

The 1<sup>st</sup> International Conference on Research in Education, Arts, Management, and Science.  
(I-CREAMS 2015) November 24<sup>th</sup>-26<sup>th</sup>, 2015; Roi Et Rajabhat University

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# 1<sup>st</sup> I-CREAMS 2015

24<sup>th</sup> - 26<sup>th</sup> November, 2015

Roi Et Rajabhat University, Roi Et (Thailand)

In Cooperation with:

- National Research Council of Thailand
- Office of the Higher Education Commission
- Rajabhat Mahasarakham University
- Srisaket Rajabhat University
- National University of Laos, Laos PDR
- Savannakhet Teacher Training College, Laos PDR
- University of South East Asia, Cambodia
- Universitas Pendidikan Indonesia, Indonesia
- Quang Tri Teacher Training College, Vietnam
- Institute for Research and Development of New Technologies, Vietnam

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## Conference Information

This conference is an open stage for all researchers to present their ideas and exchange their experience. This event will not only be an opportunity to make new connections, but also to renew and strengthen the existing relationships between the researchers, educators, and staff. As a source of knowledge for our community, Roi Et Rajabhat University has been promoting the research-based education. We realize that research is a process of inventing new knowledge, and signifying the ability of educators, researchers, students and teachers. Also, the 1<sup>st</sup> I-CREAMS will foster and increase academic excellence and advance research standards.

I-CREAMS will be held from 24<sup>th</sup> – 26<sup>th</sup> November, 2015 at Petcharat Garden Hotel and Roi Et Rajabhat University, Roi Et, Thailand. It will be a gathering place for academicians and professionals from various of fields; Education, Humanities and Social Sciences, Science and Technology, Health Science, and Business Administration Management.

The objectievs of the conference are as follows: 1) to publish academic scholarships and research as an opening-stage for researchers, graduate students, and faculty to present their academic works, 2) to exchange knowledge perspectives in order to elevate its quality both for national and international level, 3) to establish academic cooperation in research development in the areas of Education, Humanities and Social Sciences, Sciences and Technology, Health Science, and Business Administration and Management.

We are honored to have various worldclass keynote speakers who will share their experiences under the topic “Academic Research: Creation of Future and Challenges in Sustainable Research”. We also wish to welcome the invited speakers from Indonesia, Cambodia, Vietnam, and Laos.

Asst. Prof. Dr. Kochaporn Numnaphol  
Vice President of Research and International Relations,  
Roi Et Rajabhat University

## Organizers

Roi Et Rajabhat University, Roi Et (Thailand)

In Cooperation with:

- National Research Council of Thailand
- Office of the Higher Education Commission
- Rajabhat Maha Sarakham University
- Srisaket Rajabhat University
- National University of Laos, Lao PDR
- University of South East Asia, Cambodia
- Universitas Pendidikan Indonesia, Indonesia
- Quang Tri Teacher Training College, Vietnam
- Institute for Research and Development of New Technologies, Vietnam

## Advisories

- Prof. Dr. Somporn Pothinam President of Roi Et Rajabhat University Council
- Prof. Dr. Chaiyong Brahmawong Vice President of Roi Et Rajabhat University Council
- Prof. Dr. Anon Pontanee Khon Kaen University
- Prof. Dr. La-orsri Sanoamuang Khon Kaen University
- Assoc. Prof. Dr. Boonchom Srisa-ard Roi Et Rajabhat University Council Committee
- Assoc. Prof. Dr. Paitoon Suksri-ngam Mahasarakham University
- Assoc. Prof. Dr. Suwakit Sripathar Roi Et Rajabht University Council Committee
- Asst. Prof. Dr. Pramote Benchakarn Roi Et Rajabhat University Boards Committee
- Asst. Prof. Dusit Ubonlert President of Roi Et Rajabhat University
- Assoc. Prof. Somchai Wongkasem President of Rajabhat Mahasarakham University
- Asst. Prof. Dr. Pakasit Anuphabsaenyakorn President of Srisaket Rajabhat University
- Prof. Dr. H. Furqon Rector of Universitas Pendidikan Indonesia
- Sein Sonvanna President of the University of South East Asia, Cambodia
- Prof. Dr. Soukkongseng Saignaleuth President of National University of Laos, Laos PDR
- Dr. Le Thi Huong Rector of Quang Tri Teacher Training College, Vietnam
- Assoc. Prof. Dr. Nguyen Huynh Phan President of Institute for Research and Development of New Technologies, Vietnam

## Organizing Committees

- Asst.Prof. Dusit Ubonlert President of Roi Et Rajabhat University
- Asst.Prof.Dr.Kochaporn Numnaphol Vice President of Research and International Relations
- Dr.Somkiat Sripadtha Vice President of Academic Affairs
- Asst.Prof.Theerasak Dakaew Vice President of Student and Cultural Affairs
- Dr.Phornchai Phadthaisong Vice President of Administration and Land Scape Affairs
- Asst.Prof.Dr.Somprasong Senarat Vice President of Planning and Quality Assurance
- Asst.Prof.Sontaya Noivangklang Assistant President of Special Affairs
- Miss Jaruwan Saengplad Assistant President of Innovation and Technology
- Mrs.Benjamaporn Senarat Assistant President of President Office Management
- Dr.Thanaporn Pantawee Dean of Graduate School
- Dr.Aratthaya Thanommek Dean of Faculty of Arts and Sciences
- Dr.Kriangsak Srisombut Dean of Faculty of Education
- Asst.Prof.Dr. Siriporn Donkaewbua Dean of Faculty of Nursing
- Miss Ajchareeya Patthanasrakoo Dean of Faculty of Business Administration and Accountancy
- Mr.Chiewchan Yangsila Dean of Information Technology
- Mr. Aphirak Burarungrot Dean of Faculty of Law and Politics
- Dr.Suksri Suebsing Director of Research and Development Institute
- Dr.Sunchai Hamkumpai Director of Knowledge Management Institute
- Dr.Primmala Khamkomkhet Director of Academic Affairs and Registration Processing Bureau
- Mr.Chayathorn Chaiwiset Director of General Affairs Division
- Mrs.Arayarat Chareesaen Director of Planning and Finance Division

## Peer Reviewers

### Group 1: Education

- Prof.Dr.Chaiyong Brahmawong Roi Et Rajabhat University
- Prof.Dr.Peter Waterworth Deakin University, Australia
- Prof.Dr. Will Barratt Roi Et Rajabhat University / Indiana State University, USA
- Asst.Prof.Dr.Pramote Benchakarn Roi Et Rajabhat University
- Asst.Prof.Dr.Chaiyut Sirisuthi Mahasarakham University
- Asst.Prof.Dr.Jiraporn Chano Mahasarakham University
- Asst.Prof.Dr. Chaiya Phawabutra Sakon Nakorn Rajabhat University
- Asst.Prof.Dr.Pakasit Anuphabsaenyakorn Srisaket Rajabhat University
- Asst.Prof.Dr.Kochaporn Numnaphol Roi Et Rajabhat University
- Asst.Prof.Dr.Somprasong Senarat Roi Et Rajabhat University
- Dr.Herli Salim Universitas Pendidikan of Indonesia

### Group 2: Humanities and Social Sciences

- Prof.Dr.Leslie Barratt Roi Et Rajabhat University / Indiana State University, USA
- Assoc. Prof. Dr. Sukanya Aimimtham Khon Kaen University
- Asst. Prof. Dr. Nawamin Prachanant Buriram Rajabhat University
- Assoc. Prof. Dr. Buapun Promphakping Khon Kaen Universit
- Assoc. Prof. Dr. Somsak Srisontisuk Khon Kaen Universit
- Dr. Wachayu Sundayana Universitas Pendidikan Indonesia
- Dr. Gin Gin Gustine Universitas Pendidikan Indonesia

### Group 3: Business Administration and Management

- Prof.Dr. Warren Prior Deakin University, Australia
- Asst.Prof. Dr. Niramit Kunanuwat Suan Dusit University
- Assoc.Prof. Dr. Subchat Untachai Udon Thani Rajabhat University
- Asst.Prof.Dr. Srisunan Prasertsang Roi Et Rajabhat University
- Asst.Prof. Dr. Pimrawee Rochrungsat Petchaburi Rajabhat University

#### Group 4: Science and Technology

- Prof.Dr.Anon Pontanee Khon Kaen University
- Prof.Dr.La-Ongsri Sanorphoung Khon Kaen University
- Assoc.Prof. Dr. Chavi Yenjai Khon Kaen University
- Assoc. Prof. Dr. Nguyen Huynh Phan Institute for Research and Development of New Technologies, Vietnam
- Assoc.Prof.Dr. Phaitoon Sooksringam Mahasarakham University
- Assoc.Prof. Wirat Phongsiri Mahasarakham University
- Assoc.Prof.Dr. Anongrit Kangrang Mahasarakham University
- Asst.Prof.Dr. Somsanguan Passago Rajabhat Mahasarakham University
- Asst.Prof.Dr. Adisak Joomwong Maejo University
- Asst.Prof. Dr. Angkhana Inta Chiang Mai University
- Asst.Prof.Dr.Boonsatien Boonsoong Kasetsart University
- Asst.Prof. Dr.Surachai Atkla Roi Et Rajabhat University
- Dr. Thararat Sripongham Mahasarakham University
- Dr. Sukit Kanjina Chiang Mai University
- Dr. Thanwanit Thanyasiriwat Kasetsart University
- Dr. Unnop Napthuetrong Surindra Rajabhat University
- Dr. Chanyarin Somporn Roi Et Rajabhat University
- Dr. Thanai Surasilp Roi Et Rajabhat University
- Dr. Kritichai Sarakul Roi Et Rajabhat University
- Dr.Winya Dungkaew Mahasarakham University

#### Group 5: Health Science

- Prof. Dr. Somporn Phothinam Roi Et Rajabhat University
- Asst. Prof. Dr. Siriporn Donkaewbua Roi Et Rajabhat University
- Asst. Prof. Dr. Chuanpid Tumngong Roi Et Rajabhat University
- Asst. Prof. Dr. Darinee Suwabhabh Roi Et Rajabhat University



## Welcome Speech

Welcome Speech on The 1st International Conference on Research in  
Education, Arts, Management and Science (I-CREAMS 2015)  
November 24th-26th, 2015; Roi Et Rajabhat University  
Petcharat Hotel and Roi Et Rajabhat University

by Professor Dr.Somporn Phothinam  
President of the University Council, Roi Et Rajabhat University

ICREAMS 2015 participants,

It is a great pleasure for me to be here this morning at the 1st International Conference on Research in Education, Arts, Management and Science. I would like to thank the organizing committee for inviting me. Accomplishing the changes which are needed in our society to achieve a sustainable society, it requires worldwide collaboration and an exchange of knowledge and experiences. This event is a platform for scholars from different countries in different fields to present and share their academic works to build and maintain research excellence. This conference, being held at Petcharat Hotel and Roi Et Rajabhat University, Thailand is an exciting opportunity that offers those interested in the creation and dissemination of knowledge the opportunity to improve the quality of the above areas in a new era of globalization.

Over the next few days at this conference, with its wonderful and inspiring theme, you will be able to partake in excellent discussions. It is my firm belief that this exchange of knowledge and experiences is important. I very much hope that your participation in this conference will be both beneficial and enjoyable, particularly for those of you visiting Roi Et province for the first time, I trust that your stay here will be a pleasant one.

Thank you very much.

## Opening Address

by Asst. Prof. Dusit Ubonlert

President, Roi Et Rajabhat University

At The 1st International Conference on Research in Education, Arts,  
Management and Science (I-CREAMS 2015)  
November 24<sup>th</sup> -26<sup>th</sup>, 2015; Roi Et Rajabhat University  
Petcharat Hotel and Roi Et Rajabhat University

President of the University Council,  
Provincial Governor,  
Keynote Speakers,  
Ladies and Gentlemen.

I am delighted and honored to welcome you to the 1st International Conference on Research in Education, Arts, Management and Science.

The conference is hoped to promote academic excellence and exchange the experience of new knowledge between the scholars who are working in the areas of Education, Arts, Management and Science. This conference will be not only the stage for all researchers to present their ideas, but also the great opportunity establish and harmonies the relationships between researchers, educators, and universities.

On behalf of the conference committee, I would like to express my gratitude to the organizing committee staff who have been working hard to make this conference a reality. I wish all the speakers and participants a great time at the conference. Enjoy your stay in Thailand and particularly in Roi Et Province.

I would like to declare opening of the first International Conference on Research in Education, Arts, Management and Science.

Thank you very much.

## Keynote Speakers



**Peter Waterworth, Ph.D.**

Office: Melbourne, Australia.

Present Position: Sociologist and educational consultant from Melbourne, Australia.  
Visiting Professor at Roi Et Rajabht University  
Formerly Head of Department of Social Sciences and Foundations of Education at Deakin University Deakin University, Australia

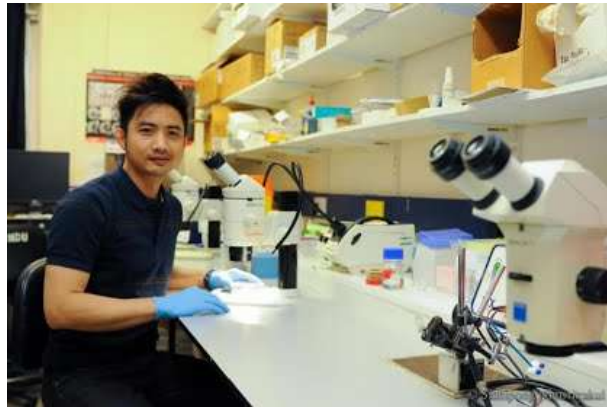
Education: Ph.D., Department of Anthropology and Sociology, Monash University

Specialization: Sociologist and Education



**Associate Professor Dr. Prapat Thepchatree**  
**Thammasat University**

Office: Center for ASEAN Studies, Thammasat University  
Present Position: Director of Center for ASEAN Studies, Thammasat University  
Education: Ph.D. in Political Science (International Relations) University of Georgia, U.S.A.  
M.A. in Political Science (International Relations) Ohio University, U.S.A.  
B.A. in Political Science (International Affairs) Thammasat University  
Specialisation: ASEAN, East Asian Studies, Thai Foreign Policy, Foreign Policy Analysis, International Security, International Political Economy



**Weerapong Prasongchean, Ph.D.**  
**Chulalongkorn University**

- Office: Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok Thailand weepaong.p@chula.ac.th
- Present Position: Stem cell researcher graduated from University College London and Imperial College London, UK. His research interests focus on stem cell and regenerative biology, neuroscience, and academic innovation.
- Education: BSc. Honor (Pharmacy) Chulalongkorn University, Thailand, 2005  
MSc. (Integrative Neuroscience), Imperial College London, UK, 2007  
PhD. (Stem Cell and Regenerative Biology), University College London, UK, 2011
- Specialisation: Stem cell and regenerative biology, neuroscience, and academic innovation. Education



**Warren Prior, Ph.D.**  
**Deakin University**

Office: Deakin University, 221 Burwood Highway Burwood  
Victoria 3125 Australia

Present Position: lecturer, Faculty of Arts and Education, Deakin University,  
Australia  
Visiting Professor at Roi Et Rajabht University

Specialization: Education



**Prof. Dr. William Barratt**  
**Roi Et Rajabhat University**

Professor of The School of Graduate Studies  
Professor Emeritus, Indiana State University

**Education**

Ph.D. The University of Iowa, 1983, Student Development in Post-Secondary Education  
M.S. Miami University, 1973, Personnel Counseling  
B.A. Beloit College, 1972, History and Philosophy

**Professional Experience**

Professor, School of Graduate Studies, Roi Et Rajabhat University, August 2015-present  
Professor Emeritus, Indiana State University, August 2015-present  
Lotus Delta Coffman Distinguished Professor, Bayh College of Education, Indiana State University 2012 – 2015.  
Professor, Department of Educational Leadership, Indiana State University, Student Affairs and Higher Education Program Coordinator, August 2011 – 2015  
Acting Chair, Department of Educational Leadership, Administration, and Foundations, Indiana State University, 2009-2010.  
Raleigh Holmstedt Distinguished Professor, Bayh College of Education, Indiana State University, 2006-2007



Administrative Fellow, School of Graduate and Professional Studies, Indiana State University, August 2008 – January 2009  
Associate Professor, Department of Educational Leadership, Administration, and Foundations, Student Affairs and Higher Education Program Coordinator, Indiana State University, 2005-2011.



Prof.Dr.Leslie Barratt  
Roi Et Rajabhat University  
Professor of Graduate Studies,  
Professor of Emerita of Linguistics, Indiana state University

#### **Education**

Ph.D. The University of Iowa, Linguistics, 1982  
M.S. Northwest Missouri State University, Elementary  
Ed., 1976  
M.A. University of Wisconsin-Madison, Linguistics, 1974  
A.B. Beloit College, Linguistics (Porter Scholars Program), 1972

#### **Professional Experience**

August 2015-Present: Professor of Graduate Studies, Rajabhat  
Roi-Et University, Roi-Et, Thailand, and Professor Emerita,  
Indiana State University, June 1, 2015-present.  
Chair, Department of Languages, Literatures, and Linguistics,  
Indiana State University, January 1, 2011-December 31, 2014:  
Professor of Linguistics, Indiana State University, 1997 - 2015  
Fulbright Senior Lecturer, Beijing Foreign Studies University,  
-1996.  
Associate Professor of Linguistics, Indiana State University, 1986  
- 1997.  
Assistant Professor of Linguistics, Indiana State University, 1980 -  
1986.  
Fulbright Senior Lecturer, Budapest Technical University, 1987-  
1988.

## Invited Speakers



**Dr. Le Thi Huong**  
**Quang Tri Teacher Training College**

Office: Quang Tri Teacher Training College (QTTTC), Km3 Highway  
No9, Dong Ha, Quang Tri, Vietnam  
phone: +84. 533.580793 E-mail: huong\_lt@qtttc.edu.vn

Present Position: Rector of Quang Tri Teacher Training College (QTTTC)

Education: PhD, 2013 Vinh University  
MA, 1998, Hue University's College of Education, Vietnam  
BA, 1993, Hue University's College of Education, Vietnam

Specialization: Education



**Dr. Mean Sothy**  
**University of South-East Asia, Cambodia**

- Office: Mondul III Village, Stogram Commune, Siem Reap Town, Siemreap Province, Cambodia
- Present Position: Director of International Relations and Research, University of South-East Asia, Cambodia
- Education: 2008-2011: Doctor of Education in Educational Administration, Ubon Ratchathani Rajabhat University  
2006-2008: Master of Education in Educational Administration with excellent for thesis, Ubon Rajabhat University  
2001-2002: Certificate of Upper Secondary School Teacher in Mathematics, Faculty of Pedagogy, Phnom Penh, Cambodia
- 1997-2001: Bachelor of Science in Mathematics, Royal University of Phnom Penh, Phnom Penh, Cambodia
- Specialization: Educational Administration

## Conference Program

### The 1<sup>st</sup> International Conference on Research in Education, Art, Management, and Science

<b>Day 1: 24<sup>th</sup> November, 2015</b>	
<b>Time</b>	<b>Conference Activity : Petcharat Garden Hotel</b>
<b>08.00-09.00</b>	<b>Registration: Pradub Petch</b>
	Opening Session
09.00-09.05	Welcome speech by Prof.Dr.Somporn Phothinam (President of the University Council)
09.05-09.10	Conference Reporting by Asst.Prof.Dr. Kochaporn Numnaphol (Vice President for Research and International Relations, Roi Et Rajabhat University)
09.10-09.15	Opening Address by Asst. Prof. Dusit Ubonlert (President of Roi Et Rajabhat University)
09.15-09.20	Welcome Performance: by RERU Jazz Big Band (Music Education Department, Roi Et Rajabhat University)
09.20-10.00	Keynote speaker (1): Academy of Research: Creation of Future and Challenges in Sustainable Research by Prof. Dr. Peter Waterworth
<b>10.00-10.30</b>	<b>Refreshment: Pradub Petch</b>
10.30-10.55	Invited speaker from Indonesia (Rector of Universitas Pendidikan Indonesia)
10.55-11.10	Invited speaker from Cambodia (President of University of Southeast Asia)
11.10-11.35	Invited speaker from Vietnam (Rector of Quang Tri University)
11.35-12.00	Invited speaker from Laos PDR (Vice President of National University of Laos)
<b>12.00-13.00</b>	<b>Lunch: Nam Petch Coffee shop</b>
13.00-14.00	<b>Place: Pradub Petch</b> Keynote speaker (2): Associate Professor Dr. Prapat Thepchatree (Director of Center of ASEAN Studies, Thammasat University)
13.00-14.30	<b>Poster presentation : Place : Pradub Ploy</b>
	Group 1: Education Group 2: Humanities and Social Science Group 3: Business Administration and Management Group 4: Science and Technology Group 5: Health Science
<b>14.30-14.40</b>	<b>Refreshment</b>
14.40-17.35	<b>Oral Presentation</b>
	Group 1: Education
	Education (1) Place: Pradub Kaew
	Education (2) Place: Pradub Ngeun
	Education (3) Place: Pradub Thong
	Group 2: Humanities and Social Science
	Place: Pay Tai

	Group 3: Business Administration and Management	Place: Pradub Thong
	Group 4: Science and Technology	Place: Pradub Petch
	Group 5: Health Science	Place: Pai Toon
18.00-21.00	<b>Welcome Ceremony: Place: Pradub Ploy</b>	
18.00-18.30	<b>Registration</b>	
18.30-18.40	Welcome Night Speech by Dr.Tuang Un-Tachai:Alumni Member of The National Legislative (Chairman of The Committee on Education and Sport Assembly	
18.40-18.50	Opening Speech by Mr. Anusorn Kaewkungwan (Governor of Roi Et Province)	
18.50-19.00	Souvenir Ceremony by President of Roi Et Rajabhat University	
19.00-21.00	Dinner reception Performance by RERU Jazz Big Band (Music Education Department, Roi Et Rajabhat University)	
<b>Day 2: 25<sup>th</sup> November 2015</b>		
<b>Time</b>	<b>Conference Activity : Petcharat Garden Hotel</b>	
08.00-09.00	<b>Registration: Pradub Petch/ Pradub Ngeun- Pradub Thong</b>	
09.00-10.30	<b>Place: Pradub Petch</b>	
	Keynote Speaker (1) “Stem Cell Research: The Revitalizations for The Future : of Health and Sustainable Science” by Dr. Weerapong Prasongchean (Chulalongkorn University)	
09.00-09.30	<b>Place: : Pradub Ngeun- Pradub Thong</b>	
	Keynote Speaker (1) Prof. Dr. Warren Prior, Roi Et Rajabhat University & Visiting Scholar, Deakin University Australia	
09.30-10.00	Keynote Speaker (2) Prof. Dr. Will Barratt, Visiting Professor, Professor of Graduate Studies, Roi Et Rajabhat University & Emeritus Professor of Educational Leadership, Indiana state University, USA	
10.00-10.30	Keynote Speaker (3) Prof. Dr. Leslie Barratt, Professor of Graduate Studies, Roi Et Rajabhat University & Professor of Emerita of Linguistics, Indiana state University, USA	
10.30-10.45	<b>Refreshment</b>	
10.45-12.00	<b>Oral Presentation</b>	
	Group 1: Education	Education (1) Place: Pradub Kaew
		Education (2) Place: Pradub Ngeun
		Education (3) Place: Pradub Thong
		Education (4) Place: Pai Toon
	Group 2: Humanities and Social Science	Place: Pay Tai
	Group 3: Science and Technology	Place: Pradub Petch
12.00-13.00	<b>Lunch: Nam Petch Coffee shop</b>	

13.00-15.00	Oral Presentation (continued)	
14.30-14.40: Refreshment	Group 1: Education	Education (1) Place: Pradub Kaew
		Education (2) Place: Pradub Ngeun
		Education (3) Place: Pradub Thong
		Education (4) Place: Pai Toon
	Group 2: Humanities and Social Science	Place: Pay Tai
	Group 3: Science and Technology	Place: Pradub Petch
15.00-16.00	Certification and Best Research Awards Ceremony	Place: Pradub Petch
16.00-16.30	Closing Ceremony	
18.00-20.00	Loy Kratong Festival	
	<ul style="list-style-type: none"> <li>- Participating in the spectacular traditional parade with local residents and government sectors</li> <li>- Celebrating the popular ancient Thai culture by floating Krathong in the natural water sources for paying respect to the nature and wishing for prosperity</li> </ul>	
<b>Day 3: 26<sup>th</sup> November 2015</b>	<b>Post-Conference Activities</b>	
<b>Time</b>	<b>Place: Roi Et Rajabhat University</b>	
08.30-09.00	<b>Registration: The Crown Prince 60<sup>th</sup> Anniversary</b>	
09.00-09.15	Traditional Cultural Parade by local residents from Tha Muang Sub-district Municipality	
09.15-09.30	<b>Stage Performance</b>	
09.30-09.40	Welcome speech by Asst. Prof. Dusit Ubonlert (President of Roi Et Rajabhat University)	
09.40-10.30	Visiting Presidential speech	
09.30-10.40	<b>Refreshment</b>	
10.40-11.00	MOU Signing Ceremony	
11.00-12.00	<ul style="list-style-type: none"> <li>-Academic exhibition by Roi Et Rajabhat University</li> <li>- Academic exhibition by the teachers in local areas and students research projects</li> <li>- OTOP shop</li> </ul>	
12.00-13.00	<b>Lunch : The Crown Prince 60<sup>th</sup> Anniversary</b>	
13.00-16.00	Tourism Excursion <ul style="list-style-type: none"> <li>- Visit magnificent arts of Maha Chedi Chaimongkol Temple situated on the mountain surrounded by national park. Shopping for local souvenir</li> </ul>	



## Presentation Program

### *Oral Presentation*

Session: Oral Presentation 1. Prof.Dr. Peter Waterworth Chairman  
 Group: Education (Group 1) 2. Dr.Kowat Tesabutra Committee  
 Date: November 24<sup>th</sup> 2015 3. Asst.Prof.Charuwan Ployduangrat Committee  
 Room: Pradub Kaew

No	Code	Paper ID.	Title	Time	Page
1	Ed1	0005	Effectiveness of melankolis as learning media to increase ability to read of children with mild intellectual disability class III in slb abc ibnu sina bandung <i>Miss Wulan Yulian</i>	14.40-15.00	
2	Ed2	0009	The ethical leadership of school administrators according to the principles of the four brahmvihara that affect the performance of teachers school under Nakhon Sakon Nakhon municipal <i>Mr. Phra Phouy Ratanasoto (Chanthamany)</i>	15.00-15.20	
3	Ed3	0010	Leadership behaviors of executives affecting to teachers morale in Sakon Nakhon municipal schools <i>Mr. Phra Thongphanh Panyavangso (Sunyaluk)</i>	15.20-15.40	
4	Ed4	0109	Implementation of whole language approach inside and outside the classroom to improve the literacy skills <i>Miss Lely Halimah</i>	15.40-16.00	
5	Ed5	0110	Developing synectic model in dance learning to develop creativity of students with special needs <i>Miss Heni Komalasari</i>	16.00-16.20	
6	Ed6	0111	The process of students' experiential response in responding love song lyrics <i>Mr. Mohammad Ferbryanto, Sansan Yuliasah</i>	16.20-16.40	
7	Ed7	0112	An analysis of teacher's directive speech acts and students' responses by gender <i>Mr. Willyana Ramlan, Siti Zaenab Sanusi</i>	16.40-17.00	

Moderator: 1. Miss Kingdao Donjerm  
 2. Miss Nujira Suwannatho

Session: Oral Presentation 1. Prof.Dr. Warren Prior Chairman  
 Group: Education (Group 2) 2. Assoc.Prof.Dr.Somporn Duanyai Committee  
 Date: November 24<sup>th</sup> 2015 3. Dr.Mean Sothy Committee  
 Room: Pradub Ngeun

No	Code	Paper ID.	Title	Time	Page
1	Ed8	0046	A model for teachers' instructional leadership development in the teacher training colleges in central region of the socialist republic of Vietnam <i>Mr. Le Duc Quang</i>	14.40-15.00	
2	Ed9	0113	Re-design of professional teacher education in Indonesia; <i>Dr. Dinn Wahyudin, Wachyu Sundayana</i>	15.00-15.20	
3	Ed10	0114	Management and organizational readiness of Indonesian teacher education institutions in implementing professional teacher education <i>Dr. Dinn Wahyudin, Mamat Supriatna, Asep Suryana</i>	15.20-15.40	
4	Ed11	0116	Teacher's challenges in designing and implementing a critical literacy-oriented EFL classroom in an Indonesian high school <i>Dr. Gin Gin Gustine</i>	15.40-16.00	
5	Ed12	0120	The development of enhancing instructional leadership model in English language teaching for primary school level under the local government <i>Mrs. Jiraporn Chano</i>	16.00-16.20	
6	Ed13	0117	The profile and implementation of accounting sciences affective aspects on lecturer of LPTK <i>Dr. Meta Arief, Umar Faruk, Leni Yulianti</i>	16.20-16.40	
7	Ed14	0118	Workplace learning (WPL) development model to improve students' catering competency skill of tourism culinary vocational school <i>Miss Rahmawati Yulia</i>	16.40-17.00	

Moderator: 1. Mr. Pisit Pinitakul  
2. Mr. Thaklaew Klaewkla

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Session: Oral Presentation 1. Prof.Dr.William Barratt Chairman  
 Group: Education (Group 3) 2. Asst.Prof.Dr.Jiraporn Chano Committee  
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1	Ed15	0115	Developing multi-campus management model <i>Prof. Dr. As'ari Djohar, Dinn Wahyudin, Zaenal Alimin, Denny Darmawan</i>	15.30-15.50	
2	Ed16	0121	The development of English reading comprehension ability using panorama technique for Sakon Nakhon Rajabhat University undergraduate students <i>Miss Thidawan Wichanee</i>	15.50-16.10	
3	Ed44	0134	The Study of Bio-Social Factors and Creative Leadership of School Administrators: The Recognition of Teachers Affect The Results of External Assessment to Develop Surin Primary School Educational Service Area Office of Education Office3 <i>Miss Watchararak Prawatpong</i>	16.10-16.30	
4	Ed45	0138	The Effective Teachers' Collaborative Working Model <i>Surintorn Wangkahad</i>	16.30-16.50	

Moderator: 1. Miss Jitlada Banbang  
 2. Miss Thaksaporn Suttitham

Session: Oral Presentation 1. Prof.Dr.Peter Waterworth Chairman  
Group: Education (Group 1) 2. Dr.Kowat Tesabutra Committee  
Date: November 25<sup>th</sup> 2015 3. Asst.Prof.Charuwan Ployduangrat Committee  
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1	Ed17	0029	The sustainability policy between Thailand and Cambodia toward qualifications framework: a comparative study <i>Mr. Sarom Tem</i>	10.40-11.00	
2	Ed18	0026	Proposed policy for the internationalization development of students' production at Mahachulalongkomrajavidyalaya University, campuses in North Eastern Thailand <i>Mr. Thanoo Srithong</i>	11.00-11.20	
3	Ed19	0032	A model for developing teacher leadership in information and communication technology of secondary schools <i>Miss Saranya Kraiboot</i>	11.20-11.40	
4	Ed20	0077	Using determinants for determining extreme values of a function of one variable, two variables and three variables <i>Mr. Pham Ngoc Thinh</i>	11.40-12.00	
			<b>Lunch: Nam Petch Coffee Shop</b>	<b>12.00-13.00</b>	
5	Ed21	0129	Calculation shear force and bending diagram using the continuous segment method for 3100-0107 strength of material <i>Mr. Montree Montreepila</i>	13.00-13.20	
6	Ed22	0130	Proposed strategies for developing effective organization of the office of Kalasin primary educational service 3 <i>Mrs. Supun Surunna</i>	13.20-13.40	
7	Ed23	0131	Measuring robustness of Thai athletes using trait robustness of self-confidence inventory (TROSCI) <i>Mr. Sarstrawit Wongbutleewatthana</i>	13.40-14.00	

Moderator: 1. Miss Kingdao Donjerm  
2. Miss Nujira Suwannatho

Session: Oral Presentation 1. Prof.Dr. Warren Prior Chairman  
 Group: Education (Group 2) 2. Assoc.Prof.Dr. Somporn Duanyai Committee  
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1	Ed24	0119	The 2013 curriculum implementation at primary school in Indonesia <i>Dr. Rusman, M. Pd., Prof. Dr. Ishak Abdulhak</i>	10.40-11.00	
2	Ed25	0122	Developing English reading comprehension ability using start strategy of Matthayomsuksa 2 students <i>Miss Unyarut Rornsuk</i>	11.00-11.20	
3	Ed26	0123	Effects of contemplation education activities development for teacher students in Roi et Rajabhat University <i>Mr. channarong wisetsat</i>	11.20-11.40	
4	Ed27	0051	A model for leadership development for chief judge of the courts of justice <i>Mr. Nopparat Apivimollak</i>	11.40-12.00	
			<b>Lunch: Nam Petch Coffee Shop</b>	<b>12.00-13.00</b>	
5	Ed28	0020	The proposed of educational leadership for school administrators under the secondary school educational service area 21 <i>Mr. Phiphat Srisukphan</i>	13.00-13.20	
6	Ed29	0133	A comparison of the academic achievement of vocational certificate 2nd year electronics student in electronics circuit with and without simulation software. <i>Mr. Adool Kruekaew</i>	13.20-13.40	

Moderator: 1. Mr. Pisit Pinitsakul  
 2. Mr. Thaklaew Klaewkla

Session: Oral Presentation 1. Prof.Dr. William Barratt Chairman  
 Group: Education (Group 3) 2. Asst.Prof.Dr.Jiraporn Chano Committee  
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1	Ed30	0078	A model for developing effective leadership for world class standing school administrators in the Northeast. <i>Mr. Parinyamit Leenalad</i>	10.40-11.00	
2	Ed31	0055	Educational leadership for chief executive of the provincial administrative organization in the next decade (B.E. 2556-2565) <i>Mr. Wirat tayangkanont</i>	11.00-11.20	
3	Ed32	0095	Factor effecting to sexual differences of Roi et Rajabhat University students <i>Dr. Thanyaporn Nualsing</i>	11.20-11.40	
4	Ed33	0088	A corpus-based study on frequency of academic word list (AWL) in laboratory animal research articles <i>Mr. sirawich Tampanich</i>	11.40-12.00	
			<b>Lunch: Nam Petch Coffee Shop</b>	<b>12.00-13.00</b>	
5	Ed34	0108	Mindset of senior students in the faculty of education, Roi et Rajabhat University, Thailand . <i>Dr. Yuvatida Chapanya</i>	13.00-13.20	
6	Ed35	0127	Roles of the faculty of liberal arts and science, Nakhon Phanom University in educational development of border patrol police schools in Nakhon Phanom province <i>Asst. Prof. Dr. Sumalee Sriputtarin, Wantipha Unarat, Kalayanee Muangthai</i>	13.20-13.40	

Moderator: 1. Miss Jitlada Banbang  
 2. Miss Thaksaporn Suttitham

Session: Oral Presentation 1. Dr.Somkiat Sripadtha Chairperson  
 Group: Education (Group 4) 2. Asst.Prof.Dr.Vijittra Vonganusith Committee  
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1	Ed36	0137	Creating a research team: collaboration in international project <i>Dr.Herli Salim and Peter Waterworth</i>	10.40-11.00	
2	Ed37	0082	Effects of online coaching in web programming of business computer students <i>Mrs. Wijittra Potisarn</i>	11.00-11.20	
3	Ed38	0085	Hitting the change point: community research project for driving up Nong Bua Lam Phu community college in the second ten years round <i>Dr. Phongsak Srivorakul</i>	11.20-11.40	
4	Ed39	0039	Different effects of written corrective feedback and explicit grammar instruction on grammatical accuracy of Rajabhat Mahasarakham English major students' paragraph writing <i>Mr. Suwitchan Un-udom</i>	11.40-12.00	
			<b>Lunch: Nam Petch Coffee Shop</b>	<b>12.00-13.00</b>	
5	Ed40	0043	Parents' satisfaction toward student tracking system by SMS : a case study of Sisongkhram industrial technology college <i>Mr. chacrit jongwai</i>	13.0 -13.20	
6	Ed	0049	A model of developing English speaking competency of non – English major primary teachers in the northeast of Thailand <i>Mrs. Prakong Yukalung</i>	13.20-13.40	

Moderator: 1.Mr.Tantikorn Phukertpim  
 2. Miss Jutamart Katato

Session: Oral Presentation 1. Prof.Dr.Lesslie Barratt Chairperson  
 Group: Humanities and Social Sciences 2. Asst.Prof.Nawamin Prachanan Committee  
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2	Hu2	0013	The efficiency of radio and television Buddhist propagation project based on Tyler's goal attainment model and the stake's congruence contingency model <i>Dr. Pinayo Prommuang</i>	15.05-15.30	
3	Hu3	0018	Information literacy of the Islamic private schools' students in the southernmost provinces of Thailand <i>Asst. Prof. Dr.Chumchit Saechan</i>	15.30-15.55	
4	Hu4	0028	A study of the problems caused by the behavior of youth crime in Lumpli district <i>Miss Kanjana Sukhaboon</i>	15.55-16.20	
5	Hu5	0056	Technical cooperation between Thailand and Lao PDR : transitions and internal conditions of Lao PDR <i>Dr. Chanajai Muenthaisong</i>	16.20-16.45	
6	Hu6	0058	Investigating the writing strategies employed by grade 9 students in Buriram province <i>Miss Punnapa Paengsri</i>	16.45-17.10	
7	Hu7	0059	A cross-cultural study of compliment speech act in English and Chinese <i>Mr. Li Shu</i>	17.10-17.35	

Moderator: 1. Mr.Yuttachak Lamjuanjit  
 2. Miss Wiwattana Yenwattana



Session: Oral Presentation 1. Dr.Wachayu Sundayana Chairman  
 Group: Humanities and Social Sciences 2. Asst.Prof.Nawamin Prachanan Committee  
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1	Hu8	0062	Building environment Vietnamese communication for ethnic minorities children 5 to 6 years old in Lao Cai, Vietnam <i>Mrs. Giang Thi Gam</i>	10.40-11.05	
2	Hu9	0063	Challenges in English vocabulary teaching for ethnic minority students at Lao Cai teacher training college and some suggested solutions <i>Mrs. Pham Thi Thang</i>	11.05-11.30	
3	Hu10	0066	Developing the communicative cultural environment between lecturers and students in the classroom in the college from mountainous areas in some provinces of the North Central-Vietnam <i>Mrs. Dang Thi Thanh Thuy</i>	11.30-11.55	
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4	Hu11	0068	Enhancing communication skills for ethnic minority students in Lao Cai teacher training college-Vietnam <i>Mrs. Doi Thi Thu Thuy</i>	13.00-13.25	
5	Hu12	0072	Intervention and prevention child labor in view of social work at “safe and sound” project- Phu Vang district- Thua Thien Hue province, Vietnam <i>Mr. Nguyen Thi Phuong Thao</i>	13.25-13.50	
6	Hu13	0073	Professional training case management for collaborators social work in Danang city <i>Mrs. Bui Van Van</i>	13.50-14.15	
7	Hu14	0074	Some characteristics of Mong ethnic minority students at primary school in Lao Cai province in studying descriptive literature <i>Mrs. Nguyen Ngoc Ngan</i>	14.15-14.40	

Moderator: 1. Mr.Yuttachak Lamjuanjit  
 2. Miss Wiwattana Yenwattana

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Session: Oral Presentation 1. Prof.Dr.William Barratt Chairman  
Group: Business Administration and Management 2. Asst.Prof.Dr.Jiraporn Chano Committee  
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2	Ba2	0064	Construction of identification system to improve efficiency exploiting geographical indications in Vietnam <i>Miss Thu Trang Le Thi</i>	15.05-15.30	

Moderator: 1. Miss Jitlada Banbang  
2. Miss Thaksaporn Suttitham

Session: Oral Presentation 1. Asst.Prof.Dr.Adisak Jumwong Chairman  
 Group: Science and Technology 2. Assoc. Prof.Dr.Winya Dungkaew Committee  
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2	Sc2	0007	Association rule mining in EPC global network <i>Dr. Hai Quoc Le</i>	15.05-15.30	
3	Sc3	0012	Online portfolio management system for lecturers <i>Mr. Pratchaya Jaisudthi</i>	15.30-15.55	
4	Sc4	0016	Effects of drying on GAC fruit aril coated Sangyod rice <i>Dr. Visaka Anantawat</i>	15.55-16.20	
5	Sc5	0060	Actual situation of using plant protection drugs in rice field in Nghi Thach commune, Nghiloc district, Nghean province, Vietnam <i>Mrs. DinhThi Kim Hao</i>	16.20-16.45	
6	Sc6	0061	Biodiversity of plants producing essential oils in Pu mat <i>Mrs. Dao Thi Minh Chau</i>	16.45-17.10	

Moderator: 1. Miss Duangthip Wongnak  
 2. Miss Pattarawan Kamplae

Session: Oral Presentation 1. Asst.Prof.Dr.Adisak Jumwong Chairman  
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2	Sc8	0067	Effects of Cyanobacteria Nostoc Caldicola extract on lifetime and fecundity of cowpea aphid (aphis craccivora koch) <i>Dr. Mai Van Chung</i>	11.05-11.30	
3	Sc9	0076	Training the self-learning skill in teaching physical exercises for high school students <i>Mr. Nguyen Van Tuan</i>	11.30-11.55	
			<b>Lunch: Nam Petch Cofee Shop</b>	<b>11.55-13.00</b>	
4	Sc10	0075	Trainers' perceptions of the relation between stress and sport competition activities among students at the university of Danang <i>Mr. Nguyen Thi Hang Phuong</i>	13.00-13.25	
5	Sc11	0080	Initialtive assay of biological coagulation of <i>Jatropha curcus</i> for wastewater treatment in Van creek, Dien Chau district, Nghe An province, Vietnam <i>Mr. Hoang Vinh Phu</i>	13.25-13.50	
6	Sc12	0126	User experience assessment for hotel booking website <i>Miss Pornphimon Katkaeo</i>	13.50-14.15	
7	Sc13	0071	How to improve the quality of sports competition for students at the Da Nang university <i>Mr. Nguyen Xuan Hien</i>	14.15-40	

Moderator: 1. Miss Duangthip Wongnak  
 2. Miss Pattarawan Kamplae

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Session: Oral Presentation 1. Asst.Prof. Dr. Siriporn Donkaewbua Chairperson  
Group: Health Science 2. Asst.Prof.Dr. Darinee Suwaphab Committee  
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2	He2	0083	Methods of diagnosis and intervention for children with aggressive behavior <i>Mr. Ho Thi Thuy Hang</i>	15.05-15.30	
3	He3	0084	Research anxiety disorders in female officers in Vietnam <i>Mr. Nguyen Thi Hang Phuong</i>	15.30-15.55	

Moderator: 1.Mr.Tantikorn Phukertpim  
2. Miss Jutamart Katato

**Poster Presentation**

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 Group: Education (Group 1) 2. Dr. Herli Salim Committee  
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1	Ed1	0128	Development of Thai language teaching strategy based on brain based learning for enhance word and writing in Pratomsuksa 1 students <i>Miss Aimrudee Samaklan</i>	
2	Ed2	0125	The development of mathematics learning outcomes of the students in vocational certificate level who learned a ratio using learning CIPPA teaching and the conventional teaching approach <i>Mr. Weerayut Srihaphon</i>	
3	Ed3	0124	The current and desirable state of learning organization for schools under secondary educational service area office 20 <i>Mr. Patiparn jumpajun</i>	
4	Ed4	0105	The development of the internal supervision model of teaching for teachers under the jurisdiction of Sakonnakhon office of primary educational, service area 3 <i>Miss Pailin Sumangkla</i>	
5	Ed5	0103	Current conditions and desirable conditions of a management information system for schools under Nongkhai poster primary education office service area 2 <i>Miss Jittiya Boonpheng</i>	
6	Ed6	0102	Current conditions and desirable conditions for participation of the schools under Udonthani office of primary education service area 3 <i>Miss Kanokwan Buransan</i>	
7	Ed7	0101	Current conditions and desirable conditions the community participation in educational management of the schools under Sakonnakhon office of primary education service area 3 <i>Miss Janthiwa sopa</i>	
8	Ed9	0136	Proposed Strategies for Leaders of Chinese Education Management in Sakon Nakhon <i>Mr.Paichit Kultangwattana</i>	
9	Ed10	0104	The Present Situation and the Characteristics of the Financial Management Standard in Planning the Budget for the Schools under the Office of Udonthani Education Service Area 2 <i>Miss Papusson Ridmontree, Mr.Sombat Aappamarsga</i>	

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10	Ed 11	0132	Guidelines for folk music curriculum administration in secondary schools at Quang Tri province, Viet Nam <i>Hoang Huu Tan</i>	

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 Group: Education (Group 2) 2. Assoc.Prof.Dr.Nguyen Phan Committee  
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1	Ed11	0100	Current and desirable situations of the teacher competencies in learning management in the schools under the jurisdiction of Nakhonrachasima office of primary educational service area 7 <i>Miss Namfon Chuenchom</i>	
2	Ed12	0099	Leadership development program aimed at enhancing the effectiveness of the management. private education common in the northeastern part <i>Miss Orawan Thalad</i>	
3	Ed13	0098	Developing an implementation guidelines for internal quality assurance system of the schools under the office of Roi et primary education service area 2 <i>Miss Penpak Buranasen</i>	
4	Ed14	0096	The development guidelines of strategic for schools under the secondary educational service area office 19 <i>Mrs. Jeranan Suttikhod</i>	
5	Ed15	0093	The development of the operations to the standard school health promotion diamond level belong to the office of the school district school district 28 <i>Miss Jarnong Piboon</i>	
6	Ed16	0047	Needs analysis of communication tasks for English-major students at Roi-et Rajabhat university <i>Miss Angcharin Thongpan</i>	
7	Ed17	0044	Changing condition for school administrators in school under Khon Kaen primary education office area 2 <i>Miss Wanichcha Sripit</i>	
8	Ed18	0040	Supply administration of basic education in friendship network center under Khon Kaen primary educational service area office 5 <i>Mr. Sayun Simma</i>	
9	Ed19	0081	Development for academic affairs administration for Phrapariyattidhamma schools in the general education section under the office of national Buddhism other <i>PraMahaWorawit Pukhamoa</i>	
10	Ed20	0107	Development of Local Curriculum Management for the School under Udon Thani Office of Primary Education Service Area 2 <i>Miss Daraporn Nuntarash, Mr.Surasak Kumkong</i>	



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1	Ed21	0038	Strategies for research management of Mahamakut Buddhist university: Sri Lan Chang campus for enhance result of educational quality assurance. <i>Dr. Chakgrit Podapol</i>	
2	Ed22	0036	Administration of academic affairs of administrators in schools under Khon Kaen primary educational service area office1 <i>Mr. Jiradach Nuadsanti</i>	
3	Ed23	0035	Using cooperative project to develop English reading comprehension skill of Prathomsuksa 5 students in Thailand <i>Mr. Prapakorn Charoensawad</i>	
4	Ed24	0034	Academic leadership of school administrators under Khon Kaen primary educational service area office 2 <i>Mr. Weerapol Wiangyos</i>	
5	Ed25	0033	Academic administration in basic education schools under Khon Kaen primary educational service area office 1 <i>Mrs. Pranee Wiangyos</i>	
6	Ed26	0031	Effects of reading instruction based on cognitive academic language learning approach (CALLA) on public administration English reading abilities and strategy use <i>Miss Angcharin Thongpan</i>	
7	Ed27	0023	The development of teaching and learning within the higher education qualifications TQF via the internet <i>Mr. Nitit Wangno</i>	
8	Ed28	0022	Leadership behaviors of school administrators according to the requirement of teachers under the jurisdiction of Saraburi primary educational service area office <i>Miss Duangnapa Peangsri</i>	
9	Ed29	0021	A study of measurement and evaluation in the classroom with Thai qualification framework for higher education for introduction to biochemistry for undergraduate students of faculty of nursing, Roi et Rajabhat university, Thailand <i>Mr. Komsil Pholdaeng</i>	
10	Ed30	0014	Kalasin Buddhist college Mahamakut Buddhist university lecturers' states of teaching and learning <i>Mr. Thongkham Ketchan</i>	

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11	Ed31	0135	Model of Risk Management for rajabhat University in Bangkok <i>Mr. Pranote meeson</i>	
12	Ed32	0097	Developing the Implementation Guideline for Personnel Job Motivation for the College under the jurisdiction of the Institute of Vocational Education: North-Eastern Region 3 <i>Mr.Boonchana Pholadow</i>	
13	Ed33	0106	The Development of Competencies for Self-development Model of the Private Schools Teachers in the Office of Sakonnakhon Educational service Area 2 <i>Miss Laddawan Kaenchak</i>	
14	Ed34	0091	Personnel management of private educational institutions under the jarisdietion of Nakhon Ratchasima Primary Educational Service Area office 7 <i>Miss Phanit Pesatcha</i>	
15	Ed35	0079	Design the Questions, Exercises Oriented Capabilities on Philology in the Current Secondary Program <i>Hoang Vinh Thang</i>	

Session: Poster Presentation 1. Asst.Prof.Sontaya Noivangklang Chairperson  
 Group: Humanities and Social Sciences 2. Dr. Chanajai Muenthaisong Committee  
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1	Hu1	0054	Needs analysis and problems on English skills for coffee house employees <i>Mr. Porramet Saisaengjan</i>	
2	Hu2	0052	A study of village fund management in Nasri Nuan sub-district, Kantarawichai <i>Mr. phongsawat Chaiyabut</i>	
3	Hu3	0027	The Guideline for Preventing and Mitigating Flooding in the Area of Palup Sub-district Municipality, Muang District, Khonkaen Province <i>Mr. Rachun Ponsiri</i>	
4	Hu4	0019	Standard operation of the assistance to the elderly of the local administration organization in Muang Khon Kaen district, Khon Kaen province <i>Miss Suranchana Prakot</i>	

Session: Poster Presentation 1. Dr. Somkiat Sripadtha Chairperson  
 Group: Business Administration and Management 2. Asst. Prof. Srisunan Prasertsang Committee  
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1	Ba1	0092	Factors that effect to learning achievement in subject's intermediate <i>Miss Duangduan Phetra</i>	
2	Ba2	0053	Cultural value efficiency to local residents from Bun Bang Fai festival: case of Suwannaphum district, Roi et province <i>Miss Ajchaereeya Phattanasakoo</i>	
3	Ba3	0050	Potential of culture tourism in Thung Ku La field : case study of Ku Ka Sing , Kasetwisai district, Roi et province <i>Mr. Sittisak Thiangnga</i>	
4	Ba4	0048	Utilizing data mining for education achievement prediction of faculty of business administration and accountancy student Roi et Rajabhat University <i>Miss Atcharaporn Jutapad</i>	
5	Ba5	0041	Study of business administration students' learning problems in accounting 1 subject, management college, Roi et Rajabhat University. <i>Miss Lalitapimta Pimta</i>	
6	Ba6	0030	Factors influencing the decision to purchase a house in Muang district, Chaiyaphum province <i>Mr. Jamikorn Kitklang</i>	
7	Ba7	0017	The auditing process of government accounting and financing at district non Thai Nakhon, Ratchasima province <i>Mrs. Amphaporn Sukkhang</i>	

Session: Poster Presentation 1. Asst.Prof.Dr.Adisak Jumwong Chairman  
 Group: Sciences and Technology 2. Dr. Thanai Surasin Committee  
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1	Sc1	0011	Watering control system for agriculture on android smartphones. case study: orchid farms in Samutsakhon <i>Miss Somjin Juntarajessadakorn</i>	
2	Sc2	0006	Use of different biofilter materials in recirculating system of nile tilapia ( <i>oreochromis niloticus</i> ) culture <i>Asst. Prof. Prachaub Chaibu</i>	



## Keynote Speakers's Full Paper

## The Academy of Research: Creating a Sustainable Future through Research and Understanding the Challenges in Research

Peter G Waterworth

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### Abstract

Research is rarely a solo activity, even solo research. Research must be conceived, constructed, processed and disseminated in appropriate settings within frameworks that have been developed and refined over centuries by trusted, wise and experienced fellow-researchers. Our peers contribute in many fundamental ways to our understanding of what research is and how it should be conceptualised. This is no more significant than in research institutes within universities where the criteria for project approval, project funding and budgeting, ethical approval and project reporting are set and monitored. Further, the acceptance of project reports is mediated by panels of peer reviewers. Research is a team activity (even, again, in solo research) because the outcomes of research are measured against the accumulated outcomes of research by other researchers stretching back decades or even further. This paper raises the question of how universities may foster and support an expansion in quality and range of research activities. What functions do university research institutes have in enhancing the quality of the work of their most experienced researchers, in encouraging and supporting new researchers and in increasing the research output of their institutes? How can they increase the creative or innovative elements of research and how can they ensure that research is conducted for productive and sustainable purposes for the benefit of humankind?

**Keywords:** research output, institutes of research, university research, research promotion, collaborative research

### 1. Introduction

Research is an indispensable and major function of universities. The dual role of universities is to create and disseminate knowledge. Research helps to create that knowledge while the dissemination of knowledge is carried out through the articulation of that knowledge and through the teaching of it to students. The measures of universities' success are generally more strongly based upon measures of research and writing rather than teaching and such measures tend to disadvantage newer universities and universities in the Asian region. Why is research such a significant part of the task of universities and how can



universities foster and encourage research activities amongst their faculty? Why, in newer universities, is there such a resistance to research and an unconscious drive to divert funding away from research and into other worthy enterprises?

## **2. The significance of research**

Universities have a unique responsibility and privilege to contribute substantively to national, social and economic development (McConnell et al, 2012, Sulo et al, 2012). They are regarded as the supreme academies of learning in which trusted and distinguished scholars, artists and scientists promote and maintain the highest of standards in creating and disseminating knowledge. Although scholars have institutional allegiances, they form part of a larger composite community of scholars extending worldwide and across time. Research is an enterprise which is undertaken with due regard to the work of current and past researchers. It is hardly an individual activity. Our research efforts depend upon the work of others who previously have brought some light to the problems we tackle. Peer researchers even sit in judgment of our own research efforts. Research may best be considered a team activity because of the interdependence of researchers and the interdependence of their findings. Research activity results in the creation of an accumulated mass of interrelated knowledge which helps us to explain and appreciate ourselves and our environment. This mass of knowledge is assembled in written form in 'the literature' or 'the research literature' and it is tested and refined over many generations of scholars. The enterprise of accumulating the literature is encompassed by a series of procedures (research methodology) and verified by a community of recognized researchers (peer review).

Research is a creative and innovative activity which attempts to identify important issues to our communities and nations, to analyse them and to test possible solutions to them. Universities therefore have a major responsibility to be aware of local, regional, national and global problems and to devote their expertise to tackling them.

Many smaller or newer universities in developing economies tend to disassociate research functions from teaching functions while the natural link between the two is often missed. Often, staff imagine their roles as either teachers or researchers and if they consider themselves to be researchers, the proportion of time they can allocate to research is far less than the proportion they devote to teaching. Research is regarded as a non-core or supplementary activity. Research can however, enhance teaching functions (Lertputtarak, 2008). Newer universities also tend to rapidly expand teaching loads which, in itself, reduces time allocated overall to research (Sulo et al, 2012). Moreover, when specialization in

teaching by some university faculty occurs, the development of greater teaching effectiveness is not necessarily assured (Ibid).

### **3. Competition in research**

Yet research is also a competitive activity. Universities realise that they need to compete with other universities in gaining research funding and in developing a strong research output (or research quantum). Funding of research is limited nationally and within universities. Measures or indices of research output are debated, framed and revised continuously and they determine fund allocation across the university sector. But more than that, measures of the status of universities are closely related to research output and help to create status rankings of universities which are publicly known and which determine funding success and student demand. For academic staff, the task is simple. Publication in well-regarded journals or with academically recognized publishers is essential for survival (Creswell, 1986, Oloruntoba & Ajayi, 2006, Hadjinicola & Soteriou, 2005 and Jauch & Glueck, 1975). Future research funding is more likely to be received by scholars who have a stronger publication record. Resources gravitate towards experienced, successful scholars.

Bibliometrics is the statistical study of research quantum in universities and has been gradually introduced to the university sector in the last three to four decades accompanied by vigorous debate on the topic (Rotten, 1990, Jauch & Glueck, op. cit.). The major reason for the move to bibliometric analysis has been the need to quantify research success across universities so that funding allocation can be made more fairly. Because of bibliometrics, national departments of higher education are able to rely upon objectively measured outcomes in determining funding decisions. Not only that, university staff themselves are in agreement that research should be a measure of academic success and productivity (Perry et al, 2000). Bibliometrics is an analysis of bibliographies, assessing the relative value of publications such as books and journal articles. Scientometrics is the statistical study of the spread or impact of ideas derived from publications especially through citations (Howard, 2012) and these are unevenly distributed through journals with most citations coming from higher impact publications (Chung, 2007). Yet again, altmetrics is the study of the spread and impact of scholarly writing in online scholarly work through analysis of social media such as blogs, Twitter and Mendeley, providing broader and faster measures of scholarly impact (Priem et al, 2012).

The hegemony held by leading researchers and their publications is similarly seen in the publication industry where commercial publishers like Trove, Elsevier, Taylor and Francis and Google have a large amount of control of privately sourced articles and books. This hegemony was opposed by the movement towards open access journals, which was greatly assisted by the Berlin Declaration on Open Access to Knowledge in the Sciences and

Humanities (Max-Planck-Gesellschaft, 2003) in which universities and publishing companies declared that they would make knowledge openly available to the public without charge. Access to the literature, particularly in institutions with insubstantial access to the global literature is particularly important. Restricted access to western literature in Asian university libraries provides a significant barrier to publication in international journals and therefore needs to be addressed primarily through online open access and then through subscription to online data sources such as Springer and Emerald.

Competition between universities as well as competition between researchers themselves for limited research resources may increase the overall quality of research and the products of research but it comes with costs and consequences. The winners continue to win and the less experienced researchers find it difficult to break into the game. A sense of exclusiveness of published researchers may develop which tends to exclude other less qualified researchers. There is therefore a need to ensure that the methods by which articles are accepted for publication remain fair and equal to all who submit them and that some level of assistance to or cooperation with younger or less experienced researchers is made available within universities or professional associations.

#### **4. Collaborative research**

Collaborative research which embraces both highly and less experienced researchers may be one solution to this problem. The growth of collaborative research globally has been dramatic and may have been fanned by a number of factors. An increase in institutional funding for research in itself has been important (Wagner et al., 2001) in stimulating greater collaboration but this has been accompanied by the rise in the use of communication technologies as a means of facilitating communicating between people in different institutions as well as different countries (Ponds, 2009) and the greater acceptance of English as the lingua franca of international publication (ibid.).

International collaboration has been reported to be growing more quickly in Western Europe and the US than in other parts of the world (Carayannis & Laget, 2004). Within the EU itself, collaboration has been progressively increasing (Ponds, op cit.), particularly since the EU has increased its funding of research which promotes collaboration between organisations or institutions in partner EU member states (Caloghirou et al., 2001). Some have suggested that international collaboration is growing at a faster pace than national inter-institutional collaboration (Ponds, op cit., Zitt & Bassecoulard, 2004) and that interdisciplinary research is growing at a greater rate than discipline based research (Ponds, op cit.). Collaboration is more likely to occur in Western academic settings, and, when it happens in developing countries,

collaborative teams are more likely to have to struggle against institutional barriers to research (Bozeman & Corley, 2004, Ynalvez & Shrum, 2011, Toivanen & Ponomariov, 2011).

Why has collaboration grown at such a pace and what are the perceived benefits of collaboration? A number of studies have concluded that collaboration, because of the very nature of mutual or team work, enhances the production of new knowledge (Lee & Bozeman, 2005, Wuchty et al., 2007, Huang & Lin, 2010). It confers a certain amount of status upon collaborators in enhanced academic reputation (Bozeman, Fay & Slade, 2013) and results in an increase in the number of citations (Katz & Hicks, 1997, Beaver, 2004) with even more citations if the work is international. Collaborative work is thought to provide better outcomes than sole work simply because collaboration provides the opportunity for the consideration of diverse and multiple viewpoints and the engagement of a greater set of skills and expertise. It is said to provide better quality research (Frenken et al., 2005) and the results of collaborative research are thought to be diffused more quickly (Singh, 2005). There are simply more people to do the work. Participants in collaborative projects also find that they are more likely to be further linked into other academic networks (Etzkowitz & Leydesdorff, 2000).

If scholars take seriously their role to act within a community of scholars in their work, then collaborative research creates a means for them to do so. Collaborative research teams with members from diverse backgrounds will help create the circumstances in which younger neophyte researchers will be nurtured and encouraged as well as be challenged by the demands of sometimes complex projects (Salim & Waterworth, forthcoming). It is vital that the research departments of universities provide training and incentives for it and that professional associations provide avenues for the publication of work from less experienced researchers.

## **5. Discussion**

Competition for research funding between universities and between researchers within universities is continuously escalating as higher education becomes increasingly internationalized and globalized. Bibliometrics provides information on universities and their researchers by counting the number of publications they produce each year, the assessed quality of the journals where their articles appear, the number of citations their articles receive, the size of the competitive research grants they receive and the status of the granting bodies. The problem many researchers have is to have a 'first' article accepted for publication in a high status journal. Researchers who are inexperienced or who are located in newer universities without a strong research culture or who are unused to writing in English face increased barriers to being published.

What can universities do to develop their research strategies and to support their budding researchers? There are a number of possible strategies which newer universities might consider to consolidate their place amongst ranks of the most prestigious research institutions.

### **5.1 Building a stronger research culture**

Institutions need to develop strategies which will demonstrate that they are committed to developing their research outcomes. Universities should

- develop institutional research foci related to their local region and arising out of the research expertise of their staff
- examine national research priorities and devise ways to match their institutional research foci to national economic development
- encourage existing staff to complete doctorates with a research focus
- appoint staff who have research doctorates or who have almost completed them.
- appoint senior staff with proven research records

### **5.2 Building a stronger research quantum**

Institutions should work deliberately to improve their bibliometric rankings.

Universities should

- develop a culture which values and rewards successful completed research and publication
- seek funding and allocate more funds to research
- provide staff incentives which recognize research success and divert funding from projects that reward seniority or that promote inter-institutional links
- provide promotion opportunities for academic staff based on research success rather than seniority
- develop Quality Assurance criteria (Harman, 2015) that focus more directly on increasing the research quantum

### **5.3 Creating inter-faculty and inter-institutional collaborative research teams**

Institutions should attempt to create collaborative research teams which are targeted towards achieving institutional research priorities. Universities should

- create diverse teams which bring together experienced and inexperienced researchers
- encourage doctoral adviser-advisee collaboration in the presentation of conference papers or research articles which represent equal contributions from each

- encourage the development of inter-institutional cooperation where research resources are allocated to the development of collaborative projects
- make use of internet based communication networks to develop, maintain, monitor, manage and report upon collaborative research projects

#### **5.4 Developing institutional links with regional industries and local government**

Universities need to have strong links to local industries and civic organisations so that they may meet community needs in their development of knowledge (PriceWaterhouseCoopers, 2015). Universities should

- create incentives for university-local collaboration
- train researchers to increase their understanding of local industrial needs and local bureaucracies
- enhance career mobility between the university, industry and the government
- provide incentives for industries' co-investment in research

#### **5.5 Developing academic staff into stronger researchers**

Universities need to focus attention on both experienced and neophyte individual researchers and develop their capabilities in order to increase their research productivity. Universities should

- identify staff research strengths and preferences
- encourage staff to focus on simple research projects which arise out of local or community needs or teaching
- develop researcher capacity in selecting reasonable, strategic and beneficial project topics, in selecting appropriate research methodologies, in searching and describing appropriate research literature, in using appropriate analytical tools, in drawing powerful conclusions and in enhancing the writing of articles for publication

## **6. Conclusion**

As public institutions that bear a key developmental responsibility within the community, universities are academies of knowledge that should produce research outcomes for the public good. Universities should engage with the regions within which they are placed and contribute to the sustainable economic development of those communities, locally and nationally. However, universities are constrained as well as enlivened by the measurement of their academic success in the form of bibliometric analysis of their research and publication outputs. There is much that universities can do to increase their research profiles including capacity building of research staff and research collaboration across

faculties and institutions. Universities within the Asian region are able collaborate to bring about such high aims and work together to produce a more sustainable world.

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## How Research on Language Can Help All Researchers

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### Abstract

Scholars today in every discipline rely on Google, Google Scholar, and other Internet searches in their work. This keynote presentation will illustrate that online searches can be used for language as well as for the concepts and sources. Furthermore, the presentation will introduce specific online search tools of language corpora, which were created for the language research method known as *corpus linguistics*, and demonstrate that these search tools are user friendly as well as extremely useful for scholars and students of any field to consult in their academic writing and speaking in order to verify meaning, usage, formality, and appropriateness for international academic communication. Although the examples will come from English, online corpora have been created for many languages and can serve as a resource for formal writing in those languages as well.

**Keyword:** corpus linguistics, language corpora, language research

### How Research on Language Can Help All Researchers

Since ICREAMS is an international conference focused on research, it is safe to say that the readers of its proceedings are involved in some type of research and want to use a formal academic style of their own language or of English in presenting their research findings in written articles or in conference presentations. It may seem an exaggeration to claim that language research can help all researchers, but I hope to demonstrate there are a few language research tools that all scholars can use to help in their own use of English for professional writing and speaking, in for example, titles, abstracts, papers, and presentations.

Before delving into the main thesis, an overview of *language research* may help clarify how broad this term is. Research about language attempts to answer many different questions, such as

- How do people learn language?

- How do languages work (inside the brain, mouth, etc.)?
- How do languages differ from one another?
- How do languages change over time?
- How do languages vary among speakers of the same language?

Answering questions about all of these areas helps us find effective ways of teaching language and using language in teaching and researching other subjects. If we know how people process language, we can improve our understanding of how the brain functions. Understanding the brain can help us to teach new processes more effectively. For example, research may assist in developing more effective techniques to teach people to hear and make speech sounds that don't exist in their language, such as [θ], which exists in English but not Thai. Research can help us more effectively teach tones, which exist in Thai but not English. Language change and language variation both make language learning difficult; hence, language education needs to keep abreast of the current language and determine the language variety that people in a given context need to learn to use.

Because language research uses methods of structured inquiry from various disciplines. In language research there are many methods for data collection and analysis that are considered appropriate: surveys, interviews, self-reports, focus groups, case studies, experiments, observations, text/speech analyses, and corpus studies. Often, these are combined into robust mixed-method research. As in all disciplines, each research method is appropriate to the types of questions asked. For example, surveys, interviews, self-reports, and focus groups are used to collect information on people's perceptions. Carefully controlled experiments are needed to collect data on the effectiveness of teaching. The research method I would like to focus on here is one that has become more available in the electronic age, that of corpus study, and it is the one that all scholars can employ by themselves not to conduct their research but as a tool to improve the language that they use in their academic presentations and papers.

We can define *corpus* as a sample of authentic text (written or spoken). **Hence**, corpus research essentially entails taking a large amount of language and analyzing it. *Authentic text* is one in which the language sample is obtained from a real-life situation and not something that someone created to use as an exemplar. For example, when I made audio recordings of young children's language while they were playing, the recordings were authentic texts. If I tried to imagine what they might say and imitate children's speech, that would not be authentic. In short, authentic texts are primary data and not secondary data or constructed models.

Because the word *corpus* comes from Latin, meaning *body*, we also use the Latin plural, *corpora*, when we talk about more than one corpus. Corpus research is not new, but it has changed drastically since the invention of the Internet. Before large digital collections of language, people manually searched through documents or tape recordings and made paper notes on what they read or heard. Today there are corpora for many languages on the web including ones for Thai and Vietnamese developed by SEALang Library, which I have listed in the Resources. In the interest of time, I will focus only on the largest corpora for English because most questions are best investigated using the largest possible database.

Corpus research is immensely useful to linguists and other scholars of language. As a linguist, I have conducted various corpus studies and like to use them to debunk common myths about English. One of my corpus studies found that one-syllable adjectives have for at least three centuries used both *-er* and *more* for comparison, as in *fairer* or *more fair*. Another such study demonstrated that formal texts by prominent authors have long used *they*, *their*, and *them* as singular pronouns (as in “the student transforms the inert information passed to them” (Dewey 1916). These pronouns are still used as singulars in academia, as the following examples illustrate:

1. “**Each sophomore** submits a list of texts to **their** tutors for review by Wednesday, April 25.” Harvard University Syllabus  
<http://histlit.fas.harvard.edu/sites/all/supporting/97syllabi/97-2012-Am1.pdf>
2. “**Any student** seeking to make up missed work pursuant to the above listed “excusable” reasons must inform the instructor of **their** intent in a timely manner.” California Polytechnic University Policy on Class Attendance.  
<http://www.academicprograms.calpoly.edu/content/academicpolicies/class-attendance>
3. “Academic honesty boils down to three simple but powerful principles:  
[1] When you say you did the work yourself, you actually did it.  
[2] When you rely on **someone else’s** work, you cite it. When you use **their** words, you quote them openly and accurately, and you cite them too.” (Lipson 2004. P. 3)

Literature scholars likewise use corpora when they analyze literature, for example, to compare the phrases used by two different authors or to determine authorship based on the kinds of language used.

Corpus research is not the exclusive domain of language scholars, however. There are many questions anyone can answer using corpora in order to improve their academic writing and speaking in any language. For example, when writing in any language, scholars may not be sure of the exact meaning or formal usage of a word. Perhaps they are uncertain whether a particular word or phrase is too idiomatic for formal academic writing. Likewise, the scholar may not be sure the word or phrase is used in other countries, particularly if the language is one spoken widely, as English is. Google searches already provide an excellent illustration of the way that people search through corpora by using key words, but the corpora compiled specifically for academic use are much more appropriate for finding answers about academic language.

Starting with the first of these three areas, let us examine an example of using corpora to find meaning or usage. A word whose meaning may not be obvious is that of *doctored*, and if used incorrectly, could lead to a serious misunderstanding. An examination of *doctored* in academic sources in the COCA corpus yields 19 entries. Let us examine the first entry, from Sri Lanka, in detail:

Tissainayagam was arrested by the Terrorism Investigation Department (TID) in 2008, and then kept in prison for months while the TID debated what to charge him with. Under threat of torture, Tissainayagam was forced to sign a "confession " saying that he had lied in two articles he wrote in 2006 about the government's bombing campaign against the LTTE. To bolster their case, the TID then **doctored** the confession to make it look like Tissainayagam was on the LTTE's payroll. None of these irregularities prevented a Sri Lankan judge from accepting the confession and convicting Tissainayagam for inciting "communal disharmony."

The above use of *doctored* is quite typical: in simpler English, someone doctored a confession to make it look different. 17 of the other 18 entries are similar as can be seen from the words that follow *doctored* in the sentences: *version* – 2 times, *image(s)* – 4 times, *photos*, *photograph*, *pieces*, *voter rolls*, *blood*, *bundled*, *excerpts*, *record*, *copies*, *lists*, and *sugar*. Only one other construction is cited:

Public perception of evolution has been so spin **doctored** that we have managed to retain an interpretation of human importance scarcely different, in many crucial ways, from the exalted state we occupied as the supposed products of direct creation in God's image.

Even in this construction, the general meaning of *doctored* is the same, that of changed or altered to misrepresent the truth. Photographs or images are regularly doctored using PhotoShop or GIMP to misrepresent people by adding, removing, or changing them. Furthermore, the reader will also see that it is usually people or groups of

people who doctor things, so the sentence must clarify who doctored what and for what (usually illegal or unethical) purpose. A researcher who searches the corpus for word meanings can thus read through the entries and gain a general idea of the meaning and usage of the word.

Using a corpus to find usage is not limited to single words; it can also be used for phrases. Let us compare *in contrast* to *on the contrary* to see how they differ. First, COCA indicates that *in contrast* has 10,410 entries, which is about 4 times more common than *on the contrary*, which has 2,361. It is impossible to present all of the thousands of entries here. Presented with that many entries, the reader can scan for patterns of meaning and usage.

Two examples will illustrate the meaning and usage of *in contrast*:

1. After all, the countries most committed to the traditional family, such as Germany, Italy, and Japan, have the lowest birthrates. Countries with high birthrates, **in contrast**, usually also have large numbers of children born out of wedlock.
2. Turkish women have lost ground in economic life: Only 22 percent sought employment in 2009, down from more than 34 percent in 1988. **In contrast**, 54 percent of South Korean women work.

In the first example, countries with traditional families are different from countries with non-traditional ones in their birth rates. In the second, Turkish women are contrasted with Korean women in whether they work or not.

Comparing the above examples with those below will provide the contrast with *on the contrary*:

1. Unlike the Neurosurgery offices, it wasn't lavishly decorated. **On the contrary**, the carpet was worn in spots, and some of the seats creaked...
2. Your teeth also yellow with age but that doesn't mean they're not healthy.

**On the contrary**, ultra white teeth could be bad...

*On the contrary* is used in the first sentence above to contradict the claim that the office was lavish. In the second, the author contradicts the claim that healthy teeth should be white. *On the contrary* often begins with a negative clause as it does in both of these sentences: "it wasn't lavishly decorated" and "that doesn't mean that they're not healthy." What follows *on the contrary* is often a stronger counter-claim that the opposite is true.

From this comparison of *in contrast* and *on the contrary*, we can see that the former simply finds a difference between two referents while the latter contradicts a claim by first rejecting it with a negative clause and then claiming the opposite.

Another area in which researchers can use corpora is to examine whether language is formal enough for academic use. Writing academic papers is difficult in one's first language, which is why universities offer freshman writing classes, but writing in a second language is an even greater challenge, and as English is now used at international conferences, there is a global need for resources to help scholars write in English. As previously mentioned, I have used corpus studies to show that the word *they* can be used to denote a singular in formal academic writing. Any scholar can employ either Coxhead's Academic Word List (AWL) or COCA's search of academic texts to see if a word or expression is formal. #13 For example, let us compare the words *unusual* and *weird*. The following table displays the results from the COCA corpus:

	COCA Total	COCA Academic - N and % of Total
<i>unusual</i>	18,245	4,770 (26%)
<i>weird</i>	9,000	612 (6.8%)

While *unusual* appears only twice as much as *weird* in COCA's total entries (18,245 to 9,000), it appears almost 8 times more often (7.79) in academic entries. Furthermore, about one quarter (26%) of the entries for *unusual* were from academic sources as compared to only 6.8% of entries for *weird*. Clearly, *unusual* is more preferred in academic writing, and *weird* would be a weird or unusual word to use.

A second example of a word we might question in academic writing is *kid* or *kids* to mean child or children rather than goats.

	COCA Total	COCA Academic – N and % of Total
<i>child</i>	360,478	111,063 (30.8%)
<i>kid</i>	111,375	584 (0.5%)

We can see immediately that while *kid* occurs about one third as often as *child* in COCA, it occurs only 584 times in academic texts, which is a miniscule .5% of its total and also 0.5% of the academic entries for *child*. Obviously, serious academic writing avoids the word *kid*.

The final area to explore here is where particular words are used geographically. Let us start with a simple comparison of some differences in the words English has for disposal containers, namely *dust bin* and *waste paper basket* for paper and other dry items and with *garbage can*, *rubbish bin*, and *trash can* for waste from the kitchen or

other wet areas. For this kind of geographic variation, Google Trends is an extremely useful tool as it provides maps such as the following:

*dust bin*



*waste paper basket*



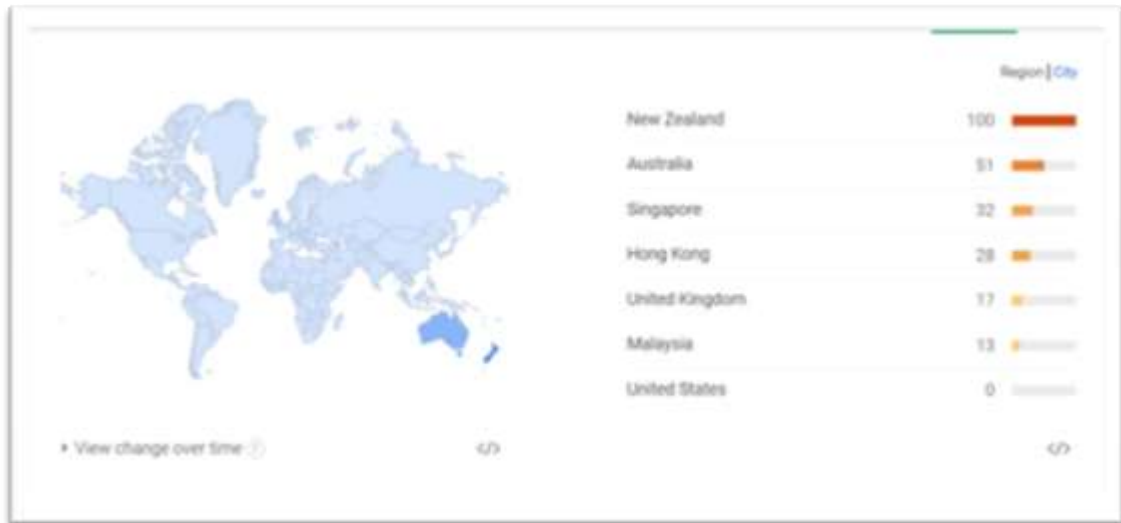




*trash can*



*rubbish bin*



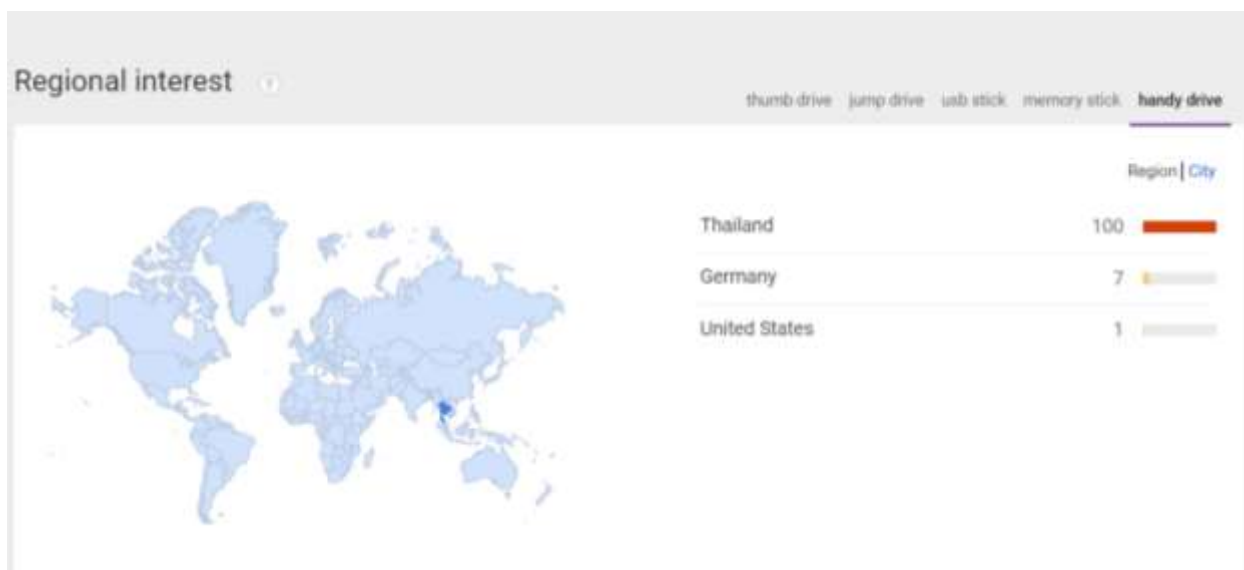
A summary of this distribution is below:

- **Dust bin** – India, UK, (US)
- **Waste paper basket** – UK, US
- **Garbage can** –Canada, US, Philippines, Australia, (India, UK)
- **Rubbish bin** – New Zealand, Australia, Singapore, Hong Kong, (UK, Malaysia)
- **Trash can** – US, Philippines, Canada, (New Zealand, Australia, Singapore, UK)

From this we can see that *dust bin* is the common term in India and the UK while *waste paper basket* is the common term in the US. For wetter items, North America uses *garbage can* or *trash can* while Oceanic countries like New Zealand and Australia use *rubbish bin*.

We can also use Google Trends to see the expansion of new words. A study I am conducting now is examining words people use for a small computer storage device that has a USB connection. When my survey is complete, I will compare my survey results from various countries to corpora such as GloWbE and to Google Trends, but it is interesting to see what Google Trends has, particularly as it applies to a couple of countries. One such country is Thailand, and the map below illustrates quite clearly that *handy drive* is almost exclusively a Thai expression.

*handy drive*



This contrasts with ‘pen drive’, which is found almost exclusively in Brazil, South America and in one city in India. Such limited geographic usage of *handy drive* and *pen drive* demonstrate the power of searching corpora to determine whether a word or expression is used outside of one’s own country.

An excellent English example of this in Thailand is *freshy*. Using two corpora, COCA for US English and GloWbE for a global view of countries where English is the primary language, we can compare *freshy* with *freshman*, another word for first-year students.

	COCA Total	COCA Academic	GloWbe
<i>freshy</i>	3	0	16
<i>freshman</i>	8803	1,281	7,187

You probably can see that this list of entries for *freshy* is short; it has only 3 in COCA and 16 in GloWbE. In COCA two are misspellings for ‘freshly’ in ‘freshly ground black pepper’. The second is a proper noun, Miss Freshy. Likewise, in GloWbE, 2 are misspellings for ‘freshly’, 4 are a type of water snake found in Australia, 5 are proper nouns, and 3 are used to mean first-year student by two speakers, twice from someone in India and once from a person in Kenya. If *freshy* were a common term for first-year student, it should have many more entries. Furthermore, the British National Corpus had no entries for *freshy* at all.

Let’s compare *freshy* to *freshman*. As Thailand is not included in the GloWbE corpus, we cannot compare it to the other countries, but another site worth looking at for *freshy* is Youtube. Youtube videos that came up on a search for *freshy* were predominantly Thai with only two from India. Faced with such results, we have to conclude that *freshy* is not in general use, is largely confined to Thailand and possibly a

couple of other countries and would not be appropriate to use in an international presentation or paper.

Most scholars today rely on Google, Google Scholar, and other Internet searches in their work. The examples provided here illustrate that searches can be used for the language they use as well as for the concepts and sources they employ. Language corpora were created for language research, but they are user friendly enough for scholars and students of any field to consult about the language they are using to communicate about their research.

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## Invited Keynote Speech

## **The Academy of Research: Creating a Sustainable Future through Research and Understanding the Challenges in Research**

By Dr. Mean Sothy  
Vice President for Research  
University of South-East Asia

### **President of Roi Et Rajabhat University, Keynote and Invited Speakers, Distinguished Guest, Ladies and Gentlemen:**

On behalf of the President of University of South-East Asia (USEA), Siem Reap, Cambodia and myself, I am very pleased to be invited by Roi Et Rajabhat University (RERU), Thailand, to participate in the 1<sup>st</sup> International Conference on Research in Education, Arts, Management, and Sciences (I-CREAMS) today. This is the first time for me and my colleague, Dr. Ngel Rattha, Dean of the Faculty of Economics, Business, and Tourism to visit Roi Et province especially participate the international conference organized by RERU.

I would like to take this opportunity to inform all participants that RERU is a good partner of USEA with which we signed an MOU on November 27, 2014. We've done many activities together in terms of study visit and teaching practicum.

Today we are going to talk about "Academy of Research: Creation of Sustainable Future and Challenges in Research" in the scope of Cambodia.

#### **OVERVIEW OF CAMBODIAN HIGHER EDUCATION**

Higher Education Institutions (HEIs) in Cambodia was first established in 1940s. The 1960s marked the beginnings of modern higher education in Cambodia, especially with the establishment of the Khmer Royal University by Prince Norodom Sihanouk in 1960. Between 1964 and 1967, eight universities were established: the Royal Technical University (1964), the Buddhist University (1965), the Royal University of Agronomic Science (1965), the Royal University of Kampong Cham (1965), the Royal University of Fine Arts (1965), the Popular University (1966), the Royal University of Battambang (1966), and the Royal University of Takeo-Kampot (1967). An unprecedented number of Cambodians were enrolled in these institutions – estimated figures range from 5,300 to 14,560 (Clayton & Ngoy 1997: 24).

The initial spurt in the development of universities, however, was not accompanied by a concern with the quality of education and by proper planning in terms of finance,

staffing and resources (Ayres 2000a: 50-52). The rise of tertiary education was truncated when the King Sihanouk was ousted from power in 1970 following a coup d'état by Lol Nol. More significantly, the country fell under the control of the Khmer Rouge in 1975. Under the Democratic Kampuchea regime, educational buildings and facilities were destroyed, and it is estimated that 75 percent of tertiary teachers and 96 percent of university students were killed (Chamnan & Ford 2004: 339). The regime ended in 1979, but much of the educational infrastructure had already disintegrated from deliberate destruction and neglect (Ayres 2000a: 126-127; cf. Ayres 1999: 207).

The reborn of HEIs in Cambodia was in 1980s focused on rehabilitation and establishment. After that in 1990s HEIs started reforming, restructuring and developing. Private HEIs and fee-paying in public HEIs was established since then. 2000s were the years of mushrooming HEIs, especially private HEIs. Nowadays, there are 110 Higher Education Institutions (HEIs) include 44 public universities (14 supervised by different ministries) and 66 private universities. The total number of students is around 250,000.

#### TOWARDS RESEARCH-ORIENTED UNIVERSITIES

In developed countries, universities are essential components in “national innovation and science systems”, especially with the increasing emphasis on global competitiveness; hence the rise of “research-oriented” universities, whose key features tend to be similar across the board. Below are some *Characteristics and Requirements of a Research-oriented University*:

- Full-time academic staff with a commitment to research. This might seem obvious, but many universities in Cambodia lacking professors capable of doing research.
- Work responsibilities that recognize that research is part of the job – teaching loads that are not too high.
- Infrastructure at the university that will support research – libraries, internet access, laboratories, supplies, equipment and the like. These facilities must be kept up-to-date and similar to those found in the most advanced universities.
- Quality students, especially at the graduate level.
- A research university must offer doctoral degrees and place considerable emphasis on graduate/professional degrees.
- Adequate financial support – including in all cases from governmental sources.
- Academic freedom and a culture of inquiry.
- The role of the English language.

(Source: Altbach 2004b, as quoted in Meek & Suwanwela 2006:13)

## CURRENT STATE OF RESEARCH CAPACITIES IN CAMBODIA'S UNIVERSITIES

The lack of research capacity may stem from deeper cultural traditions in Cambodia. In the traditional teaching, the teacher leads and students passively follow. Learning without a teacher, which is the essence of research, goes against this tradition". The assertion (using almost the same words) and, in addition, makes an observation about reading materials in the Khmer language. However, this "culturalist" argument can also be overstated in a deterministic or an essentialist way, especially when it is presented as an invidious contrast between "Western" and "Eastern" civilizations. Hierarchical social structures and teacher-led pedagogies, as well as rote learning in early schooling, have been aspects of traditional East Asian countries such as China, Japan, and South Korea and in Southeast Asian countries such as Thailand, Malaysia and Indonesia.

Yet there is clear evidence of increasing research capacities at universities in these countries. In any case, sustained development of modern basic and tertiary education is a relatively recent development in Cambodia. A "research culture" at universities does not develop automatically or within a short time frame. Thus, it is important to note that university research has not received any significant or concrete emphasis in Cambodian national policy. In *The Rectangular Strategy for Growth, Employment, Equity and Efficiency in Cambodia* (2004: 18), it is stated that:

*The Royal Government is committed to achieving the goal of "Education for All" by ensuring equity in the attainment of nine years of basic education for all children and enduring access by the children of the poor households to education, especially by improving the quality and number of public education institutions and providing more scholarships to poor students. The Royal Government will continue to strengthen its partnerships with the private sector and the national and international community to enhance and improve the quality of education services, both in vocational and technical training and in higher education, consistent with international standards and the development needs of the nation.*

This indicates general willingness on the part of the Cambodian government in reforming the higher education system, although state funding has clearly concentrated mainly on basic education. However, consistency in the quality of higher education with both "international standards and the development needs of the nation" entails significant state investment in building up research capacities in public universities as a national policy priority.



## CHALLENGES OF DEVELOPING RESEARCH CAPACITIES

There are two salient features figure prominently in the majority of the universities in Cambodia. First, the universities function primarily – some almost exclusively – as teaching and degree-granting institutions. Second and as a corollary, in many universities, lecturers are not expected to – and do not – conduct research as part of their academic responsibilities. When asked about the state of research at their universities, officials tend to think of “research” in terms of student research or research as part of degree requirements.

In particular, the private universities have clearly not emphasized faculty research. They place strong emphasis on market-driven education and training programs because of revenue generation from fee-paying courses. Although research is conducted in the some specialized universities, the actual research output of these institutions appears to be modest and uneven. The positive lessons from these cases will be considered in the next section on opportunities for strengthening research capacities.

In most universities, research methodology courses and research projects (usually in the form of a graduation thesis) are incorporated into the undergraduate program. Not all students, though, get to conduct research before graduation due to varying levels of financial support. Only the top ten or twenty percent of students are allowed to write graduation theses. Moreover, there is a perception among students that research consists primarily of library or online research.

More importantly, the fact that lecturers in general do not conduct research also suggests that university teaching is for the most part not research-based. There are concerns expressed about the quality of university teaching, especially in terms of curriculum design and content – this deserves a separate study.

With the lack of institutional emphasis on research in most Cambodian universities, it is not surprising to highlight that Cambodian universities is lacking of a research culture. In particular, “Cambodian culture” is characterized as lacking a spirit of inquiry; students acquire knowledge through rote learning and accept what has been taught by the teacher. In such a culture; what absent is “a culture of inquiry and a sense that the world is a fascinating place to be explored”.

Beside culture there are more reasons as follows:

### A. Cultivating Newer Generations of Researchers

One specific consequence, after the Khmer Rouge era, is “structural”. Cambodia was a near-total loss of an entire generation of academics, many of whom might have studied overseas or earned higher degrees and, in any case, could have played important leading

roles in Cambodia's public universities. Those who survived the Khmer Rouge era or have returned from abroad are too few and far between, and the lack of a critical mass of committed academic leaders has serious implications for institutional memory and generational renewal.

Yet, there is some realization that it is no use bemoaning the structural fact of a "missing generation" and the urgent task today is to cultivate newer generations of highly-educated academics.

Low numbers of faculty with PhDs hinder the building of research capacity in universities. With a critical mass of faculty who have experienced conducting independent and intensive research for their doctoral training, universities are better enabled to achieve the following: a) institutionalize research as a component of an academic vocation; b) develop research-based teaching that goes beyond the pedagogy of upper secondary teaching or skills training; c) identify and nurture younger research-oriented faculty to take up university leadership roles, including research mentors; and d) build up quality postgraduate programs, which can in turn, educate a newer generation of researchers.

## **B. Revising Academic Salaries**

Working conditions at public universities are determined by state investment in higher education. The Cambodian government offers much less financial support for higher education since basic education and functional literacy remain primary concerns. On one hand, this is understandable, Cambodia has reached the stage where state support for higher education needs to be significantly increased – not least because the provision of lower levels of schooling have now created a demand for places in universities. Since the amount of resources allocated for teaching has to be maintained due to increasing enrolment rates, the funding for research is severely limited in many universities – even though the lack of research capacity has implications for the quality of undergraduate teaching.

Academic salaries remain low, especially at public HEIs. In effect, fee-paying programs and the enrolment of fee-paying students constitute an indirect way for lecturers to be better paid by teaching extra hours and for public universities to supplement their modest budgets with generated income. With low salaries in any given university, lecturers tend to – or are compelled to – teach at a number of other institutions. It is reported that some lecturers may teach up to a maximum of ten hours a day, six days per week. In any case, with added teaching hours at other universities, especially the private HEIs, monthly incomes for lecturers are reported to be between USD200 and USD700. This, though, also depends on the levels and disciplines taught and

the choice on the part of lecturers to moderate their additional part-time teaching for the sake of conducting research.

However, the impact of long teaching hours on pedagogy and learning at universities deserves serious consideration. Lecturers have limited time to prepare for lessons and update teaching materials, especially based on knowledge of newer literature and actual research experience. More specifically, since one's income is directly dependent on contact hours, faculty members tend to focus only on lectures, and have reportedly omitted written assignments as part of the requirements for earning credits. One interviewee observes that "teachers avoid written exercises as it involves time for grading, which does not count towards contact hours; they also do not conduct tutorials – which have come to be seen as "not counted" as the credits awarded for a course are based only on lecture hours".

### **C. Developing Academic Professionalization**

Cambodian universities, especially the public universities, lack a well-defined system of professional ranks and career tracks in which promotions and salary increases are mapped out for academic staff. This is a most glaring systemic weakness, which cannot be addressed from only within a university; it has to be addressed at a national level and from a national perspective.

To be sure, Ministry of Education, Youth and Sport (MoEYS) has already identified the need for a proper academic track for university lecturers when it listed the following under "main programs and activities" in its Education Sector Support Program (ESSP) document (2005a: 14): "Develop criteria for university teachers' status / title based on qualifications, experience and capacity". However, the team has not come across any evidence to indicate that this intended MoEYS exercise is underway. Yet the urgency is greater than ever before if we consider the need to develop research capacity in Cambodian universities. It will not be possible to establish a professoriate (with ranks such as Assistant Professor, Associate Professor, and full Professor, or their equivalents) within a short time frame. This should be done carefully and consistently across universities – in ways that recognize the contributions of each academic justifiably and transparently. The fundamental task of defining clear criteria for professional ranks, including qualifications, experience, responsibilities, and performance, is long overdue.

### **D. Addressing Brain Drain**

Young Cambodians who have received their postgraduate education in foreign institutions are relatively well-trained in conducting research. The time that they spent overseas also allows them to establish networks with their peers and professors within the larger academic community. However, such young Cambodians are "pulled in every

direction” because “there are more places that well-educated people can go”. Low teaching salaries and lack of career tracks and research opportunities provide little incentive for individuals holding advanced degrees to remain in academia; therefore, few become lecturers or take up research positions within universities.

The ‘brain drain’ from universities – or what one calls “internal hemorrhage” – especially to the government or private sectors. Those who remain in universities have to confront practical issues relating to salaries, and may need to increase their teaching hours substantially, leaving little or no time for engaging in research activities. Once they lose touch with research engagements because of their teaching load, they also tend to lose their links with the academic community, making attempts to re-engage in research thereafter even more difficult.

#### **E. Improving Research Facilities**

Basic research facilities (e.g. libraries, laboratories) are presented in most universities, but there is an uneven spread of facilities, with some institutions lacking in more specialized facilities for natural and social science research. A small number of universities offer specialized research facilities that are specific to their own academic focus. Furthermore, internet is generally available, but access is limited and speed may be slow

#### **F. Ensuring Budget Allocation for University Research**

There is a relative absence of any government budget allocation for research activities in public universities. One exceptional case is Royal Academy of Cambodia (RAC), which reported that government-supported research amounts to 40 percent of all sources of research funding, the actual sum is rather modest and insufficient for promoting quality research – about USD10,000 per year. Some universities also have funds flow from international projects involving overseas universities and agencies but it is still not enough. As for private universities, it would appear viable for part of their revenue from fee-paying students to be used for funding research activities and higher salaries for teaching staff (which would allow them to decrease their teaching load and become more active in research). However, it is not revenue generation but budget allocation that is crucial in developing research capacity.

Most private universities do not regard research as a priority, not least when they are oriented towards profitability – even though research can help a university improve teaching quality and raise its profile. With public universities admitting fee-paying students to supplement their revenues, it might be thought that the additional funding could go towards improving the salaries of university teachers and providing support for research activities.

### **G. Consolidating Academic Leadership and Administrative Management**

Many universities have some form of research board or committee or office to supervise research activities, but in the absence of clear research policies the roles of these bodies remain ill-defined and their effectiveness in implementation is questionable. Some research bodies are in charge of student research. There is also little conscious planning in the establishment of research centers, and when asked about such arrangements some universities even report laboratories and libraries as research centers, which indicates lack of understanding of units fully dedicated to spearheading new research.

At the broader level, the “largest obstacle” for universities in developing research capacities is the lack of autonomy. The government officials at the highest levels “sit at the top and dictate what they feel is good for national development, but [the problem is] they do not have a complete vision or experience with higher education.” One reason given is that those appointed to serve in ministry or accreditation committees may also not be in a position to exercise judgment because they themselves have not earned advanced degrees.

Within universities, the style of management is also instrumental in retaining young Cambodians who have returned from abroad. Young people who are trained overseas will not accept old models of management that are based on centralized decision making. This highlights a potential area of conflict between the older and younger generations of teaching staff in universities, and raises questions as to how the exit of the old and the entry of the new could be managed.

### **STRENGTHENING RESEARCH CAPACITIES**

Regardless of the challenges of developing research capacities in Cambodian universities, a number of positive examples that illustrate initiatives undertaken by some Cambodian universities can be highlighted:

- At Royal University of Phnom Penh (RUPP), the momentum for research as an institutional priority was first created in late 1996 when the university organized an International Conference on Khmer Studies, garnering support from donors for its research activities and capacity training programs. A growing number of lecturers are involved in research collaboration with local and international partners, and with support from donor agencies or from international partner universities. Some other universities have actively engaged in applied research to solve practical problems, often with the funding of and in collaboration with overseas institutions.

- Institute of Technology of Cambodia (ITC) is a case in which there is a conscious policy to moderate the teaching load of research-active lecturers, who teach half the required number of hours per academic year (i.e. 192 out of 384 hours) but are paid on a full-time basis. The research covers a wide range in engineering and technology, especially in topics related to environmental studies.

- Some universities, USEA is one of them, place their research office applied for and received Asian Development Bank (ADB) and/or World Bank. They have done well in producing research materials and procurement for goods, work, and services.

- The numbers of Cambodians who have received scholarships to pursue higher education overseas have increased over the years, and their exposure to other academic environments and research traditions may help change the culture of research in Cambodia in the long run. This, however, rests on both the quantity and quality of university teachers and researchers, and so much will be contingent on improving their working environment.

- Research-oriented lecturers tend to have already earned a post-graduate degree from a university of international standing – in particular, in research-based PhD programs in which the candidate has actually experienced doing thesis research and writing a dissertation. Such lecturers bring their research experience to their university careers and are personally motivated to continue with academic research.

- In light of the lack of government or university research funding, these lecturers also attempt to match their specialized research interests with the needs of funding agencies. To be sure, there are financial incentives for research work; instead of part-time teaching, they can also earn additional income as part-time researchers or consultants in funded research projects.

- These lecturers also benefit from research mentorship and advice from visiting professors and expatriate researchers, if indeed their universities have the presence of such scholars on campus.

- Support and encouragement from the university leadership is important because this shows that research is a necessary and valuable part of a lecturer's work.

- The involvement of students in faculty research is a “win-win” situation for both lecturers and students; lecturers are offered research assistance and students gain practical research experience which goes beyond what they learn in research methodology classes.

### **DEVELOPING MORE FACULTY-INITIATED, UNIVERSITY SUPPORTED RESEARCH**

With the near absence of state funding for university research, Cambodian researchers based in universities have been involved as collaborators or consultants in projects funded by donors, aid agencies, international non-governmental organizations (NGOs), and foreign universities. This also allows lecturers to earn additional income to supplement their salaries without additional part-time teaching and to remain active in research activities at the same time. This has been a way of breaking out of the vicious circle of low teaching salaries, long teaching hours, and low levels of research activities. That said, it is questionable whether this contributes to the building of sustainable research capacities within Cambodia's universities in the long run.

The role that Cambodian universities play in the constellation of knowledge production in the country is arguably modest, even though they play a major role in addressing the demand for undergraduate education. This raises further questions about how research capacity can be further developed to be on a par – and in collaboration – with other research institutions in government, civil society, and the private sector.

### **RECOMMENDATION FOR RESEARCH SUSTAINABILITY**

In the state level, fund allocated from the Government for research activities has to be made regularly and equity between public and private universities. Cambodia Society Research and Development (CSRDR) should be established in order to support research activities. Furthermore, professorship is one of the most important criteria to promote research activities. In the institutional level, each university should produce research promotion policy and develop human resources in terms of research capacity building. More importantly, each university should promote research culture to the faculty members and students.

### **Ladies and gentlemen!**

Once again, I would like to express my profound thanks to Roi Et Rajabhat University for inviting us to participate in this significant conference. Finally, I wish RERU and participants success in all undertakings.

Thank you!

## Full Paper



## Education

**Strategies for Research Management of Mahamakut Buddhist University :  
Sri Lan Chang Campus for Enhance Result of Educational Quality Assurance.**

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**Abstract**

This paper research aimed 1) to develop strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus. 2) to analyze strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus. The proposed Strategies for research management obtained: plans and projects. This research is participatory policy research with two phases of conducting research, as followed: The First Stage was developing Strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus. The Second Stage was analyzing Strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus. Based on suitability, feasibility, usefulness, and acceptance.

The results finding: Strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus, followed by 5 components were: The research productivity development consisted 3 plans, and 4 projects. The knowledge management consisted 2 plans, and 6 projects. The resource supporting consisted 2 plans, and 2 projects. The research publishing consisted 1 plans, and 2 projects. And The exploiting research consisted 2 plans, and 3 projects.

**Keywords:** Participatory Policy Research, Strategy, Research management.

**Introduction**

Higher Educational Commission provided the Second Long Range Plan on Higher Education of Thailand (2007 - 2022), the essence was higher educational institutes will be important mechanism to enhance competencies of Thailand toward international level, through human development, productivity of innovation and wisdoms by research and development system for the purpose the manufacturing sector, infrastructure and leverage the strength of holistic society. Moreover, Higher Educational Commission provided promote research project in higher educational institutes and enhance the higher educational institutes level toward National Research University for encouraged and promoted higher educational institutes in 2009. Vision of National Research University

project to Thailand would to have a world class level National Research University in context and identity of Thailand, consisted 3 objectives were; 1. to enhance all university level of Thailand toward higher research competency and enhance the high competency universities toward The National Research University, 2. In order to produce high level manpower in various disciplines that can respond to both community development, innovation sector and industrial sector led to an increase in the competitiveness of the country on the international stage, 3. to developing Thailand into a hub of education, research and development, and an international training in Asian region. The event has two main activities were development of national research universities and promoting research in higher education institutes. [1]

Vision of Mahamakut Buddhist University: Sri Lan Chang Campus have been “An educational institution producing graduates fully-equipped with good knowledge and behaviour, who earn their living according to holy abiding; a source of Buddhist knowledge and scholars capable to guide the society and end all debates on Buddhism academically; and an institution acclaimed for its good governance meeting the global standards.” And 4 missions are 1. The producing graduates in the field of Buddhist studies with high quality and standards both of knowledge and conduct in accordance with the holy abiding, 2. providing public services on Buddhist studies, whilst acting as a centre of Buddhist learning, 3. Attempting to preserve and promote national arts and culture; enhancing the society’s immunity against the influx of inappropriate culture; and maintaining Thai nationalism in consistence with Buddhist practices and culture, and 4. searching for new sources of knowledge on Buddhist studies, sociology, arts and culture. [2]

The 11th development plan of Mahamakut Buddhist University: Sri Lan Chang Campus (2012 – 2016) provided mission of research consist to 1. Increase productivity of research on Buddhism and social science, consist to 4 measures are: 1. Developing personnel to increase knowledge about research methodology via training together with other institutions and provide funding for research to be sufficient, and 2. Provide institute of research management for effectiveness, 3. Encourage research into the issue is urgent of the campus and local society, and 4. Publishing researches of Sri Lan Chang Campus via collaboration with other institutions. 2. Joint research with other institutions both domestic and foreign, consist to 2 measures are: 1. Encourage to joint research between institutions or other entities, 2. Provide to exchange of information of research between institutions. (Mahamakut Buddhist University: Sri Lan Chang Campus, 2013).

Mahamakut Buddhist University: Sri Lan Chang Campus be assessed the implementation of Internal Education Quality Assurance on 19 – 20 December 2014 result that 4th component, Research was lowest score ( $\bar{X} = 1.98$ ) and was in improve level. [3]

Thus, the researcher as the Research Statistical Data and Information Sector of Mahamakut Buddhist University: Sri Lan Chang Campus, interest to study Strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus for take advantage of the work, and achieve the goals and mission of Mahamakut Buddhist University : Sri Lan Chang Campus.

### Materials and Methods

This research had Objectives were: 1. To develop strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus. And 2. To analyze strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus.

Researcher studied and reviewed all above of concepts, theories, and Related Researchs all above, Then, researcher have formulated a theoretical framework for research management strategies of Mahamakut Buddhist University: Sri Lan Chang Campus were:

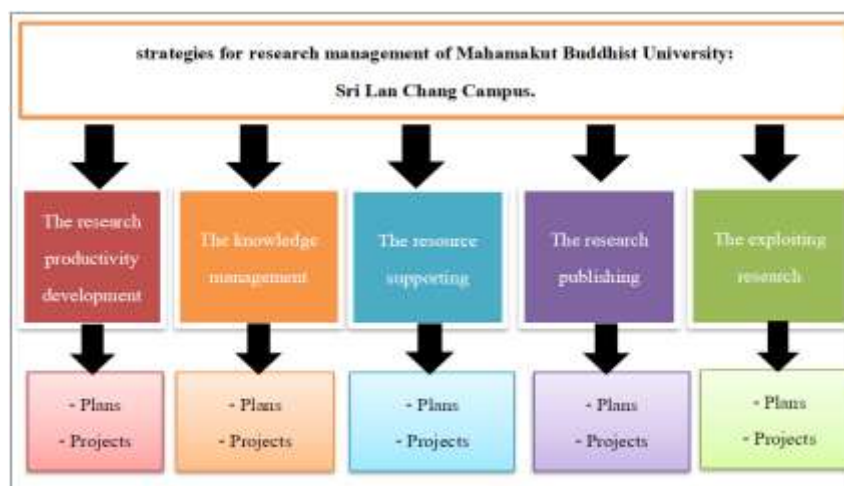


Figure 1 Research Framework

This research was participatory policy research (PPR) with two phases of conducting research, as followed: The First Stage was developing research management strategies of Mahamakut Buddhist University: Sri Lan Chang Campus. The Second Stage was analyzing research management strategies of Mahamakut Buddhist University: Sri Lan Chang Campus. Based on suitability, feasibility, usefulness, and acceptance. The research

is mixed methodology consisted to quantitative research was survey research, which was used to collect data and analyze quantitative. qualitative researchs, which uses techniques and several tools; the document research, In – depth Interviews and focus group discussions. Details are as follows:

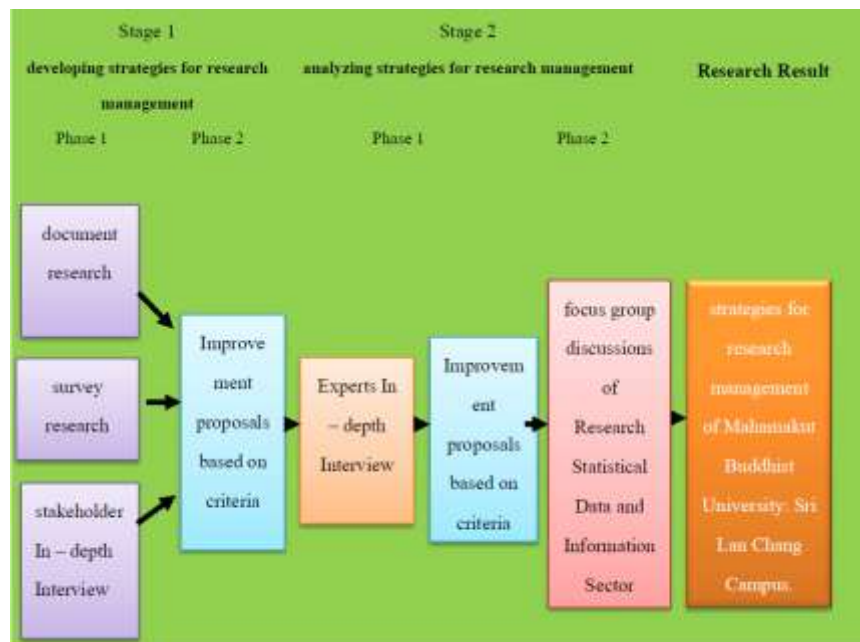


Figure 2 Stages of Research

## Results

The results finding: strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus, followed by 5 components were: The research productivity development consisted 3 plans, and 4 projects. The knowledge management consisted 2 plans, and 6 projects. The resource supporting consisted 2 plans, and 2 projects. The research publishing consisted 1 plans, and 2 projects. And The exploiting research consisted 2 plans, and 3 projects. Details are as follows:

1. Plan includes 10 programs: 1) determine the research direction and campus policies and social needs, 2) developing competencies of researchers, 3) creating a university for research, 4) management of knowledge from research, 5) Creating a network of researchers with external institutions 6) Supporting budget for research 7) Supporting research resources 8) Publishing researches 9) Research to develop university, and 10) Research to the community.

2. The project has 17 projects: 1) Training for guidelines of producing research base on Buddhism of Mahamakut Buddhist University: Sri Lan Chang Campus, 2)

Training for social changing research in the 21st century, 3) Training for research and development (R & D Research), 4) annually event for honored and presented the award to researchers /departments with outstanding research results, 5) Establishment of Research journal of Mahamakut Buddhist University: Sri Lan Chang Campus, 6) Training for writing research papers , 7) The appointment of external and internal experts to select researchs published, 8) Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University: Sri Lan Chang Campus with other universities in the country, 9) Supporting budget for research to develop knowledge based on Buddhism, 10) Establishment of a center of research development, 11) Supporting budget for publish researches, 12) organized seminar The 1st Srilanchang Conference, 13) Training for teaching technique to Research base learning, 14) Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University: Sri Lan Chang Campus with the graduate student's office to benefit from use research result, 15) Published the research articles on the website, 16) Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University: Sri Lan Chang Campus with the Leoi Province Office of Buddhism, 17) Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University: Sri Lan Chang Campus with communities to collaborative research.

## Discussions

This research studied strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus, followed by 5 components were: 1. The research productivity development, 2. The knowledge management, 3. The resource supporting, 4. The research publishing, and 5. The exploiting research; cover the assessment of the implementation of Internal Education Quality Assurance of the Office of The Higher Education Commission [4], that specify as each Higher Education Institutions maybe focus a point of emphasis in research different cause the environment and the availability of each institution. However, all would have research in part of mission. The concordance of context for the development of research management strategies of Mahamakut Buddhist University: Sri Lan Chang Campus operated from studied the real context of the Mahamakut Buddhist University: Sri Lan Chang Campus, through stage of developing research management strategies and Stage of analyzing research management strategies of Mahamakut Buddhist University: Sri Lan Chang Campus; via focus group discussions in order to submission strategies as defined components, consisted to plans and projects, Public hearing, that aim to provide stakeholders from all sectors have been jointly provide

feedback and check the draft strategies; Based on the concept of Guskey were: Propriety; considered from making the acquisition process, Using words and expressions, grading, and features. Congruity; considered from policy and context of Mahamakut Buddhist University: Sri Lan Chang Campus usefulness. Utility; considered from the impact that would happen to corporate clients, the agency is involved. Feasibility; considered from their ability to practice and having sufficient resources to comply. [5]

1) The research productivity development consisted to Plans were; 1) determine the research direction and campus policies and social needs, 2) developing competencies of researchers, 3) creating a university for research, and Projects were; 1) Training for guidelines of producing research base on Buddhism of Mahamakut Buddhist University: Sri Lan Chang Campus, 2) Training for social changing research in the 21st century, 3) Training for research and development (R & D Research), 4) annually event for honored and presented the award to researchers /departments with outstanding research results; the result appears because Higher Education institutions be expected of social to be the source of academic works for serving the nation to move ahead, keep up changing innovations and technologies in the world, personel of university must to be academicians and researches productivity regularly. According to Sajeewan Tupwasu studies Factors associated with research productivity of teachers's Rajabhat Institutions, and suggested that research productivity of teachers's Rajabhat Institutions would to enhance both quality and quantitative, administrators would to determine the research direction and policy clearly and ongoing, for all its diverse dimensions under consideration of consistency between local and international seamlessly. More supporting for budget, textbooks, and materials. As well as, they should published the results of research and applied to benefits of the development of the mission of the institute and society seriously [6], comply with Paithurn Sinlarat said that universities as academic sources of social, academicians and university Must keep track academic progress regularly. Even today academics have emerged and developed extensively, then academicians need to be continually monitored regularly. Most important roles of academicians was creating a new knowledge from research because the research is the quest for new knowledge. [7]

2) The knowledge management consisted to Plans were; 1) management of knowledge from research, 2) Creating a network of researchers with external institutions, and projects were; 1) Establishment of Research journal of Mahamakut Buddhist University: Sri Lan Chang Campus, 2) Training for writing research papers, 3) The appointment of external and internal experts to select researchs published, 4) Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University : Sri Lan Chang Campus with other universities in the

country, 5) Published the research articles on the website, and 6) Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University : Sri Lan Chang Campus with the Leoi Province Office of Buddhism, comply with Wichit Kammantakhun studied policy recommendation for developing a research capacities at Roi Et Rajabhat University, on the 5th strategy – capacity and competency quality research administration, and 2nd tactic - knowledge Management from research and encourage the application of published or utilized researches, by set 7 measures followed : 1) Developing a system to support the dissemination of research and knowledge management both in academic circles and utilization from researches, Such as the preparation research journal and conferences in the local, community, nationally and internationally. 2) Provided a system to collected, analyzed and synthesized knowledge from reliable and modern researches. 3) Creating a network of researchers with internal and external institutions. 4) Promote of the researchers by the competition and awarding to develop writing and presentation of research paper within the institution for at least one year. 5) Support writing to patented, Petty Patent, Intellectual Property, as well as protecting the rights of research. 6) Organize the national or international conference to present and take advantage the researches from outside or oversea. 7) Encourage the university to more participation in national or international research conference, either in the form of published in the national or international database, Attending conferences in order to present their research both national and international. He had set the mechanism into practice follow : 1) The Research and Development Institute or The Graduate School provided research journal. 2) Creating a network of published researches with external institutions. 3) The university organized research conference at least 1 time per year. 4) Appointment of committee to collected, analyzed and synthesized knowledge from researches. 5) Organized a workshop on writing research papers for professors and researchers.[8]

3) The resource supporting consisted to Plans were; 1) Supporting budget for research. 2) Supporting research resources, and projects were; 1) Supporting budget for research to develop knowledge based on Buddhism, 2) Establishment of a center of research development; This is probably because Research Administration to be effective, its must be coupled with budget support. Because in addition to research from teaching of university teachers. Because researches required to pay in the operation, although researches are the duty of teachers in addition to teaching of them, to the university teachers dedicated to research their university must to support budget for motivation. Moreover, academic climate of the institute, equipment research, and supporting from the authorities that directly affect the research productivity of teachers. Comply with Sunan



Panthuya found that factors of research supporting consisted to data resources, the research funding, research equipment, supporting from the authority, times, and reward. Moreover [9], comply with Sammana Rathanith found that the institute factors to support research productivity were he research funding, academic climate of the institute, and supporting from the authority.[10]

4) The research publishing consisted to Plan was; 1) Publishing researches, and Projects were; 1) Supporting budget for publish researches, 2) organized seminar The 1st Srilanchang Conference, comply with Wichit Kammantakhun studied policy recommendation for developing a research capacities at Roi Et Rajabhat University, on the 5th strategy – capacity and competency quality research administration, and 2sd tactic - knowledge Management from research and encourage the application of published or utilized researches, by set 7 measures followed: 1) Developing a system to support the dissemination of research and knowledge management both in academic circles and utilization from researches, Such as the preparation research journal and conferences in the local, community, nationally and internationally. 2) Provided a system to collected, analyzed and synthesized knowledge from reliable and modern researches. 3) Creating a network of researchers with internal and external institutions. 4) Promote of the researchers by the competition and awarding to develop writing and presentation of research paper within the institution for at least one year. 5) Support writing to patented, Petty Patent, Intellectual Property, as well as protecting the rights of research. 6) Organize the national or international conference to present and take advantage the researches from outside or oversea. 7) Encourage the university to more participation in national or international research conference, either in the form of published in the national or international database, Attending conferences in order to present their research both national and international. He had set the mechanism into practice follow: 1) The Research and Development Institute or The Graduate School provided research journal. 2) Creating a network of published researches with external institutions. 3) The university organized research conference at least 1 time per year. 4) Appointment of committee to collected, analyzed and synthesized knowledge from researches. 5) Organized a workshop on writing research papers for professors and researchers [11]

5) The exploiting research consisted to Plans were; 1) Research to develop university, and 2 ) Research to the community, and Projects were; 1) Training for teaching technique to Research base learning, 2) Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University: Sri Lan Chang Campus with the graduate student's office to benefit from use research result, and 3) Memorandum of Understanding (MOU) to establish a research collaboration between

Mahamakut Buddhist University: Sri Lan Chang Campus with communities to collaborative research. Comply with Supreeya Sutthikul (2010, cited in Chaiya Pawaboot, 2006: 213) studied the developing the participation action research capacities of athletic and health research to developing human and social in 3 provinces of southern, and suggested that; 1) the research should to led process of participation action research applied to instruction and development of student; morality, ethical, and personality, 2) There should be create a culture in the organization by using participatory research involved. And comply with Wichan Panich said that the desirable research system of higher educational institutes must be able to produce research that were useful for developing social and country, according to the mission of higher education institutions. They need to develop a research system to suitable and availability of each.[12]

## Conclusion

This research paper founded the strategies for research management of Mahamakut Buddhist University: Sri Lan Chang Campus for Enhance Result of Educational Quality Assurance were:

1. The research productivity development should the project as follows: Training for guidelines of producing research base on Buddhism of Mahamakut Buddhist University: Sri Lan Chang Campus, Training for social changing research in the 21st century, Training for research and development (R & D Research), and Annually event for honored and presented the award to researchers /departments with outstanding research results

2. The knowledge management should the project as follows: Establishment of Research journal of Mahamakut Buddhist University: Sri Lan Chang Campus, Training for writing research papers, The appointment of external and internal experts to select researchs published, Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University: Sri Lan Chang Campus with other universities in the country, Published the research articles on the website, and Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University : Sri Lan Chang Campus with the Leoi Province Office of Buddhism.

3. The resource supporting should the project as follows: Supporting budget for research. 2) Supporting research resources, and projects were; Supporting budget for research to develop knowledge based on Buddhism, and Establishment of a center of research development.

4. The research publishing should the project as follows: Supporting budget for publish researches, and organized seminar The 1st Srilanchang Conference.

5. The exploiting research should the project as follows: Training for teaching technique to Research base learning, Memorandum of Understanding (MOU) to establish a research collaboration between Mahamakut Buddhist University: Sri Lan Chang Campus with the graduate student's office to benefit from

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## Design the Questions, Exercises Oriented Capabilities on Philology in the Current Secondary Program

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### Abstract

Evaluation and assessment oriented competency is a new trend of the world. In Vietnam, the educational researchers are focusing to design an effective tool for the evaluation and assessment in different subjects at different levels of education according this direction. In this paper, we propose a few suggestions for the designing of questions and exercises oriented competency assessments on philology in secondary school. We have also proposed general process of designing the questions and exercises, which maybe as initial guidance for literatural teachers.

### 1. Introduction

Innovation assessment methods about students in philology have long become the first concern of teaching, learning literature. This is one of the key stage, an important tool, primarily to determine the learner cognitive capacity, adjustment process of teaching and learning; motivation to innovate teaching methods, contribute to improve and raise quality . In fact, the recent years, the recommended test, high school graduation exam, college entrance examination, entrance examination ... towards innovation, with high applicability in real life, respect political views of students make their land to reveal talent, points of view, perspective on the world around them, avoid duplication of documents, read by rote was gradually shift in teaching ,learning litrature... Innovations assessment methods was high public opinion concurred, warmly received.

Although there have been so innovative , but in general , for many teachers , the assessment of philology subject has yet escaped the rut , imposing rigid machines, closed , creating opportunities for passive learning style "reading copy"; Heavy academic. Or on "open" subjects but causing of the offensive, against the norms of traditional moral values. Therefore we need to continue to innovate. We have access to innovative test evaluated skills knowledge. This special subect will go into the details of inspection and assessment

of innovative approaches towards promoting student's ability not only every single unit but also the topic. So this special subject is not new but it is considered higher development.

## **2. Guidelines prepared questions, assessment exercises oriented capabilities of the topics**

### ***2.1. Some notes about the characteristics of evaluation oriented capabilities:***

Philological capacity is defined as the ability of each student shown in implementing the goals of knowledge, skills and attitudes that they have available or acquire and using in the process of learning to form and develop the capacity of Philological which include: ability to use Vietnamese shown in 4 skills (listening, speaking, reading and writing); literary reception capacity, aesthetic perception; self study and practice capabilities, applications (which focuses on solving practical situations)

There is no contradiction between the evaluation oriented capacity and knowledge skill standards, the evaluation oriented capacity is considered to be higher than the assessment skills knowledge standard. The assessment of knowledge and skill standard is mainly oriented towards assessing the memo, receive, reproduce knowledge and practise skills of learners.

Evaluation oriented capabilities concern about the advancement and the ability of students that is exposed in the learning process; stimulate self-assessment and inspection of them are accurate, objective academic achievement and achieve the aim of teaching. Focus on the test correction and giving mark.

Do not take the assessment oriented knowledge skill standard learned as essence but focus on ability to apply knowledge and skills in different situations. It means shifting evaluation from memory, reproduction... to manipulate competency assessment and solution of practical problems. Evaluation oriented capabilities pay attention to the general assessment contents, integration towards the questions associated with the resolution of practical situations in life related to the students; help them know the application in real life; connection to education issues with real life (outside of school). These assessments towards the ability that enrich and expand the personal lives of students, control the learning content to participate in society on the cultural, scientific...

To assist students with the opportunity of showing their opinion, personal ideas, different thinking (still in control of teachers, not against ethical values and standards of the law) and the ability to feel the personal creative thinking, thereby they know how to learn, love and have a passion for learning literature.

Comparing two types of questions:

Example 1: When checking on the topic of rhetorical measures (class 6), may give questions about the multiplication:

\* Questions of assessment follow knowledge and skill standard: Please point out and analyze the effects of impersonal rhetoric measures used in the following passage:

"Raining in spring is tumult, breezy. The raindrop is little, soft, falling by as dance. Raindrop particles woven into the ground (...). The ground was exhausted suddenly awoke, get warm, fresh raindrops fondly. Soft, soothing land go on giving strength to plants. Raining in spring has brought them so full of vitality cholestasis, spilled onto the green leaf branches. And trees thank for the rain with all fragrant fruits season" (The sound of rain - Nguyen Thi Thu Trang)

\*Question assess oriented capabilities: Your reviews about the description nicely spring rains of the author. Since then, write a paragraph to describe our garden behind the showery rain using impersonal rhetoric measures.

Example 2: When checking Vietnam medieval stories we may give questions about the work: "The girl in Nam Xuong":

\*Questions follow knowledge and skills standards: How do you feel about Truong Sinh? But questions oriented capacity: According to you, Truong Sinh is pity or blame? Why?

\*Questions follow knowledge and skills standards: Is there any special thing when finishing the work? Question oriented capabilities: If a writer Nguyen Du let Vu Nuong return to reunion with her husband and children. According to you which ending is more meaningful? More interesting? Why?

Example 3: When checking Vietnam folklore theme (class 6) may give questions about the fairy tale "Thach Sanh":

\*Questions follow knowledge and skills standard: Indicate valuable qualities of character Thach Sanh?

\*Question assess oriented capabilities: If you had been Thach Sanh, would you have forgiven Ly Thong and his mother? Why?

Example 4: When checking the stories and topics Vietnam sign 1930- 1945 (class 8) can make the following questions:

\*Question standardized knowledge and skills: Analysis of the detailed meaning: "If the person on car is not my mother, that mistake not only make me shy but also pity anymore. The same as the illusion of running fresh water flowing under the shade appeared before the rift eyes of the pedestrian collapsed in desert." (Quote: "in the womb).

\*Questions oriented capabilities: If on behalf of Nguyen Hongwriterwe remove this text, in your opinion í it right? Why? Since then, write paragraphs discuss spiritual meaning of mother to childhood, with each human life.

## ***2.2. Instructions, processes compiled questionnaires, examination and assessment exercises oriented capabilities of a theme***

The construction of the test subjects include the usual steps: the recommended plan, build a matrix, compile questions and guide dots and evaluate test, finish problems. In which we focus on the steps:

### Step 1: Select topic

Choosing the topic of teaching philology may be based on the program of philology general education. Accordingly, Literature, Vietnamese, Writing literature are 3 circuit writing great contents and distribution as well as three constituent subjects of language arts. In each circuit this content with small threads. or example, Vietnamese can be detached smaller topics like: vocabulary, grammar, language style, measures rhetorical, communicative activities. Writing literature include general issues of text, text styles ... Circuit Literature include the works sorted by category: stories, poems, discourses, theater or Text Update theme ... Teachers use the theme option to construct questions, to test or assess oriented capacity.

Step 2: Determine the requirements of the standard knowledge and skills to be achieved:

Clinging to the knowledge and skills to prepare appropriate testing. Oriented formation and capacity development so as determine standards of knowledge, skills towards capacity can be formed after studying the topic.

### Step 3: A table describing the student capacity development

Table describes the evaluation levels according to the specific capabilities of the standard knowledge and skills according to the different levels, in order to assess the ability of the student's achievement. The levels are arranged in 4 levels: awareness, understanding, low use, high use ( from a standard build of questions at different levels)

\* The level of awareness: Students remember the basic concepts can be raised or recognize them when requested. The commonly used verbs: elicit, summary, remember, recognize, presents ...

\* The level of understanding: Students explain, infer, connection information, know how to apply the knowledge and concepts in a similar way. The commonly used verb: explain, define, comment...

\* Low use level: Students create a link, connection, comparison between the knowledge learned and apply them to practice the same requirements as teacher taught



or textbook guided . The commonly used verbs: create (sentences, paragraphs); compare, review, assess, analyze ...

\* High use level: Students use concepts, knowledge of the subject to solve new problems or similar situations in real life. The commonly used verbs: create (articles, paragraphs); compare, review, assess, analyze, present (personal opinion); ...

Step 4: Prepare a test matrix

Recommended test matrix (Thematic deployed in 2009-2010). The compilation of questions depend on test matrix was set up to implement students' development capacity.

Step 5: To compile questions and guide dots:

Compiled questions, check assignments, evaluation of teaching process for each topic were identified.

Based on the knowledge and skills to ensure the following requirements:

- *Integration*: Because the parts in philology subjects not studied individually but usually operated based on excerpts or text . This will not only help students with reading and receiving text language perspective but also equip them with the knowledge of understanding of how to write or vice versa . Therefore test questions outside the memo, reproduced also ask students to identify them in specific situations , understand their meanings used in quotations or text. (For example, when checking topic Vietnamese class 8 may give out the question of punctuation: Analysis of the nuanced expressive punctuation type in the following quote :

*"The old face suddenly twitched. These wrinkles buckets together, squeezing the tears flowed. The poor old head on one side and the old mouth of soft mouthrecently cowardly like a baby. He cries hu hu..*

*- Woe ... teacher!... He knew nothing! He heard me call then ran on, waving tail happy. I gaveit a meal. It was eating MUC hidedin the home section, behind it, grabbed two legs and upside it up. Mực and Xiên tried quite a few have tied all four legs. Then he realized that he was going to die! ... Hey! teacher! What wisdom like it! It just blame me. Its a weak cry, looking at me, as if to tell me that: "A! Old bad Man! I live with you like that why do you treat me like this?" I am old at my age still fool a dog, it does not think I trick it!" (Quoted work "Lao Hac")*

- *Practical application*: Philologicalcapacityof students is demonstrated inresult skill practice that students get from these lessons. These skills will also be shown in the application on the various situations in life. Therefore the examination, assessment of academic qualifications of students the most useful is based on the design a practice exercises, including association between the reception and the creation of documents.

Focus on nature close, practical, helpful, associated with real situations or assumptions, but close to real life.

Example 1: When checking topic: Exercising types of text documents (grade 8) can give the question: If you were a tour guide, how would you recommend with visitors about Thien Cam tourist of my homeland?

Example 2: Folklore theme in grade 6 may give the question:

Question 1. From witness the current floods, explain why in the fierce fighting between the water god and the mountain god of legend "Son Tinh, Thuy Tinh" folk author makes water withdrawal in apity?

Question 2. In the dream I met Thuy Tinh, talk about the accidental encounter?

- *Education and social significance*: The test questions should focus on maximizing the self-discipline, positive, active of students as they work (limited to use too familiar documents, situations to the students, if using these documents should explore, innovate questions). Teachers need to research to build the hypothetical situation that close to real life, choose the situations that create attraction, appealing to students on the issues of social significance, profound education, topically ... create excitement and provide more useful information to students.

Example 1: With the folklore theme in grade 6 may give the question:

Question1: depend on legendary "Dragon and Fairy", explain the meaning of the word "fellow" that we often use.

Question2: After reading the Declaration of Independence, Uncle Ho graciously asked: "I speak, can fellow hear clearly?", why the word "fellow" (he did not use the word people) melt the hearts of millions of Vietnamese?

- *Show the personal views*: Design questions, exercises focusing on the positive, creative of students; help students express personal points of view to develop independent thinking, critical thinking.

Example: Vietnam Poetry 1900-1945 (Grade 8), there may be question: Why in the poem "Motherland", the author wrote: "Thank for heaven the sea quietly full of boats fishing" put in quotes? It is argued that this verse represents the superstition of people in fishing village. Do you agree?

### **3. Conclusions**

According views of capacity development, the assessment did not evaluate the ability to reproduce learned knowledge as the center of the assessment. The assessment according to ability needs to focus ability to creatively apply knowledge in different situations. In other words: Capacity assessment is to assess the knowledge, skills and attitudes in meaningful context.

In education process, the effective evaluation oriented capacity development of sustainable learners should perform the following requirements:

- Assessment tool helps students to exploit, to apply the knowledge, skills, interdisciplinary and cross-subjects.
- Methods and assessment tools contribute stimulate spiritual teachings promote self-initiative and creativity of students in learning, focused practice, training and skills development.
- Evaluation orients to maintain the striving and progress of learners to help development of the proper motivation.

Teaching and assessment capacity on philology at schools today also need innovation. Therefore, the capacity assessment approach is the right direction to improve the quality of literatural teaching in schools. This study have given examples and shared experience for designing the questions and exercises to evaluate the philology at secondary school.

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**Professional training case management for collaborators social work in DaNang city**

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**Abstract**

Case management is a process of nature assistance expertise in social work. The last time the Department of Labour - Invalids and Social Affairs of Da Nang City in collaboration with a comprehensive program and help integrate people with disabilities (PDSP) of the Agency for International Development (USAID) held a class set fostering professional training case managers with accessibility for staff and employees, social workers not responsible or collaborators of social work Danang. Course content includes: Overview of case management for people with disabilities, the case management process for people with disabilities, the case management skills to people with disabilities. Course outcomes were evaluated based on the program's tools and comprehensive integration of people with disabilities support international development agencies USA. Course outcomes were evaluated successfully. The lessons and experiences of the class have important implications for the next training course better achieved.

**Keywords:** Social work; case management; persons with disabilities; social workers; Danang.

## 1. Introduction

Case management is a process of nature assistance expertise in social work. Case management is a collaborative process that assesses, plans, implements, coordinates, monitors, and evaluates the options and services required to meet the client's health and human service needs. It is characterized by advocacy, communication, and resource management and promotes quality and cost-effective interventions and outcomes [4]. Professional training managing disability cases for social workers belonging (social workers non-professional or professional), contribute to the goal of "Development of social work as a profession in Vietnam. We must raise awareness of the society about the social work profession; build staff, officers, employees and collaborators of social work in sufficient quantity, meets the requirements of quality system development associated with providers of social services at all levels , contributing to building the social security system " [1]. This paper is based on the survey results in the training courses for staff working in the local society in Danang, Vietnam.

## 2. Methods

- Using the questionnaire of 15 questions for people involved in training, **the content of knowledge** for social activities for people with disabilities (before and after training)
- Using the questionnaire of 15 questions for people involved in training, **the content action/practice** for social activities for people with disabilities (before and after training)
- Data processing with SPSS (Statistical Package for the Social Sciences).

## 3. Results

### 3.1. The results were about the content of knowledge for social activities:

Before the training, test results Input (Pre-test) of the 39 participants did not have any students answered correctly all 11 questions. Most of 32/39 participants (nearly 80%) answered correctly from 7-9 sentences. In Pre-test, averaged number of correct answers students is 9.3 / 11 question, equivalent remaining 75.73% and the wrong answer.

**Table 1: The results were about the content of knowledge for social activities before and after training**

Content	Before training (%)		After Training (%)	
	False	True	False	True
Disability is referring to the shortage of body, senses and functions of human activity, not discussing social factors	82,5	17,5	22,5	77,5
Case management is a process that is more specialized assistance through interactive relationships directly and multidisciplinary	7,5	92,5		100
In case management, the connection with the system providing social services in the community is not important	10	90		100
The participation of people with disabilities in the process of planning the successful elements of case management	5	95		100
Chart of ecological is a support instruments actively in the process of identifying the resources and facilities provide quality services for people with disabilities	15	85		100
In the evaluation workshop planned aid people with disabilities, the participation of persons with disabilities is not important	5	95	7,5	92,5
After referral for persons with disabilities, employees complete case management responsibilities	12,5	87,5	5	95
Workshop referral cases be implemented for all the needs of the disabled assistance	50	50	30	70
The workshop concluded cases is not necessary to have the participation of the president / vice president of the commission commune / ward	22,5	77,5		100
Activities on gender equality for persons with disabilities is for men and women with disabilities	25	75	12,5	87,5

who are performing the same role				
Gender-based violence against disabled people is mainly embodied in the form of mobility impairment	20	80	12,5	87,5

In the test output (Post-test), with 4/34 participants (11.8%) answered correctly all 11 questions. Nearly 95% of participants answered correctly from 9-11 sentences. Only 1 student (2.9%) answered correctly 9 questions. Thus, on average, output in tests each student answered correctly 13.56 / 11 question and the correct answer rate is 90.39%, higher than 75.73% response rate Answer the quiz correct input (illustrations in Table 1, Table 2 and chart 1, chart 2 is illustrated below).

**Table 2: Summary of correct answers of the participants in the Pre-test and Post-test**

Nuber of true	Pre-test		Post-test	
	Participan	%	Participan	%
6	1	3.6	-	-
7	2	7.1	-	-
8	6	21.4	-	-
9	12	42.9	-	-
10	7	25.0	10	32.3
11	0	0	21	67.7
<b>Total</b>	<b>28</b>	<b>100.0</b>	<b>31</b>	<b>100</b>

### 3.2. The results were about the content of action/practice for social activities

We measure the change of attitude of students in 5 levels (0. *Not at all confident* / 1. *Not confident* / 2. *Normal* 3. *Confident*/ 4. *Very confident*). The results obtained have the biggest change in the level of confidence for the management of cases before and after the learner in the course are: a comprehensive assessment (+0.54 points), receiving documentation (+0.5 points), construction target building support (+0.45 points). This is the basic content of the course, both in theory and in practice.

**Table 3. Comparison of participant on case management activities in the pre-test and post-test**

Content	Level of <b>action/practice</b> for social activities					Mean
	0	1	2	3	4	
Reception documented of client	7,5	12,5	42,5	30	7,5	<b>2,17</b>
Comprehensive evaluation	2,5	25	62,5	10		1,8
Planning intervention	5	22,5	50	20		1,87
Develop targeted intervention	5,3	39,5	34,2	21,1		1,71
<b>Supervision implementation</b>	2,6	20,5	51,3	25,6		<b>2,0</b>
Evaluate and ends	5	17,5	57,5	20		1,93
Implement advocacy skills	10	22,5	37,5	27,5	2,5	1,90
Connect with individuals, agencies and organizations	7,5	17,5	45	30		1,98
Coordination of resources	7,5	37,5	42,5	10	2,5	1,63
Attracting the participation of the client, family, and community	7,7	35,9	38,5	17,9		1,67
<b>Storing the client profile</b>	7,9	5,3	42,1	42,1	2,6	<b>2,26</b>
Working with multidisciplinary teams	7,9	28,9	34,2	28,9		1,84

Confidence levels of the participant to change are: Storing the client profile (2,26/4); Reception documented of client (2,17); Supervision implementation (2,0); Connect with individuals, agencies and organizations (1,98); implementing advocacy skills (1,9); ...

The items make the participants “*Not confident of normal*” Coordination of resources (1,63); Attracting the participation of the client, family, and community (1,67); Working with multidisciplinary teams (1,84); Develop targeted intervention (1,8), Comprehensive evaluation (1,87/4)...



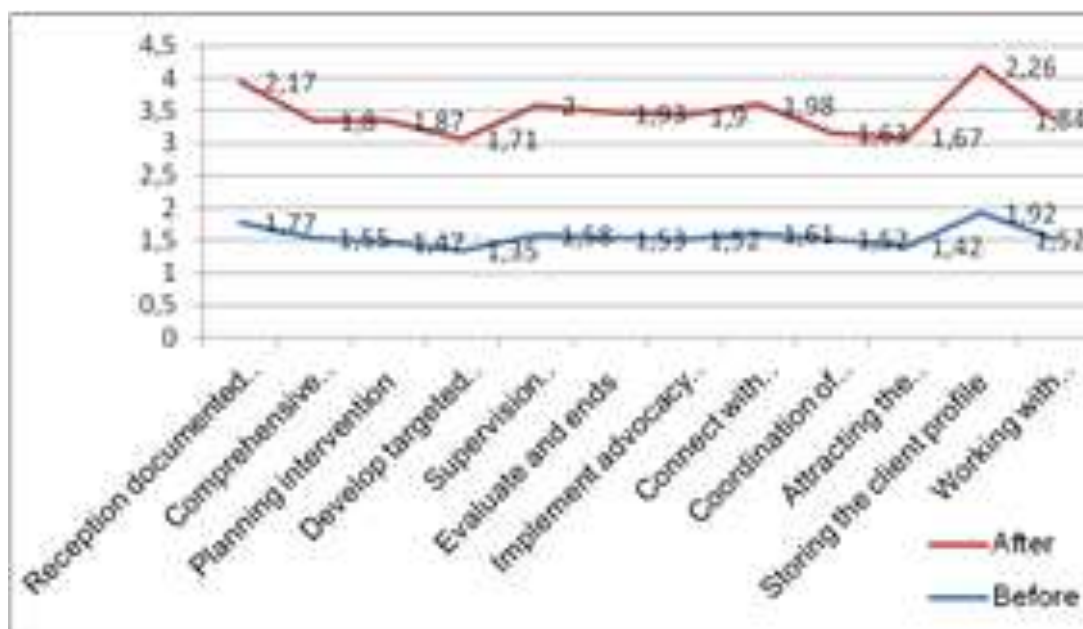


Figure 1: The change after training

#### 4. Discussions

Activity of social work in the world has a history of hundreds of years. We can know that, at Chiang Mai University, Thailand, the Faculty of Social Sciences was one of the first of three faculties, founded in 1964, so Thailand already have more than 40 years performing social work but Vietnam is one of the new national focus on social development.

The skills training for social workers are the first in Vietnam, currently only for the feature is disabled; while there are many other subjects such as the elderly; children in general and children in special circumstances (orphans, abandoned, early labor, violations of law, leaving the house, addicted to the game ...), women; people who have problems with substance...

This training course on social work with disabled people helped us assess the extent of the participants on the knowledge of people with disabilities; practical content; attitudes of social workers working with disabled people. This program follow the Implementation of decision No. 32/2010 / QD-TTg of the Prime Minister's 32 on "Project development of social work profession in 2010 - 2020". Comments of practicals to the next grade more effectively, as increased learning time, arrange a time to work in offices more learning, skills training for social workers.

We expect the exchange of experts (professional education, psychology, social work) to have these experiences in order to further develop social work in Vietnam.

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## **Roles of the Faculty of Liberal Arts and Science, Nakhon Phanom University in Educational Development of Border Patrol Police Schools in Nakhon Phanom Province**

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### **Abstract**

The Faculty of Liberal Arts and Science, Nakhon Phanom University is an institution of education with the primary missions of producing graduates, research, providing academic services, and working for arts and cultural preservation. The Academic Services Division has shown success in academic services by collaborating in the educational development of the Border Patrol Police Schools in Nakhon Phanom Province. The purpose of this research was to develop the educational quality of the Border Patrol Police Schools in Nakhon Phanom Province by using principles of operations research, including operational planning, observation, and reflection. The researchers consisted of nine persons, and the participants in the academic services activities were 270 lecturers and students of the Faculty of Liberal Arts and Science, Nakhon Phanom University. The contributors were 24 principals and teachers of Border Patrol Police Schools in Nakhon Phanom Province. The participants in academic services were from 6 Border Patrol Police Schools including 5 Prothomsuksa 1 students of the Khonradhengkel Border Patrol Police School and 67 Prothomsuksa 6 students from 6 Border Patrol Police Schools in Nakhon Phanom Province. The instruments used in data collection consisted of an observation form, an interview form, an activities record form, and a satisfaction questionnaire. The “Triangulation Technique” was employed in data verification, and the findings were revealed using descriptive analysis. The statistics employed in data analysis were mean, standard deviation. The findings were gotten from 3 activities: (1) English Camp Activity, (2) Improvement and Development of the Classroom and Environment, and (3) Enhancing Academic Achievement Activity under the Ordinary National Educational Test (O-net, under which all activities were completed). The students’ participation in the activities to enhance their O-net results showed the satisfaction at the highest level. The O-net results of the students who participated in the project revealed an increase in the average score of 1.74 percent in the academic year 2012.

**KEYWORDS:** (1) Educational Development (2) Border Patrol Police School  
(3) Faculty of Liberal Arts and Science, Nakhon Phanom University

## **Introduction**

Her Royal Highness Princess Maha Chakri Sirindhorn has been implementing her project to help children and youth in the provincial Border Patrol Police Schools since 1980. She has focused on development through learning processes, including knowledge development, basic skill development, and positive attitude for children and youth, coupled with problem solution and local culture. Moreover, she has tried to find and implement activity patterns to accordingly develop children and youth in the contexts of various communities and local cultures. During the past, Her Royal Highness Princess Maha Chakri Sirindhorn has monitored successively the implementation of schools and has conferred with teachers and supported authorities to advise and help them in problems that have been encountered. As a result, children and youth, plus adults who live in the educational service area of the Border Patrol Police Schools have gained opportunity and have had improved quality of life. (General Staff Division, Border Patrol Police Bureau. 2013 : online).

Nakhon Phanom University is the university that enlightens graduates for their academic proficiencies and distributes educational opportunities for communities, both locally, and in the Greater Mekong Sub-region. It has core missions in academic development, research, academic service, and arts and culture ministering. The faculty of Liberal Arts and Science, Nakhon Phanom University is an educational authority that also has core missions in graduate enlightenment, academic services for the community, research, and arts and culture ministering. The mission in academic services is implemented through cooperation with educational organization networks to strengthen the teaching profession; to develop teachers' knowledge, quality and standard profession; and to develop other authorities in Nakhon Phanom Province and the countries in the Greater Mekong Sub-region. The academic services have integrated with research and instruction by assigning the students to participate in academic service activities. In addition, there is research for implementing in an academic service, and vice versa; or an academic service is in conjunction with some research (Nakhon Phanom University. 2013 : 1-5), to respond to the royal initiative of Her Royal Highness Princess Maha Chakri Sirindhorn. In the project for developing the Border Patrol Police Schools, the Faculty of Liberal Arts and Science dedicated scholarships to Her Royal Highness Princess Maha Chakri Sirindhorn to give to teachers of Border Patrol Police Schools. In the budget year 2013, the Faculty of Liberal Arts and Science managed the project of the academic service which was integrated with the

research by using Participatory Action Research including 4 steps: Plan, Action, Observation and Reflection. All steps of the research involved the cooperation between lecturers and students of the Faculty of Liberal Arts and Science, Nakhon Phanom University, and school administrators, teachers and students of the Border Patrol Police Schools in Nakhon Phanom Province.

### **Research Objective**

The objective of this research was to develop the educational quality of Border Patrol Police Schools in Nakhon Phanom Province.

### **Research Methodology**

Researchers group and collaborators were as follows:

1.1 Researchers: There were 9 researchers.

1.2 Collaborators:

1.2.1 Academic service participants: There were 270 participants, including 20 lecturers of the Faculty of Liberal Arts and Science, Nakhon Phanom University from the Educational Department, the English Department, the Early Childhood Department, the Social Studies Department and the Science Department, plus 250 students from the departments mentioned.

1.2.2 Informants: There were 24 informants, including 6 head teachers and 18 teachers of Border Patrol Police Schools in Nakhon Phanom Province.

1.2.3 Academic service recipients: There were 6 schools, including (1) Ban Nongdoo Border Patrol Police School, (2) Ban Hadsaiepa Border Patrol Police School, (3) Changkonpatumwan-anusorn 8 Border Patrol Police School, (4) Ban Nasamakkhee Border Patrol Police School, (5) Chyititwittaya Border Patrol Police School, and (6) Khonrathengkhel Border Patrol Police School. There were 72 students from 6 Border Patrol Police Schools, including 5 Prathonsuksa 1 students from the Khonrathengkhel Border Patrol Police School, and 67 Prathonsuksa 6 students from 6 Border Patrol Police Schools.

### **Research Instruments**

In this research, the researchers defined the type, aspect and procedure in instrument creation for data collecting as follows: The instruments were of 4 types.

1. Observation Forms: The observation forms consisted of (1) the observation form of group discussion for planning, (2) the observation form of English storytelling, (3) the

observation form of classroom environment and school environment before developing, (4) the observation form of implementation for developing classroom and school environment, and (5) the observation form of seminar activities for Prathomsuksa 6 students.

2. Interview Forms: The interview forms consisted of (1) the interview form of implementation planning, (2) the interview form after English storytelling activities, (3) the interview form after developing and improving classroom environment and school environment, and (4) the interview form after participating in tutoring activities of Ordinary National Education (O-net).

3. Group Discussion Forms: The group discussion forms consisted of (1) the group discussion form for planning implementation of education quality development of the Border Patrol Police Schools, and (2) the group discussion form for concluding implementation of education quality development of the Border Patrol Police Schools.

4. A satisfaction questionnaire for Prathomsuksa 6 students who participated in tutoring activities of Ordinary National Education (O-net).

The procedures in instrument creation for data collecting were as follows: (1) to study the documents and related research reports, (2) to create the instruments for data collecting, (3) to propose the instruments to 3 experts to verify the aspects of core principles and educational framework; they also considered and rectified some mistakes to be complete instruments, (4) to rectify the instruments based on the experts' suggestions, (5) to publish the complete instruments, and (6) to employ the instruments for data collection.

## **Data Collection**

In this research, the researchers followed an action research based on Kemmis & McTaggart (Phongboriboon, Yajai. 1994 : 84-92) as the guidelines of research implementation in the role of the Faculty of Liberal Arts and Science, Nakhon Phanom University to develop the education quality of Border Patrol Police Schools in Nakhon Phanom Province. The procedures of the action research were Planning, Action, Observation and Reflection which revealed as follows:

1. Planning: the researchers jointly studied current situations and problems of implementation in education quality development of Border Patrol Police Schools in Nakhon Phanom Province. The procedures were (1.1) to arrange group discussion among the researchers, 6 head teachers and 18 teachers of Border Patrol Police Schools to discuss current situations, problems and needs in education quality development of Border Patrol Police Schools in Nakhon Phanom Province; (1.2) to visit Border Patrol Police Schools to collect basic

data and assess the actual situations of schools before implementing educational quality development.

2. Action: there were 3 activities that followed the action process in education quality development of 6 Border Patrol Police Schools in Nakhon Phanom Province. The activities were during the period October 1, 2013 to January 30, 2014 which revealed the following:

(2.1) English camp was the activity for Prathomsuksa 1 students to practice storytelling. The target group was Prathomsuksa 1 students of the Khonrathengkhel Border Patrol Police School.

The time period was October 14, 2013 to October 18, 2013.

The collaborators consisted of the researchers, lecturers and students from the English Department of the Faculty of Liberal Arts and Science, Nakhon Phanom University, who taught and trained the students how to do the storytelling.

The procedures consisted of the lecturers and students from the English Department spending 1 week in training storytelling skills to Prathomsuksa 1 students of the Khonrathengkhel Border Patrol Police School. The students had improved skills to act out fables and tales in front of Her Royal Highness Princess Maha Chakri Sirindhorn's royal throne.

(2.2) Classroom and school environment development was the activity to develop classrooms and school environment of 6 Border Patrol Police Schools.

The target schools were 6 Border Patrol Police Schools which were developed for better learning enhancement.

The time period was October 1, 2013 to December 30, 2013.

The collaborators consisted of the researchers, lecturers and students from the Educational Administration Department, the English Department, the Early Childhood Department, the Social Studies Department, and the Science Department of the Faculty of Liberal Arts and Science, Nakhon Phanom University.

The procedures consisted of the lecturers and students from the Educational Administration Department, the English Department, the Early Childhood Department, the Social Studies Department, and the Science Department of the Faculty of Liberal Arts and Science, Nakhon Phanom University arranging the academic services to develop 6 Border Patrol Police Schools in such matters as library development, classroom development, academic exhibitions, etc.

(2.3) The tutoring activity of Ordinary National Education (O-net) was the activity to instruct Prathomsuksa 6 students in the subjects which were required to test for Ordinary National Education (O-net) including English, Science, Social Studies and Thai Language.

The target group was 67 Prathomsuksa 6 students from 6 Border Patrol Police Schools.

The time period was January 27, 2014 to January 30, 2014.

The collaborators consisted of the researchers, lecturers and students from the Educational Administration Department, the English Department, the Early Childhood Department, the Social Studies Department, and the Science Department of the Faculty of Liberal Arts and Science, Nakhon Phanom University, plus head teachers and teachers from 6 Border Patrol Police Schools.

The procedures consisted of the lecturers and students from the Educational Administration Department, the English Department, the Early Childhood Department, the Social Studies Department, and the Science Department of the Faculty of Liberal Arts and Science, Nakhon Phanom University instructing the students in the subjects of English, Science, Social Studies and Thai which focused on the concept of "Play and Learn" for Prathomsuksa 6 students from the 6 Border Patrol Police Schools. The students from the 6 schools gained knowledge and new experiences, as they also had fun in learning.

3. Observation: the implementation in education quality development of 6 Border Patrol Police Schools in Nakhon Phanom Province was found as follows:

(3.1) English Camp activities were as follows:

3.1.1 The activities: Lecturing and practicing English storytelling

3.1.2 Data collection: The researchers observed activities provided and noted in the observation form. After finishing lectures and practice, the researchers interviewed the participants informally, including the lecturers and the students of English Department and the Prathomsuksa 1 students who participated in the activities. Then they recorded the data.

3.1.3 The instruments used in data collection were an observation form and an interview form.

3.1.4 Resources: The participants included lecturers and students of the English Department and Prathomsuksa 1 students.

3.1.5 Data procedures: Observation, interview and data record.

(3.2) Classroom and school environment development revealed data collection as follows:



3.2.1 The activity: Classroom and school environment development of Border Patrol Police Schools.

3.2.2 Data collection: The researchers observed activities provided and noted in the observation form. After finishing activities such as board decoration, exhibition, classroom academic corner and computer corner, the researchers interviewed the participants informally, including lecturers and students of the Educational Administration Department, the English Department, the Science Department, the Early Childhood Department, plus head teachers and teachers from the Border Patrol Police Schools who participated in the activities. Then they recorded the data.

3.2.3 The instruments used in data collection were an observation form and an interview form.

3.2.4 Resources: The participants included lecturers and students of lecturers, plus students of the Educational Administration Department, the English Department, the Science Department, the Early Childhood Department, plus head teachers and teachers from Border Patrol Police Schools who participated in the activities.

3.2.5 Data procedures: Observation, interview and data record.

(3.3) Ordinary National Education (O-net) revealed data collection as follows:

3.3.1 The activity: The tutoring activity of Ordinary National Education (O-net) for Prathomsuksa 6 students in the subjects of English, Science, Social Studies and Thai Language.

3.3.2 Data collection: The researchers observed activities provided and noted in the observation form. After finishing the tutoring activities, the researchers interviewed the participants informally, including lecturers and students of the English Department, the Science Department, the Early Childhood Department, plus head teachers and teachers from the Border Patrol Police Schools who participated in the activities. Then they recorded the data. Moreover, the researchers used the satisfaction questionnaire to survey the satisfaction of Prathomsuksa 6 students of the 6 Border Patrol Police Schools towards the activity.

3.3.3 The instruments used in data collection were an observation form, an interview form and a five-rating scale satisfaction questionnaire.

3.3.4 Resources: The participants included lecturers and students of lecturers, plus students of the Educational Administration Department, the English Department, the Science Department, the Early Childhood Department, plus head teachers and teachers from the Border Patrol Police Schools who participated in the activity.

3.2.5 Data procedures: Observation, interview, and data record

4. Reflection: The researchers used the data collected to analyze and make conclusions concerning the implementation of education quality development of 6 Border Patrol Police Schools in Nakhon Phanom Province as follows:

(4.1) Group discussion of the researchers: The researchers discussed the information gathered from the 3 activities of observation, interview and interrogation, as to its best use in the implementation of education quality development of the Border Patrol Police Schools. They analyzed the information of knowledge and concepts to maximize the potential results of the implementation in education quality development of the Border Patrol Police Schools in Nakhon Phanom Province.

(4.2) Group discussion between the researchers and the participants: The researchers and all participants, including head teachers of 6 Border Patrol Police Schools, discussed and concluded 3 activities of the implementation in education quality development of the Border Patrol Police Schools in Nakhon Phanom Province. Moreover, there were guidelines and suggestions for the implementation of the Faculty of Liberal Arts and Science, to develop the education quality of the Border Patrol Police Schools in the future.

### **Data Analysis and Data Processing**

1. Data processing: The researchers collected the data from 3 activities together with all participants, including a group of academic service providers and academic service recipients. The 3 activities consisted of (1) English Camp, (2) classroom development and school environment development, and (3) activity of Ordinary National Education (O-net).

2. Data analysis:

(2.1) Verified data accuracy by collecting the data from observation, interviews and result records, using multi-dimensional data; whereas the data from questionnaires was analyzed by mean, standard deviation, and result interpretation.

(2.2) Distributed unused information and then categorized the data gathered.

(2.3) Analyzed the data by repeating several times, linking data relationships, and using descriptive interpretation.

(2.4) Analyzed the data from five-rating scale questionnaires of the students who participated in all activities.

### **Research Findings**

The research entitled “Roles of the Faculty of Liberal Arts and Science, Nakhon Phanom University in the Educational Development of Border Patrol Police Schools in Nakhon

Phanom Province” which followed an action research based on Kemmis & MaTaggart: Planning, Action, Observation and Reflection revealed the findings as follows:

Planning: The researchers and lecturers of the Faculty of Liberal Arts and Science, Nakhon Phanom University discussed in a group as the “academic service providers”, together with head teachers and teachers of the 6 Border Patrol Police Schools as the “academic service recipients”. They studied current situations, problems and needs in education quality development of Border Patrol Police Schools and the former roles of the Faculty of Liberal Arts and Science in academic service for Border Patrol Police Schools. They visited 6 Border Patrol Police Schools to collect data on the actual situations of schools in order to reach conclusions on the best ways to develop education in 3 activities: English Camp, classroom development and school environment development, and Ordinary National Education (O-net).

Action: The researchers implemented 3 activities which were during the period October 1, 2013 to February 28, 2014. The 3 activities were implemented successfully by all participants, including the researchers, lecturers and the students of the Faculty of Liberal Arts and Science, Nakhon Phanom University as the academic service providers, together with head teachers and teachers of 6 Border Patrol Police Schools as the academic service recipients.

Observation: The researchers observed, interviewed and surveyed all participants, including the academic service providers and the academic service recipients. The overview of all people involved in 3 activities, whether they were satisfied with the activities provided (especially the Ordinary National Education (O-net)), showed that Prathomsuksa 6 students were satisfied with the activities at the highest level.

Reflection: The researchers analyzed the data gained, and concluded successful implementation of education quality development of Border Patrol Police Schools in Nakhon Phanom Province. The researchers discussed in a group together with head teachers and teachers of 6 Border Patrol Police Schools to reflect on results of education quality development. The results found that the 3 activities were completely successful. All participants were satisfied with the activities provided, and they proposed that the Faculty of Liberal Arts and Science, Nakhon Phanom University continue the roles in education quality development for the education institutions in Nakhon Phanom Province. The 6 Border Patrol Police Schools in Nakhon Phanom Province proposed that the Faculty of Liberal Arts and Science, Nakhon Phanom University expand the service for additional Border Patrol Police Schools in Mukdahan and Sakhon Nakhon Provinces, 2 in each province. In addition, during the next budget year, there would be the academic camp for students before they take the Ordinary National Education (O-net). Furthermore, the average scores in 4 subjects of O-net test

in the academic year 2013 of 6 Border Patrol Police Schools were 1.74 percent higher than those in the academic year 2013.

## Discussion

The research entitled “Roles of the Faculty of Liberal Arts and Science, Nakhon Phanom University in the Educational Development of Border Patrol Police Schools in Nakhon Phanom Province” which followed an action research based on Kemmis & MaTaggart: Planning, Action, Observation and Reflection revealed the discussion as follows:

Planning: The researchers and lecturers of the Faculty of Liberal Arts and Science, Nakhon Phanom University discussed in a group as the “academic service providers”, together with head teachers and teachers of 6 Border Patrol Police Schools as the “academic service recipients”. They studied current situations, problems and needs in education quality development of Border Patrol Police Schools. Formerly, the Faculty of Liberal Arts and Science implemented academic services continuously. This was not all-inclusive, however, for the 6 Border Patrol Police Schools, though the Faculty of Liberal Arts and Science did offer scholarships for teachers of Border Patrol Police Schools for 2 Border Patrol Police Schools for 2 million Thai baht each. The scholarships were offered by Her Royal Highness Princess Maha Chakri Sirindhorn to help scholars. The results of group discussion revealed that Border Patrol Police Schools lacked resources in terms of budget, buildings and materials, according to the research of Worawit Senasri (2013 : Abstract). It showed that Border Patrol Police Schools had the problem in academic administration that teachers were responsible for so many duties that the academic practicum was ineffective. Teachers were teaching subjects that were not based on their educational backgrounds; so the Faculty of Liberal Arts and Science had supported scholarships for graduate studies according to the research of Boonprakhong Sirinate (2013 : Abstract). It showed that the highest three average levels of motivation in the practicum of teachers of the Border Patrol Police Schools were in Work Characteristics, Career Advancement, and Respectfulness. Moreover, the results found that there were many factors that affected ineffective practicum, including frequent responsibility changes, budget shortfalls, personnel shortages, inadequate income, and not enough modern computers, according to the research of Wirot Seangsuwan (2009 : 67-68). It showed that Border Patrol Police Schools had problems in all aspects; so the schools had to be developed by gaining sufficient budget and by planning activities that could be suitably supported by the budget. Accordingly, the group agreed in discussion to implement 3 activities, including (1) English camp, (2) classroom development and school environment development, and (3) the Ordinary National Education (O-net). Regarding

the visitation of the researchers to the schools to collect empirical data, the researchers had to postpone some appointments because of their other responsibilities. However, the researchers did visit all schools in October, 2013, before finishing the 1<sup>st</sup> semester of the academic year 2013.

Action: The researchers implemented 3 activities during the period October 1, 2013 to February 28, 2014. They worked successfully, despite limitations in budget and difficulty in traveling, to visit the Border Patrol Police Schools. The lecturers and the students who provided academic services had to have good planning to manage their activities properly within 1 week. As a result, all people related to all activities both as “academic service providers” and “academic service recipients” reported their satisfaction towards all activities. The activities consisted of an English camp that was focused on academic development and English skills preparation for ASEAN. Besides classroom development and school environment development, the researchers focused on developing classroom conditions, plus libraries and laboratories to be suitable for the instructional environment. The bulletin boards were arranged to enlighten and motivate students appropriately according to the research of Ransom (2004 : 4373-A). It showed that environment development both inside and outside the classroom were reinforcing factors to enhance the students’ learning abilities. Moreover, the activity of the Ordinary National Education (O-net) was focused on developing the learning achievement of Prathomsuksa 6 students to get satisfactory score levels on their tests according to the research of Khuanchai Sing-on (2009 : Abstract). It showed that Border Patrol Police Schools could be developed to raise the satisfaction level of parents in 5 aspects, including School Curriculum Development, Learning Resource Development, Education Technology, Academic and Budget Enhancement, Personnel and General Management, and Public Education. The implementation of the 3 activities was completely successful.

Observation: The researchers observed, interviewed and surveyed all participants, including the academic service providers and the academic service recipients who participated in the activities. They were all pleased with the 3 activities, especially the Ordinary National Education (O-net), to which Prathomsuksa 6 students revealed their satisfaction at the highest level. The students who participated in activities gained new experiences, studied in available environments, and discussed their lessons with other students from other schools. As a result, the students felt intimate enough to share their ideas, that they reported that they studied happily at the highest level, which was according to the research of Brayboy - Locklear (2003 : 1158-A). It showed that the school environment had influence on the motivation of American students in learning improvement; and also accorded to Milstein’s result that proper school

environment arrangements enable the students to have better communication. Furthermore, an interesting aspect from observations was that all activities provided revealed great cooperation from both academic service providers and academic service recipients.

Reflection: The researchers analyzed the collected data and concluded the implementation in education quality development of Border Patrol Police Schools in Nakhon Phanom Province. The results have shown that all activities provided were completely successful. There was a group discussion in which all participants reflected the results of all activities. The reflection showed that all people involved in the implementation revealed their satisfaction towards implementation in education quality development of Border Patrol Police Schools. Therefore, the Faculty of Liberal Arts and Science, Nakhon Phanom University could continue the roles in implementation in education quality development of Border Patrol Police Schools in Nakhon Phanom Province, and could expand service to 2 more schools in both Mukdahan and Sakhon Nakhon Provinces, in order to develop education quality continuously under the limited budget. As a result, in the next fiscal year, the Academic Camp would be provided for students before taking Ordinary National Education (O-net). Incidentally, in the academic year 2013, all 6 Border Patrol Police Schools had scores that were 1.74 percent higher in the 4 subjects than those in academic year 2012. As a result, all participants collaborated with their determination to develop education quality effectively. Moreover, the prestige of Her Royal Highness Princess Maha Chakri Sirindhorn made the implementation completely successful.

### **Suggestions**

1. The suggestions in using the research:

1.1 The activities provided implementation in various activities and many schools under a limited budget, so the implementation was not good enough in education quality development for each activity. Therefore, the researchers should reduce the activities, but increase the budget, for highly quality.

1.2 All participants should work effectively together as the academic service providers and the academic recipients. They should share their ideas in working and work together in all procedures: Planning, Action, Observation and Reflection.

2. The suggestions for the next research:

2.1 The researchers should do the research in the context of Border Patrol Police Schools, for example, Situations, Problems and Solutions in Implementation of Border Patrol

Police Schools; Educational Quality Assurance in the Context of Border Patrol Police Schools, etc.

2.2 The researchers should do the research to develop the cooperation in other aspects between Higher Education Institutions and Border Patrol Police Schools, for example, innovation development, research, instructional quality development, etc.

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## Needs Analysis of Communication Tasks for English-Major Students at Roi Et Rajabhat University

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### Abstract

The purposes of this study were to investigate the needs of Communication tasks for English-major students and English language problem. This study also sought to determine these students' wants for the English course. A questionnaire was used to collect data from 121 participants who enrolled *English for Communication course (GEL1104)* required by RERU, academic year 2014.

The findings were as follows:

1. According to 121 English-major students, speaking skill was needed at the most. The order of needed skills were reading, writing, and listening.
2. The students' needs of Communication tasks consisted of role-play, jigsaw, spot the difference, opinion exchange, problem solving, information-transfer, and sharing personal experiences respectively.
3. The students expressed a high degree of problems with writing skill.
4. With regard to students' wants for the *English for Communication course (GEL1104)*, they wanted speaking at the most.

The results of the study are useful for the curriculum development and material design for a course in *English for Communication (GEL1104)* for English majors. Moreover, the results reflect the role of learners' needs in designing and developing materials for a course. By taking into account the needs of learners, educators and teachers can provide appropriate instructional input to foster effective learning.

**Keywords:** Needs analysis, Communication tasks

## **Introduction**

The English language plays an important role in the world's communication because it is the most widespread language, and is employed as a medium of international communication. In Thailand, it has increasingly gained an important role in both academic and business areas. A person with a good command of English is likely to have a better chance to get a desired job. Thus, it is not surprising why English has been a popular major subject among students at the undergraduate and graduate levels. Educational institutions in Thailand offer general education programs in which English is required for all undergraduate students, especially Roi-et Rajabhat University also provides an English for communication course (GEL1104) for the first-year students. When they registering for the Bachelor Programs at Roi-et Rajabhat University they are required to take two courses in the first and second semester (English for Communication, English for Study skills). To develop English for communication course (GEL1104), the needs analysis undertaken here was designed for the English for communication course, the focus of which is to improve learners' general English communication skills. Therefore, it is the aim of this study to investigate the needs of Communication tasks among English-major students at Roi-et Rajabhat University. A needs analysis will be carried out as a starting point in determining the students' needs in terms of the content/topic and activities of a course. The results of the study will reveal the needs of the students in detail. Moreover, the results will provide the guidelines for developing the teaching materials that correspond with the needs of this group of students.

## **Objectives of the study**

1. To investigate the needs of Communication tasks for English-major students ,Roi et Rajabhat University
2. To provide the guidelines for developing the teaching materials of English for communication course (GEL1104) that are mostly beneficial to English-major students, Roi et Rajabhat University

## Literature review

As the purpose of this study is to conduct a needs analysis involving the Communication task of English majors, the review of the literature will focus on two areas: needs analysis and the Communication task.

## Needs analysis

The term *needs* is used to refer to wants, desires, demands, expectation, motivations, lacks, constraints, and requirements (Brindley, 1984: 28). *Learner needs* imply what learners hope to gain from a particular course (Berwick, 1989). Procedures which are used to collect information about learners needs are known as needs analysis (Richards, 2001: 51).

Needs analysis as a distinct and necessary phase in planning educational programs appeared in the 1960s; it served as part of an approach to curriculum development (Stufflebeam, 1985). It has a very crucial role in the development of a course. Graves (2000: 98) expressed such a view as follows

*“Essentially, needs assessment is a systematic and ongoing process of gathering information about students’ needs and preferences, interpreting the information, and then making course decisions based on the interpretation in order to meet the needs It is based on the belief that learning is not simply a matter of learners absorbing pre-selected knowledge the teacher gives them, but is a process in which learners—and others—can and should participate... When needs assessment is used as an ongoing part of teaching, it helps the learners to reflect on their learning, to identify their needs, and to gain a sense of ownership and control of their learning”.*

Richards (1984) suggested that needs analysis serves three main academic purposes. It provides a means of obtaining wider input into the content, design, and implementation of a course; it is used in developing goals, objectives, and content; and it functions to provide data for reviewing and evaluating an existing program.

Graves (2000) noted that needs assessment involves six steps which are cyclical in nature and result in valuable information for designing, implementing, developing, reviewing, and evaluating a course. These steps include (1) deciding what information to gather and why; (2) deciding the best way to gather it; (3) gathering the information; (4) interpreting the information; (5) acting on the information; and (6) evaluating the effect and effectiveness of the action.

A variety of procedures are used in conducting a needs analysis. Questionnaires are one of the most common instruments. The reasons for their popularity are because they are

relatively easy to prepare, they can be used with large numbers of subjects, and they information that is relatively easy to tabulate and analyze (Richards, 2001: 60). Other common instruments include interviews, observations, and analyses of available information.

### **Communicative task-based language teaching**

The features of Communicative Language Teaching can be found in a more specific communicative approach to L2 instruction such as Task-Based Instruction (TBI). Currently, there are two main second language acquisition (SLA) theoretical accounts for TBI; the psycholinguistic and the socio-cultural approaches (Ellis, 2003). The psycholinguistic approach to TBI is also known as the cognitive approach of language learning (Skehan, 1998). In general, Skehan's (1998) cognitive approach to TBI for language learning concerns with psycholinguistic factors such as fluency, accuracy, and complexity of language production when students engage in meaning-making oriented tasks. However, such meaning-making oriented tasks within the cognitive approach of TBI is related to language learning processes that take place in the readers' mind in line with the cognitive information processing of SLA. On the contrary, within the perspective of the sociocultural theory of SLA, tasks in Communicative Task-Based Language Teaching (CTBLT) constitute the co-construction of meaning via students' participation, self-regulation through private speech, mediation, imitation, internalization, and assisted interactions within a learner's ZPD or zone of proximal development (e.g., Ellis, 2003).

Communicative Task-Based Language Teaching is a form of Communicative Language Teaching in which tasks or activities are viewed as central to meaningful language learning (Nunan, 2004; Skehan, 1998). The primary goal of Communicative Task-Based Language Teaching is to prepare learners with language that matches their needs (Long & Crookes, 1993) and is suited to their context and familiarity (Ellis, 2003). Teaching and learning activities under Communicative Task-Based Language Teaching typically involve learners as problem solvers who have to fulfill a specified real world task in relation to the instructional objectives or learning outcomes such as making travel arrangements with a travel agent (Crookes, 1986; Prabhu, 1987).

### **Communication tasks**

Second language acquisition researchers describe tasks in team of usefulness for collecting data and eliciting samples of learners language for research purposes. For example, Bialystok (1993:2-9) suggest that a communication tasks must (a) *stimulate real communicative exchange*, (b) provide incentive for the L2 speaker/listener to convey information, (C) provide

control for the information item required for investigation and (d) fulfill the needs to be used to the goal. Similarly, Pica (1980) argues that tasks should be developed in such as ‘way to meet criteria for information control, information flow and grow of the study’.

Willis (1996b:53) defines task as a goal-oriented activities in which learner use language to achieve a real outcome and reflect language use in the outside world. Other definitions are more general. Nunan’(1989a) one of the most commonly cited pedagogical definition of task, Nunan proposes that a communication task

*.....a piece of classroom work which involves learners in comprehending, manipulating, producing or interacting with the target language while the their attention is principally focuses on meaning rather than form (Nunan,1989a;10)*

### **Task types**

Task types can be identified in a number of ways. For example, (Nunan,1989) suggest two board of categories: real world task (such as using telephone) and Pedagogical tasks (such as information gap activities)these can be subdivided by language function (e.g. giving instruction,apolpgizing, making suggestions), cognitive process or knowledge hierarchies (e.g. listing, ordering and sorting, sharing personal experiences, problem solving, Comparing, creative;) (Willis,2001) Others might classify tasks by topic and language skills require for completion, or by whether the outcome is **closed** or **ended** (Long(1989). Pica, Kanagy and Folodum (1993) take their starting points the type of interaction that occur during task completion, e.g. one way or two way information flow, result in 5 types, jigsaw tasks, information gap, problem solving task, decision making task, and opinion exchange.

### **Research methodology**

The study employed the quantitative and qualitative approaches, using a questionnaire to collect data and interpreting the results in terms of the needs of the communication tasks for English-major students. The details of the participants and the questionnaire are as follows:

### **Participants**

The target population was English-major students who had taken at least one course in English for communication course (GEL1104). Both the purposive sampling and the random sampling procedures were used to select the representatives of the population. That is, undergraduate majoring in English at Roi-et Rajabhat University were targeted since they all took an English for communication (GEL1104) as one of their compulsory courses in the

program. The participants were then randomly selected from this group of students. The undergraduate students were in the second and third years of their study in the English program. They took a course in English for communication (GEL1104) in the first year of study. There were 15 second-year students and 15 third-year students, yielding 30 students were chosen to participate in the present study.

### Instrument

A five-point Likert scale questionnaire was used to investigate the needs of Communication task for English-majors students. It was constructed based on a number of studies in needs analysis and a wide range of topics / tasks presented. There are three parts of questions consisted of background questions focusing on potential problems that the respondents had in language learning and the needs of topic and tasks (see Appendix).

### Findings

The results of Needs Analysis in Learning English and Communication Tasks for English major students at Roi –Et Rajabhat University, Academic Year 2557

**Table 1 :** Participants' general information, opinion and experience in learning English (N= 30)

No	Statements	Samples	Percent (%)
1	<b>Gender</b>		
	Male	5	17.0
	Female	15	83.0
2	<b>Listening skill</b>		
	<input type="checkbox"/> Excellent	0	0
	<input type="checkbox"/> Good	0	0
	<input type="checkbox"/> fair	7	24.0
	<input type="checkbox"/> weak	16	52.0
	<input type="checkbox"/> very weak	7	24.0
3	<b>Speaking skill</b>		
	<input type="checkbox"/> Excellent	0	0
	<input type="checkbox"/> Good	0	0
	<input type="checkbox"/> fair	7	24.0
	<input type="checkbox"/> weak	4	13.0
	<input type="checkbox"/> very weak	19	63.0

4	<b>Reading skill</b>		
	<input type="checkbox"/> Excellent	0	17.0
	<input type="checkbox"/> Good	0	20.0
	<input type="checkbox"/> fair	14	27.0
	<input type="checkbox"/> weak	16	13.0
	<input type="checkbox"/> very weak	0	10.0
5	<b>Writing skill</b>		
	<input type="checkbox"/> Excellent	0	0
	<input type="checkbox"/> Good	0	0
	<input type="checkbox"/> fair	16	53.0
	<input type="checkbox"/> weak	13	44.0
	<input type="checkbox"/> very weak	1	3.0

**Table 1** reveals that the proportion of students were female as many as that of the male students. It was found that the students assessed their English skills at a fair level; however, considering each skill, reading was ranked at the highest level, followed by listening, writing, and speaking, respectively.

**Table 2:** Participants' Needs for topic to study English for communication (GEL 1104) (N=30)

No.	Needs for topics	Mean	SD	meaning	Ranking
1	Personal identification	3.91	0.13	much	1
2	House and home, environment	3.83	0.06	much	4
3	Daily life	3.77	0.18	much	5
4	Free time/ entertainment	3.67	0.19	much	8
5	Travel	3.70	0.29	much	7
6	Relations with other people	3.65	0.24	much	9
7	Health and body care	3.63	0.20	much	10
8	Education	3.87	0.04	much	2
9	Shopping	3.60	0.13	much	11
10	Food and drink	3.72	0.22	much	6
11	Services	3.56	0.21	much	12
12	Places	3.51	0.18	average	13
13	Language	3.47	0.04	average	14

14	Weather	3.86	0.11	average	3
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According to Table 2, the students ranked their need for topic, three are as the highest need; Personal identification (M=3.91), Education (M=3.87), and Weather(M=86) respectively. For the lowest needs are, Language (M=3.47), Places (M=3.51), and Services (M=3.56).

**Table 3:** Participants' Needs of Characteristics of Learning and tasks

No.	Needs for Characteristics of Learning and tasks	Mean	SD	meaning	Ranking
1	Learning through completing	3.88	0.08	3.88	5
2	Learning through role play	3.90	0.14	3.80	4
3	Learning through presentations (e.g. oral, exhibition, poster ...)	3.76	0.19	3.76	9
4	Learning through problem solving	3.79	0.24	3.70	7
5	Learning through competition	3.99	0.99	3.70	1
6	Learning English through jigsaw	3.68	0.05	3.68	12
7	Learning through language games	3.63	0.17	3.63	14
8	Learning through opinion exchange	3.78	0.06	3.63	8
9	Learning through simulation	3.64	0.35	3.53	13
10	Learning through decision making	3.53	0.19	3.53	15
11	Learning through demonstrations	3.71	0.18	3.51	10
12	Learning through ordering and sorting	3.69	0.09	3.49	11
13	Learning through sharing personal experiences	3.96	0.21	3.46	2
14	Learning through comparing	3.45	0.16	3.45	16
15	Learning through information-gap	3.93	0.21	3.43	3
16	Learning through information transfer	3.87	0.26	3.43	6
17	Learning through group work discussion	3.41	0.24	3.40	17
18	Learning through story telling	3.40	0.27	3.40	18
19	Learning through hand-on experience	3.31	0.18	3.31	19

The findings revealed that students ranked their needs for Learning through competition at a highest (M=3.99), Learning through sharing personal experiences (M=3.96) Learning through information- gap(M=3.93) consequently. Three of the lowest mean score they needed in



language learning and tasks consists of; Learning through hand-on experience (M=3.31), Learning through story telling (M=3.40) and Learning through group work discussion (M=3.41) respectively.

### Qualitative results

The results from the open-ended question analysis were consistent with the findings from the questionnaire. Ten English major students perceived that the last two skills they performed worst were listening and speaking, which they consequently regarded as difficult. However, they revealed that speaking was more difficult than writing, and interestingly five second year students were still facing the same English language difficulties and boring as seen from the following quotes translated from Thai:

*Student 1,; I feel speaking is the hardest for me. Sometimes I want to express some ideas but I can't deliver at all.*

*Student 2,; We rarely discuss in the classroom, anyway. it's such a boring class.*

*Student 3,; Not enough interesting activities, just memorize the grammar for the exam.*

### Conclusion and Suggestions

In conclusion, this study investigated the needs of Communication tasks for English-major students. Data were drawn by using a questionnaire collecting opinions and judgments from 30 English majors' students. The results revealed the students' needs of topics and tasks. Eight of topics needs were judged as significantly needed. These included Personal identification, Education, Weather, House and home environment , Daily life, Food and drink, Travel and Free time, entertainment. Additionally, eight of students prefer tasks will apply for the chosen topics; Learning through competition, Learning through sharing personal experiences, Learning through information-gap, Learning through role play, Learning through completing, Learning through information transfer, Learning through problem solving and Learning through opinion exchange.

The results are useful for the curriculum development and material design for a course in English for communication (GEL1104) for English majors. They provide some guidelines for the scope of the course content /topics and tasks that matches the needs of this group of students. Moreover, the results of the study reflect the role of learners needs in designing and Developing the materials for a course. By taking into account the needs of learners, educators and teachers can provide appropriate instructional input to foster effective learning.

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## Effects of Reading Instruction Based on Cognitive Academic Language Learning Approach (CALLA) on Public Administration English Reading Abilities and Strategy Use

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### Abstract

The purposes of this study were (1) to compare the students' public administration English reading ability before and after receiving the reading instruction based on cognitive academic language learning approach, (2) to investigate reading strategies used by public administration students, and (3) to explore the students' opinion towards reading instruction based on cognitive academic language learning approach.

Data were collected from 30 students RERU who enrolled in the English for public administration course, semester 2 academic years 2014. The research instruments were reading comprehension test, survey of reading strategies (SORS), think aloud protocols, and questionnaire.

The finding revealed that (1) there was a significant difference between the mean scores from the pre and post reading comprehension test at the significant level of 0.05.

(2.) The reading strategies used by students consisted of Cognitive reading strategy, Social/Affective reading strategy, and Metacognitive reading strategy respectively. (3) The students' opinions towards reading instruction based on cognitive academic language learning approach were highly positive.

**Keywords:** CALLA, survey of reading strategies (SORS), Public administration English

### Introduction

Now a day, English is considered as a major international language, people all over the world in non-English speaking countries take English as a foreign language to develop their proficiency. Students in non-English speaking countries do not frequently have a chance to listen, speak, or write in English, they have more chances to use English in their reading (Piyankool, 2001). Reading is one of the four necessary important language skills for learning English as a second or foreign language. The higher the level of education is pursued, the

greater the command of English is required, especially in reading and writing in order to access academic resources and keep up with world standards in all disciplines. However, Thai educators investigated the reading ability of Thai EFL students and found that most Thai university EFL students especially those who are not English majors have low to medium English reading proficiency (Chinwonno,2001). Several causes have been identified in regard to the Thai university EFL students' poor English reading problem. These include a lack of reading resources, a lack of strong reading culture, a lack of reading strategy knowledge, and teachers' use of unsuccessful teaching methods (Sukamolson,1993; Vanichakorn, 2003). As stated by Ekwall and Shanker (1988), more than 90 percent of learners' reading failures could or should be blamed on poor teaching. This is in line with the observational studies by Durkin (1978-1979) and Pressley and Wharton-McDonald (1997) which found that teachers regularly assigned reading tasks to their students and then tested their reading comprehension, but rarely taught the reading strategies needed by their students.

Recent research on reading has focused on the process of comprehension and strategies instruction. Successful language learners need reading strategies to help them cope with learning difficulties. Chamot and O'Malley (1994), they also assert that learners who use strategy approaches to learning will comprehend written language more effectively and be able to retain and use their language better than learners who do not use learning strategies. According to Chamot and O'Malley (1999), the Cognitive Academic Language Learning Approach (CALLA) is a learning strategy instructional approach. It is designed to meet the academic needs of English learners and assist them to become more academically successful. The Cognitive Academic Language Learning Approach model included three components: topics from major content subjects, academic language skills, and instruction in learning strategies. The three broad categories of learning strategies are; metacognitive strategies, cognitive strategies, and social/affective strategies. These strategies have been incorporated in CALLA through a five phase of instructional model: preparation, presentation, practice, evaluation, and expansion. Therefore, the researcher constructs a reading strategy instruction based on the Cognitive Academic Language Learning Approach to examine if it has an impact upon learners' reading comprehension ability and their reading strategies in the specific field study.

### **Purposes of the study**

2.1 To compare the students' public administration English reading ability before and after receiving the reading instruction based on cognitive academic language learning approach

2.2 To investigate reading strategies used by public administration students.

2.3 To explore the students' opinion towards reading instruction based on cognitive academic language learning approach.

### **Significance of the Study**

The findings of this study are expected to play a significant role in English reading pedagogy. The effective strategies in academic English reading gained from the study and the strategy instruction employed are expected to result in the improvement of teaching and learning particularly in English reading courses.

### **Research Questions**

4.1 Does the students' reading ability after trained through the Cognitive Academic Language Learning Approach is higher than before training?

4.2 To what extent does a reading instruction based on the Cognitive Academic Language Learning Approach promote students' use of reading strategies?

4.3 What is the students' opinion toward the Cognitive Academic Language Learning Approach on Public administration English reading?

### **Limitations of the Study**

As this research was carried out in a specific classroom, the sample cannot be said to represent the larger community. However, this research was designed to use different methods to find out exactly what strategies were used and also which ones were considered effective in reading courses in the undergraduate curriculum.

### **Literature Review**

#### **Reading comprehension and strategies**

Comprehension cannot be understood as being only the product of reading. For any demanding text, readers have to be skillful and strategic if they want to read it effectively (Urquhart & Weir, 1998). The use of reading strategies is especially crucial for high educational level students in almost every academic field of study since academic materials written in English are widespread. Since the mid-1970s, research studies have paid particular attention to the role of strategies in second language learning (e.g., Anderson, 1991; Cohen, 1990; O'Malley & Chamot, 1990; Oxford, 1990; Rubin, 1975), and they have indicated that learners actively employ strategies to accomplish their language learning goals. Barnett (1988) examined reading strategies used by students learning French and concluded that there is a relationship between

strategy use and reading comprehension. Developing strategic reading is an important way to enhance comprehension ability. The main objective of the English reading instruction is to enhance students reading comprehension ability as well as their use of reading strategies. Reading instruction in this study therefore referred to comprehension strategy instruction.

### **The Cognitive Academic Language Learning Approach**

According to Chamot and O'Malley (1994), Cognitive Academic Language Learning Approach is an instructional approach for second and foreign language learners. It prepares students for academic achievement with academic work and language development. This approach enables learners to further understand what is required by the language task and to use their knowledge of the language. This allows the student to learn new content and apply recognized learning strategies to learning the new target language. Learning strategies are divided into three main categories consisting of metacognitive, cognitive and social/affective strategies.

### **Think-Aloud**

Think-aloud protocol is a method used to investigate learners' reading strategies, in which learners think aloud as they are completing a task in order that the researcher can discover what kinds of thinking processes or strategies they are making use of. The researcher observes while the learner attempts to complete a defined task. Think aloud techniques are those in which subjects complete a task or solve a problem and verbalize their thought processes as they do so. The researcher collects the think aloud protocol on tape and then analyses it for the thinking strategies involved (Nunan, 1992). Regarding the method of thinking aloud, Bell (2004) mentions that it is used to model the cognitive processes of reading comprehension. Students verbalize their own thoughts as they read aloud, modeling the kinds of strategies a skilled reader uses during the reading. The main purpose of a think aloud protocol is to model for students the thought processes that take place when difficult material is read. Feldmann and Stemmer (1987) point out that think aloud protocol has been used mainly to investigate the process of translation and communication in a foreign language. Moreover, think aloud procedures have been employed to investigate learners' ongoing cognitive processes and strategies in four major second language areas including translation, reading, writing, and testing (Matsumoto, 1993).

### **Methodology**

This investigation on Public Administration English Reading ability focus on reading instruction based on the Cognitive Academic Language Learning Approach is considered a classroom research, which means the study was carried out in a real classroom in order to obtain effective methods that would enhance the development of students 'English reading comprehension. This section presents the research procedure, which include the following fundamental aspects.

- Subjects of the study
- Study instruments
- Data collection
- Data analysis

### **Subjects of the Study**

The subjects or informants of this study selected using purposive sampling. Therefore, a class of the students who took the course English for Public Administration (ENG26) at Roi-et Rajabhat University was a group for explicit instruction in the study, which consisted of 30 participants.

Nine participants from the group were invited to be informants for conducting Think-aloud to reflect their effective strategies, especially those gained from the explicit instruction of reading strategies.

### **Research instruments**

The instruments employed in the present study to achieve the research purposes were 1) Survey of Reading Strategies(SORS), 2) lesson plans , 3) English for public administration reading a test, 3) Think- aloud protocol , and 4) questionnaire.

#### **1. Survey of Reading Strategies (SORS)**

Survey of Reading Strategies is adapted from Learning Strategies Questionnaire developed by Chamot A.U (1999). A total of 30 items related to three major types of reading strategies explicitly taught in the cognitive academic language learning approach were included on this survey. *Metacognitive strategy* comprises of 9 items primarily concerned with organizational planning, selective attention and self-assessment. *Cognitive strategy* comprised 15 items concerning elaboration of prior knowledge, note-taking, summarizing, imagery and making inference. In addition, *Social/Affective strategy* comprised 6 items concerning questioning for clarification and cooperation. There was a four point scale for the students to

rate how often they used different reading strategies when they read on-line in English, 4-always, 3-sometimes, 2- always 1-never. After the construction of the survey of reading strategies, the survey had been validated by three experts for its contents and pilot tested to ensure its construct validity. When the four items had been modified as appropriate according to the suggestions of the experts, the survey of reading strategies was piloted in order to ensure reliability. After the pilot study, the reliability values of the survey of reading strategies were estimated by using Cronbach's alpha coefficient method. Using this method of analysis reliability values of more than 0.7 are considered acceptable. The alpha coefficient from the pilot study was equal to 0.82 which demonstrated that the survey of reading strategies adapted by the researcher had good reliability.

## **2. Lesson plans**

Eight lesson plans with detailed information of activities and procedures to be used in classroom were written by the researcher. Each lesson plan included title of the lesson, content objectives, reading strategy, activities and evaluation. The researcher developed eight lesson plans using the following procedures:

(1) The researcher studied reading passages from various resources to select the passages as the text.

(2) The researcher informally interviewed two English teachers who were political science officer. The Reading Interest Inventories was therefore designed based on the information gathered from the checklist.

(3) Topic content needs analysis was conducted to find out the needs of the students. Reading Interest Inventories were distributed to the 80 public administrative students in semester 1, academic year 2014, Roi Et Rajabhat University.

Based on the results of public administrative students' needs analysis, eight reading passages from a variety of source were selected, Local government, Contemporary Forms of Government, Civil Service, Electrical system and Social Security. Each lesson was developed by the researcher based on the Cognitive Academic Language Learning Approach. Activities in all lessons were integrated three types of reading strategies: metacognitive reading strategy, cognitive reading strategy and social/affective reading strategy.

## **3. English for public administration reading test**

English for public administration reading test is constructed for measuring Public administration reading comprehension. The total score of the test was multiple choices for 30 items. It was covered reading sub-skill, understanding of the general idea, the main points, specific details, the reference, inference, word context clues and specific information.



After the construction of the test, the evaluation form of test item objective had been validated by three experts for its contents and pilot tested to ensure its construct validity. After the revision of the tests, a pilot study was carried out before the main study was undertaken with an additional 30 students who were studying political science in another section. All test items were analyzed for difficulty index and discrimination index of the test. The reliability of the overall test calculated by Kuder-Richardson-20 formula (KR-20) was 0.92, which can be interpreted that the test had *high* reliability. The criteria for the difficulty index and the discrimination index were set as follows ((Sukamolson, 1995, p. 31).

*For the difficulty index (p):*

$p < 0.20$  means the item was difficult.

$p = 0.20-0.80$  means the item was good in terms of its difficulty.

$p = 0.81-0.94$  means the item was easy.

$p \geq 0.95$  means the item was very easy.

*For the discrimination index (r):*

$r = 0$  means the item had no discrimination ability.

$r \geq 0.19$  means the item had a low discrimination ability.

$r = 0.20-0.29$  means the item had a fair discrimination ability.

$r = 0.30-0.39$  means the item had a high discrimination ability.

$r \geq 0.40$  means the item had a very high discrimination ability.

According to the criteria, the test items of which difficulty indices ranged between 0.20 - 0.80, and discrimination indices were equal or higher than 0.20 were chosen for the main study. It meant that all 30 items of each test were satisfactory.

#### **4. Think-aloud protocol**

Think-aloud protocol as the main instrument to investigate the students' use of reading strategies. Lavadenz (2003) states that with think-aloud protocols, students verbalize, in an interview context; how they are processing the text they are reading. Regarding the method of thinking aloud, Bell (2004) mentions that it is used to model the cognitive processes of reading comprehension. Students verbalize their own thoughts as they read aloud, modeling the kinds of strategies a skilled reader uses during the reading. The main purpose of a think aloud protocol is to model for students the thought processes that take place when difficult material is read.

## 5. Questionnaire

The students' questionnaire consist of the students' opinion questionnaires and the open-ended questionnaires. The former was used to obtain the data on students' opinion. the questionnaire consisting of 12 close-ended items and 1 open-ended item was developed to investigate the participants' opinions towards materials. This questionnaire with the reliability index of 0.76, obtained through Alpha Cronbach.

### Data Collection

The data collection was carried out before and after the experimental study. The whole experiment lasted for 8 weeks.

Prior to a cognitive academic language learning approach reading Instruction, the pretest were distributed to the public administrative students in order to assess their reading comprehension ability and their use of reading strategies. The public administrative students received the treatment for 8 weeks. At the end, all of the participants were post tested as well as survey of reading strategies were conducted in order to examine the effects of a cognitive academic language learning approach and their use of reading strategies. Subsequently, the in-depth analyses of the observations through think-aloud sessions for qualitative data, then students were asked to answer questionnaire of students' opinion toward reading instruction based on cognitive academic language learning approach.

### Data analysis

1. The data obtained from the pre and post reading comprehension test was statistically analyzed by means of arithmetic mean, standard deviation, and t- test (Paired samples test) in order to compare the differences in the students' reading comprehension ability

2. The data obtained the Survey of reading strategies (SORS) was statistically analyzed by mean of arithmetic mean, standard deviation. Furthermore, the verbal report from the think aloud protocol was transcribed and analyzed qualitatively.

3. The data obtained from the students' opinion toward the cognitive academic language learning approach was statistically analyzed by mean of arithmetic mean, standard deviation.

## Findings

This part reports and discusses results according to the research objectives.

1. To compare the students' public administration English reading ability before and after receiving the reading instruction based on cognitive academic language learning approach.
2. To investigate reading strategies used by public administration students.
3. To explore the students' opinion towards reading instruction based on cognitive academic language learning approach.

**Table 1** Means, t-values, and the significance of the pre English reading comprehension test and the post English reading comprehension test

Mode of Assessment	Mean	Mean differences	t	df	p
pretest	29.10	-11.68	8.789*	29	0.000
posttest	33.53				

\*P < .05

The result of the t-test shows that the students earned a higher posttest mean score (Mean=33.53) than a pretest mean score (Mean= 29.10). The mean difference was -11.68 and the t value was 8.789\* with a degree of freedom of 29(N = 30). It is apparent that there was a significant difference between the mean scores from the pre and post reading comprehension test at a significant level (p < .05). There would be significantly higher average scores on the post English reading comprehension test than the pre English reading comprehension test was accepted. In other words, students' reading comprehension ability significantly improved after receiving Reading instruction based on cognitive academic language learning approach.

**Table 2** Mean Scores from the Survey of Reading Strategies (SORS).

Category of Reading Strategy	Mean	S.D.	level
1. Metacognitive Reading Strategy	7.38	0.65	3
2. Cognitive Reading Strategy	8.48	0.77	1
3. Social/Affective Reading Strategy	8.23	0.15	2

The results from Table 2 reveals that the means scores on the Survey of Reading Strategies (SORS) in three types ; Cognitive Reading Strategy (Mean 8.48), Social/Affective Reading Strategy (Mean=8.23),and Metacognitive Reading Strategy(Mean=7.38).

To gain more insights into the students' actual use of strategies when they were asked to undertake reading tasks, the second research question was formulated. To address this question, I used qualitative data from observations through think-aloud sessions

**Student A** “ try to picture or visualize information to help remember what I read”

**Student B** “I usually start with context clues because they help me read faster and easier without stopping to look up every new word in a dictionary.”

(Cognitive reading strategies/ Think-aloud)

**Table 3** presents the students' opinion toward the Reading Instruction Based on Cognitive Academic Language Learning Approach on public administration English reading.

Statement	Mean	S.D.	Ranking
<b>Instructor</b> Mean = 3.65 S.D.= 0.59			
1. The instructor well-prepared teaching	3.23	0.99	3
2. The instructor explain and model reading strategy clearly	3.67	0.87	2
3. The instructor have the students' opportunity to practice in reading skills	4.06	0.45	1
<b>Reading activities</b> Mean = 3.53 S.D.= 0.94			
4. The reading activities challenge students' thinking	3.50	0.99	2
5. All reading texts are interesting	4.02	0.83	1
6. The reading activities are enhance students' thinking	3.09	0.44	3
<b>Learning environment</b> Mean = 3.77 S.D.= 0.76			
7. students are active learning	3.54	0.98	2
8. Students have an opportunity to discuss about issue they don't understand	4.34	0.02	1
9. Students have an opportunity to share their idea freely	3.43	0.23	3
<b>Usefulness</b> Mean = 3.07 S.D.= 0.76			
10. Students gain more reading strategies	3.88	0.98	1
11. Students enable to apply reading to another skill	3.57	0.76	3
12. Students aware of using reading strategy in their	3.65	0.62	2

real life			
<b>Overall</b>	<b>Mean = 3.74</b>	<b>S.D.= 0.43</b>	

From Table 2 ; data from the open-ended questions revealed that most of the students clearly stated that they liked the enjoyable and useful activities which could enhance their reading skills and doing these activities were the most valuable benefit they gained from learning reading through cognitive academic language learning approach overall (Mean = 3.74 S.D.= 0.43.) For the section that the students have the highest opinion level are; Learning environment (Mean=3.77 S.D.= 0.76), Instructor (Mean = 3.65 S.D.= 0.59), Reading activities ( Mean=3.53 S.D.= 0.94), and Usefulness (Mean = 3.67S.D.= 0.76).

## Conclusions

In summary, there were significantly higher average scores on the post reading comprehension test than the pre reading comprehension test and students used of reading strategies consisted of Cognitive Reading Strategy, Social/Affective Reading Strategy and Metacognitive Reading Strategy. Moreover, the students' opinion on Reading Instruction based on cognitive academic language learning approach as a high level.

The results of this study supported both content-based reading instruction and a cognitive academic language learning approach. According to the results, university students' reading comprehension mean scores from the post reading comprehension test were significantly higher after receiving Reading instruction based on cognitive academic language learning approach. It may therefore be concluded that a cognitive academic language learning approach help learners improve their reading comprehension ability. In addition to the strategies employed above, the university students' were encouraged to write down important information' and guess the meaning of unfamiliar words based on what they already knew about the topic and from other contextual clues while they were reading. Moreover, students were provided with a chance to cooperate with each other to help complete the tasks. This is seen to be an excellent way to increase student responsibility for learning (Chamot & O'Malley, 1994).

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## The Development of English Reading Comprehension Ability Using Panorama Technique for Sakon Nakhon Rajabhat University Undergraduate

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### Abstract

The purposes of this research were to study and compare the English reading comprehension ability before and after learning through PANORAMA technique of Sakon Nakhon Rajabhat University undergraduate students and to study students' attitude towards teaching English comprehension using PANORAMA technique.

The sample group consisted 40 undergraduate students at Sakon Nakhon Rajabhat University in the first semester of the academic year 2015. They were selected by cluster random sampling. The design of the research was a one group pretest posttest design.

The research instruments were 12 lesson plans, English reading comprehension ability test and the attitude questionnaire. Statistics used in this research were the mean, percentage, standard deviation and t – test for dependent. The finding for this research were as follows;

1. The students' pretest and posttest scores on English reading comprehension ability were 49.5 percent and 77.12 percent, respectively. The students' posttest score in English reading comprehension ability was found to be significantly higher than that of pretest.
2. The students' attitude towards teaching English reading comprehension using PANORAMA technique was at a good level.

**Keywords:** PANORAMA, English reading comprehension ability, students' attitude

### 1. Introduction

English is an international language. Since, it is a tool to access communication, education and information, learning English is essential. It enables learners to be able to communicate with foreigners properly, with confidence and to meet with the breadth of vision. As Thailand will enter the ASEAN Community by the year 2015 with the ASEAN charter, article 34 mentions that the language used in ASEAN is English. The agreement of labor movement

includes 7 fields; engineer, architect, nurse, doctor, dentist and accountant. This will effect the ASEAN countries to have a standard criteria to assess the ability of workers in the region and it causes more competition especially in English ability.

The Office of the Higher Education Commission has realized the importance of entering the ASEAN Community. It will change economics, social, culture and education in particular. Therefore, the Office of the Higher Education has produced the strategic plans to use in higher education to develop the students to meet with successful and to drive Thai education to be more effective. Sakon Nakhon Rajabhat University realizes the change of social, economics and education towards the development of education to provide students with the best ability. The curriculum contributes to learners' development by giving learners better understanding of themselves and others. The learners are able to learn and understand differences in languages and cultures. They will be able to use foreign language in communication easier and wider access to bodies of knowledge and will have vision in leading their lives.

Reading is the single most important fundamental skill that students could acquire. It is very beneficial for students' lives. It is also a way for students to reach out their goal. Reading encourages students to gain more knowledge. The students need to study by using text books. Even workers also need reading skill to accomplish their lives. In accordance with William (1994) stated that most of the books are published in English so the students need to be good at reading. Also, Anderson (1984) mentioned that reading skill is important for learning English as a second language. The students who have good reading skills are able to study effectively. Hence, teaching reading should be related with the strategies such as using background knowledge, skimming and scanning strategy, finding the main idea and summarizing. Therefore, teaching reading should be used to comprehend the text. According to Chaweewan (2000) supported that reading is important for everybody. It is the key to success.

Reading skills are important for students but English instruction has not succeed because of the lack of reading comprehension of students. As Lapp and Flood (1986) stated that most of the students lack of reading comprehension ability and they also lack vocabulary knowledge. In accordance with Samuth (2006) mentioned that the problem of students is they could not manage their thoughts. This effected their reading comprehension ability. Sakon Nakhon Rajabhat University stated that the standard of the course, Reading and Writing for General Purposes subject (01550104) should have a passing rate of 70 percent of the total students enrolled. However the students who passed the standard were only 50 percent in Academic year 2013. It indicated that their reading comprehension ability is at very low level. According to the study of the documents which relate to reading comprehension, it showed



that effective reading depends on the design and technique of teaching. The researcher found that PANORAMA technique is interesting. This technique enhanced the students to be able to achieve their reading purposes. PANORAMA technique consists of many effective stages. First, preparation stage consists of P – Purpose, A – Adapting rate to material and N – Need to pose question. Second, Intermediate stage consists of O – Overview, R – Read and relate and A – Annotate. Last, Conclusion stage consists of M – Memorize and A – Assessment.

The research was interested to use PANORAMA teaching to solve the problem and enhance the students to have reading comprehension ability

## **2. Research instruments**

The instruments used in this research were 12 lesson plans, English reading comprehension ability test and the attitude questionnaire.

2.1 Lesson plans of teaching English reading comprehension using PANORAMA technique consisted of 12 lesson plans, 3 hours per plan, 36 hours in total. The value of the Index of Item Objective Congruence (IOC) was between 0.67 – 1.00

2.2 An English reading comprehension ability test was the multiple – choice test with 40 items. The value of the Index of Item Objective Congruence (IOC) was between 0.67 - 1.00 and the discrimination value was between 0.35 – 0.93 the reliability test was at 0.94.

2.3 A students' attitude questionnaire towards teaching English comprehension using PANORAMA technique consisted of 20 items related to the contents using a five point rating scale. The value of the Index of Item Objective Congruence (IOC) was between 0.67 – 1.00

## **3. Methods**

The researcher conducted the research on the purpose of using PANORAMA technique to improve the English reading comprehension ability.

To perform data collection, the researcher collected data in the first semester of the academic year 2015 as follows;

3.1 The students took the pretest using an English reading comprehension ability test with 40 items, it took 1 hour.

3.2 The researcher conducted the teaching program using 12 lesson plans. The duration was 12 weeks, 3 hour per week, 36 hours in total.

3.3 The students took the posttest using the same English reading comprehension ability test as the pretest, it took 1 hour.

3.4 The researcher distributed to the students an attitude questionnaire to examine the students' attitude towards teaching English comprehension using PANORAMA technique.

3.5 The researcher analyzed data from the pretest, the posttest and the attitude questionnaire towards teaching English reading comprehension using PANORAMA technique.

#### 4. Results

A study and comparison of pretest and posttest scores on English reading comprehension ability and an investigation of undergraduate students' attitude towards teaching English reading comprehension using PANORAMA technique can be summarized as follows;

4.1 The students' pretest score on English reading comprehension ability was 19.8 or 49.5 percent and that posttest was 30.85 or 77.12 percent respectively.

**Table 1** A comparison of English comprehension ability scores prior to and after using PANORAMA technique

t -test	N	$\bar{X}$	S.D.	Average score
Pretest	40	19.8	3.42	49.5
Posttest	40	30.85	2.51	77.12
				34.69**

Table 1 indicated that the students' English reading comprehension ability was found to be significantly different at .01 level. More than 70 percent of students had higher learning achievement scores after studying English reading comprehension using PANORAMA technique.

4.2 The students' attitude towards teaching English reading comprehension using PANORAMA technique was at a good level.

**Table 2** Students' attitude towards reading comprehension using PANORAMA technique

Questionnaire interpretation	N	$\bar{X}$	S.D.	
Students' attitude towards START strategy	40	3.72	0.41	Good

Table 2 indicated that students' attitude toward teaching English reading comprehension using PANORAMA technique was 3.72 and the standard deviation was 0.41.

## 5. Discussion

This study was an experimental research with a one – group pretest posttest. The purposes of this study were to compare students' English reading comprehension ability before and after using PANORAMA technique and to study students' attitude towards teaching English reading comprehension using PANORAMA technique. The research findings can be discussed as follows;

1. From the study and comparison of the English reading comprehension ability of undergraduate students before and after using PANORAMA technique. The findings were found that the students' pretest and posttest scores on English reading comprehension ability were 19.8 or 49.5 percent and 30.85 or 77.12 percent respectively. The finding indicated that the students' pretest score on English reading comprehension ability was at a low level. The reason might be from the lack of reading comprehension ability. They might not have the syntactic skills to organize and interpret the text efficiently.

The students could not comprehend the text because of a lack of vocabulary and reading strategy to arrange their thoughts from reading the text. Moreover, they also did not know how to identify the main idea of the text. They could not achieve their reading purposes. However, after the students learned English reading comprehension using PANORAMA technique, they could improve their English reading comprehension ability. The students posttest score in English reading comprehension ability was significantly higher than that of the pretest at .01 level and more than 70 percent of students gained a higher score in English reading comprehension after using PANORAMA technique. It can be stated that PANORAMA technique could improve English reading comprehension ability of undergraduate students.

2. The students' English reading comprehension ability after studying English comprehension using PANORAMA technique was significantly higher than that prior to its use and more than 70 percent of students gained a higher score on the posttest than that of the pretest. According to the results of the study, two conclusions are drawn as follows;

Firstly, the reason might be PANORAMA technique could enhance students' English reading comprehension. This technique encourages the students to be able to read the long text efficiently. Williams stated that PANORAMA technique consisted of various stages. (Williams, 1982: 357) In accordance with Bloor suggested that this technique could improve English reading skill. It will guide the readers to be able to read efficiently, summarize main idea and supporting details of the text. (Bloor, 1995: 359) Moreover, Edwards stated that PANORAMA technique are merged from many effective techniques. There are 3 stages of this technique namely; Preparation stage consisted of 3 steps. P – Purpose, A – Adapting rate and N – Need to pose question. Intermediate stage, there are 3 steps in this stage namely O – Overview, R – Read and relate and A – Annotate. Conclusion stage, there are 2 steps of this stage. M – Memorize and A – Assessment.

Secondly, teaching English reading comprehension using PANORAMA technique is an effective reading technique, consisting of 3 stages and 8 steps in which the teacher was the facilitator in every step for students to comprehend the text. The first activity was the pre-reading stage, the teacher motivated the students by asking about their background knowledge of the text along with teaching the vocabulary and sentence structure that appear in the text. Next, the teacher divided the students into groups of 5 and gave the text to the students and asked the students to identify their reading purposes. When the students had the goal of reading they would pay more attention to read and to answer the purposes that they have identified. The teacher guides the students that the speed of time while reading can be changed because the time of reading depends on reading purpose. Moreover, the teacher asked the students to make the questions before reading by changing title, subtitle or even the content into questions. Next stage was while reading stage in which the students read the text using many strategies. The students read the text quickly to observe the text and read again using more time to find the main idea and supporting details by using skimming and scanning strategies. Furthermore, students read the text by using their background knowledge which relates to the text. After that the students summarized the text by underlining the important sentences in the text. Lastly, post reading was the activity to evaluate the students if they achieved their reading purposes or not. The students used the underlined sentences from the previous step to produce the paragraph to memorize and comprehend the text. The teacher

helped students to check their summarized passages and discuss the text again. The last step of teaching English reading comprehension using PANORAMA technique is assessment. Even students are assigned to work in a group, the teacher would check their reading comprehension ability individually by using the comprehensive test.

3. From an investigation of students' attitude towards teaching English reading comprehension using PANORAMA technique, the finding indicated that the students' attitude towards teaching English reading comprehension using PANORAMA was at a good level. The reason might be English reading comprehension activities using PANORAMA teaching provided students pleasure in reading.

Using questions to begin the class increased the students' interest in the topic and motivated them to read the text. For self-questioning, it challenged students to ask questions themselves to make guesses about the text. Students strongly agreed that the pre-reading activities used in the preparation stage encouraged them to be more interested in the text. Also, the intermediate stage helped students better understand the text. It might be students were provided appropriate background knowledge about the text while reading so they could relate what they had already known and new things they read for greater comprehension. For the conclusion stage, students had summarized the text themselves by using their outlines. This promoted them to conclude what the text was about and to check their comprehension. Moreover, they had fun and enjoyed doing reading activities using PANORAMA technique. This learning enabled them to gain more vocabulary and sentence structures and also the texts were interesting and could motivate them to read other texts. These results were consistent with a study of Srisawas (2010) who investigated the students' attitudes towards teaching English reading using PANORAMA and SYNECTIC. The results showed that the students' attitude were at a good level.

It could be stated that students' attitude towards teaching English reading comprehension using PANORAMA technique influenced students' reading comprehension. If students had a positive attitude towards reading, they would give their attention to read the text. Mostly, it would promote students' greater reading ability.

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## Transformational Leadership of school Administrators in Schools under Khon Kaen Primary Educational Service Area Office 2

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### Abstract

The purposes of this research were to study the transformational leadership of school administrators in schools under Khon Kaen Primary Educational Service Area Office 2 and to compare the transformational leadership of school administrators, perceived by the personal, classified by educational level and school size. The samples used in this research was the personal, of 310 in number, including 118 school administrators and 192 teachers, arrived through Krejcie and Morgan's Sample-size Table (Krejcie and Morgan,1970,cited in Boonchom Srisard,2013:43), and the sample random sampling technique. The instrument was Likert's 5-rating-scale questionnaire, with the reliability of 0.94. The statistics used for analyzing the data were percentage (%), mean ( $\bar{x}$ ), standard deviation(S.D.), t-test (Independent samples) and F – test (One – way ANOVA and Scheffle's method.

The results of the study were as follows:

1. The transformational leadership of school administrators, perceived by the personal as a whole, was at the high level.

2. The transformational leadership of school administrators, perceived by the personal in aspects, was at the high level, and in order from high to low are Intellectual Stimulation(IS), Idealized influence (II), Individualized consideration (IC), and Inspirational motivation (IM) respectively.

3. The transformational leadership of school administrators, perceived by the personal with difference educational levels, as a whole ,was found with statistically significant different at the .05 level.

4. The transformational leadership of school administrators, perceived by the personal with different school sizes as a whole, it was found with no difference; and in the aspect of individualized consideration (IC), it was found with statistically significant different at the .05 level.

5. The personal had some main suggestions including the administrators should build by inspirational motivation, working morale, and emphasizes Output values, and appraise those with good work, increase confidence of subordinates and assign work based on their ability, should show good self-behavior and sterilize self for common good, and should meet with teachers on participation in planning work as of the school objectives.

**Keywords:** Transformational Leadership, Bass and Avolio's concept, school Administration, personal's perception.

## 1. Introduction

The Thai society at present has entered into the transformational period, causing by the advancement in information technology together with the new knowledge and innovation. The transformations have been going on so rapidly. It is therefore, necessary for all professional administrative management to adjust themselves to the environment in order to attain success and growth. Transformation is the event or process when happened can make the affected people's adjust differently from the original ones. At present the transformation occurs rapidly, in various forms, and renders complicated impacts and creates confusion. In many times it becomes so severe that it cannot be controlled, and creates problems both in structure and mentality, both in making living and work (Tonson, 2003 : 161)

All organizations, generally, have to change or transform for survival and growth while the internal and external environment are changing. The organizations must appropriately respond to such change (Khechonnann, 2002 : 32-34).

Although the organizations try to adjust themselves both in resources and work performance to accept the environmental forces, the proach've work alone cannot be guarantee its success. Outing to the complexity and uncertainty of environment at present, the organizations must by to do the proactive adjustment, without waiting for the occurrence of the environment to come to analyze the situation, to plan, and make adjustment afterwards. The organization change is a process of making change in the organizations, with the objective to solve the problems occurring within the organizations, or to try to adjust the organizations for growth, by problem and analysis, planning, building efficient organizational culture. The changing process is based on the techniques in behavioral science, sociology, and action research in order to stimulate change within the organizations in the desirable direction. (Promraksa, 2011 : 1-2)



The school administrators are the main personal that are extremely important in school administration with efficiency. This profession is necessary to possess capacity, knowledge. Virtue and ethics, good a professional ethics, as well as leadership in various styles, which is the integration of different concepts into practice.(Saopayon, 2011 : 119)

The transformational leadership as of Bass and Avolio's Concept (Bass and Avolio, 1990) mentioning that it is the process of person who can use art to induce others to cooperate in doing work to attain the set goals with efficiency. The leader must have the suitable traits in knowledge, ability, concept, and wisdom or intelligence, virtue, responsibility, emotional maturity, and motivation of the need for success. The success of becoming leader, not only depends on the suitable behavior, but also the leadership skills, such as human relationship skills, decision making, coordination, and communication, and so on.

Although the leader must have the mentioned traits and roles, the organization administration to attain its objectives must also depend upon the situation and the environment related. Accordingly, the leader must adjust his own behavior suitable for the happening situation, both directly and indirectly. In addition, if the organizational administrator can develop the personal in the organization to process leadership in the great extent, it will be good for both work administration in the organization and mobbing change in the organization. This depends, however, on the training of the administrator to make it really happen in doing work, with theories and principles of suitable leadership that guide the suitable direction.

It is, therefore, necessary for the administrators in the new era to possess transformational leadership with self development and adjustment of the new paradigm by emphasizing the leadership with extensive vision, being able to transfer the vision to co-workers, having clear working performance goals, being a good model, building up confidence, faith, and pride in co-workers, self-adjustment pacing up with change, and having knowledge and ability in administration and technology (Homyamyen, 2005 : 4). Most important of all, he must have the commitment in the administration by emphasizing student quality with knowledge, ability, virtue and ethics, and living happily in the society.

From studying the administration of educational provision in Khon Kaen Primary Educational Service Area Office 2, it was found that the administration of work in various aspects was rather slow and did not pace up with circumstances. Also, from the achievement evaluation of students in grade 6 and grade 9 in 2013 (B.E.2556), it was found that the achievement in many subject groups was below the national average. In this regard, the school administrators were regarded as having an important role in solving the problems, by making change in school administration and work performance of the personal to pace up with the

current circumstances. Similarly, from the study of the transformational leadership as of Bass and Avolio's Concept it was found to be very interesting and accepted worldwide that helps in promoting the creation of the administrator's transformational leadership.

From the background and significance of problems as introduced, the researcher was interested in studying the transformational leadership of school administrators in schools under Khon Kaen Primary Educational Service Area Office 2, in order to gain and information for use as guidelines in development of leadership of school administrators to be able to perform administration in their schools with efficiency and effectiveness in the long.

## **2. Reseach Objectives**

2.1 To study the transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2

2.2 To compare the transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, as perceived by the personal, classified by position and school-size.

## **3. Researcher Scopes**

### **3.1 Population and Sample**

**3.1.1 Population,** The personal, of 1,608 in number, including 175 school administrators and 1,433 teachers, in school under Khon Kaen Primary Educational Service Area Office 2, Academic year 2014 (B.E.2557)

**3.1.2 Sample,** The personal, of 310 in number, arrived though Krejcie and Morgan's Sample- size Table (Krejcie and Morgan, 1970; cite in Srisa-ard, 2013 : 43) and the stratified random sampling technique.

### **3.2 Content**

The transformational leadership as of the concept of Bass and Avolio (1990) in 4 aspects as follows;

3.2.1 Idealized Influence: II

3.2.2 Inspirational Motivation: IM

3.2.3 Intellectual stimulation: IS

3.2.4 Individualized consideration : IC

### 3.3 Research Variables

3.3.1 Independent Variables, the statuses of the respondents:

3.3.1.1 Position

- 1) School administrator
- 2) Teacher

3.3.1.2 School size

- 1) Small size
- 2) Medium size
- 3) Big size

3.3.2 Dependent Variables, The transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, perceived by teacher in form aspects as follows:

3.3.2.1 Idealized Influence

3.3.2.2 Inspirational Motivation

3.3.2.3 Intellectual Stimulation

3.3.2.4 Individualized Consideration

## 4. Research Methodology

### 4.1 Sample :

4.1.1 Collect the number of population of the personal of basic education school in transships Network Center, derived 1,608 in number.

4.1.2 Open Krejcie and Morgan's Sample- size Table (Krejcie and Morgan, 1970; cite in Srisa-ard, 2013: 43), derived 310 in number.

4.1.3 Calculate number of school administrator and teachers, through rule of three.

4.1.4 Select the number of the sample, through drawing the required number of each group.

**4.2 Instrument**, The questionnaire with 2 sections:

**Section 1**, statuses of the respondents in the checklist form of position and school size

**Section 2**. The questions on the transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, in 4 aspects, namely idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, in Likert's 5-rating scale form.

### 4.3 Data Collection

4.3.1 Ask for the official letters from the faculty of Education and Liberal Art, Nakhon Ratchasima College, for allowing to collect the data, to director of Khon Kaen Primary Educational Service Area Office 2.

4.3.2 send 310 questionnaire form and the official letters from Nakhon Ratchasima College to the sample school for giving responses of the questionnaires

4.3.3 Collect all 310 questionnaire forms by the researcher, account rip for 100 percent.

4.3.4 check the completion of the responses, to be ready for the analysis.

### 5. Data analysis

The analysis was in 4 sections as follows:

Section 1, analysis of the statuses of the respondents, namely position and school size, using frequency (f) and percentage (%)

Section 2, analysis of the transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, as a whole and in aspects, using the mean ( $\bar{x}$ ), standard deviation (S.D.)

Section 3, Comparative analysis on the transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, as perceived by the personal with different positions, using the t-test (Independent samples) ; and with different school sizes, using the F – test.

### 6. Summary

The research results were summarized as follows:

6.1 The transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, perceived by the personal, as a whole, it was at the high level.

6.2 The transformational leadership of administrators perceived by the personal in aspects was at the high level in all aspects.

6.3 The transformational leadership of administrators perceived by the personal with different position, as a whole and in aspects, was found to be statistically significant difference at .05 levels; but with different school sizes, as a whole, it was no difference, except in the aspect of individualized consideration, it was found with statistically significant difference at the .05 level

## 7. Discussion

From the research on the transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, there were topics for discussion as follows:

7.1 The transformational leadership of administrators in school administrators in school, as perceived, as a whole and in aspects, it was found it the high level, this might that the administrators could well control emotion in narrow situation, promoted the subordinator to understand the real goals of the organization, had ability in solving problems, valued knowledge, ability and ideas of the subordinates, believed in the subordinates confident, had ability to face complicity, ambiguity, and macertainty, and had commitment in development and vision.

This research result was correspondent with Homyamyen, (2005: Abstract), studying the transformational leadership of the basic education school administrators under Nong Khai Primary Educational Service Area office 2, and finding that the school administration had the transformational leadership the high level.

In addition, the finding was correspondent with Janthamol,(2005 : Abstract), studying the transformational leadership of primary school administrators in Wang sapung District, under Luei Education Service Area Office 2, and finding that the administrators had the transformational leadership, as a whole and in aspects at the high level.

7.2 The transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, perceived by the personals, and finding that it was with statistically significant difference at .05 level. This might be owing to the administrators had no confidence in the subordinates, and did not value their work performance as it would be. The teachers might also view that the administrators did not sacrifices for the common good as it would be.

This research finding was correspondent with Promraksa (2011 : 74),studying The transformational leadership of small school administrators under Lumphun Primary Educational Service Area office 1, and finding that the small school administrators had the highest transformational behavior on helping the teachers and educational personal in self development. In addition, the administrators and teachers really valued one another.

7.3 The transformational leadership of administrators in school under Khon Kaen Primary Educational Service Area Office 2, as perceived by the personal with different school sizes, as a whole was not with difference. This might do because the administrators had some training and

developed themselves from the ministry in the same manner , and made the result come out with no difference.

However, it was found in the aspect of individualized consideration with the statistically significant difference at .05 level, by which the administrators in the medium and large sizes had the transformational leadership differently. The result should Khon Kaen Primary Educational Service Area Office 2 emphasized in development and promotion of the large schools more than the medium size school. They should have promoted all types of schools to the same standard and become the learning organization in all schools. This was correspondent with Rahothan (2010 : 107), studying on the relationship between the transformational leadership of administrators and the effectiveness in administration of basic education school under Chon Buri Primary Education Area office 3 and finding the education service area office should have conducted training, meeting and seminar for the administrators to again knowledge and understanding how to administrator schools to become the learning organizations and help the educational provision up to the standard.

## **8. Suggestions**

### **8.1 Suggestions for Application.**

8.1.1 The school administrators should use the transformational leadership in the aspect of inspirational motivation to manage the personal administration with subordinates in a greater extent.

8.1.2 The administrators and teacher in schools should have meeting consult one another and design working plans together in order to make work performance outputs in live with the school objectives.

8.1.3 The education service area office should use the data and information from the research to apply in personal development in the office.

### **8.2 Suggestions for Future research :**

8.2.1 Should study in depth on the transformational leadership to gain clearer.

8.2.2 Should study on the transformational leadership in other offices.

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## Effects of Contemplative Education's Activity Development for Teacher Students in Roi Et Rajabhat University

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### Abstract

The purposes of this research paper were to study effects of activities development by using the contemplation education, to study Roi-ET Rajabhat University Demonstration School teachers' opinion toward the activities, and to study Roi-ET Rajabhat University Demonstration School students' satisfaction with the activities. 300 samples obtaining from a purposive sampling technique were the third year students for the academic year 2014 of the Faculty of Education in Roi Et Rajabhat University. There were 3 kinds of research instruments: 10 lesson plans; Teacher Survey Questionnaire consisting of 4 aspects: activity conductor, activity participant, contemplative education's activity, and useful application; Students' Satisfaction Questionnaire with the activities that was the five-rating scale consisting of 9 items of question dealing with activity, educational media, and attitude. The questionnaires contained the corrected item-total correlation ranging from 0.41 to 0.85 and contained the total alpha's reliability at 0.90. The findings of this research were revealed that effects of activity development by using the contemplation education can develop teacher students' competency of plans construction. They can develop 100 activities by using the concept of contemplation education that then they implemented these activities with students in a classroom at Roi-ET Rajabhat University Demonstration School. Roi-ET Rajabhat University Demonstration School teachers had opinions as follows: the aspect of activity moderator can develop creative thinking, positive psychology for student teachers, and good characteristics for student teachers; the aspect of participants can develop their emotion, concentration, memory, and happy in learning; the aspect of contemplative education's activity can be easy to use, being practical that teachers can be implemented, and lastly, the aspect of useful application can be useful for school. Roi-ET Rajabhat University Demonstration School students' satisfaction



with the activity and media and instrument at the highest level, but in terms of attitude was at the high level.

**Keywords:** Contemplation Education, Learning Management, Skill and Teaching Technique

## 1. Introduction

According to the education reform as mentioned in the National Education Act B.E. 2542 (1999) Chapter 4 dealing with National Education Guideline, Section 22-30, it states that education shall be based on the principle all learners are capable of learning and self-development. The teaching learning process shall aim at enabling the learners to develop themselves at the own pace and the best of their potentiality. The approaches shall give emphasizes to knowledge, morality, learning process, and integration. The educational institution shall promote all types of lifelong learning, organize happy activities for learners to draw from authentic experience and drill in practical work for complete master. (Office of the national Education Commission, Office of the prime Minister, 1999). Learners can be better in the situation of readiness of their states of mind. This point is a very important factor directing to their leaning capability. It is true that learning on the way of school, they face many situations. Some are not ready in learning. Again, an important thing for educational development is to develop teachers' competency to be excellent in teaching and to have teacher spirit. Teaching work is a sacred job, experienced teachers should take responsibility by propagating their skills to next generation of teachers (Wichien Chaiban, 2013:2). In addition, Chapter 7, Section 52 of the Act states to Ministry shall promote development of a system for teachers and educational personal so that supervisory and co-teacher, faculty staff, and educational personnel shall be ready and capable of preparing new staff and continually developing in service personnel (Office of the National Education Commission, 1999).

Contemplative education model had been developed by Lamplaimat Pattana School since 2013. It is a concept for the development of teachers and children in terms of emotional quotient, spiritual quotient, and preparing the children to relax and being ready in learning. After having practiced contemplative education for 1 year, students become calm of mind that is suitable state of mind to develop their deeply listening, thinking, and capability to learn and integrating with other kinds of learning. Latterly, the school developed a process and activities. Presently, teachers implement contemplative education for cultivating children as well as cultivating teachers' inner intelligences. Contemplative education becomes an important role in

developing teachers as well as developing student's intelligences and emotional intelligences. The students become to appreciate values of everything and welcome good things into their mind. These states of mind are suitable for learning.

Inner intelligence refers to spiritual quotient and emotional quotient. That is to say, one realizes his/her states of mind as well as others. He/She can keep his/her emotion into the balanced states. He/She has self-esteem, lives meaningfully, accepts differentiation of others, has self-discipline, takes responsibility, sufficiently lives, has mindfulness, has efforts in doing works successfully, and has loving-kindness to others. To cultivate inner wisdom by means of contemplative education, there are 3 components: positively psychological reinforcement, community construction and community norm, and practicing with activity (Wichien Chaipang, 2012). As a result, there are many schools starting implementing this concept to develop students' concentration, emotion, and learning achievement such as Ban Nakhanaun School in Srasaket, Krasung hruenratrangsun School in Buriram, Khonkaen Municipality School in Khonkaen etc.

From the above mentioned, it is seen clearly that contemplative education can develop students which benefits to students, teachers, and student teachers. Therefore, the research are interested to instruct teacher students who will be a teacher to have more experience about contemplative education by designing an activity and then trying out the activity with students in the real school.

## **2. Objectives of the Study**

2.1 To study effects of activity development by using the contemplation education for student teachers in Roi ET Rajabhat University.

2.2 To study teachers' opinion toward the activity in Roi ET Rajabhat University Demonstration School

2.3 To study students' satisfaction with the activity in Roi ET Rajabhat University Demonstration School.

## **3. Materials and Methods**

### **3.1 Research Instruments**

There are three kinds of research instruments: lesson plan, Teacher Survey Questionnaire, and Students' Satisfaction Questionnaire as follows:

3.1.1 Lesson plan. Ten lesson plans dealing with the concept of contemplative

education were implemented in a classroom for the third year students, 1,245 students as the population of this research in total, who were studying in the Skills and Teaching Techniques Subject in the academic year 2014. The sample was 300 students who have enrolled in Early Childhood Program under the Faculty of Education in Rajabhat Roi Et University. These 300 students were obtained by purposive sampling techniques. The topic for the research as appeared in the lesson plan was “Low Brain Wave” by the application of contemplative education which is one part of the Skill and Teaching Technique Subject.

3.3.2 Teacher Survey Questionnaire. The questionnaire consisted of four aspects: activity moderator, participant, contemplative education’s activity and useful application. This questionnaire was used to collect the data from the school teacher who concerned with the activities as observers and worked in Roi-ET Rajabhat University Demonstration School.

3.1.3 Students’ Satisfaction Questionnaire. The questionnaire containing 9 items of question was designed to investigate school students’ satisfaction with the activity as moderated by teacher students.

These three kinds of research instrument were checked its content validity by 3 specialists in language and subject matters and then was improved according to the suggestions of specialists. And then the instruments were tried out with students who were not the sample of this research to check its reliability. The questionnaires contained the corrected item-total correlation ranging from 0.47 to 0.76 and contained the total alpha’s reliability at 0.90.

### **3.2 Procedures of the research**

This research was carried out into 8 steps as follows:

3.2.1 Studying documents and researches concerning contemplative education.

3.2.2 Determining the target group for the study, researcher selected the third year students who are secular program students in the Faculty of Education in Rajabhat Roi-ET University because the researcher was teaching them who were studying concerning the research issue.

3.3.3 Constructing of research instruments.

3.3.4 Checking research instruments concerning content validity and reliability.

3.3.5 Designing lesson plan. The researcher instructed teacher students as sample of this research by using 10 lesson plans for the purpose of teaching them to understand of

contemplative education. This step, teacher students learned to design activities in integration with contemplative education and then submitted to the researcher for editing the activities. The researcher also suggested until getting effective activities. As a result, students could construct 100 activities, each group of three per 1 activity.

3.2.6 Teacher students implemented their activities with school students in Roi-ET Rajabhat University Demonstration School. During performing the activities, class teachers observed the activities. After having finishing the implementation of activities, teacher students took a note about results of their teaching.

3.2.7 Class teachers and school students in Roi ET Rajabhat University Demonstration School filled out questionnaires.

3.3.8 Analyzing the data by using content analysis and descriptive statistics.

3.3.9 Conclusion, discussion, and suggestion.

#### 4. Results

4.1 Result of instruction of ten lesson plans by the researcher as the teacher were revealed that teacher students could construct 100 effective activities in integration with contemplative education.

4.2 Class teachers' opinions towards activities were revealed that contemplative education could develop the teacher students in terms of creative thinking, positive thinking, and characteristics of teacher-hood, could develop school students in terms of emotion, leaning concentration, memorizing, and learning motivation. And lastly, contemplative education was easy and practical to use and was useful for the school.

4.3 School students satisfied with activity were at the highest level in terms of educational media and were at the high level in terms of attitude with activity.

#### 5. Discussions

The findings of this research can be discussed as follows:

5.1 Research finding was revealed that teacher students could construct 100 effective activities in integration with contemplative education. This finding can be discussed that teacher students had well understood about process, model, way and components of how to construct an activity in integration with contemplative education. They, therefore, can design activities successfully. After having finished designing the activities, they implemented their activities with school students and concluded a result of their moderating activities in classrooms. This finding is in line with the study of **Chanchalee Mapudh** (2011: 38-56) who studied the effects of

contemplative education: a case study of Philosophy and concepts of education. Its finding was that contemplative education supported and enhanced the development of a number of important traditional academic skills such as critical and objective thinking, textual analysis and problem-solving, as well as important affective qualities such as emotional intelligence, commitment to social engagement, a sense of purpose, the ability to listen deeply, compassion, meta-cognition, the ability to cooperation, welcoming diversity. Furthermore, contemplative education fosters creativity and thinking transformation. It is also in line with the study of **Narintra Sinsuwongwat** (2011) who studied on the development of learning activities on good citizen according to democracy for grade III primary students by application of contemplative education. This research was aimed at studying students' citizenship behaviors into the better ways. They respected to religion and royal institution both in school and community. They helped others who needed helps. This indicates that they had generosity of mind. They deeply listened to their friends reporting in front of a class and were happy in learning. Lastly, students shared their ideas by showing their reasons of questions and answers as well as showing a decision making.

5.2 Research finding was revealed that class teachers rated contemplative education could develop the teacher students in terms of creative thinking, positive thinking, and characteristics of teacher-hood, could develop school students in terms of emotion, leaning concentration, memorizing, and learning motivation. And lastly, contemplative education was easy and practical in using, and was useful for the school. This finding is in line with the research of **Onanong Saenphol** (2011) who studied effects of contemplative education to self-learning for students studying the Psychology for Teacher Subject. This research was aimed at studying effects of contemplative education to learning. Activities dealing with contemplative education consisted of portfolio, group meeting, free writing, and group working. The findings of this research were revealed that university students realized their inner states of emotions and belief association with outer states of the worlds by means of activity. They changed their thoughts, realized new way of practice, and deeply listened to others. Their behaviors transformed into mindfulness and wisdom, showed loving-kindness with others and everything surrounded. This finding is also in line with **Patchalee Sirimak** (2011: 42-58) who studied the development of human resources with contemplative education. The purposes of the study were to study the concepts of contemplative education for human resource development, to analyze the concept of the contemplative education for human resource development, and to synthesis the concept of contemplative education for human resource development. From the documentary research was revealed that contemplative education is aimed at changing oneself

from inner states of mind and thinking by means of deeply criticizing oneself, practicing activities for transformational learning, and applying one's experiences to subject matters. This method supports of being aware of values and enhances intelligences: intelligent quotient (IQ), emotional quotient (EQ), adversity quotient (AQ), moral quotient (MQ), and spiritual quotient (SQ). Therefore, Contemplative education activity can be implemented for the human resource development.

5.3 Research finding was revealed that school students satisfied with activities at the highest level in terms of educational media and were at the high level in terms of attitude with activity. This can be explained that activity of contemplative education can develop their meta-cognition. This is to say, the activity process began with calmness, and meditation. They felt relaxation with the activity. On the other hand, teacher students spoke positively such as very good, great, appraising by having a big hand to support their doing activities, sweet smiles, etc. These manners of teacher student are positive psychology that can make friend with school students. Besides, sweetly playing music songs along with moderating activities can invoke their learning during all the process. In addition, contemplative education was a newly attractive thing for school students. There were multiply sufficient instructional media for them. this finding is in line with the study of **Sommart Khampermpool** (2011: 43-73) who studied the development of teaching model of arts for creative thinking development and consciousness by means of contemplate education for High School student Grade XII. This research was aimed at developing students' satisfaction with teaching model of art. The finding was revealed that students satisfied with an activities concerning contemplative education at the high level.

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**A Study of Measurement and Evaluation in the Classroom with Thai Qualification Framework for Higher Education for Introduction to Biochemistry for Undergraduate Students of Faculty of Nursing, Roi Et Rajabhat University, Thailand**

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**Abstract**

The purposes of this research were to study the measurement and evaluation in the classroom for develop learning process and enhancement of contenting and teaching management competency in the classroom by using the learning, teaching, measuring and evaluating process with Thai Qualification Framework for Higher Education (TQF:HEd) for Introduction to Biochemistry lecturer for countries of the Faculty of Nursing, Roi Et Rajabhat University, Thailand. The sample was 30 nursing's students in the Classroom of second semester for undergraduate students, in the academic year 2013. The research instruments were studied both of midterm and final for educational measurement and evaluation achievement tests by using the multiple choice items. Their scores data of learning and teaching process were collected and analyzed from a class for Introduction to Biochemistry by using the teaching in classrooms that including learning activity both lecture and Problem-Based Learning (PBL) method and experimental testing in laboratory. The data were analyzed by calculating the percentage of the average scores, item validity indices by finding the difficulty indices, discriminating indices and correlation by using the ordered item booklet as following with the Curriculum Mapping of TQF : HEd. The result showed that the cut scores in raw scores and examinee's ability of the achievement tests that classified into 7 levels by using the Norm Referenced of Roi Et Rajabhat University Automatic Grading Program with excellent (A), very good (B+), good (B), rather good (C+), fair (C), poor (D+) and very poor (D) was 6.7, 13.3, 50.0, 23.3, 6.7, 0.0 and 0.0%, respectively. The percentage of the average scores for lecture testing in midterm and final examination was 59.3 and 58.7, respectively, and experimental testing in final examination was 55.7. The multiple choice items, item validity indices in term of indicated difficulty index (p) were 0.1-1.0. The discriminating indices that comparison with 5 groups (Gr.) of the GPAX score with Gr.1 (3.60-4.00), Gr.2 (3.25-3.59), Gr.3 (2.90-3.24), Gr.4 (2.55-2.89) and Gr.5



(<2.54) showed the correlation result with the cut off scores. The findings showed the measurement and evaluation in the classroom with the TQF : HEd for Introduction to Biochemistry for nursing's students that enhancing the efficiency of contenting and teaching management.

**Keywords:** Thai Qualification Framework, TQF, Measurement, Evaluation, Development of test, Curriculum Mapping

## 1. Introduction

The Biochemistry conceptual understanding is one of science majors that the important skills for nurse literate person. Biochemistry study is an important knowledge skill for nursing's students in undergraduate student level of the Faculty of Nursing, Roi Et Rajabhat University, Thailand. Biochemistry knowledge skill has been general accepted to have an extremely effect to understanding in the good health of people. The countries advancing in science and technology are become the world's leaders in throughout dimensions because it has an effect on development the country. So, every country are focusing the main goals of national educational policy on the promotion of science conceptual understanding with conduct many researchs and teaching methods for developing science curriculum to be the best education plan for all students. Thailand is also to support and promote in development for enhancing the science study skill (1).

Especially, the undergraduate level in Thailand were studied the science study skill with instructional model by using the Thai Qualification Framework for Higher Education (TQF:HEd). TQF is an education qualification system adapted from The National Qualification Framework adopted by United Kingdom and Australia. It is used for standardize the education quality, so that it will be enable credit transfer between institution more acceptable in the education processes. TQF was improved the education process with the expected learning outcomes of students in five domains, namely; ethical and moral development, cognitive skills, interpersonal skills and responsibility, analytical and communication skills, and numerical analysis, communication and information technology so that the graduates from each institutions would have a same conformance (2), (3).

The measurement and evaluation is very important for supporting the achievement of students and a power tool of lecturer for developing the learning process and enhancement of contenting and teaching management competency in the classroom. The teaching management and evaluation needs to consistent with learning, teaching, measuring and evaluating process in

classroom. So, the result of evaluation is a representative to the ability of the achievement of students in the cut scores form. The lecturer should be to develop the instructional process that including with learning, teaching, measuring and evaluating process in classroom that consistent and represent with the ability of the achievement of students (4), (5).

The purposes of this research were to study the measurement and evaluation in the classroom for develop the learning process and enhancement of contenting and teaching management competency in the classroom by using the learning, teaching, measuring and evaluating process with Thai Qualification Framework for Higher Education (TQF:HEd) for Introduction to Biochemistry lecturer for countries of the Faculty of Nursing, Roi Et Rajabhat University, Thailand.

## 2. Materials and Methods

The sample was 30 nursing's students who studied in Introduction to Biochemistry in the classroom of second semester for undergraduate students Faculty of Nursing, Roi Et Rajabhat University, Thailand, in the academic year 2013. The classroom were studied the science instructional model with Thai Qualification Framework for Higher Education (TQF:HEd) for the learning, teaching, measuring and evaluating process. The instruments models were studied both of midterm and final for educational measurement and evaluation achievement tests with the multiple choice items by Bloom's Taxonomy theory to measure student abilities and progress using authentic assessment. Their scores data of learning and teaching process were collected and analyzed from a class for Introduction to Biochemistry by using the teaching in classrooms that including learning activity both lecture and *Problem-Based Learning* (PBL) method and experimental testing in laboratory. The data were analyzed by calculating the percentage of the average scores, item validity indices by finding the difficulty indices, discriminating indices and correlation between achievement scores of the cut off score and GPAX group. The learning objectives were assigned to consistent with the Curriculum Mapping of TQF:HEd for learning process and teaching management in classroom that documents for collected and analyzed data including with 8 documents; course blueprint, learning objective, learning model, lesson activity plan, assessment blueprint, test blueprint, item specification and item validity. The cut scores in raw scores and examinee's ability of the achievement tests were classified into 7 levels by using the Norm Referenced of Roi Et Rajabhat University Automatic Grading Program with excellent (A), very good (B+), good (B), rather good (C+), fair (C), poor (D+) and very poor (D), respectively. The percentage of the average scores for lecture testing in midterm and final examination was calculated and analyzed, respectively. The experimental testing in final

examination was calculated and analyzed, respectively. The multiple choice items, item validity indices were analyzed in term of indicated difficulty index (p). The discriminating indices were analyzed to finding the correlation between the cut off scores and the 5 groups (Gr.) of the GPAX score; Gr.1 (3.60-4.00), Gr.2 (3.25-3.59), Gr.3 (2.90-3.24), Gr.4 (2.55-2.89) and Gr.5 (<2.54) (6).

### 3. Results

The measurement and evaluation in the classroom for develop learning process and enhancement of contenting and teaching management competency in the classroom by using the learning, teaching, measuring and evaluating process with Thai Qualification Framework for Higher Education (TQF:HEd) for Introduction to Biochemistry lecturer for countries of the Faculty of Nursing, Roi Et Rajabhat University, Thailand. The result of educational measurement and evaluation achievement tests with the multiple choice items to measure student abilities and progress with an instrument model for authentic assessment in Introduction of Biochemistry using TQF:HEd showed the highest behavior measurement in test blueprint for lecture testing in midterm and final examination at knowledge at 44.17% (Table 1) and for experimental testing in final examination at knowledge at 50.00% (Table 2). The multiple choice items, item validity indices in term of indicated difficulty index (p) were 0.1-1.0. The result showed that the percentage of cut off scores in raw scores and examinee's ability of the achievement tests that classified into 7 levels by using the Norm Referenced of Roi Et Rajabhat University Automatic Grading Program with excellent (A), very good (B+), good (B), rather good (C+), fair (C), poor (D+) and very poor (D) was 6.7, 13.3, 50.0, 23.3, 6.7, 0.0 and 0.0%, respectively (Table 3). The percentage of the average scores for lecture testing in midterm and final examination was 59.3 and 58.7, respectively, and experimental testing in final examination was 55.7. The discriminating indices that comparison with 5 groups (Gr.) of the GPAX score with Gr.1 (3.60-4.00), Gr.2 (3.25-3.59), Gr.3 (2.90-3.24), Gr.4 (2.55-2.89) and Gr.5 (<2.54) showed the correlation result with the cut off scores (Table 4).

### 4. Discussion and Conclusion

Introduction of Biochemistry is an important knowledge skill for nursing's students in undergraduate student level of the Faculty of Nursing, Roi Et Rajabhat University, Thailand. The lecturer has been to develop the learning process and enhancement of contenting and teaching management competency in the classroom by using the learning, teaching, measuring and evaluating process base on Thai Qualification Framework for Higher Education (TQF:HEd). TQF is

used to standardize the quality of education in Thailand with the expected learning outcomes of students in five domains that including with

**Table 1.** The instruments models for lecture testing for Introduction to Biochemistry in the second semester of nursing's students, Faculty of Nursing, Roi Et Rajabhat University, Thailand, in the academic year 2013 were studied with multiple choice items that behavior measurement and evaluation achievement tests by Bloom's Taxonomy theory.

Multiple choice	Behavior measurement in lecture testing (item)						Total item
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	
Midterm	21	18	2	18	0	1	60
Final	32	11	2	15	0	0	60
Total	53	29	4	33	0	1	120
%	44.17	24.17	3.33	27.50	0	0.83	100
Prioritized	1	3	4	2	0	5	

**Table 2.** The instruments models for experimental testing for Introduction to Biochemistry in the second semester of nursing's students, Faculty of Nursing, Roi Et Rajabhat University, Thailand, in the academic year 2013 were studied with multiple choice items that behavior measurement and evaluation achievement tests by Bloom's Taxonomy theory.

Multiple choice	Behavior measurement in experimental testing (item)						Total item
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	
Final	35	16	5	11	0	3	70
%	50.00	22.86	7.14	15.71	0	4.29	100
Prioritized	1	2	4	3	0	5	

**Table 3. The percentage of cut off scores in raw scores and examinee's ability of the achievement tests that classified into 7 levels by using the Norm Referenced of Roi Et Rajabhat University Automatic Grading Program with excellent (A), very good (B+), good (B), rather good (C+), fair (C), poor (D+) and very poor (D).**

Score	Total (person)	Percentage (%)
A	2	6.67
B+	4	13.33
B	15	50.00
C+	7	23.33
C	2	6.67
D+	0	0
D	0	0

**Table 4. The discriminating indices by comparison with 5 groups (Gr.) of GPAX score and the cut off scores.**

Student's group	GPAX	Score					Total (person)	Total (%)
		A	B+	B	C+	C		
1	3.60-4.00	2	4	6	1		13	43.33
2	3.25-3.59			7	4		11	36.67
3	2.90-3.24			2	2	1	5	16.67
4	2.55-2.89							
5	<2.54					1	1	3.33
Total (person)		2	4	15	7	2	30	100
Percentage (%)		6.67	13.33	50.00	23.33	6.67		

ethical and moral development, cognitive skills, interpersonal skills and responsibility, analytical and communication skills, and numerical analysis, communication and information technology. The research results showed the measurement and evaluation in the classroom with the TQF:HEd for Introduction to Biochemistry lecturer for nursing's students that enhancing the efficiency of contenting and teaching management. This result is similar to the finding by Maneerat et al. (2015) that has been studied by comparison the instructional model between

TQF: HEd and Capability Maturity Model Integration for Service (CMMI-SVC). The result shows that TQF would benefit from integrating the CMMI-SVC maturity level and key process areas with generic and specific goals and practices. It shows the excellent tool of TQF:HEd for using the measurement and evaluation in the classroom for developing learning process and enhancement of contenting and teaching management competency in the classroom. The instrument models for learning measurement and evaluation achievement tests with the multiple choice items by Bloom's Taxonomy theory for lecture testing in Table 1 that showed high percentage of behavior measurement at knowledge (44.17%), analysis (27.50%), comprehension (24.17%), application (3.33%) and evaluation (0.83%), respectively. The instrument models for learning measurement and evaluation achievement tests with the multiple choice items by Bloom's Taxonomy theory for experimental testing in Table 2 that showed high percentage of behavior measurement at knowledge (50.00%), comprehension (22.86%), analysis (15.71%), application (7.14%) and evaluation (4.29%), respectively. The data showed the instrument models for learning measurement and evaluation achievement tests with the multiple choice items by Bloom's Taxonomy theory both lecture testing and experimental testing that focused to evaluate in behavior skill of knowledge, analysis and comprehension. The student achievement in science study is similar with the reported by Chaiyo (2012) that has been studied to effect the learning activity by cooperative learning with the student team achievement division technique on science achievement and satisfaction of Matthaymsuksa 1 students. The result showed a potential the research instrument of a set of 40 items of multiple choice achievement test to evaluate the learning process of students in science classroom(7). The science study in classroom have also been reported by Chanprasert et al. (2012) that the effectiveness of a set of 80 items of multiple choice is a ability tool for medicine's students to study in Life Science Physics using a self directed learning process with a problem-based learning (8). The model-based teaching and the experimental testing is a potential tool for developing the learning process in science education (9). The model-based learning in science classroom has been reported by Kawatkul et al. (2015) that showed to promote the student's understanding in scientific concepts on Biomolecule for Mathayomsuksa Six students by using the Model-based learning for learning process in classroom (10).

The discriminating indices result show the correlation between the cut off scores and the 5 groups (Gr.) of the GPAX score that represents to the effectiveness of the measurement and evaluation in the classroom with the TQF:HEd for Introduction to Biochemistry for nursing's students. The result showed that the percentage of cut off scores in raw scores and examinee's ability of the achievement tests that classified into 7 levels by using the Norm Referenced of Roi

Et Rajabhat University Automatic Grading Program with excellent (A), very good (B+), good (B), rather good (C+), fair (C), poor (D+) and very poor (D) was 6.7, 13.3, 50.0, 23.3, 6.7, 0.0 and 0.0%, respectively (Table 3). The percentage of nursing student who achievement test was showed the highly increasing from excellent score (A), to good score (B) and maximum at good score (B), after that it was slowly decreasing to fair (C). The discriminating indices result show the correlation between the cut off scores that comparison and 5 groups (Gr.) of the GPAX score with Gr.1 (3.60-4.00), Gr.2 (3.25-3.59), Gr.3 (2.90-3.24), Gr.4 (2.55-2.89) and Gr.5 (<2.54) showed (Table 4). The percentage of total person in the third order group of achievement scores showed the decreasing of person from Gr.1, Gr.2 and Gr.3, at 43.33, 36.67 and 16.67%, respectively. The achievement scores in Gr.1 showed only A and B+, while Gr.2 and 3 was B, C+ and C. The achievement scores at B and C+ in Gr.2 is higher than Gr.3 and nobody to present at C. The finding in this study indicated the discriminating indices result was correlated between the cut off scores and group of achievement scores. The future research is planning to comparison this research result with the analyze result of measurement and evaluation using the learning, teaching, measuring and evaluating process with TQF:HEd for Introduction to Biochemistry lecturer of nursing's students in the classroom of second semester for undergraduate students, in the academic year 2014.

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## A MODEL FOR TEACHERS' INSTRUCTIONAL LEADERSHIP DEVELOPMENT IN THE TEACHER TRAINING COLLEGES IN CENTRAL REGION OF THE SOCIALIST REPUBLIC OF VIETNAM

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### Abstract

The purposes of this research were to: 1) investigate the components of teachers' instructional leadership, 2) construct and develop the model for developing teachers' instructional leadership, and 3) examine the effectiveness of a developed model for developing teachers' instructional leadership at the Teacher Training Colleges in the central Vietnam. This Research and Development (R&D) was divided into three phases: Phase I - Exploring a conceptual framework and components of teachers' instructional leadership, Phase II - Designing and improving a model, and Phase III - implementing the developed model and summarizing the results. Data were analyzed using percentage, mean, and standard deviation.

The findings were as follows:

1. The components of teachers' instructional leadership at the Teacher Training Colleges in the central Vietnam involved five major components, 15 sub-components, and 75 indicators as follows: 1) Vision, mission, and learning goals, consisting of three sub-components which involved participation in the creation of guidelines for learning development, giving top priority for learning, and creation of academic benchmarks. 2) Curriculum and teaching development, consisting of four sub-components which involved understanding the curriculum associated with the relevant factors, the implementation and development of school curriculum, the teaching and learning management, and the use of information technology and teaching materials. 3) Student quality enhancement, consisting of three sub-components which involved students' achievement development, expectations for students' learning, and students' progress enhancement. 4) Creation of supportive learning environment, consisting of three sub-components, which were promoting learning atmosphere, exchanging ideas and reflective practice, and building and maintaining good relationships with teachers, students, and community, and 5) Conducting research to improve the quality of education, consisting of two

sub-components which involved research focus, and having knowledge and skills for conducting research.

2. The model for developing teachers' instructional leadership at the Teacher Training Colleges in central Vietnam comprised principles, objectives, contents, development procedure, and measurement and evaluation.

**Keywords:** leadership, instructional leadership.

## 1. Introduction

As the 21<sup>st</sup> century approaches with the rapid development of sciences and information technology, the changes in economy, politics, sciences, and environment have influenced educational administration throughout the world. This is evident in the pursuit of finding solutions to suit the issues or trends of educational administration or to create effective and appropriate administration guidelines in individual country in order to produce effective personnel to serve the needs of the changes in each country. The Socialist Republic of Vietnam, as a developing country, is also affected by these changes and efforts. Education in Vietnam has generally tried to keep pace with the developed nations in Asia, region, and the world.

The Communist Party of Vietnam during the 10<sup>th</sup> council meeting dated on 18 to 24 of April 2006 at Hanoi concluded, "Education and training are the two priority areas of the nation's policy targeted to develop public knowledge, production personnel, and special skills, and to contribute to economic and social development. The report also revealed, "Education and training development is a motivation creation to industrial promotion leading to modern development. This would be a condition for human resource development, which is a basic factor for society, fast growth, and sustainable economic improvement" (Communist Party of Vietnam, 2006, p.14).

In the context of strengthening economic growth and society, science and technology, the global trends create challenges and opportunities for all nations. Consequently, the Communist Party of Vietnam at the 10<sup>th</sup> meeting recognized the importance of "education and training in terms of science and technology as a priority of national policy, which is considered as a basic motivation to enhance industry and modernization". Consequently, it was agreed to find ways for improving education, focusing on the importance of upgrading teaching and learning quality, changing curriculum, contents, instructional methods, quality teachers, learning resources enhancement, teaching and learning materials media, improving student creative

thinking and freedom of students.” In terms of education problems, the 10<sup>th</sup> meeting document indicated that “the changes and the upgrade of public education management and training, the demolition of negative perspectives towards tutoring extra class, after hours studying, testing, admission for education recruitment, learning assessment, and accreditation of certificate and diploma” (Communist Party of Vietnam, 2006, p. 16)

The Ministry of Education and Training Vietnam (2008, p.5) revealed the quality of education in Vietnam is at a low level when compared to the needs of country. The development of education for all levels, professionals, and education in the previous years has served the needs of public learning, but not the quality of education, which did not serve the need for economic development and society of the country when compared to other countries and regions of the world. In order to provide solutions in education as mentioned above, one of the important tasks is having the correct evaluation of the status for the academic affairs management in education institutions. Vietnam education system at higher education level plays important roles in producing administrators, education specialists, and highly quality personnel in order to develop the country. The target will succeed or not depending on the guidelines found to help achieve this target. In addition, the actual evaluation for academic affairs at the university and college level, and the construction of the guidelines for developing the administration to upgrade the quality of academic affairs at the educational level are required. Furthermore, teacher professional development is essential for current situations in terms of faster growth of economic, society, technology, and information, as the changes inevitably affect the education system. The challenges for the teachers are to improve students’ learning achievement, and self-development to be harmonious with the changes. Teacher professions concerning teaching and learning should also connect to the scope of the empowerment of the education institution for developing teaching and learning effectively through the contents structure, which serves the needs of the student, for example, lesson plans construction, learner centered approach, application of teaching aids and learning resources that exploit the students’ learning. Library development activities, laboratory tasks to facilitate the students’ learning, research, and development support for teaching and learning, and students’ skills are required.

The instructional leadership of administrators and teachers has influenced the learning organization of educational institutions. Therefore, the administrators and teachers should play important roles for facilitating learning organizations that might lead and create better cooperation. The roles and being a change agent of school administrators and the teachers are also essential for successful performance of learning organizations. In addition,

Stronge (1998, cited in Somkid Sroinam, B.E. 2547, p. 4) pointed out that the roles of administrators and teachers took full responsibility for having vision, mission recovery, guidance, and following the curriculum and instruction, providing positive atmosphere support, giving support to strengthen a relationship among communities, and enhancing academic institution development to gain effective financial in order to build up the learning organization.

Instructional leadership of teachers is a new trend for Vietnam educational institutions. School administrators and teachers do not have a clear understanding of the importance of teacher instructional leadership. According to Nguyen Ngoc Lien (2013, p. 125), educators should understand the leadership concepts, especially in education, in order to foresee the freedom of teachers in education institutions as a performance of major tasks for effective teaching and learning quality leading to educational institution development. Therefore, teachers should be cognizant of their responsibility and perform their leader skills in education institutions. Their roles will involve building up vision, creating performance plans to pursue the target, establishing unity, creating inspiration and motivation, empowering decision-making, and creating changes in organization culture. Consequently, teachers should be trained more on leadership development, especially teacher instructional leadership. Apart from the literature reviews, studies found that teachers when trained for being leadership on education institution is likely to influence in a positive development and to improve the student learning achievement.

In the central Vietnam, there are ten colleges of teacher training which are local higher education institutions aiming to produce quality teachers to perform in target objectives and mission, teaching and learning management, and academic research in order to serve the needs of the development in economic, local society, region, and country.

From the previous issues mentioned above, the researcher explored the model for instructional leadership development of teachers at the Teacher Training Colleges in the central of the Socialist Republic of Vietnam. The purpose was to develop the administrative activities in academic affairs of the Teachers Training Colleges in the central of the Socialist Republic of Vietnam. The proposed guidelines would help establish planning and create assessment criteria for teacher leadership in order to reach the achievement of teacher performance effectively, and teaching and learning management and quality education in the future.

## 2. Research instruments

The research instruments comprised a structured Interview form and a checklist form

## 3. Methods

This research employed the Research and Development approach to investigate the teachers' instructional leadership at the Teacher Training Colleges in the central Vietnam. The main purpose of this research is also to construct and develop the model for developing teachers' instructional leadership. The effectiveness of a developed model was reviewed through the effective design and model refinement and confirmation, and then applied in the field. The research was divided into three phases: Phase I Exploration of a conceptual framework and components of teachers' instructional leadership comprised document inquiry and analysis, experts' examination, and a survey; Phase II was related to designing and improving a model; and Phase III was related to implementing the developed model and summarizing the results.

## 4. Results and Discussion

1. The components of teachers' instructional leadership at the Teacher Training Colleges in the central Vietnam involved five major components, 15 sub-components, and 75 indicators as follows: 1) Vision, missions, and learning goals. 2) Curriculum and teaching development. 3) Student quality enhancement. 4) Creation of supportive learning environments, and 5) Conducting research to improve the quality of education.

2. The model for developing teachers' instructional leadership at Teacher Training Colleges in central Vietnam comprised principles, objectives, contents, development procedure, and measurement and evaluation. The proposed model resulted from document inquiry, interviews, experts' reviews, and is appropriate in accordance with the instructional leadership for teachers in the central Vietnam of the Socialist Republic of Vietnam.

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## Using Cooperative Project to Develop English Reading Comprehension Skill of Prathomsuksa 5 Students in Thailand

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### Abstract

The objective of this study was to examine reading comprehension achievement of Prathom 5 students after taught by cooperative project learning activity. The participants of the study were 40 students who were in Prathomsuksa 5 in Ban Markkhaeng School during the first semester of 2013 academic year. The design of this study is single group pre/post-test design.

The tools used to collect data of the study contained 1) English reading comprehension lesson plans with cooperative project learning activity 2) English reading comprehension achievement test 3) attitude towards learning English reading comprehension using cooperative project learning activity questionnaire 4) Cooperative skills assessment sheet 5) English reading comprehension stage tests.

The result showcased that students' average reading comprehension achievement score after experiment is 66.38% and more than before experiment 72.96%. Also, students' attitude is at highly agree with learning by using cooperative project learning plan. Besides, students' cooperation skills are in medium level. However, students' reading comprehension skills are clearly in different levels.

**Keywords:** cooperative learning, cooperative project, reading comprehension

### Introduction

Nowadays, we live in a borderless world which everyone can contact with others even they are in different parts of the world comfortably and easily. Using phone, e-mail and social network can keep everyone close together. At the present, there are 6,909 languages including local dialects used all over the world (Lewis, 2009). The most three spoken languages in the world are Chinese, Spanish and English in order. However, English is the most used as official

languages around 112 countries. Therefore, English is one of the most important languages used for international communication.

At this moment, Thailand are focusing on learning English as second language because of ASEAN Economic Community Summit or AEC which will be happening in 2015. As Thailand remarked as regional hub of AEC and the committee determine English as official language, Ministry of Education are supporting and encouraging learning English with full throttle. (Ramasutra & Rohitsatian, 2011) For instance, Ministry of Education promote 2012 to be “English Speaking Year” which encouraged people to speak English more. It determined every Monday to be an English speaking day in every week at every school. Then, there would be 1 more days every week until there are 7 days a week.

(Office of the Education Council, 2553) According to National Education Plan 2009-2016 Edition determine many policies responding to AEC summit. To be more specific, there are 2 interesting and important policies to be focused. First, Policy 1.1 is to develop students reading skill in both Thai and English. Also, the policy encouraged students to have critical thinking skill, problem solving skill and self-study skill as well as participate with learning activity with creativity and problem solution. Although Ministry of Education usually tried to develop core curriculum as many as possible, Thai students’ achievement scores were still in crisis according to Ordinary National Educational Test result. The result showed that average English test scores didn’t reach 50% and decreased every years during 2008-2010 (Siamrath Newspaper, 2011). Nevertheless, this issue affected students in undergraduate level. Many undergraduate students still weren’t good in English. Therefore, they would run into career recruitment issue that almost every companies need English speaking employees (Charoensuk, 2012).

To respond to National Education Plan, Thai students’ English learning development must be started from reading skill. Reading is the first skill acquired in language learning (Aksaranukroh, 1989). Learners have to read to acquire new information from many sources. In addition, reading helps learners to have new experience and open their mind (Media Chula, 2006). Therefore, they can improve other language skill either. However, most of students were persuaded to learn English language for entrance examination but not comprehension nor finding new information. So, teachers have to develop reading learning activity to create good attitudes toward reading improving other language skills.

According to these problems and guidance, this study was to develop learners’ reading comprehension skill using cooperative learning together. By the way, cooperative project learning was considered to be in a part of this study for some reasons. First, project learning allows learners to think creatively and critically. They have to plan what to do, look for



information, discuss for the best answer, and present in front of the class. In short, they can acquire many language skills in a task. Another reason is cooperative learning changes learners becoming active learners. They have to be passive; listening or reading. After that, they need to be active; writing or speaking. Therefore, students will be main character in the class. They have to do everything to finish their tasks so teacher will have a lot of time to observe their work process and behavior.

### **Objectives**

1. To examine learners' English reading comprehension after using cooperative project learning activity.
2. To investigate learners' cooperative skills during working on cooperative project.
3. To study learners' attitude toward learning English reading comprehension after using cooperative project learning activity.
4. To find learners' English reading comprehension stage after using cooperative project learning activity.

### **Methodology**

To start with, the population of this study was grade 10 students' at Ban Markkhaeng School in 2013 academic year. The sample of this study was grade 10 students' of Prathomsuksa (Primary class) 5/4 of this school chosen by simple random sampling by classroom. There were 40 students in the class.

This research consists of 5 well standardized tools. First, grade 10 English reading comprehension learning using cooperative project activity learning plans were used to teach learners to read to perform project works. Second, English reading comprehension achievement test was used to evaluate learners' reading comprehension skill. The test consists of 40 multiple choices questions. Third, learners' cooperative skills assessment form was used to evaluate how learners' participate with others during their group works. It contains 4 evaluation criteria; responsibility, group participation, enthusiasm, and group discussion. Forth, learners' attitudes questionnaire was used to asset how learners think about learning English reading comprehension using cooperative project learning activity. It's a likert scale questionnaire consisted of 10 evaluation criteria. Lastly, English reading comprehension unit placement tests to examine which stage learners were in. They contained 1 reading passage with 5 open-ended questions for each unit.

For data collection, achievement pre-test was performed to collect score comparing with post-test. After that, the learning plans were used to perform learning activity for 32 hours in total. During the class, researcher had to observe learners behavior and write down in teacher's note. This note was used to assess learners' cooperative skills in assessment form. After every unit, reading comprehension test was given to learners to see how good they can answer questions from reading passage. After the last unit, the post-test was conducted using reading comprehension achievement test. Finally, learners' attitudes toward learning English reading comprehension was evaluated by questionnaire given to learners after achievement test.

For data analysis, there are many ways and statistic formulas to be used. First of all, average, standard deviation, and t-score were used to analyze learners' achievement score comparing pre-test and post-test. Second, data from learners' cooperative skill assessment form was calculated using average and evaluated with criteria. Third, learners' attitudes toward learning English reading comprehension using cooperative project activity was calculated the same way as cooperative skill assessment. Lastly, learners' answers in reading comprehension test were analyzed using rubric criteria to judge which stage learners were in.

## Result

Firstly, learners' reading comprehension achievement post-test average score is more than pre-test with 0.01 significant score. The pre-test average score is 15.35 or 38.38%. Besides, the post-test average score is 26.55 or 66.38%. So, the post-test average score is more than the pre-test for 72.96% with 15.482 t-score.

Secondly, learners' overall cooperative skills are in medium level. To be more specific, learners' responsibility score is 2.56 which means high cooperative level. In addition, cooperation, enthusiasm and discussion scores are 2.48, 2.46 and 2.42 in order which means they are all in medium level.

Thirdly, learners' highly agreed with learning English reading comprehension using cooperative project learning activity. Their average attitude scores are 4.5 out of 5.

Finally, learners' had different reading comprehension skill between 3 stages. 20 of all learners or 50% of them were able to give details from reading passage in their own speech. 19 of all learners or 48% were able to answer questions according to the passage. However, there are 1 learner who were unable to understand the reading passage.

## Discussion

### **English reading comprehension achievement score**

Learners' post-test achievement score is more than pre-test after learning English reading comprehension using cooperative project learning activity. The reason is cooperative project learning is student-centered method. Learners had so many opportunities to work with their preferable skills, help each other, look for new information than student's book and also discuss with each other to find the best answer. They can acquire many skills and have assistants when they run into problems. This method also helped low level learners in case that they didn't dare to ask teacher. The result related with Wilai Ponyiam's study 'A Development of the English instructional Activities based on Project based learning Approach for Prathomsuksa 6' that learners' post-test achievement score is more than pre-test with 0.01 significant score.

### **Cooperative skills**

The result showed that learners' cooperative skills after learning English reading comprehension using cooperative project learning activity are in medium level. To pinpoint, learners seemed not to be cooperative because some learners were separated from their close friends. Some of them sometimes leave their group to join other groups that their close friends were in. Moreover, they didn't know concept of cooperative learning and project works. Therefore, they didn't help or talk to each other during project work. Nevertheless, they couldn't reach agreement in discussion part. Some learners stood for their answer and didn't listen to others' opinion. Besides, there was only 1 learner who read script for presentation. However, these problems disappeared from time to time. Most of them performed better in last three units.

### **Attitudes toward learning English reading comprehension using cooperative project learning activity**

Learners highly agreed with learning English reading comprehension using cooperative project learning activity for some reasons. First, they could help each other and participated with group members to finish tasks. They were so proud when they had got reward from the most creative award. Moreover, they enjoyed learning and playing together rather than sitting and listening to teacher. According to Department of Curriculum and Instruction Development's principle, project learning activity allows learners to exchange their information or experience with each other as soon as searching for new information by themselves. So, they will be interested in learning (Department of Curriculum and Instruction Development, 2001). By the

way, the result also accorded with Samart Termprayool's study about developing of English language learning of sixth grade students by project work approach (Termprayool, 2002). He found that learners had good attitudes toward learning English with project approach. Besides, Sutatip Sudnongbua's study about developing English communication using project works of Grade 12 students revealed that learners had very good attitudes toward learning using project. They thought project gave them leadership and creativity.

### **English reading comprehension stages**

According to the study, there are three stages learners were in. First, 50% of learners who were able to give details from reading passage in their own speech. To be more specific, they didn't copy answers from sentences in the passage and could give more answer and details. Second, 48% of learners were able to answer questions according to the passage. Learners copied exactly sentences from passage or answered in short such as just a word or phrase. The last one, 2% of learners were unable to understand what they had read.

All of these staged related to achievement indicators that Ministry of Education assigned in Core Curriculum (Ministry of Education, 2008). According to Criterion 1.1, Indicator 4 defined that learners have to be able to tell the main idea and answer questions from reading passages. As well as Criterion 1.3, Indicator 2 defined that learners can draw pictures and mind maps to show what they read. These indicators accorded to reading comprehension assessment manual by Department of Curriculum and Instruction Development said that there are 4 stages of comprehension; word comprehension, interpretation, critical reading and creative reading. This concept based on Harris and Sipay's concept as well as Hafner and Jolly's concept divided comprehension stages into 14 stages. There were two stages were used as criteria because they are intersected with National Core Curriculum; word comprehension and interpretation.

### **Suggestions**

1. Learning with cooperative project took slightly long time. Teacher has to allow learners to take some time for research. They have to find new information from different sources and take much time for discussion.

2. Learning reading comprehension and cooperative project should consist of contents of other field subject and be able to be applied to other field subject either.

3. To develop reading comprehension, questioning and discussion are important process that help learners understand what they read.

4. it's highly recommended to give so much information about project works because some of 10 grade learners didn't have any experience about project works. When they have to do project works, they didn't have any idea what to do.

5. Icebreaking activity before cooperative project is necessary. Sometimes, learners weren't comfortable to exchange their opinions with others whom they weren't close. So, it caused cooperation issues during project works.

6. During presentation phrase, teacher should facilitate classroom to be relax and familiar. Learners sometimes felt awkward and depressed because they fear of failure.

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## THE SUSTAINABILITY POLICY BETWEEN THAILAND AND CAMBODAI TOWARD QUALIFICATIONS FRAMEWORK: A COMPARATIVE STUDY

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### ABSTRACT

This research aimed to identify the challenging factors affecting education on National Qualifications Framework (NQFs) goals in Thailand and Cambodia and to compare the sustainability policy on the affected factors that help to promote the equal access in both countries.

The research is an explorative introductory study based on the previous literature, government reports and compare between the two domains of educational studies and challenging factors that effecting on demography and economic, education system as well as current sustainability policy, levels and descriptors and the use of learning outcomes.

Through analyzing the sustainability policy between Thailand and Cambodia have similarities on cooperation in various cooperative frameworks, and prepare all sectors for the move towards becoming an ASEAN Community by 2015. As well as the both promote the ideas of national qualification framework for continuous improvement among all teachers and personnel in the schools, and develop the schools into learning organizations so that the quality focus becomes a working culture of the schools. However, NQFs can play a role in promoting learning, but particularly, they can encourage evaluation, quality, recognition and standard-keeping of the skills and competencies students gain and NQFs can help to promote the equal access in both countries. Therefore, this paper found the relative significant issues which are the main factors affecting to the equal access of NQFs. Also, there are some policies are found to be emerging solution for the government in 21<sup>st</sup> Century Education.

**Keywords:** A comparative study, Sustainability, policy, Qualifications Framework

## 1. Introduction

### 1.1 Background of the study

The use of the word international in connection with education generally call to mind years of worthy efforts by many organizations, UNESCO, in the meeting in Paris on 1974, at its eighteenth session, recommended education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace. The use of educational action for promoting the concept of peace concerns the content of education and training, educational resources and material, school and university life, initial and ongoing training for teachers, research, and ongoing training for young people and adults (Miel, 1968; EI,; UNESCO, 1974) [1].

The word policy is commonly used in government document, academic writings and daily conversation. However, the nature of policy and the ways in which it can be researched, interpreted and produced are open to debate. The literature that might assist in this matter is diverse, divided and to some content inclusive. In the words of ball (1994, p.15), it contain “theoretical uncertainties”; and answers to some questions rise other question [2].

The establishment of a Thai National Qualifications Framework (NQF) was proposed by the Office of Education Council (OEC) of the Ministry of Education as part of the National Manpower Production and Development initiative during the Second Decade of Education Reform, 2009-2018. The Thai NQF builds on the existing Thai Qualifications Framework for Higher Education (TQF) and Thai Qualifications Framework for Vocational Education (TVQF) (OEC, 2013). It was approved by the Cabinet on 21 December 2010 [3].

The Cambodian Qualifications Framework (CQF) was established in December 2010 by a committee of ministers following the 6<sup>th</sup> meeting of the National Training Board (NTB). It was submitted to the 7<sup>th</sup> NTB meeting in 2011, and was approved at the 8<sup>th</sup> meeting in February 2012. The CQF is currently awaiting the preparation of supporting documents and guidelines for its implementation. It will then require approval by the Council of Ministers to outline its functions and before implementation can take place responsibilities (Royal Government of Cambodia, 2012) [4].



Response to the globalization and the regional economic and political development, Thailand have educational cooperation policy on create unity and promote cooperation among ASEAN countries in order to realize the goal of creating an ASEAN Community, as well as promote cooperation with other countries in Asia through various cooperative frameworks, and prepare all sectors for the move towards becoming an ASEAN Community by 2015 in the economic, socio-cultural and security areas. Thailand had educational cooperation with neighboring country under the framework of both bilateral and multilateral cooperation since 1991 BE, with Cambodia by MOU since 2000 (Ministry of Education, 2008). Cambodia and Thailand have introduced a number of education reforms to increase the access to the quality of education for both genders. Also, this paper will look at two education policies and compare the success scenarios of National Qualification framework.

### **1.2 Objective**

In order to achieve the overall purpose the following objectives are proposed:

- (1) To identify the challenging factors affecting Education on NQF goals in Thailand and Cambodia,
- (2) To compare sustainability policy on the affected factors that help to promote the equal access in both countries.

### **1.3 Significance of the study**

This study will be a supplementary source for the literature reviews in the comparative education in two specific countries in the area of National Qualification Framework.

### **1.4 Limitation of the Study**

The lack of reliable data from the two countries is the main constrains when the review is taken mostly from the government and development party. The academic result and research work have not found much in the paper. The inconsistent and incomparable data from various sources is another limitation when this study relied on the existing research and online source available from international development organization and government source of data. Therefore, this paper cannot be generalized into the whole countries.

## **2. Research Methodology**

The discusses theoretical and methodological issues in comparative analysis of education policies. It begins with a description of international policy context, and then moves to debates about the definitions of policy context, and then moves to debates about the definitions of policy. Contemporary change in geopolitical relation combined with the implications of the intensification of globalization have heightened the significance of such

relationships to the content that the every conceptualization of problems in comparative and international research needs fundamental change (Crossley & Watson 2003, p.48) [5].

Comparative education policy study is a field characterized by eclecticism, despite pleas for coherence of focus and methods from the social science, sociology, anthropology and economics (Wilson 1994; Rust et al. 1999) [6]. Mover, much comparative education policy research is now commissioned by governments, international organizations or private educational charities. These each have their own agendas and often want to commission consultants or researchers for their own ends, either to propagate particular theories or to advance a set of policies (Samoff 1996) [7].

The main research method include critical literature reviews, examination of official guideline/ policy paper, government reports, journals, articles and reports from relevant sources. As well as to compare between the two domains of educational studies, Bray and Thomas suggested a Framework for Comparative Education as it has been extensively cited literature and used in wider domain of education studies (Bray, Adamson & Mason, 2007). In the framework, there are three main levels of comparison (1) Geographic/ location, (2) Non-location demographic and (3) Aspects of education and of society [8].

For the geographic level, the countries were selected to compare between Thailand and Cambodia since they are located Southeast Asian region considerably a similar locations. In the aspect of education and society, this study chose other aspects that represented the education reform and policies on NQF in the selected two countries. Moreover, the entire population in non- locational demographic groups was picked to compare the issues and policies.

### **3. Findings**

#### **3.1 Basic Education Policy in Thailand**

##### **3.1.1 Demography and Economy**

Thailand is located in the centre of Southeast Asia with the approximate population of 69 million known as Thai people. World Bank (2014) reported the poverty rate of 13.2% and the GPD per capita is 5,370 USD counted as middle-income country based on industry, agriculture and tourism. Thailand has stayed in peace for decades and the constitution of Thailand in 1997

stipulated the basic rights to access to free basic education of 12 years and given the equal right to have free education (UNESCO, 2011) [9].

OECD (2013) wrote that Thailand has faced challenges to improve the education, health care system, and environmental issues as a result from its economic growth. Despite of making a significant progress in providing education, the disparity in access still remained mainly in the poor household, rural areas and remote regions that have been addressed into the national policies. The improving the quality of teaching and learning has been the challenge for the current and future of Thai education. Thailand has increased the national budget for education reform and development that has a significant impact on the quality of education system [10].

### **3.1.2 Education System in Thailand**

The Thai education system comprises 4 levels, namely: pre-school education, primary education, secondary education, and higher education. Details of the 4 levels of education can be summarized as follow:

Pre-school Education: is provided for 3-5year old children. Primary education: emphasizes literacy, numeracy, communication skills, and abilities relevant to future occupational roles. At this level, education is compulsory and free of charge, provided for children aged 6-11 including the disadvantaged ones. Secondary Education: is divided into two levels, each covering a period of three years. The upper level aims to provide appropriate academic and vocational knowledge and skills correspondent with the learner's interests and aptitudes. And also Higher Education as aims at the full development of human intellectuality, and the advancement of knowledge and technology. This level may be organized in the forms of colleges, universities, or institutions for specialized studies [11].

## **3.2 Basic Education Policies in Cambodia**

### **3.2.1 Demography and Economy**

Situated in Southeast Asia, Cambodia shares border with Lao, Vietnam and Thailand with a current population 14 million people known as Khmer. According to World Bank (2005), the poverty rate showed 20% of the total population with the GDP per capita is 950 USD considered the low-income country in the world. After the civil war and devastated genocide, Cambodia gained political stability in 1998 when the country has to restore the socio-economic development. Despite the economic growth, Cambodia is struggling with serious challenging issues such as shortage of skilled workers, low quality of education, human trafficking, and

public health service (UNESCO, 2010). However, because education is the core sector of the country to promote the economic and social development, Cambodia has gradually increased the national expenditure with the development partners [12].

### 3.2.1 Education System in Cambodia

Education sector is operated by Ministry of Education, Youth and Sport (MoEYS). The government has endorsed nine years of compulsory education as their basic education. There are two types of education system both formal and non-formal education. According to MoEYS (2009), the formulation of formal education is 6+3+3 that consists of primary school (6 years), lower-secondary school (3 years) and upper-secondary school (3 years) [13].

### 3.3 Sustainability policy between Thailand and Cambodia

The education policies between the two countries can to achieve the goals and to improve their education system. It can be noticed that the governments of Thailand and Cambodia put a great emphasis on enhancing equal access to education by identifying the problems and set out various policies responding to the limitation.

	Education Policies	Thailand	Cambodia
Millennium Development Goals	Decentralization	x	
	Education System 6+3+3	x	x
	National Expenditure 20%	x	x
	High Net Enrollment	x	x
	Dropout Issue		x
	Out-Of-School Issue	x	
	Fee Abolition	x	x
	School Construction		x
	Teacher Recruitment		x
	Children Financial Aids	x	x
	Child Friendly School		x
	Life-Long Learning	x	x
	Free Lunch	x	
	Vocational Training	x	x

**Table 2: Comparing Education Policies.**

### 3.3.1 Current sustainability policy of NQFs

The NQF is thus designed to benefit both individuals and industry. And The capacities of educational institutions and of public and private sector training providers to implement the NQF will be strengthened, making them better able to meet the needs of production and services and designed to facilitate regional worker and student mobility as well as Thai government has signed an agreement with ten countries with the aim to integrate into the ASEAN Economic Community (AEC) by 2015 [14].

The Cambodian government has Promoted high quality educational programmes and internationally acceptable certification are a prerequisite for ASEAN integration and government envisages a thoroughgoing reform of the entire education sector in order to provide Cambodia's citizens with quality primary, secondary, vocational. The Education Strategic Plan (ESP) 2014-2018 (MoEYS, 2013) consolidates the progress made during the ESP 2009-2013 (MoEYS, 2010) in addressing issues of access, quality and institutional capacity building [15].

	<b>Thailand</b>	<b>Cambodia</b>
<b>Main Policy Objectives</b>	<p>The Thai NQF is intended to:</p> <ul style="list-style-type: none"> <li>● Make educational qualifications more relevant to industry needs, thus raising the quality of manpower in the manufacturing and services sectors;</li> <li>● Raise the standard of Thai qualifications to international level;</li> <li>● Make qualifications transparent and comparable across national borders;</li> <li>● Enhance the competitiveness of both domestic and regional labour markets.</li> </ul>	<p>The government intends the CQF to:</p> <ul style="list-style-type: none"> <li>● Allow nationally consistent recognition of learning outcomes;</li> <li>● deliver high quality education and training that matches international standards;</li> <li>● Provide mechanisms for credit transfer and for the recognition of prior learning and experience;</li> <li>● Develop flexible pathways to facilitate movement between education and training sectors, as well as between those sectors and the labour market;</li> <li>● Improve access to education and training programmes and to qualifications;</li> <li>● Set out clearly defined avenues for achievement in order to encourage individuals to continue their education;</li> </ul>

- Provide qualifications that meet the needs of employers as well as learners, thus improving national economic performance;
- Facilitate the mobilization of a skilled regional workforce (Kingdom of Cambodia, 2012).

**Table 2: Comparing Mean Policy objectives**

### 3.3.2 Levels and Descriptors and the use of learning outcomes

The Thai NQF has nine levels but the CQF in eight levels descriptors which are based on learning outcome as following areas:

	<b>Thailand</b>	<b>Cambodia</b>
<b>The level of descriptors</b>	<ul style="list-style-type: none"> <li>● The level descriptors were arrived at by linking educational qualification levels (secondary, vocational and higher) with the competence levels required by various industry clusters, thus ensuring the closest possible fit between educational content and industry demands.</li> </ul>	<p>The level descriptor cover the following areas:</p> <ul style="list-style-type: none"> <li>● Knowledge</li> <li>● Cognitive skills</li> <li>● Psychomotor skills</li> <li>● Interpersonal skills and responsibility</li> <li>● Communication skills</li> <li>● Information technology skills</li> <li>● Numeracy skills</li> </ul>

**Table 3: comparing level descriptors on learning outcomes**

### **3.4 Similarities of the Policies**

The two governments have decentralized some functions and responsibilities to lower levels of administration but remain rather centralized, especially with regard to standard setting and teacher management in Cambodia (UNESCO, 2014). Cambodia has just developed the culture of decentralization into education system to ensure the equitable access to quality and efficiency, institutional development and capacity building for local administration (Chhinh & Dy, 2009; Niazi, 2011) [16]. However, Thailand has pursued the reform of its education system through decentralization, universalization of basic education, expanding capacity for upper secondary school and ensuring opportunities for life-long learning for all people. The country has been strengthening the local capacity in planning, managing, implementing and monitoring the education system at all levels, especially down to the local administration organizations to better inform and improve policies, planning and management decision-making (Amornvivat, 2004) [17].

Both countries have been increasing their national expenditure about 20% in the recent years. This financial allocation to the education sector provides a clear indicator of the government commitment to improve the education system. Moreover, the two countries have the same formulation of 6+3+3 system that require by law on 9-year basic education and 12 year free of schooling that prepare students for the basic life skills, cultural identity and understanding about society where they live in and compete in the labor market.

### **3.5 Differences of the Policies**

The two countries have some differences in policies on basic education. The study noticed that Cambodia experienced the remarkable dropout rate despite of its success in enrollment due the internal inefficiency of the education system and the exclusive poor communities in the remote areas. That was the significant transformation from primary school to secondary school that showed the big gap for the success of compulsory 9-year education in Cambodia. However, Thailand has faced the similar problem but it was a low dropout rate during the transition. The most critical issue for Thailand is the out-of school population that reported to be one of the top countries that increase the out of school children in the region.

The government has put effort in dealing with this issues and UNESCO (2012) stated that the children who are out of school do not mean they have never entered school. In fact, some exposer to the formal school and leave school while some have never attended at all due to the poverty, migration issue, child labor and uneasy access to the schooling in the far

remote areas. The two governments have struggled in promoting the internal education quality to retain the children [18].

#### **4. Conclusion and Suggestion**

Finally, Thailand and Cambodia have similarities on cooperation in various cooperative frameworks, and prepare all sectors for the move towards becoming an ASEAN Community by 2015. As well as the both promote the ideas of National qualification framework for continuous improvement among all teachers and personnel in the schools, and develop the schools into learning organizations so that the quality focus becomes a working culture of the schools. However, NQFs can play a role in promoting learning, but particularly, they can encourage evaluation, quality, recognition and standard-keeping of the skills and competencies students gain. This study is aimed to identify the challenging factors affecting Education on NQF goals in Thailand and Cambodia, and to compare the NQF on affected factors that help to promote the equal access in both countries. Therefore, this paper found the relative significant issues which are the main factors affecting to the equal access of NQF. Also, there are some policies are found to be emerging solution for the government at 21<sup>st</sup> Century Education.

Therefore it is suggested that both government of the countries should be more and more cooperation to build global community of education and also promote trans nation collaboration, support, and research to development in Asean community.

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Supply Administration of Basic Schools in Friendship Network  
Center under Khon Kaen Primary Educational Service Area Office 5

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**Abstract**

The purposes of this research were to study supply administration of Basic Education Schools in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, compare the supply administration of Basic Education Schools, perceived by the teachers with different working experience. The samples used in this research consisted of 112 teachers in Friendship Network Center. The instrument used of collecting the data was to 5 –rating-scale questionnaire, with the reliability of 0.95. The statistics used in data analysis were percentage(%), mean( $\bar{X}$ ), standard deviation(S.D.), and t – test

The research results were as follows:

1. The Supply Administration in basic education Schools in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, as whole was at the high level.
2. The Supply Administration in basic education Schools in Friendship Network Center in providing supply, controlling supply, keeping supply, and maintaining and disposing supply aspects was at the high level.
3. The Supply Administration in basic education Schools in Friendship Network Center perceived by the teachers with different working experiences, as a whole was found with statistically significant at the .05 level
4. The Supply Administration in basic educational Schools in Friendship Network Center, as perceived by the teachers with different working experiences, in providing supply, controlling supply and keeping supply was found with statistically significant difference at the .05 level, where as in the maintaining and disposing supply with no difference

**Keywords :** School supplies, supply administration in basic education schools, Friendship Network Center, and working experience

## 1. Introduction

The National Education Act of B.E 2542(1999 A.D.),and the Amendment (Vol.2 ) of B.E 2545(2002A.D.) ,Specifies the ministry of Education to Education to decentralize the authority and responsibility of administration and educational provision, in academic budget personnel and general administration aspect to the boards and educational service area office and the school under the service area office direct. This is with the intuition to preside education ,with quality . Especially the supply and asset administration, must be managed with flexibility, transparency, accountability Based on the administrative principle of achievement orientation, rendering good quality for teacher and personnel in the supply administration, as well as specifying the educational provision at the basic education and higher education below the Bachelor's degree must work under the educational service area offices (Article 37), and the ministry must decentralize the authority of administration and educational provision, in all academic budget, personnel, and general administration to the boards, and educational service area office, and the schools under the educational service area offices direct (Article 40). These make the educational service area offices have to work in line with the decentralization of education in the 4 aspects, and able to work on behalf of the Ministry's representatives to work in collaboration with other official offices, organizations of state and private agencies, as well as providing educational services for people in educational service area offices, and school are therefore the most important of educational in education, religions, and culture of the Ministry of Education. (Ministry of Education. 2002: 11 – 12)

Education is an important factor in developing quality of life and a continuous process throughout life to aim at enhancing the quality of people to be able to make living and work for the benefit of the society. The educational provision of the office can attain the objectives only if it can manage on the tasks of all unit in the office with efficiency. And to attain such objectives if it necessary to use resources in management, namely man, money, materials and management techniques just the same as of other offices. In all four kinds of resources, the supply and supply work are important and necessary, and part of business work in educational offices, not less than the human resource and the rest in development of the offices. It is therefore necessary to determine the guideline for setting the supply with righteousness in

accordance with the official regulation, and assigning the responsible persons for the related documents to facilitate the righteousness as well as systematically and currently maintaining them, ready for checking at all time (Maneepark and Sisaery,1998:122)

The supply management, although there are the regulations of prime minister's office on the supply of B.E(1992A.D), Amendment(vOl.2) of B.E 2538(1995 A.D), (vol.3) of B.E 2539(1993 A.D), and many other amendments as the regulations and practical guidelines on preparing the budget for provision and disposal of supply and equipment's, they are still not cover all of the complete the supply provision cycle. There are always practical problems such as the red tape in supply provision and mismatching the user's needs, as well as the distributions, controlling, and maintaining all the broken ones on time. Some pieces of supply are without efficiency and useless, but they cannot be disposed or crossed out from the list this makes the supply that cannot be used or are useless available in schools in a great number. These are the obstacles foe making a request for new and modern supply for use in doing work, The supply provision in the management process of correcting steps in the cycle on providing, making annual plans of purchasing and contracting, specifying supply, providing, receiving supply, controlling and maintaining supply, and disposing supply at the last the last step.

The study on the current state and problems in most schools, it was found that the supply work, the part that supported efficient teacher and learning are organization faced with the practical problems of the assigned supply authority lacking knowledge and connect understanding, and this authority was often kept changing. This made the supply work performance become incorrect as of the regulations of the prime Minister's office of B.E. 2535 (1992 A.D.) and the Amendment. Beside the authorized person in change, the school still lacked practical guideline or the manual of the systematic and correct procedure to follow in the school. Also, the supply work performance in most school had problems in 4 aspects, namely providing, controlling, keeping, maintaining and disposing aspects, on which the supply authority could not follow the regulations of the Prime Minister's Office of B.E. 2535 (1992 A.D.) and the Amendment strictly.

From the problems as mainlined the researcher was interested in studying the supply administration of basic education schools in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, for obtaining the data to be used as the guidelines in supply administration in basic education schools with more efficiency and effectiveness in the long run.

## 2. Research Objectives

2.1 To study the supply administration of basic education schools in friendship Network Center under Khon Kaen Primary Educational Service Office 5.

2.2. To study the supply administration of basic education schools in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, perceived by the teacher, classified by working experience.

## 3. Research Scopes.

**3.1 Population**, 155 teachers in basic education schools in Friendship Network Center under Khon kaen Primary Educational Service education Service Area Office 5, Academic 2004.

**3.2 Sample**, 112 Teacher in basic education school in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, Academic year 2014; derived through Krejcie and Morgan's Sample – size Table (Krejcie and Morgan, 1970; excited in Srisa-ard Stratitied 2013: 43) and random sampling technique.

### 3.3 Content

The supply administration of basic education schools of the Regulations of the Primes minister's Office on Supply (2002) in 4 aspects as follows: -

3.3.1 Providing supply.

3.3.2 Controlling supply.

3.3.3 Keeping supply.

3.3.4 Maintaining and disposing supply.

**3.4 Variable of the study** are as follows.

3.4.1 Independent variable work in experience.

1) Below 10 years.

2) From 10 years and above.

3.4.2 Dependent variables the supply administration of basic education schools in Friendship network center under Khon kaen Primary Educational Office 5, as perceived by the teachers in 4 aspects as follow: -

1) Providing supply.

2) Controlling supply.

3) Keeping supply.

4) Maintaining and disposing supply.

#### 4. Research Methodology

**4.1 Research Instrument**, the questionnaire in two sections: -\

**Section 1**, the questions on the status of the respondents, in the checklist form.

**Section 2**, the questions on supply administration of basic education schools in Friendship Network Center under Khon kaen Primary Educational Service Area Office 5, in Likert's 5 rating – scale form.

**4.2 Instrument Construction:** -

4.2.1 Draft the questions of the dependent variable.

4.2.2 Bring the draft of questions to the advisor to check their suitability and correctness.

4.2.3 Improve the questions as suggested by the advisor.

4.2.4 Bring the questionnaire to 3 expert to consider the congruence of the items.

4.2.5 Find out the index of item congruence of the values yielded between 0.67 – 1.00, they were regarded as usable. It was found that all items met the criterion.

4.2.6 Correct some item as suggested by the experts.

4.2.7 Bring the improved questionnaire to try-out with 30 teachers of non-sample in Sao Lao Wittayakarn School.

4.2.8 Find out the reliability as of Cronbach's Method, and yielded the value of 0.95, regard as usable.

4.2.9 Produce the questionnaire copies for collecting data for their research.

**5. Data Analysis**, in three sections as follows: -

**Section 1**, analysis of the status of the respondents, using the frequency (F) and percentage (%).

**Section 2**, analysis of the supply administration of basic education schools, in Friendship Network Center, as a whole and in aspects, using the mean ( $\bar{x}$ ) and standard deviation (S.D.).

**Section 3**, comparative analysis of the supply administration of basic education schools in friendship Network Center, by working experience, using the Independent samples T-test.

## 6. Research Summary

The research results were summarized as follow:-

6.1 The supply administration of basic education schools in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, perceived by the teachers as a whole, was at the high level.

6.2 The supply administration of basic education schools in Friendship Network Center, perceived by the teachers in all 4 aspects, as a whole and in item, was at the high level.

6.3 The supply administration of basic education schools, perceived by the teachers with different working experiences as a whole, was found with statistically significant difference at the .05 level.

6.4 The supply administration of basic education schools, perceived by the teacher with different working experiences, in three aspects namely, providing supply, controlling supply and keeping supply, it was found with statistically significant difference at the .05 level where as in the maintaining and disposing supply, it was with no difference.

## 7. Discussion

The research on the supply administration in basic education schools in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, in Academic year 2014 (B.E. 2557) had topics for discussion on the supply administration and comparison of the supply administration as follow: -

7.1 The supply administration of basic education schools in Friendship Network Center under Khon Kaen Primary Educational Service Area Office 5, as perceived by the teachers, as a whole, was at the high level. This might be only owing to the supply administration was followed by the Regulation of the Prime Minister's Office on the Supply, B.E. 2545 (2002 A.D.). The Regulations clearly specified authority and guideline for practice on which the authorities in change could follow as references. There are also other relevant regulations and guideline.

The research result as mentioned was correspondent with Srithap-thim (2012; Abstract), studying on the strategies for increasing the efficiency of supply administration in SukhothaiThammathirat Open University, and finding that the efficiency of supply administration of SukhothaiThammathirat Open University was at the high level, as a whole and in aspects.

7.2 From comparison of supply administration of basic schools in Friendship Network Center under Khon kaen Primary Educational Service Area Office 5, perceived by the teachers



with different working experiences as a whole, was found with statistically significant difference at the .05 level.

The research result was correspondent with Butrachai (2006: Abstract), researching on the supply administration as of the Regulations of the Prime Minister's Office of B.E. 2535 of key-stage-4 schools under Mahasarakham Educational Service Area Office 1 and 2, and finding that the comparison between the educational office 1 and 2, as a whole and in aspects, was with statistically significant difference at the .05 level.

In addition, the comparison, as perceived by the teachers with different working experiences in three aspects, namely providing supply, controlling supply and keeping supply, was with statistically significant difference at the .05 level, except in the maintaining and disposing supply aspect, it was found with no difference. The result might be owing to the fact that the maintenance was another person of the supply administration to prevent, keep and take care of supply and equipment by keeping them in proper order, preventing breakage and being out of order and repairing, for again as usual, especially the Tools of with high values/prices, or purchasing to replace the old and in usable condition. Knowing how to take care and the steps for bringing them out into use can also reduce the repairing steps the cause money and time wastage. The maintenance can make the supply become efficient and can be used again with safety and ready for future use.

## **8. Suggestions**

### **8.1 Suggestions for Application**

8.1.1 The research results should be used in basic education schools by the school administrations and the teachers in charge of the supply work, as the data for the supply administration, planning, developing and improving the supply administration with quality and suitability.

8.1.2 The Primary Educational Service Area Offices should use the research results as the data, and information for monitoring, supervising and following up the supply administration with efficiency.

### **8.2 Suggestions for future Research**

8.2.1 Should study on the supply administration in the maintaining and disposing aspect.

8.2.2 Should study on the supply administration in various institutions, such as secondary schools, Vocational colleges and universities.

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**Different Effects of Written Corrective Feedback and Explicit Grammar Instruction on Grammatical Accuracy of Rajabhat Maha Sarakham English Major students' Paragraph Writing**

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**Abstract**

The current study aimed to investigate 1) the effectiveness of written corrective feedback (WCF) on students' grammar accuracy in their paragraph writing, 2) the effectiveness of explicit grammar instruction on the students' paragraph writing, and 3) different effects of the two methods on the grammar accuracy of students' paragraph writing. The participants were 30 English major students of Rajabhat Maha Sarakham selected by purposive sampling. The 20 students were grouped into two experimental groups of 10 received written corrective feedback and explicit grammar instruction. Meanwhile, other 10 students were treated as the comparative group. The result of the comparative study using one way ANOVA and Post hoc analysis found that the participants in the two experimental groups outperformed the participants in the controlled group with the statistically different level at 0.5 ( $p=0.05$ ). However, there was no significant difference between the two experimental groups. The result of the study was beneficial in designing the writing classrooms focusing on grammatical accuracy in terms of choosing the way to improve students' performance.

**Keywords:** Written corrective feedback (WCF), explicit grammar instruction, EFL writing

## Background

It has been accepted that accuracy in grammatical structure is a component of a good composition. McCaskill (1998) suggests that grammar makes writing effective. Therefore, in order to complete a good composition, writers have to consider several grammatical issues including the using of tenses, subject verb agreements, articles, punctuations, capitalizations and spellings, passive active voices, and gerunds and infinitives etc. Moreover, Andrews, Torgerson, Beverton, Freeman, Locke, Low, Robinson, and Zhu (2005) claim that errors in tenses, punctuations, and subject verb agreements might change the meaning of a sentences. Therefore, having good grammatical knowledge enables a learner to produce an accurate writing piece. The current study aims to investigate the focused feedback discussed later in the same chapter. The focus of grammatical errors in the recent studies on grammatical errors occurring in the Thai EFL context including verb tense, article, sentences structure, subject verb agreement, and redundancy (Watcharapunyawong & Usaha, 2013; Kaweera, 2013).

However, it is not easy to contribute the good performance and knowledge of grammar in Thailand. Several researchers (e.g. Watcharapunyawong & Usaha, 2013; Kaweera, 2013) suggested that grammar is the most crucial problem among Thai EFL students. The problem leads to failure of both academic and real life aspects. In detail, the failure in writing leads to academic breakdown. Students with low ability of grammar could not complete the course such as paragraph writing, essay writing, and other kinds of written based courses. Moreover, the real life problems could be brought about by the struggle of writing as well. It is difficult to succeed in working without grammar knowledge (St John, 1996). Therefore, it is very important to contribute writing as a main qualification of EFL students.

Before moving to the solution of students writing ability, the problems could be analyzed in depth. It could be considered that problems in grammatical use could be an account of several aspects. The first aspect lies in the difference of the two languages. It has been proved that difference in two languages could account to problems in language learning (Coder, 1975). Similarly, several aspects of language, e.g., tense, article use, and punctuation, could be the cause of writing failure of Thai students (Iwasaki and Ingkapirom, 2005). Moreover, the writing difficulty to Thai students could be caused by teaching of Thai EFL context. Foley (2005) claimed that Thai EFL writing teaching and learning has problems in that teachers focus too much on grammar translation method. Therefore, students have less opportunity to produce output language, and this leads to the inexperience in the skill and problematic performance.

Consequently, attempts to improve grammatical accuracy are employed into Thai EFL context. The main purpose of the attempts is to introduce students to write with accuracy in grammatical use, rhetorical structure, and appropriate use of words. Two interesting methods in EFL writing are error correction in the written production of students and explicit instruction to the errors. The former refers to an attempt to identify mistakes in written language production

(Lightbrown & Spada, 1999). The benefit of the written corrective feedback lies in awareness errors which could enable students to see the different between target structures and their own produced output. The later method of explicit teaching on the error of grammar accuracy in writing production has been seen in the effective method by the researchers (Bowles & Montrule, 2008; Ellis, 2008). Hulstijn & Graaff's (1994) debated that writing is too complicated; therefore, students have to be instructed directly in order to get them cross the difficulty of the skill. Influence of the two methods on the EFL written context is crucial. Therefore, the investigation of the methods could lead to the deep understanding of how learners learn through the different kinds of writing teaching.

### **Related Studies**

Studies have been conducted to prove effectiveness of both methods. The detail of the studies is shown below.

#### *Written Corrective Feedback (WCF)*

The effectiveness of corrective feedback has been studied in the context of the EFL context for decades. As mentioned, the idea to let students learn from their mistake is used to be the principle of studies. Bitchener and Knoch (2009) studied the effect of three different written feedbacks. 4 groups of low intermediated SLA students received different types of feedback were investigated. The controlled group received no feedback in the treatment while the three experimental groups were given feedback. The study found the effectiveness of the CF in the outperforming of students in the experimental groups. The study of Sheen (2007) points out the benefit of CF as a learning method for second language. The use of a speeded dictation test, a narrative writing test, and an error correction test were taken to measure learners' acquisition after the treatment of corrective feedback. The study found that learns can learn to write English better when being given feedback with explanation of the errors (meta-linguistic feedback). In this case, meta-linguistic explanation helped learners to write correctly and acquire the correct form of writing in the target language. It seems that corrective feedback is an alternative method in L2 classrooms.

#### *Explicit Instruction*

The issue of explicit instruction is related to how it benefits students in covering the aspects of students' errors. Therefore, the method is brought in the research creation. For example, Admin's (2009) suggested that explicit instruction is effective in reducing grammatical errors in students' writing. Direct teaching helps students to understand grammar rules and leads to improving in writing. Moreover, both simple and complex rules of grammar rule could be instructed by the direct way (Ellis, 2008). This could lead to both higher level of grade and performance. In addition, Rajabi and Dezhkam (2014) conducted study of explicit instruction in

the improving of writing accuracy of Iranian EFL students. The result of the comparative study pointed out the outperformance of students in experimental group. In conclusion, improving in writing accuracy seems to be led by the implication of explicit instruction.

### **This Study**

Related studies point out benefits of both written corrective feedback and explicit method in improving students' grammatical accuracy. However, in case of WCF, it could be given in the several forms- direct and indirect (Ellis, 2009). Therefore, comparison of WCF and explicit instruction could lead to the superior of direct or indirect instruction. The current study aimed to investigate the different effects of two method of writing teaching with the following research questions.

1. To what extend does written corrective feedback (WCF) improve students' writing ability?
2. To what extend does explicit instruction improve students' writing ability?
3. What are different effects of the two methods on the grammar accuracy of students' paragraph writing?

### **Methodology**

#### *Participants*

Thirty second year English major students of Rajabhat Maha Sarakham University were selected as participants in this study by purposively sampling method. The students took the Paragraph Writing course in the first semester of 2015 academic year. They are low proficiency students as the major has no screen test for entering the program.

#### *Instruments*

##### Rubric

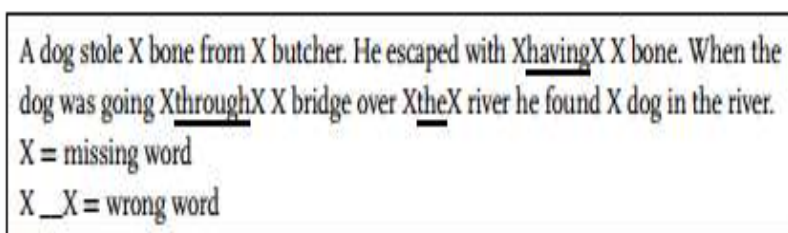
Rubric scoring was designed in this study in order to judge grammatical accuracy of students. The rubric was used to judge the correctness of sentence unit (T-unit). The aim criteria of rubric include issues raised from grammar books. The criteria included component of sentence structure, correctness of subject verbs agreement, correctness of main verb, correctness of tense use, correctness of part of speech, and correctness of punctuation use. Therefore, the full point of each test would be 30.

##### Pre and Posttest

Pre and posttest were the written tests at the paragraph level. The topics of the test were "My Memorable Events" and "The Unforgettable Situation" respectively.

### Feedback

The study employed indirect written corrective feedback described by Ellis (2009) as the way to identify the students' errors. The direct correction is not given, so the students have to study themselves in order to understand the way of fixing errors. An example of indirect written corrective feedback could be seen in the figure 1.



**Figure 1 Example of Feedback**

### Explicit Instruction

The explicit instruction in this study referred to the way teachers provide direct teaching to specific errors of students. After the performance, errors would be corrected. The crucial issues of errors were selected to teach in the class along with grammar books.

### *Data collection and Data analysis*

The following table shows the process of data collection and data analysis.

Stage	Data collection	Data analysis
1	Participants took the pretest. The pretest score was used to divide the participants into three groups of WCF, Explicit, and comparative.	Raw score.
2	Teachers give feedback to the first group and analyze errors in their writing to teach selected issues in the two experimental groups.	
3	Students took posttest. The score of the posttest was analyzed to answer research questions.	t-test for in group development Two way ANOVA and pros hoc analysis for between group developments.

**Table 1 Data collection and Data Analysis**

## Result

	df	Mean Square	F	Sig.
Between Groups	2	2.133	.082	.922
Within Groups	27	26.070		
Total	29			

P=0.05

**Table 2 Pretest score analysis**

After taking pretest, the score of the students was used to arrange them in two groups of WCF, explicit instruction, and comparative group. The analysis of one way ANOVA show the level of significance at 0.922 ( $p=0.922$ ). The p value is over the set confident level of 0.5. Therefore, three groups of students show no significant difference in the pretest process. It could be said that before the treatment, the students had started in the comparable level of performance. After the treatment the result of the study were as follow.

### The effectiveness methods

	Gr	N	Mean	S.D.	t
oup					
WCF		10	-2.00	2.20	-3.16
EI		10	-2.50	2.17	-3.36
COM		10	0.30	0.61	1.40

P=0.05

**Table 3 T-test of treatment**

According to the data in Table 3, it could lead to the following result of the study.

#### *Written corrective feedback (WCF)*

The result of the study showed that the comparative t value of the pre-and posttest is -3.16 ( $t=3.16$ ). The t value is not over 0.5 set as the significant level of the statistic result. Therefore, the students' score in the group that received written corrective feedback is significantly different. This refers to the improving of students' writing accuracy after passing the process of WCF.

#### *Explicit Instruction (EI)*

Similarly, the t value of the students' performance of the group of explicit instruction shows the level of -3.36 ( $t=3.36$ ). The students show improving in the grammatical accuracy presented in



their paragraph writing as the level of difference is significant at the confident level of 0.5 ( $p=0.5$ ).

#### *Comparative group*

It is shown in the table 3 that the t value of the comparative group is 1.4 ( $t=1.4$ ) which is exceed the significant value. Therefore, it could be suggested that there was no significant difference in the score of pre and posttest performed by the group. It could be concluded that students in the comparative group did improve their writing accuracy.

#### **Different Between the Two Methods**

(I) GRPOST	(J) GRPOST	Mean Difference (I-J)	Std. Error	Sig.
	EI	-.1000	1.88365	.998
WCF	Com	3.3000	1.88365	.025
EI	WCF	.1000	1.88365	.998
	Com	3.4000	1.88365	.022
Com	WCF	-3.3000	1.88365	.025
	EI	-3.4000	1.88365	.022

P=0.05

**Table 4 Difference of Method**

Table 4 shows the comparative performance of students in each group. According to the table, the students in the WCF group show significant difference to the students in comparative group ( $p=0.025$ ). However, the score of the students show no significant different when being compared with the EI group ( $p=0.998$ ). Similarly, the students in receiving explicit instruction (EI) shows significant difference to the comparative group ( $p=0.022$ ) but no different to the WCF group ( $p=0.998$ ).

#### **Reliability**

The study employed two raters as the score giver of each writing test. The co-efficient values between two raters were found at 0,754 for the pretest and 0.723 for the posttest.

The results of the study lead to the conclusion that the two methods are both beneficial in improving students' grammatical accuracy in writing. However, there is no significant difference in the comparison of the two methods. The results of the study lead to the discussion below.

## Discussion

To give explanation to the results of the current study, the research questions are raised again to lead the discussion of finding.

*To what extend does written corrective feedback (WCF) improve students' writing ability?*

The results of the study indicate that the students can write a more grammatical accurate piece of writing after receiving indirect feedback to their writing performance. It could be implied that students can learn from the indicated feedback. The awareness of errors leads them to adjust or study further to correct their own mistakes in writing. The result of the study contributes the benefit of feedback proposed by Bitchener and Knoch (2009), Sheen (2007), and Ferris (1999) who support the error correction in writing.

*To what extend does explicit instruction improve students' writing ability?*

Similarly, explicit instruction is proved to be effective by the result of the current study. It could be implied that students, when being indicated the mistake in performance and instructed directly what they cannot do, could improve and gain the knowledge from teachers' instruction. Therefore, the method could be an alternative in developing writing classrooms. The result of the study support the idea of, Rajabi and Dezhkam (2014), Admin's (2009), and Ellis (2008) with the claim to promote explicit instruction in the writing classrooms.

*What are different effects of the two methods on the grammar accuracy of students' paragraph writing?*

Lastly, the result of the study shows no significant difference between the two methods of written corrective feedback and the explicit instruction. The key of improvement is with the attention to errors (Schmidt, 2001). It seems that students, whether being instructed directly or not, could find their own way to solve problems when being told. The result of the study relates to the study of Ferris (2006) claiming the comparable effectiveness of explicit and implicit grammar teaching. The discussions lead to the conclusion of the study below.

## Conclusion

The results of the study could be drawn to the conclusive issues of 1) the process of indirect written corrective feedback could lead to improvement of grammar accuracy, 2) explicit instruction could lead to the more accurate piece of writing in terms of grammatical use, and 3) there is no statistical difference between the effectiveness of the two methods. The conclusion of the study could be guidance for writing classroom.

The finding could be implicated to the writing classroom management. Although there is no significant difference between the methods, an interesting point was found during the data collection. It took approximately half an hour to give feedback for the 10 students, but it took two hours to instruct students for the whole class. In this case, teachers might use the finding to

apply in their classes. For example, in the class with a 20 students, it is faster to give feedback than explicitly lecture. However, it might be different in the other situations of writing classrooms.

Further study could investigate the long time performances of students after taking the treatment. It is interesting to investigate the assumption of the different effect of implicit and explicit teaching especially in writing.

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**Proposed Policy for Internationalization Development of the Student Production at  
Mahachulalongkornrajavidyalaya University, Campuses in North Eastern Thailand**

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**Abstract**

The purposes of this research were to study the current situation, problems, and expectations; and to develop the proposed policy for internationalization development of the student production at Mahachulalongkornrajavidyalaya university, campuses in North Eastern Thailand of which comprising vision, mission, goals, strategies, and key performance indicators of students' production. The research consisted of 2 phases; the basic information studies for drafting the proposed policy and the proposed policy examination and development of the proposed policy. The examples were 3 campuses in the North Eastern Thailand i.e. Nong Khai, Khon Khaen, and Surin campuses of Mahachulalongkornrajavidyalaya university. The data were collected by document analysis, questionnaire, focus group discussion, in-depth interview, and public hearing. The results of the research were as follows:

1) The current situation and the problems for internationalization development of the student production at the campuses in North Eastern Thailand were in the moderate level. The expectations were the development of the campuses' personnel in effective English using ability; the research based-learning and teaching; the student development according to desirable characteristics of the international qualification framework respectively.

2) The proposed policy for internationalization development of student production at the campuses in North Eastern Thailand consisted of the vision in educational management as 'By 2021 C.E., the campuses in North Eastern Thailand would produce the qualified students and would be the center of international Buddhist education by integration of Buddhism to the modern sciences for sustainable mental and social development'; the mission of the student production as 'aiming to produce the accepted Buddhist graduates in the international level with 4 missions comprising 1) the resources of student production consisted of 9 goals, 48 strategies, and 48 indicators 2) the student production process consisted of 3 goals, 18 strategies, and 18 indicators 3) the student quality development

consisted of 6 goals, 33 strategies, and 33 indicators and 4) the evaluation of the student production processes consisted of 5 goals, 8 strategies, and 8 indicators.

**Keywords:** Proposed Policy, Internationalization Development, Student Production, Mahachulalongkornrajavidyalaya University

## 1. Introduction

An approach of globalization and ASEAN community has driven human activities into the new aspects of economics, society, politics, religions, and cultures. Along with this, it brought up various pros and cons to Thailand. A boundless communication and connection was its advantage. On the other side, there was a collapse in economics, society, and politics. People have become materialistic. Besides, strong competition on the transnational educational service is rapidly increasing due to the ASEAN liberalization policy. This has made a huge boundless market for ASEAN higher educational business (Ministry of Education, 2011, p. 8).

In the near future, foreign educational institutes of ASEAN countries would flow into Thailand both in the aspects of quantity and complexity as a result of cooperation on educational liberalization policy. With this high competition, higher educational institutions are considered to be the most significant organizations to develop the Thai citizens so as to solve Thailand's problems as a whole. They have to push themselves to survive amid a tough competition in doing its four missions as assigned in the National Education Act 1999 of Thailand. They must develop themselves in various aspects such as the vision of the university's leaders, the quality of educational management, and the qualified personnel including the related rules and regulation (Office of the Higher Education Commission, 2010, p. 56-58). As a result, this leads to a significant educational reform in Thailand since 1999 up to the present time so as to compete with other universities in the ASEAN community (Office of the Education Council, Ministry of Education 2009, p. 2).

Mahachulalongkornrajavidyalaya University is one of the higher educational institutes in Thailand. It was founded by His Majesty King Chulalongkorn the Great on September 13, 1896 with the determination of providing Tipitaka studies, and higher education, not only for monks and novices, but also for laypeople. On September 21, 1997, the National Assembly of Thailand enacted a royal Act of Mahachulalongkornrajavidyalaya University to the effect that the University should become a legal entity under the supervision of the state. Its main campus is located at 79 Moo 1 Lam Sai Sub-district, Wang Noi District, Ayutthaya Province. At present, it has been running ten extended campuses throughout Thailand and six overseas affiliated institutes of the university with the vision of "To develop the university to be the international leading center of Buddhist education by integrating Buddhism with modern

sciences for sustainably mental and social development.” In the North Eastern Thailand, the university has got five campuses comprising Nong Khai, Khon Kaen, Ubon Ratchathani, Nakhon Ratchasima, and Surin campuses. As being the university campuses, they are also to make use of the said university vision in educational management. To manage education in the international level, the North Eastern campuses have to get themselves ready with a comprehensive long running policy.

Therefore, the researcher is interested in studying the proposed policy for internationalization development of the student production at Mahachulalongkornrajavidyalaya university, campuses in North Eastern Thailand.

## **2. Materials and Methods**

This research was the policy research with the use of mixed methodology. The purposes of the research were to study the current situation, problems, and expectations; to develop the proposed policy for internationalization development of the student production at Mahachulalongkornrajavidyalaya university, campuses in North Eastern Thailand of which comprising vision, mission, goals, strategies, and indicators of student production. The research was divided into 2 main phases with six steps.

### **2.1 Phase 1: the basic information studies for drafting the proposed policy**

This phase consisted of 3 steps.

Step 1 was the study and analysis of the documents. The Eleventh Development Plans (2012-2016) of Nong Khai, Khon Kaen, and Surin campuses were studied and analyzed in 5 issues i.e. philosophy, vision, mission, student productive policy, and administrative policy.

Step 2 was the perspective study of 168 persons by using questionnaire on 3 main issues i.e. current situation, problems, and expectations for internationalization development of the student production.

Step 3 was the study of 3 model institutes of student production in the international level by analyzing the development plan obtained and interviewing 3 highest administrators of the institutes on 5 main issues i.e. the organization vision, the mission in student production, the input, the process, and the output for internationalization development of the student production.

Having done the three first steps, the proposed policy was drafted.

## 2.2 Phase 2: the examination and development of the proposed policy

This phase consisted of 3 steps.

Step 1 was the focus group discussion on the drafted proposed policy by 13 campuses' personnel who were in charge with the policy and plan of the campuses.

Step 2 was the study from 6 experts by examination and interview. For the examination, the proposed policy modified from step 1 was examined by the experts in 4 aspects i.e. congruity, propriety, feasibility, and practical utility of the proposed policy. For the interview, the experts were questioned on 2 important issues i.e. (1) agreement or disagreement on the proposed policy and (2) recommendations for improving the proposed policy.

Step 3 was the public hearing with the objective of the proposed policy's acceptance. The improved proposed policy from step 2 was detailed to 30 participants obtained from the campuses and allowed them to express their view of acceptance of the proposed policy.

## 3. Results

The findings are presented according to the research purposes as follows;

3.1 The current situation and the problems for internationalization development of the student production at Mahachulalongkornrajavidyalaya university, campuses in North Eastern Thailand were at the moderate level ( $\bar{x} = 2.03$ , S.D. = 0.38), ( $\bar{x} = 2.00$ , S.D. = 0.32) in the holistic view as seen in the table 1;

**Table 1 the current situation and problems**

Student Production Mission in the Holistic View	Current Situation			Problems		
	$\bar{x}$	S.D.	Meaning	$\bar{x}$	S.D.	Meaning
Input	1.9	0.4	moderate	2.0	0.3	moderate
Process	5	1	rate	7	3	rate
Output	2.0	0.4	moderate	2.0	0.4	moderate
	0	3	rate	1	0	rate
	2.1	0.4	moderate	1.9	0.3	moderate
	5	3	rate	3	8	rate
Total Average	2.0	0.3	moderate	2.0	0.3	moderate
	3	8	rate	0	2	rate



The expectations for internationalization development of student production were the development of the campuses' personnel in terms of effective English using ability, the research based-learning and teaching, and student development according to the desirable characteristics of the international qualification framework respectively.

3.2 The proposed policy for internationalization development of student production at Mahachulalongkornrajavidyalaya university, campuses in North Eastern Thailand consisted of vision, missions, goals, strategies, and indicators as follows; (1) The vision in educational management was "By 2021 C.E., the campuses in North Eastern Thailand would produce the qualified students and would be the center of international Buddhist education by integration of Buddhism to the modern sciences for sustainable mental and social development." (2) The mission of student production was "aiming to produce the accepted Buddhist graduates in the international level with 4 missions comprising the resources of student production, the student production process, the student quality development, and the evaluation of the student production processions; and each mission carried its goals, strategies, and indicators." (3) The resources of student production consisted of 9 goals 48 strategies and 48 indicators. (4) The student production process consisted of 3 goals 18 strategies and 18 indicators. (5) The student quality development consisted of 6 goals 33 strategies and 33 indicators. (6) The evaluation of the student production processions consisted of 5 goals 8 strategies and 8 indicators. This can be shown as in figure 1;

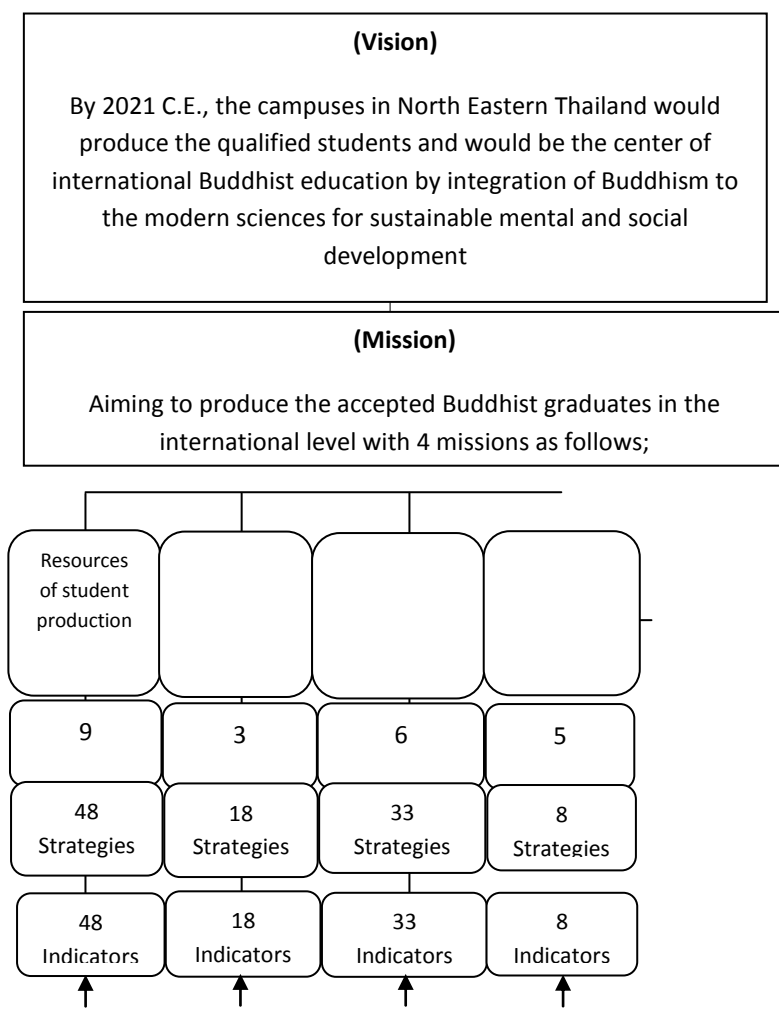


Figure 1 proposed policy

#### 4. Discussions

From the research results, there were significant points to be discussed, as follows;

4.1 The vision to produce qualified students and to be the center of the international Buddhist education by integration of Buddhism to the modern sciences for sustainable mental and social development of the university campuses in North Eastern Thailand was related to the Eleventh Higher Education Development Plan of 2012-2016 (Office of the Higher Education Commission, 2013, p. 29) of which pointed out the vision that by the year 2016 the higher education of Thailand should be the most qualified international learning and developing center with the help of sufficiency economy philosophy in the ASEAN community.

4.2 The mission to produce the accepted Buddhist graduates in the international level of the university campuses in North Eastern Thailand was related to the report of the

third educational assessment by the Office for National Education Standards and Quality Assessment (2011-2015) (Mahachulalongkornrajavidyalaya University, 2013, p. 7) of which pointed out in the executive summary of the assessment report that the university should conduct the international program on Buddhist studies for being the international leading center on Buddhist education in the international levels as said in the university vision.

4.3 The 9 goals, 48 strategies, and 48 indicators of the mission on resources to produce graduates were related to the research article on 'Internationalization of Higher Education : towards a Conceptual Framework' (Qiang Z, 2003, p. 249-252) which implied the international elements of universal organizational structure, qualified personnel, foreign students, enough budget, international curriculum, wide range learning source, high media and technology, good environment, and participatory administration.

The resources to produce graduates were also related to the concept on effectively administration and organizational development (the Office for National Education Standards and Quality Assessment (Public Organization), 2012, p. 42) which stated that the higher educational institute should have the effective administration system, a harmonious conveying of the institute's vision and values into action for achievement of the assigned purposes and missions, a directing council, an operation according to the policy and the concerned rules and regulations including the good governance, and providing welfare to the students and personnel.

It is notable that the expectation to have the qualified teaching staff and supporting staff was the significant point obtained from the survey study. The ability of effectively using four skills of English language should have been learnt by the personnel, particularly the teaching staff for being the internationalization standard of the higher institute.

4.4 The 3 goals, 18 strategies, and 18 indicators of the mission on the student production process were related to the international standard criteria of student production of the Office of ASEAN University Network (AUN Secretariat, 2011, p. 10-44) which have shown the ASEAN benchmark for 15 graduate producing criteria comprising expected learning outcomes, programme specification, teaching and learning strategy, student assessment, academic staff quality, support staff quality, student quality, student advice and support, facilities and infrastructure, quality assurance of teaching and learning processes, staff development activities, stakeholders feedback, output, and stakeholders satisfaction.

It is notable that the data obtained from personnel' expectations of the university campuses in North Eastern Thailand had indicated that the campuses should have the teaching staff lecture by way of research based learning. Therefore, the academic staff should have been developed through the technique of research based teaching.

4.5 The 6 goals, 33 strategies, and 33 indicators of the mission on the student quality development were related to the seven survival skills for career, college, and citizenship

(Tony Wagner. 2010, cited in Sanrattana, W., 2013, p. 103) stated that students in the 21<sup>st</sup> century should have been developed in seven skills; (1) critical thinking and problem-solving (2) collaboration across networks and leading by influence (3) agility and adaptability (4) initiative and entrepreneurialism (5) effective oral and written communication (6) accessing and analyzing information (7) curiosity and imagination.

The student quality development was also related to 5 domains of learning outcomes appeared in Thai Qualifications Framework for Higher Education (Government Gazette, Book No. 126, Special Section 125 G, 2009, p. 18-19) stated that any kinds of learning should at least have the learning outcomes in five domains of learning i.e. (1) Ethical and Moral Development (2) knowledge (3) cognitive skills (4) interpersonal skills and responsibility (5) analytical and communication skills.

4.6 The 5 goals, 8 strategies, and 8 indicators of the mission on the evaluation of the student production processes were related to PDCA Deming Cycle (Deming, W.E., 1986, p. 56-57) which consisted of planning, doing, checking, and acting.

4.7 The goals of the 4 missions in student production are considered to be very significant because they are the key issues to respond to the achievement of the missions, but their strategies and indicators are in accordance each other to indirectly respond to the missions. Therefore, it is valuable to mention the goals in detail and their strategies and indicators in only number as follows;

4.7.1 The 9 goals, 48 strategies, and 48 indicators of the first mission were; (1) the first goal concerned with the organizational structure and contained 5 strategies and 5 indicators, (2) the second goal concerned with the organizational personnel and contained 7 strategies and 7 indicators, (3) the third goal concerned with the quantity of students and contained 5 strategies and 5 indicators, (4) the fourth goal concerned with the financial strategic plan and contained 5 strategies and 5 indicators, (5) the fifth goal concerned with the international programme on Buddhism and contained 7 strategies and 7 indicators, (6) the sixth goal concerned with the learning sources and contained 4 strategies and 4 indicators, (7) the seventh goal concerned with the media and technology and contained 2 strategies and 2 indicators, (8) the eighth goal concerned with the environmental structure and contained 3 strategies and 3 indicators, (9) the ninth goal concerned with the administration and contained 10 strategies and 10 indicators.

4.7.2 The 3 goals, 18 strategies, and 18 indicators of the second mission were; (1) the first goal concerned with the management of instructor system and learning and teaching system and contained 11 strategies and 11 indicators, (2) the second goal concerned with the usage of learning and teaching aids and contained 2 strategies and 2 indicators, (3) the third goal concerned with the system and mechanism in evaluation and contained 5 strategies and 5 indicators.

4.7.3 The 6 goals, 33 strategies, and 33 indicators of the third mission were; (1) the first goal concerned with the graduates' virtues and ethics and contained 5 strategies and 5 indicators, (2) the second goal concerned with the graduates' knowledge and contained 8 strategies and 8 indicators, (3) the third goal concerned with the graduates' intellectual skill and contained 1 strategy and 1 indicator, (4) the fourth goal concerned with the graduates' interpersonal skills and responsibility and contained 5 strategies and 5 indicators, (5) the fifth goal concerned with the graduates' analytical, communication, and information technology skills and contained 10 strategies and 10 indicators, (6) the sixth goal concerned with the graduates' professional skill and contained 4 strategies and 4 indicators.

4.7.4 The 5 goals, 8 strategies, and 8 indicators of fourth mission were: (1) the first goal concerned with the system and mechanism of evaluation of student production processes and contained 2 strategies and 2 indicators, (2) the second goal concerned with the personnel' s awareness on student production process evaluation and contained 1 strategy and 1 indicator, (3) the third goal concerned with the coverage of student production process evaluation and contained 3 strategies and 3 indicators, (4) the fourth goal concerned with the implementation of student production process evaluation and contained 1 strategy and 1 indicator, (5) the fifth goal concerned with the development of system and mechanism for student production process evaluation and contained 1 strategy and 1 indicator.

## 5. Conclusion

The present circumstances and problems for approaching an internationalization development in student production of the campuses in North Eastern Thailand laid in the moderate level. The personnel of the campuses expected to have the qualified academic staff in the effectively English using ability; the research based-learning and teaching; and the student development in accordance with the desirable characteristics of the international qualification framework respectively.

The educational vision of the campuses in Northeastern Thailand was 'By 2021 C.E., the campuses in North Eastern Thailand would produce the qualified students and would be the center of international Buddhist education by integration of Buddhism to the modern sciences for sustainable mental and social development'. The mission of student production was 'a strong aim for producing the accepted Buddhist graduates in the international level with 4 missions comprising 1) the resources of student production consisting of 9 goals, 48 strategies, and 48 indicators 2) the student production process consisting of 3 goals, 18 strategies, and 18 indicators 3) the student quality development consisting of 6 goals, 33 strategies, and 33 indicators and 4) the evaluation of the student production processes consisting of 5 goals 8 strategies and 8 indicators.

## 6. Acknowledgement

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## Academic Leadership of School Administrators under Khon Kaen Primary Educational Service Area Office 2

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### Abstract

The purposes of this study were to verify the leadership of school administrators under Khon Kaen Primary Educational Service Area Office 2 as perceived by the personnel, and to compare the leadership of school administrators as perceived by the personal, classified by position and working experience. The sample included the school personnel of 310 in number. The instrument used in collecting the data was the rating-scale questionnaire with the index of item congruence (IOC) between 0.67 – 1.00. The statistics use for analyzing the data were frequency, percentage, mean, standard deviation, t-test, F-test, and Scheffé's Method.

The main study findings were summarized as follows :-

1. The academic leadership of the school administrators under Khon Kaen Primary Educational Service Area Office 2, perceived by the personnel as a whole and individual aspects, was at the high level.

2. The academic leadership of the school administrators under Khon Kaen Primary Educational Service Area Office 2, perceived by the personnel with different positions as whole and in most aspects, had statistically significant difference at the .01 level.

3. The academic leadership of the school administrators under Khon Kaen Primary Educational Service Area Office 2, perceived by the personnel with different working experiences as whole had no difference, except in the providing teacher motives and promoting teacher professional development aspects, it was found with statistically significant difference at the .05 level, by which the personnel with working experience less than 5 years had the more mean value.

**Keywords :** Academic Leadership, School Administrators. Personnel, position, and working experience.

## 1. Introduction

The school administrators as the leaders of school, with rules, duties and direct responsibility, much be the change leaders of both the system and the educational reform process. This means they have to manage and support all Staff members to be able to provide educational for students and train them with quality as of the successful goals. The success of educational provision, not only depends upon the administrators leadership but also the use of their leadership behavior. The administrators have to show their leadership behavior, commit and pay attention to their administrative work systematically, use their knowledge and ability to perform administrative work evidently, build up motivation and morale for the personnel to do work together to reach objectives sufficiently. The administrators are regarded to be extremely significant for the participation of the relevant persons in doing all kinds of work. In school or other organizations, if the administrators lack the leadership, they are likely not to lead their organizations to success and the desirable goals. The academic administrations, especially, is the gist of school operation. The administrators must also be the academic leaders in order to gain efficiency of doing work.

Lipham and Hoch (1974) mentioned that the leadership behavior of the administrators is the important component for the success of the project. Building up good leadership behavior is important and necessary for every administrator. This is because the administrators make the organizations reach their objective. They have to promote the cooperative system to exist in the organizations and to make the personnel to become satisfied and be willing to cooperate in doing work.

Leadership is extremely important for work administration achievement. The success of work is related to the ability of the administrators or leader. The leader's behavior or leadership is the element that reveals such an organization has what kind of work performance, and what level of its efficiency and effectiveness. The administrator has the most important role in using the knowledge and ability to be the leader in work administration in order to combine power and use the personnel power available to share work, and must know how to solve the problems correctly and properly, and to make work operations gain maximum efficiency and success as the set goals, by making the participative personnel become satisfied and give full cooperation. This is because, the more the leadership behavior meets with the co-worker's expectation, the higher the organization has the outputs (Stogdill, 1974)

It is therefore necessary that the administrator as the organization leader must possess the effective leadership behavior. It is regarded as the most important factor for the organization success, for he is the legal person that can decide what should be doing, and the one that creates all things. It is true that one person cannot change the whole world but has to rely on the power of thought and enthusiasm from many others. However, if there is



without the leader, the initiative is not taken place right at the first start, and all things will be carried on without direction.

When considering the task of the school administrator position, especially in the educational reform period at present, it is found that the real practical role of the school administrator is focusing on the significance of the academic administration and student activities, while the role in other aspects are subordinate. It could, therefore, be mentioned that the most important role of the school administrator is the role of the academic leader (Sermasak visaraporn, 2003 : 61)

Form the background and the significance of problems as mentioned, the researcher, as having responsibility for development of the quality educational provision in school and realizes the roles of all parties in roles, was interested in studying on the academic administration of school administrators to obtain data and information for planning, determining policies, monitoring and developing educational quality in the schools with more efficiency in the long run.

## **2. Objectives**

2.1 To verify the leadership of school administrators under Khon Kaen Primary Educational Service Area Office 2 as perceived by the personnel.

2.2 To compare leadership of school administrators as perceived by the personnel, classified by position and working experience.

## **3. Researcher Scopes**

### **3.1 Population and Sample**

The population was personnel in basic education schools under Khon Kaen Primary Educational Service Area office 2, in Academic year 2014 (B.E.2557), of 1,608 in number, the sample was personnel, of 310 in number, derived through Krejcie & Morgan sample-size Table (Krejcie & Morgan, 1970, cite in Boonchom Srisa-ard, 2013 : 43) and the stratified random sampling.

### **3.2 Content**

The academic leadership of school administrators as of Hallinger and Murfy's Conceptual Framework (Hallinger and Murfy, 1985 : 221-224, cite in Weerachart Wilasri, 2007 : 40-50) in 11 aspects, namely

- 1) determining school goals,
- 2) communicating school goals,
- 3) supervising and evaluating teaching and learning, 4) coordinating curriculum implementation, 5) checking student growth, 6) controlling time used in teaching and learning organization, 7) listening to opinions of staff and students, 8) providing 9) promoting

teaching profession development, 10) developing school academic standards, and 11) providing facility for promoting student learning.

#### **4. Research Significance**

4.1 The school administrator can use the data and information from this study to implement in developing self academic leadership to upgrade their potential.

4.2 The school administrator use the data and information for making understanding and exchanging knowledge and opinion away teachers.

4.3 The primary Educational Service Area Office use the data and information for supervising and promoting academic leadership development of school administration and personnel with more efficiency.

#### **5. Research Methodology**

##### **5.1 Research Instrument**

The Instrument was the questionnaire on academic leadership of school administration under Khon Kaen Primary Educational Service Area office 2, constructed by the researcher with 2 section

**Section 1.** The questions on the statuses of the respondents, in the checklist form, on position and working experience.

**Section 2.** The questions on academic leadership of school Administrators, in Likert's 5-rating scale form.

##### **5.2 Data analysis and statistics used**

**5.2.1** Analysis on the statuses of the questionnaire respondents, by using frequency and percentage (%).

**5.2.2** Analysis on academic leadership of school administrators, by using mean ( $\bar{X}$ ) and the standard deviation (S.D.)

**5.2.3** Comparative analysis on academic leadership of school administrators, perceived by the personnel, classified by positions using the t-test, independent samples, and classified by working experiences, using the F-test and Scheffé's Method.

#### **6. Research Results**

6.1 The academic leadership of the school administrators under Khon Kaen Primary Educational Service Area Office 2, perceived by the personnel as a whole and individual aspects, was at the high level.

6.2 The academic leadership of the school administrators under Khon Kaen Primary Educational Service Area Office 2, perceived by the personnel with different positions as whole and in most aspects, had statistically significant difference at the .01 level.

6.3 The academic leadership of the school administrators under Khon Kaen Primary Educational Service Area Office 2, perceived by the personnel with different working experiences as whole had no difference, except in the providing teacher motives and promoting teacher professional development aspects, it was found with statistically significant difference at the .05 level, by which the personnel with working experience less than 5 years had the more mean value than those with working experience between 5-10 years, and more than 10 years.

## 7. Discussion

7.1 The academics leadership of school administrators under Khon Kaen Primary Educational Service Area office 2, as perceived by personnel was as the high level, and in most aspect was at the high level, except in the aspect of communicating school goals it was at the middle level. This might be because the academic work was the important one, the main work or the main task of school, and was regarded as the lacy of education administration of schools, which most administrators emphasized much in working. Especially, when the administrators had academic leadership it was an expression to motivate to or direct those involved to separate in developing student quality to succeed in learning, as well as behaving themselves as a good model of the academic leaders in emphasizing student centered teaching and leaning organization. In addition, it also depends upon the process on determining the vision, goals and commitment, of learning, managing curriculum and instruction, developing students, environment and culture of learning.

This research result was correspondent to Theera Rooncharoen (2000 : 60-70, cited in Chumsak Intharak, 2008 : 10), mentioning that to become the academic leaders of school administration should behave themselves to be a model of transformational leaders, especially the academic leaders, by emphasizing on promoting and supporting transformation of student centered teaching and learning model, as of section 4 in The National Education Act of B.E. 2542 (1999 A.D.), and having planning, policies and strategies for learning reform of school, clearly and conveniently for practices, giving advice and building up cooperative effect of all parties concerned for learning reform that would lead to the educational reform.

In addition, the research result was correspondent with Chatchai Chaimong (2009 : Abstract) who studied the relationship between the academic leadership of the school administrators and the effectiveness of academic affairs administration in secondary schools under Nakhon Phanom (secondary) Educational service area 2, the research finding showed that the academic leadership of the school administrators as a whole was at the high level, and the result was also correspondent with Nawaphat Uthairat and other (2009 : 99), who studied on the academic leadership of the school administrators under Phitsanulok

Vocational Education Office, the research result showed that the academic leadership of the school administrator as perceived by administrator and staff as a whole was at the high level.

In addition, the result was correspondent with Darunee Phipattanaphol and others (2000 : Abstract) who studied on the academic leadership of school administrators as perceived by the teachers in schools under Pathum Thani Educational Service Area Offices, the research result showed that the academic leadership of the school administrators as perceived by the teachers as a whole was at the high level. However the result was correspondent with Boonak Thapthimthai (2014 : 97), who studied on the opinions of teachers toward the leadership of administrators and professional teacher development of private schools under Private Educational commission, Ratchathewee district, and the research result showed into the professional teacher development in the aspect of academic activity practice as a whole was as the moderate level, and the relationship between the leadership of administrators and teacher professional development in private schools was positive at the moderate level with statistically significance at the .01 level.

7.2 When comparing of the academic leadership of the school administrators under Khon Kaen Primary Educational Service Area Office 2, as perceive by the personnel with different positions as a whole, it was found with statically significant difference at .01 level, while comparing the academic leadership of the school administrators as perceived by the personnel with different working experiences as a whole, it was found with no difference, but in aspects it was found two aspects, namely, providing teacher motives and promoting staff development aspects, with statistically significant difference at the .05 level, where by the personnel with less than 5 years of experience had the more mean value.

The result revealed as it was, might be that the administrators and teachers might have different opinions, attitudes, knowledge capturing methods, working principles, and working experiences. In addition, the personnel might lack interacting and sharing knowledge and opinions among themselves. These resulted in the different perception on academic leadership of the school administrators.

The result research was correspondent with

Nawaphat Uthairat and other (2009 : 99), who studied on the academic leadership of the school administrators under Phitsanulok Vocational Education Office, the research result showed that the academic leadership of the school administrator as perceived by the personnel with difference position and working experiences, as a whole yielding statistically significant difference at the .05 level.

## 8. Suggestions

### 8.1 Suggestions for Research Application.

8.1.1 The school administrators school verify and use the research result, as the guideline for developing academic leadership of their own.

8.1.2 The schools should bring the research results into use in performing work of the schools, especially in the communicating school goals. by making the billboard for public relations, notices, and setting school goals to communicate with parents and students in student hand books, leaflets or school magazines.

8.1.3 The Educational Service Area office should take interest, by conducting meeting, training, supervising, and encouraging the School administrators and staff to take up their suitable roles of academic leadership of each position.

### 8.2 Suggestions for Future Studies.

8.2.1 Should study on suggestions and guidelines for developing additional academic leadership of the school administrators.

8.2.2 Should study on leadership development in other aspects for various data suitable for the events that can use in self development and educational quality in the long run.

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## THE DEVELOPMENT OF ENHANCING INSTRUCTIONAL LEADERSHIP MODEL IN ENGLISH LANGUAGE TEACHING FOR PRIMARY SCHOOL LEVEL UNDER THE LOCAL GOVERNMENT

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### Abstract

This research study aimed to 1) study the generalities, problems, and needs in English language teaching, 2) develop the enhancing instructional leadership model in English language teachers and 3) evaluate the enhancing instructional leadership model in English language teachers. There were three periods of research methodology as follows; 1) the study of generalities, problems, and needs in English language teaching in 113 teachers in municipality primary schools, under the local government , 2) the draft of the enhancing instructional leadership model in English language teachers and instructional practiced media, and 3) the evaluation to affirm the enhancing instructional leadership model in English language teachers by group seminar with 7 qualified persons. The research duration was between June, 2014 to August, 2015. It could be concluded that 1) the generalities, problems, and needs in English language teaching were in the high level (mean = 4.21) and the needs of the development was also high (mean = 4.36), 2) the development of enhancing instructional leadership model in English language teachers consisted of 5 elements such as 1) principles and reasons, 2) purposes, 3) activity arrangements, 4) contents, and 5) evaluations. There were three minor activities such as teaching and learning leadership, trainer system, and CLIL instructional English model. 3) The evaluation of the enhancing instructional leadership model in English language teachers showed that opinions of the qualified persons about suitability, possibility, and usefulness were in the high level (X = 4.01 , 4.37 , 4.43)

**Keywords:** Instructional leadership model ,Content and Language integrated learning ,Mentor

## Introduction

One aspect in preparing to become a part of the ASEAN Community should be making preparations in English in order to better understand and have closer relations with our neighbors in English. The Basic Education Core Curriculum B.E. 2551 (A.D. 2008) with regard to its foreign language learning content from which the English language subject is mainly drawn. Document analysis was employed in this article because, according to Prior (2011), government documents are useful resources containing policy and mission statements whose content can be employed as data that provide informative accounts of government goals and objectives. Based on the document analysis of OBEC (2008, pp. 252–253), there are four main strands and standards, which can be summarized as follows. First of all, language for communication employs “foreign languages for listening, speaking, reading and writing, exchanging data and information, expressing feelings and opinions, interpreting, presenting data, concepts and views on various matters, and creating interpersonal relationships appropriately” (OBEC, 2008, p. 267). Thus, the expected standards are: first, understanding and having the capacity for interpreting what has been heard and read from various types of media, and ability to express opinions with proper reasoning; second, possessing language communication skills for effective exchange of data and information, and efficient expression of feelings and opinions; and third, presenting data and information, concepts and views on various matters by speaking and writing. Secondly, language and culture harmonize “foreign languages with the culture of native speakers; relationships, similarities and differences between languages and cultures of native speakers; languages and cultures of native speakers and Thai culture; and appropriate application” (OBEC, 2008, p. 253). Primary school students are trained to appreciate the relationship between the language and culture of native speakers and their capacity for use of language appropriate to occasions and places, as well as similarities and differences between the language and culture of native speakers and Thai speakers, and their capacity for correct and appropriate use of language. Thirdly, language and its relationship with other learning areas aims to relate foreign languages with other learning areas in order to form the basis for further development, seek knowledge, and broaden learners’ world views, which are considered to be the standard primary school students must achieve. Finally, language and its relationship with the community and the world is one of the standards for primary school students to be able to apply “foreign languages in various situations, both in the classroom and the outside community and in the global society, forming a basic tool for further education, livelihood and exchange of learning with the global society”



### Directions and Ways to Enhance English Proficiency

Due to the limited number of English teachers in Thailand, we, language teachers, have to find new ways to help our students to achieve their goals. A Chapter in the Educational Reform Act states that Thai learners should have global literacy. That is, they must know English, be able to use the Internet, and understand cultures of other countries to be qualified as world citizens. For higher education, they should be able to exchange knowledge, have interactive networking, and collaborate in international research projects (UNESCO). From the stakeholders' point of view, they expect to have graduates who have communication skills in English and Thai. Wongboonsin et al. (2003) report the following desirable skills, competencies, and qualifications suggested by stakeholders, academicians, and specialists in human resource development.

a. **Skills:** Thai learners should be equipped with conceptual skills, operating skills, technical skills, management skills, human skills, and communication skills.

b. **Competencies:** They should have English proficiency, computer literacy, analytical ability, innovation, and critical thinking.

c. **Qualifications:** They must meet international standards, adopt the attitudes of life-long learning, and have positive attitudes towards learning and working. In addition, they should be able to work in a team."

In the competitive global arena, computer literacy appears to be one of the top requirements as Panitchapakdi (1998) mentioned. "We need to have a workforce whose members are innovative and creative. We can no longer afford to benefit from cheap labor, especially in the future when competitiveness will be determined on technological capabilities."

Every area of work in Thailand will need personnel with fluent English. Better English means more opportunities. In addition to these priority sectors, young people should also be adventurous enough to explore other potential growth areas and emerging sectors such as creative industries and green businesses which have huge regional and global market potential. Youth unemployment in the region reached [13.1 percent](#) in 2012, on a par with the global average, but of ASEAN's 603 million people about a third are young. With numbers like this, the AEC will require a sharp, youthful focus if it is to make any practical sense. However, School is designed to teach students how to learn. Primarily, this is accomplished by growing competent and qualified educators. Professional development comes into being through deliberate actions by organization – usually the district or school, sometimes the province to train and develop educators, to make the school a learning laboratory for teachers and administrators. These actions result in various forms of development that are practiced today. These forms are directed toward several purposes, including : Enhancing the school as a good place for learning; Enhancing the school as an

organization, one that generates a high quality of life for students and staff alike; Providing opportunities for professional learning by staff, from basic knowledge and skill to new approaches to curriculum and instruction, including tools for inquiring into student learning; Enhancing the collaborative dimension of the school and reducing isolation, enabling the faculty to work together to help the students reach high states of growth. Note that several of these purposes deal simultaneously with improving the organizational climate of schools by stating the growth of educators. Helping educators have a better quality of experience in the workplace and helping the school become a more positive and warm institutions are worthwhile in themselves. These become the focus of the first level of evaluation in staff development and school renewal. Also, a generative social climate will lead to effort to better curriculum and instruction for students, but as a derivative of educators' growth. However, in the Models where curricular and instructional initiatives are central, the growth of educators needs to lead directly to increased student learning. Importantly an approach to professional development can legitimately be used before there is solid evidence that student learning will change or increase. (Joyce, B., & Calhoun, E., 2010)

### **The Nature of Leadership**

A sampling of some representative definitions of leadership follows:

- Leadership is “ the process of influencing group activities beyond expectations”.
- Leadership is “ influencing , guiding in direction, course ,action, and opinion”.
- Leadership is “effective influence”.
- Leadership is “ building cohesive and goal-oriented teams”.
- Leadership is “ persuading others people to set aside...their individual concerns and to pursue a common goal that is important for the ..welfare of a group.”

What distinguishes leader from non-leaders, between a *manager* and *leader* :  
A manager does the thing right; a leader does the right thing.” The first person is concern about carrying out policy; the second person formulates policy. The first person thinks in terms of trees ;the second person has a larger view of life and deals with the forest. Effective leader , according to Peter Drucker, do not make many decisions. They focus on important ones and ones that have impact on the larger aspects of the organization. They try to think through what is generic and strategic, rather than solve daily problem or “put out fires.” They try to make few important decisions on the highest level of conceptual understanding. Effective leaders in organizations engage in decentralized decision making- that is, responsibility and authority are given to middle management and shared decision making-that is, decisions are made in a committee or by a group; thus, effective leader bring in people inside and outside the organizations as part of the team.

### What is Instructional Leadership ?

**Instructional leadership** is generally defined as the management of curriculum and instruction by a [school principal](#). This term appeared as a result of research associated with the [effective school movement](#) of the 1980's, which revealed that the key to running successful schools lies in the principals' role. However, the concept of instructional leadership is recently stretched out to include more distributed models which emphasize distributed and shared empowerment among school staff, for example [distributed leadership](#), [shared leadership](#), and [transformational leadership](#)

Several researchers have outlined the characteristics and components of instructional leadership. Hallinger and Murphy's (1985) conceptual model has been most widely used in empirical studies of instructional leadership. The authors proposed the key role of instructional leaders in three dimensions: 1) *Defining the school mission*, 2) *Managing the instructional program*, and 3) *Promoting a positive school-learning climate*. In these three dimensions, principals have different functions. First, their analyses of a leader's role in *defining the school mission* focuses on two functions: framing clear school goals and communicating clear school goals. Second, in the area of *managing the instructional program*, principals have three functions: supervising and evaluating instruction, coordinating curriculum, and monitoring student progress. Third, in regards to *promoting a positive school-learning climate* principals have five functions: protecting instructional time, promoting professional development, maintaining high visibility, providing incentives for teachers, and providing incentives for learning.

Murphy (1988) proposed four major dimensions of instructional leadership: 1) *Developing mission and goals*, 2) *Managing the education production function*, 3) *Promoting an academic learning climate*, and 4) *Developing a supportive work environment*.

Duke (1982) suggested six functions of instructional leadership related to teacher and school effectiveness: 1) *Staff development*: recruitment, in-service education, and staff motivation, 2) *Instructional support*: organized activities to maintain an environment geared towards improving teaching and learning, 3) *Resource acquisition and allocation*: adequate learning materials, appropriate facilities, and skilled support personnel 4) *Quality control*: evaluation, supervision, rewards, and sanctions, 5) *Coordination*: activities that prevent cross-purposes or duplicate operations, and 6) *Troubleshooting*: anticipation and resolution of problems in school operation. The first four functions of instructional leadership are directly related to instruction behaviors, whereas the remaining functions are indirectly relevant to instructional activities.

Andrew, Bascom, and Bascom (1991) defined four strategies that instructional leaders use to enhance student achievement: 1) *Resource provider*: provision of resources to attain learning goals, 2) *Instructional resource*: provision of strategies and skills to achieve better teaching

practice, opportunities for professional development, and assessment for school performance related to instruction, 3) *Communicator*: promoting discussion among school members about school vision, goals, and culture for successful learning, and 4) *Visible presence*: showing up through face-to-face interaction as well as through informal exchanges in day-to-day activities.

Through extensive literature review, Spillane, Halverson, and Diamond (2004)<sup>[5]</sup> identified that instructional leaders have several macro-school-level functions. “1) constructing and selling an instructional vision, 2) developing and managing a school culture conducive to conversations about the core technology of instruction by building norms of trust, collaboration, and academic press among staff, 3) procuring and distributing resources, including materials, time, support, and compensation, 4) supporting teacher growth and development, both individually and collectively, 5) providing both summative and formative monitoring of instruction and innovation, and 6) establishing a school climate in which disciplinary issues do not dominate instructional issues.”

Instructional leadership is a critical aspect of school leadership. The work of instructional leaders is to ensure that every student receives the highest quality instruction each day. Doing so requires that instructional leaders lead for the improvement of the quality of teaching and for the improvement of student learning. Mazano, Waters, and McNulty (2005) noted that instructional leadership is the most frequency mentioned educational leadership concept in North America. The research noted the fact that instructional leadership is not well defined. In the research, Smith’s and Andrews’s description of instructional leadership is used. Smith and Andrews (1989) identified four dimensions of an instructional leader. The four dimensions are resource provider, instructional resource, communicator, and visible presence.

Being a resource provider consists of principal ensuring that teachers have adequate supplies to deliver instruction. Principals should consistently communicate with the teachers to assess instructional resource needs. Principals should consistently communicate with the teachers to assess instructional resource need. Principals should have a process in place to constantly evaluate the equipment for functionality and proper working conditions. Principals should evaluate instructional supplies to examine effectiveness and to ensure research-based strategies. The principle should also monitor the maintenance of the facilities. Adequate light, comfort, and clean lines have an impact on an optimal learning environment. Principals must be able to develop and maintain adequate funding through proper budgeting. Budgets should be developed with input from the instructional staff. Federal and state mandates should be considered when developing school budgets (Smith and Andrews, 1989).

Leadership is a process that can lead design ideas. Clearly targeted For others to follow and try to push the results achieved (Sue Law and Derek Glover, 2000: 23) in the 21<sup>st</sup> century organization, they are facing new challenges, making the leading role more complex and there. even more important Future leaders need new skills and competencies. Increased due to several external factors. Performance day by day is becoming increasingly important to the leaders are capable of cognitive complexity, the ability to learn on their own ;self - learning capabilities, behavioral flexibility, Cultural sensitivity, process analysis were as educators. He recognizes the importance of developing the capacity of teachers through teacher leadership development. Teaching English By the end of English teacher has taught leadership role. With mentoring and coaching to teachers and younger teachers are responsible for teaching in English. Which will be the foundation of education that can strengthen the country English is important because it is the official language in ASEAN, the students will develop. Must start from teachers and educational staff quality. Must have knowledge and understanding of the English language can communicate using English as the medium of instruction and can be managed effectively.

### **Aims**

This research study aimed to 1) study the generalities, problems, and needs in English language teaching, 2) develop the enhancing instructional leadership model in English language teachers and 3) evaluate the enhancing instructional leadership model in English language teachers.

### **Methods**

There were three periods of research methodology as follows; 1) the study of generalities, problems, and needs in English language teaching in 113 teachers in municipality primary schools, under the local government , 2) the draft of the enhancing instructional leadership model in English language teachers and instructional practiced media, and 3) the evaluation to affirm the enhancing instructional leadership model in English language teachers by group seminar with 7 qualified persons. The research duration was between June, 2014 to August, 2015.

### **Results**

It could be concluded that

1) the generalities, problems, and needs in English language teaching were in the high level (mean = 4.21) and the needs of the development was also high (mean = 4.36),

2) the development of enhancing instructional leadership model in English language teachers consisted of 5 elements such as 1) principles and reasons, 2) purposes, 3) activity arrangements, 4) contents, and 5) evaluations. There were three minor activities such as teaching and learning leadership, trainer system, and CLIL instructional English model.

Three criteria are created for framework of the study. 1) developing and communicating shared goals, 2) promoting school-wide professional development, and 3) monitoring and providing feedback on the teaching and learning process

3) The evaluation of the enhancing instructional leadership model in English language teachers showed that opinions of the qualified persons about suitability, possibility, and usefulness were in the high level (X = 4.01 , 4.37 , 4.43 )

## Discussions

The development of enhancing instructional leadership model in English language teachers consisted of 5 elements such as 1) principles and reasons, 2) purposes, 3) activity arrangements, 4) contents, and 5) evaluations. There were three minor activities such as teaching and learning leadership, trainer system, and CLIL instructional English model.

Three criteria are created for framework of the study. 1) developing and communicating shared goals, 2) promoting school-wide professional development, and 3) monitoring and providing feedback on the teaching and learning process. Related to Hoy and Hoy (2003) suggest that there are some basic and necessary instructional leader behaviors. For example, provision of resource and material support is one of the essential roles of a school principal. Staff improvement is another basic prerogative of the principal . Three criteria determined by Alig-Meilcarek (2003) offer highly –correlated dimensions and create the basic framework of the present study. These criteria are :1) developing and communicating shared goals, 2) promoting school-wide professional development, and 3) monitoring and providing feedback on the teaching and learning process. These criteria are briefly explained as follows: Developing and communicating shared goals: vision, mission and goals are the cornerstones of any school , and constitute the intangible power that motivates teachers and leader. Promoting school-wide professional development : Teacher improvement and establishment of professional learning communities constitute a central element of school development. Monitoring and providing feedback on the teaching and learning process: In the past ,instructional supervision was limited to traditional formal and informal classroom observations. Therefore, supervision is a key part of principal’s role in ensuring that the planned changes are being effectively implemented in the classroom.

## Conclusion

Leadership is the art that can influence others and lead them to. With the trust and confidence fully. Leadership is the art or the person's ability to attract or influence others in various situations. For Operations and Director The communication process for others to cooperate with them in action. Until achieving its objectives and set goals In educational institutions that develop into a learning organization. The school administrators, teachers

and practitioners all. Having learned along the way is the leadership team Mentoring group used in the development of individuals in the organization. Instructional leadership was found to be crucial for optimum teaching and learning, requiring training for all members of the school community. The teacher is instructional leader in the classroom with the full and knowledgeable support of principle in a school which priorities teaching and learning for all members through mutual sharing and respect.

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**Academic administration in Basic Education Schools  
under Khon Kaen Primary Educational  
Service Area office 1**

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**Abstract**

The purposes of this study were to study the academic administration in basic education schools under Khon Kaen Primary Educational Service Area office 1, to compare the academic administration in basic education schools, perceived by the personnel, classified by position and working experience, and to study guidelines for development of the academic administration in basic education schools. The samples consisted of personnel in basic education schools, of 313 in number, in Academics year 2014. The instrument use for collecting the data was rating scale, questionnaire with the reliability of 0.83. The statistics use for analyzing the data were frequency, percentage, mean ( $\bar{X}$ ), standard deviation (S.D.), t-test, F-test, and Scheffé's Method.

The research results were as follows :-

1. The academic administration in basic schools under Khon Kaen Primary Educational Service Area office 1, perceived by the personnel as a whole was as the high level, with the developing internal quality assurance system aspect having the highest practice.
2. The academic administration in basic education schools, perceived by the personnel with different positions, as 2 whole had statistically significant difference at the .05 level, an in aspect it was found 8 aspects had difference, but 4 aspects had no difference.
3. The academic administration in basic education schools, perceived by the personnel with different working experiences, as a whole had no difference, and in aspects it was found 9 aspects had no difference, but 3 aspects had difference.
4. The main guidelines in developing academic administration in basic educational schools were : schools should build up awareness for the personnel to see importance of the internal quality assurance system, should promotion teachers to implement the curriculum for active and continuous learning process development, and should promote teachers to develop the standard evaluation tools in line with the school curriculum.

**Keywords :** Academic administration, basic education schools, school curriculum, and internal quality assurance.

## 1. Introduction

Administration and position of education at present has been, as much as possible, decentralized by the Ministry of Education to the Committees of Educational Service Area offices and the schools. This has the intention for the educational service to work freely, dynamically, rapidly, and in the line with the needs of students, schools, local communities, and the participation of the stakeholders. These are important factors to make work administration and educational provision become strong . This will make them be able to develop curriculums and learning process, as well as measurement and evaluation. They are also factors to support the development of student quality and local communities with effectiveness and efficiency. (Ministry of Education, 2007 : 29)

The academic administration is regarded as the main work of school administration. The school administrators and teachers must be aware of the significance of the academic administration and develop the provision of education with quality by upgrading it to the higher level. The school administrators must possess competency in emphasizing academic administration in schools.

Accordingly, the researcher was interested in studying the academic administration in basic education schools under Khon Kaen Primary Educational Service Area office 1, base on the conceptual framework of the manual of Administration Basic Education Schools as the legal persons of the Educational Service Area Offices, ministry of Education. This includes 12 aspects, namely 1) developing the school curriculum, 2) developing the learning process, 3) measurement, evaluation and credit transfer, 4) research for developing educational quality, 5) developing educational and technology, 6) developing learning resources, 7) educational supervision, 8) education guidance, 9) developing internal quality assurance system, 10) promoting academic knowledge, 11) coordinating cooperation in academic development with other school, and 12) promoting and supporting academic work to persons, families, organizations, offices and other educational institutions.

## 2. Objectives

2.1 To study the academic administration in basic education schools under Khon Kaen Primary Educational Service Area office 1.

2.2 To compare the academic administration in basic education schools, perceived by the personnel, classified by position and working experience.

2.3 To study guidelines for development of the academic administration in basic education schools.

### 3. Researcher Scopes

#### 3.1 Population and Sample

The population of 1,717 in number, was personnel in basic education schools under Khon Kaen Primary Educational Service Area office 1, in Academic year 2014. The sample of 313 in number, was personnel in basic education schools, derived through Krejcie & Morgan sample-size Table (Krejcie & Morgan, 1970, cite in Boonchom Srisa-ard, 2013 : 43) and the stratified random sampling.

#### 3.2 Content

The academic administration in basic education schools in 12 aspects (see Introduction)

### 4. Research Significance

4.1 The school administration can apply the data and information from this research to increase development of the academic administration efficiency.

4.2 The teachers can apply the data and information, as well as guidelines from this research, for improving work cooperatively.

4.3 The primary Educational Service Area Office can apply the data and information from this research to improve supervision and promotion of academic administration with more efficiency.

### 5. Research Methodology

#### 5.1 Research Instrument

The questionnaire on academic administration in basic education school under Khon Kaen Primary Educational Service Area office 1, constructed by the researcher and with the reliability of 0.83, consisting of 3 section :-

**Section 1.** The questions on the statuses of the respondents, in the checklist form, on the independent variables of position and working experience.

**Section 2.** The questions on the academic administration in basic education school under Khon Kaen Primary Educational Service Area office 1, in Likert's 5-rating scale form.

**Section 3.** The questions on guidelines in development of academic administration in basic education schools in 12 aspects, in the open-ended form.

#### 5.2 Data analysis and statistics used

5.2.1 Analysis on the statuses of the respondents, using frequency and percentage.

5.2.2 Analysis on academic administration in basic educational schools, perceived by the personnel, as a whole, in aspects and in items, using the mean ( $\bar{X}$ ) and the standard deviation (S.D.)

**5.2.3** Comparative analysis on guidelines in development of academic administration in basic educational schools, perceived by the personnel with different positions using the t-test of independent samples, and different working experiences, using the F-test and Scheffé's Method.

**5.2.4** Analysis on guidelines in development of academic administration in basic educational schools, perceived by the personnel with different positions using the t-test of independent samples, and different working experiences, using frequency and percentage.

## **6. Research Results**

(See Abstract )

## **7. Discussion**

7.1 The academics administration in basic education school under Khon Kaen Primary Educational Service Area office 1, as a whole was at the high level in 7 aspects and moderate level in 5 aspects. The results turned out as such might be owing to the academic administration in the main task of the schools on which the administrators of all schools must work on it systematically and continuously in addition, there are at present evaluation and assessment of school performances, student achievement tests at all levels, as well as ranking increment assessment of staff and administrators. The schools, therefore, must have to keep on continuous development of the academic administration. This led to resulting the academic administration in most aspects at the high level. This must be caused by the schools lacked readiness for providing academic services to person, families, or other organizations in the communities, and lacked other factors, such as personnel, budget, media and materials, and so on.

This research finding was correspondent of the Ministry of Education (2003), mentioning that the academic affairs are the main works or tasks of schools with an aim to allow the schools to perform work freely, dynamically, rapidly, and in correspondence with the needs of students, schools, communities, localities, and the participation of the stakeholders at large. These are the important factor in making schools become strong in administrative management, and can develop the curriculums and learning process, as well as measurement and evaluation, and measurement of the factors supporting the development of student quality, communities localities with efficiency and effectiveness.

This research finding was correspondent with Preecha Krajangpho (2007 : 105-106), studying on academic administration of schools administrators under Prachin Buri Primary Educational Service Area Offices, and finding that the schools with small, medium and large sizes had academic administration at the high level.

Similarly, the result was correspondent with Preewal Khungsang (2007 : 75), studying on academic administration of basic education schools under Nonthaburi Municipal schools and finding that the academic administration as a whole and in aspect was at the high level. It was also correspondent with Isaraphab Thongbo (2008 : 115) study on academic administration of schools teaching at the secondary level and as the elementary level as a whole and in most aspects was at the high level, was correspondent with Somsak Chaisuwan (2009 : 117-118), studying on academic administration of schools in Sukherin district, under Narathiwat Primary Educational Service Area Office 2, and finding that the academic administration as a whole and in all aspects was at the high level, and was correspondent with Apinya Wongsuwan (2009 : 100), studying academic administration in basic education schools, Tha Bo district, under Nong Khai Primary Educational Service Area Office 1, and finding that academic administration as a whole and in aspects was at the high level.

7.2 The comparative analysis of academic administration in basic education schools under Khon Kaen Primary Educational Service Area Office 1, perceived by the personnel with different positions, as a whole had statistically significant difference at .05 level as of the set hypothesis. This might be using to the lack of collaborate cooperation and making understanding in school academic administration, and lack of supervision, and following-up work of school administration, or the teachers failed to report on the outputs of activities under taken to the administration. These resulted in the difference in opinion of administration and teacher. This research result was correspondent with Nannaphat Champarat (2010 : 138), studying on academic administration of basic education schools under Chaiyaphum Provincial Administrator Organization, and friendship that the academic administration as perceived by the personnel with different position as a whole had statistically significant difference at .01, correspondent with Siriporn Khemchaiyaphum (2010 : 86-88), studying on academic administration in private vocational schools under

Khon Kaen Primary Educational Service Area Office 1, and finding that the academic administration as a whole perceived by the personnel with different position had the statistically significance at the .05 level, but in aspects with no difference, and was correspondent with Pongdech Artwet (2010: 115), studying on academic administration in basic education schools under Chaiyaphum Primary Educational Service Area Office 2, and finding that the academic administration, perceived by the personnel with difference positions, had no difference, as a whole and in items.

7.3 The comparative analysis of academic administration in basic education schools under Khon Kaen Primary Educational Service Area Office 1, as perceived by the personnel with difference working experiences as a whole, had no difference. This might be using to the academic work was the important on in all schools, and the personnel in different age groups had to do duties and carried on activities in a similar manager, with the National

Education Act or the Government policies as guideline, as well as the same policies of the office they were under. Their opinions were, therefore, not different.

The result of the research was correspondent with Khon Kaen Primary Educational Service Area Office 1 (2014 : 1-7), taking responsibility for schools located in Muang Khon Kaen, Ban Fang, and Phra Yuen district, there are 162 schools under the same jurisdiction. They are divided into 17 school groups for the safe of convenience in administration and provision of education, by using the area-based principle in promoting, supporting, Supervising following-up and helping schools in the responsible coverage areas. There are Deputy Directors of Khon Kaen Primary Educational Service Area Office 1, education supervisor, and group director taking responsibility in each area.

This research was correspondent with Rattana Somsanuk (2009 : 115-116), studying on academic administration of basic education schools under Chaiyaphum Primary Educational Service Area Office 2, and finding that the academic administration of basic education schools as perceived by teacher with different working experiences as a whole and in aspects with no difference. This might be using to the academic work is the key work in organizing teaching and learning and developing the learner in all schools. This mate their opinions toward academic administration have no difference. The result was also correspondent with Apinya Wongsuwan (2009 : 106), studying doing the research on academic administration in basic education school, in Tha Bo district under Nong Khai Primary Education Service Area Office 1, and finding that the state and problems in academic administration as perceived by the personnel (administrator and teacher) as a whole and in aspects had no difference, and was correspondent with Pongdet Artwet (2010 : 115) doing the research on academic administration in basic education schools under Chaiyaphum Primary Educational Service Area Office 2, and finding that the state and problems in academic administration as perceived by personnel with difference working experiences, as a whole and in aspects, had statistically significant difference at the .05 level.

## **8. Suggestions**

### **8.1 Suggestions for Research Application.**

8.1.1 Should using the research results into use in developing the academic administration for increasing its efficiency.

8.1.2 Should consider and improve academic work, especially in the aspect of promoting and supporting academic work to person, family, organizations, office, and other educational institutions.

8.1.3 The Educational Service Area office Should signify the academic work by providing meetings, training, supervision, as well as promoting Administrator and teachers to understand principles of academic administration correctly, suitable and continuously.

8.1.4 The school administrator should make understanding, knowledge sharing and experience in working with teachers, by organizing meetings, clarifying, training, and presenting work procedure of school between the administrators and teachers regularly.

8.1.5 The teachers responsible for academic affairs and relevant work should apply the research results suitable for their own schools continuously.

## **8.2 Suggestions for Future Studies.**

8.2.1 Should study academic work of basic education schools, clarified by school size for applying the data to develops equality of schools work clarify.

8.2.2 Should study other aspects of administration to gaining more data in many aspects and can be apply for developing quality in schools continuously.

8.2.3 Should conduct research and development of academic administration model in basic education schools for use in developing schools in the future.

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### PROPOSED STRATEGIES FOR DEVELOPING EFFECTIVE ORGANIZATION OF THE OFFICE OF KALASIN PRIMARY EDUCATIONAL SERVICE 3

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#### Abstract

The purposes of this research were to propose strategies for developing effective organization. This preliminary Policy Research was divided into two phases: Phase I was related to exploring the current conditions, problems, and guidelines for developing effective organization through document inquiries, a survey, multi-case studies, in-depth interview, and a visit to three outstanding Educational Service Area Offices; Phase II was related to drafting the proposed strategies.

The finding was that the proposed strategies for developing effective organization of the Office of Kalasin Primary Educational Service 3 involved eight aspects: 1) Establishment of policies, development planning, and basic education standards in accordance with the policies, education standard, education plans, development plans for basic education and local needs. The strategies comprised one strategy, two procedures, and nine indicators; 2) Analyses of block grant allocation for academic institutions and organizations in educational service areas, and notification of budget allocation, and controlling, inspecting, and monitoring the expenditure of each organization. The strategies comprised one strategy, four procedures, and 14 indicators. 3) Coordination, enhancement, support, and development of co-curriculum with academic institutions in educational services areas, and conducting research and information collection in respect of education. The strategies comprised three strategies, five procedures, and 53 indicators. 4) Controlling, monitoring, and evaluation of basic education and educational service areas involving two strategies, two procedures, and nine indicators, 5) Coordination of resources including personnel resources in order to enhance and support education management and development in educational areas. The strategies comprised one strategy, one procedure, and three indicators; 6) Education quality assurance system and evaluation for academic institutions in the educational service areas involving two strategies, nine procedures, and 24 indicators; 7) Coordination, enhancement, and support of education for private academic institution, local administration organization, as well as people, community organization, profession organization, religion institute, workplaces, and other organizations managing various formats of education. The strategies comprised

one strategy, one procedure, three indicators, 8) Coordination, enhancement, and operation of sub-committee, education committee, and general public performance with organization or sectors both public and private sectors, and local administration organization. The strategies comprised one strategy, two procedures, and six indicators.

**Keywords:** proposed strategies, effective organization

## **Introduction**

Policy Research was employed to analyze the data from the proposed strategies and the guidelines, including finding solution for organizational issues, especially in actual practice. The proposed guidelines for administrators are concerned with how decision-making and policy are formulated. In addition, administrators are able to select the best guidelines to suit individual organization and to correctly employ existing administrative resources.

The Office of Educational Service Area is a public sector that provides education services for youth at a basic education level for all, with quality and free services. The Administrative management by executive committee emphasizes monitoring, control, support, and coordination for quality education development. Therefore, there is a need for policy establishment, planning, and administrative process in creating a new model in accordance with principles in order to rapidly and effectively accomplish the goals. In other words, better and effective operations would facilitate beneficial changes in education. Some literature reviews revealed that one of the administrative processes that is popular in the current situation is strategic administration processes.

The Kalasin Primary Educational Service Area Office 3 (KPEASO 3) realizes the importance of the needs for developing organization through the principles of stakeholders' participation in terms of policymaking and decision-making. This would lead to effective guidelines for performance in accordance with appropriateness, possibility, propriety, and utility. As a result, the researcher is interested in conducting research to propose strategies for developing effective organization of the KPEASO 3. The proposed strategies will be performance guidelines for KPEASO 3 to achieve goals and objectives in the future.

### **The purposes of this research were to:**

- 1) examine the current conditions, problems, and guidelines for developing effective organization of the Office of Kalasin Primary Educational Service 3; and
- 2) propose strategies for developing organizational effectiveness.

### **Research Methodology**

This research undertook a Policy Research, which was divided into two phases: Phase I related to exploring the current conditions, problems, and guidelines for developing effective organization through document inquiries, a survey study, multi-case studies, in-depth interviews, and a visit to three outstanding Educational Service Area Offices; and Phase II was related to drafting the proposed strategies through an operational seminar.

### **Data Collection and Samples**

The data were collected as follows:

1) A questionnaire about current conditions, problems, and guidelines for effective organization was administered to 200 samples comprising school administrators, teachers, and personnel, obtained by a purposive sampling technique;

2) A multi-case study was employed to gather physical evidence during a site visit at the three outstanding Educational Service Area Offices-The Office of Roi-Et Educational Service Area 2, The Office of Primary Educational Service Area 1, and The Office of Khon Khen Educational Service Area 5. Key informants were a total of 12 persons, including directors, deputy directors of the Educational Service Area Office, group directors, and personnel; 3) The in-depth interview with scholars, obtained through purposive sampling technique, comprised five administrative scholars of Educational Service Area Office; 4)

An operational seminar was conducted. The samples, obtained through purposive sampling, comprised 25 school administrators, educational personnel, and scholars, and 5) The public hearing of stakeholders involved a total of 100 persons as follows: 20 personnel working at the KPEASO 3, 70 teachers and educational personnel of school; and 10 other stakeholders.

### **Data Analysis**

The data drawn from a survey study, a multi-case study, an in-depth interview, an operational seminar, public hearing of stakeholders, were analyzed through mean and standard deviation.

### **The finding was as follows:**

The proposed strategies for developing effective organization of the KPEASO 3 involved eight aspects:

1) Establishment of policies, development planning, and basic education standards in accordance with the policies, education standard, education plans, development plans

for basic education and local needs. The strategies comprised one strategy, two procedures, and nine indicators;

2) Analyses of block grant allocation for academic institutions and organizations in educational service areas, and notification of budget allocation, and controlling, inspecting, and monitoring the expenditure of each organization. The strategies comprised one strategy, four procedures, and 14 indicators.

3) Coordination, enhancement, support, and development of co-curriculum with academic institutions in educational services areas, and conducting research and information collection in respect of education. The strategies comprised three strategies, five procedures, and 53 indicators.

4) Controlling, monitoring, and evaluation of basic education and educational service areas involving two strategies, two procedures, and nine indicators,

5) Coordination of resources including personnel resources in order to enhance and support education management and development in educational areas. The strategies comprised one strategy, one procedure, and three indicators;

6) Education quality assurance system and evaluation for academic institutions in the educational service areas involving two strategies, nine procedures, and 24 indicators;

7) Coordination, enhancement, and support of education for private academic institution, local administration organization, as well as people, community organization, profession organization, religion institute, workplaces, and other organizations managing various formats of education. The strategies comprised one strategy, one procedure, three indicators,

8) Coordination, enhancement, and operation of sub-committee, education committee, and general public performance with organization or sectors both public and private sectors, and local administration organization. The strategies comprised one strategy, two procedures, and six indicators.

## **Discussion and Conclusion**

From the research results, the proposed strategies aimed to establish the guidelines for improving the performance mission of the KPEASO 3. The strategies were also proprietary, appropriate, feasible, and utility in accordance with the context of the PEASO, comprised eight strategies, procedures, and indicators. The details were as follows:

1) The first strategy was an establishment of policies, development planning, and basic education standards in accordance with the policies, education standard, education plans, development plans for basic education and local needs. The strategies comprised one strategy, two procedures, and nine indicators.

The policies and development planning are related to each other as the policies are the indicator of work administration. Similarly, Wirot Sarrattana (2010) agreed that administration's success depends on the policies of: 1) having a target that is feasible towards public benefit, 2) being drawn from screening and needs, 3) covering all missions, and each aspect harmoniously comprising goals direction and appropriate strategy, 4) being clear, comprehensible and able to transfer all missions and each aspect to practitioners easily. In addition, Santi Phusrisom (2009) proposed the policies comprising three components: 1) goals that assisted to create the mission. Therefore, written goals should notify where organizations were able to choose to demonstrate the framework and guidelines they had achieved. The principles should be clear, and express organization unity: 2) the "Mend" was an important strategy for stakeholders to apply guidelines in order to achieve goals: 3) Policy Mechanism comprised project and activities to support operational guidelines in order to achieve the needs or goals. Pongsak Phukabkhao (2010) concluded that policy was important for administration management, as it was a performance guideline which needed to be clear in respect of the allocating tasks and goals in order to achieve the performance, and to be able to achieve the goals, and to serve the needs of customer or society as a whole, and had a possibility to be able to put into actual practice, and related to the changes.

2) The second aspect concerning analyses of block grant allocation for academic institutions and organizations in educational service areas, and notification of budget allocation, and controlling, inspecting, and monitoring the expenditure of each organization. The strategies comprised one strategy, four procedures, and 14 indicators.

The budget administration is one of the tasks that is assigned to distribute power to the committee and Education Service Area Office and academic institution as is designated in the Education Act B.E. 2542, and amendments (Second National Education Act B.E. 2545). The intention of the legislative provisions of the act focuses on distribution of power to relevant offices in terms of budget establishment and administration as much as possible in order to effectively improve performance and efficiency. Napadon Poonsawat (2008) asserted that the deployment of policy for actual practice or the transferring policy for actual practice was important as it could make policy clearer, understandable, acceptable, and create good attitudes towards policy practitioners and the affected practitioners. This would be a tool for pushing forward the success of the policy and being able to employ policy into actual practices.

3) The third aspect concerning coordination, enhancement, support, and development of co-curriculum with academic institutions in educational services areas, and conducting research and information collection in respect of education. The strategies comprised three strategies, five procedures, and 53 indicators. The research found that

the policy statement should ensure policy objectives or facilitate benefit towards organization, needs of society or majority of public that might affect or influence deployment of the policy into practice.

4) The fourth aspect concerning controlling, monitoring, and evaluation of basic education and educational service areas which covered four tasks, namely academic aspect, administration aspect, general administration, and budget aspect. The strategies involved two strategies, two procedures, and nine indicators. Similarly, Uthai Boonprasert (2003) indicated that participation was an important principle of administration. In order to be in line with the strategy to optimize the administration and operation, participation from school personnel, personnel and external organization both public and private sectors such as teachers, personnel, parents, guardian, community, alumni, and other organizations, should be involved in decision making and employ such decisions into practice. This would create more freedom of task administration, and efficient operation. In addition, Chalard Chantarasombat (2008) indicated that participation can be categorized as follows: (1) taking part in studying, solving problems, finding solution and needs of community; (2) taking part in sharing ideas and construction of model and development strategy to solve community problems or to create new and usable resources; (3) taking part in policy making, planning, project or activities to demolish, amend the problems, and serve the needs, (4) taking part in decision making for the use of limited resources to exploit public; (5) taking part in organizing and adjusting the effective task administration development; (6) taking part in investing activities in accordance with personal capability; (7) taking part in employing policy, planning, project, and activities to achieve the goals set; and (8) taking part in controlling, monitor, and evaluation.

5) The fifth aspect concerning coordination of resources, including personnel resources in order to enhance and support education management and development in the Educational Service Areas. The strategies comprised one strategy, one procedure, and three indicators.

6) The sixth aspect concerning Education quality assurance system and evaluation for academic institutions in the Educational Service Areas involving two strategies, nine procedures, and 24 indicators. The quality assurance system is a process for organization development and performance in order to achieve the goals. As Wichian Vitayaudom (2006) stated, organization development had a particular process that had to be planned, and organized long term, because the organization development had to be involved in every step of administration planning, starting from goals creation, performance planning, inspection and activity refinement which might affect the result process. He also concluded that organization development comprised: (1) updating the organization and responding promptly to the internal and external changes of

organization; (2) increasing the effective working through the application of techniques and new strategies; constructing shared responsibility, attitudes changes, and opinion exchanges between person and organization in order to raise better consciousness; (3) creating enthusiastic work environment and compete with each other to produce better tasks for organization participation.

7) In the seventh aspect concerning coordination, enhancement, and support education for private academic institution, local administration organization, as well as people, community organization, profession organization, religion institute, workplaces, and other organizations managing various formats of education. The strategies comprised one strategy, one procedure, and three indicators. The distribution of power to the Education Service Area, academic institution, and local administration organization, tends to cover the academic, budget, personnel administration, and general administration (section 39). In addition, according to the National Education Act B.E. 2542 (Section 41), it stated that the local administration organization should provide education at all levels or each level depending on individual readiness and appropriateness and needs of local. The Education Service Area duties are to coordinate and to enhance local administration organization to be able to managing education in accordance with the policy and education standards.

8) In the eighth aspect, Coordination, enhancement, and operation of sub-committee, education committee, and general public performance with organization or sectors both public and private sectors, and local administration organization. The strategies comprised one strategy, two procedures, and six indicators. Similarly, the Education Council Secretary Office (2012) stated that the education reform proposed in the second decade (B.E. 2552-2561) specifying six components of the guidelines for new administration management reform in respect of the distribution of power for administration and education management in the Educational Service Area Office as follows: (1) having mechanism to drive the distribution of power to the Educational Service Area Office systematically depending on individual competency and readiness; (2) having a plan to support, strengthening, and readiness of the Educational Service Area Office through the assessment in order to classify and rank the group in accordance with the readiness; (3) creating a change agent and innovative administration; (4) developing leadership of administrator in in the Educational Service Area Office by establishing leadership development plans through regular channel and dynamic to support and encourage within special channel through the specified qualification required before entering the profession position; (5) adjustment and development of new strategies in terms of academic in the Educational Service Area Office through the reduction of clerical duties and command, but highly emphasising on providing advice, and support to schools



under the Educational Service Area to strengthening individual performance in terms of creating mechanism for not allowing anyone to entering the profession position unfairly; (6) Enhancement of the education administration at all levels and categorized through the Area-based at all provinces, provincial groups, special areas, for examples, the Southern Border Provinces through the provincial education committee to coordinate and integrate the education development at all levels and school types of jurisdiction harmoniously.

### **Recommendation for future research**

Research should be undertaken in provinces in charge of many Educational Service Areas in order to create the similar strategies and develop same or similar quality in education development

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**A MODEL FOR LEADERSHIP DEVELOPMENT  
FOR CHIEF JUDGE OF THE COURTS OF JUSTICE**

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**Abstract**

The purposes of this research were to 1) examine the components of leadership of Chief Judge of the Courts of Justice, construct and develop a model for leadership of Chief Judge of the Courts of Justice, 3) evaluate the developed model before implementation. The research, employed the Research and Development approach, was divided into 3 phases: Phase I was related to model investigation comprised document inquiries and literature reviews. The in-depth interviews were conducted to 18 scholars. The structured interviews was also examined an assessed its appropriateness through 10 experts. In addition, the five-rating scale of survey questionnaire was administrated examining a level of performance of Chief Judge from 219 courts-the Provincial Court, the Juvenile and Family Court, and Kwaeng Court throughout Thailand. The samples, obtained through the Krejcie and Morgan formula, were 350 persons drawn from a total of 3,978 Justice civil servant, Judge and senior judge, director of administrative office, and section head/unit head. The statistical analysis employed was frequency, percentage, mean, and standard deviation. Phase II was related to model draft and establishment comprised model drafting and refinement by 10 experts. Phase III was related to model implementation at 4 courts from the Provincial Courts and the Juvenile and Family Courts under the Office of the Chief Justice, Region IV. The data analysis was mean and standard deviation.

The findings revealed that:

1. The 4 components of leadership of Chief Judge of the Courts of Justice consisted of knowledge and professional experiences, human relations skills and personalities, knowledge and management skills, and moral and ethics. The leadership of Chief Judge of the Courts of Justice, as a whole, was at a good and a very good level, ranged from high to low respectively: moral and ethics, interpersonal skills and personalities, management knowledge and skills, and knowledge and professional

experiences. The highest level of mean scores was the moral and ethics aspect, and the lowest level fell into knowledge and professional experiences.

2. The developed model of leadership development for Chief Judge of the Courts of Justice comprised principles, objectives, contents, process, and measurement and evaluation.

**However, the model implementation is still on process which might take a few months to complete data collection.**

**Keywords:** Leadership, Courts of Justice

## 1. Introduction

Thailand is in the middle of the globalization flow which influences the country's economy and social development. In other words, the changes are highly impact the country's growth in various dimension dynamics, for example, a quality of life, social unfairness, moral and culture recession. In terms of politics, there have been changes, adjustment, and cancellation of lawsuit, regulations, and rules continuously. The communication and technology also forces the changes faster and greater onto Thai society to becoming a knowledge based society, and innovation. Therefore, each sector tends to adjust and improve individual faster operational performance. The faster changes mentioned earlier has driven greatly issues, and conflicts among sectors including private and public sectors. With the existing conflicts, in the present, the Courts of Justice encounters court congestion. The situation is likely to continue to increase in the future that might affect the roles and mission of the Courts of Justice in terms of fairness provision to society. The Courts of Justice, then, requires to change the roles and to improve the effectiveness of task management in accordance with the ongoing changes from economy, society, and politics (Chulalongkorn University, 2550, p.1).

The Courts of Justice is an organization dealing with justice power one of the three judiciary of country governance. The court is therefore the authority of the judiciary as a mechanism to uphold the fairness to society continuously. The Courts of Justice authorize a trial to all cases, for example, a civil case, criminal case, labor case, juvenile and family case, tax case, intellectual property and international trade cases, a bankruptcy case, and petty cases. The roles of the Courts of Justice also involve the reconciliation for disputes, right protection of public according to the legal Act in order to support all sectors in Thai society living together harmoniously. The Chief Judge of the Courts of Justice is the court administrator which is very important as a leader who facilitates the public fairness in each area assigned from the Courts of Justice. The administrative roles and duties are also consisted of budget, personnel, court cases as well as being a representative of the

court to coordinate with other public organizations. The errands also extend to solve the problems and to collect all cases to determine the policy for further designing the mission and strategies of the Courts of Justice (Sirinbhorn Patram Supasith, 2013, p.1).

In order to achieve the objectives and policies assigned of the judicial mission and responsibilities of the Courts of Justice, the chief judge, as a Presiding of Courts of Justice, plays an important role towards the effective development of the courts by carrying out the policies of the Courts of Justice and the President of the Supreme Court. The responsibilities of the chief judge-a leader of the court- has jurisdiction to perform the duties to assign and monitor the court in charge in a respect of controlling and inspection of the administrative tasks on human, tasks, and work system to bring the fairness to public. The chief judge is in charge of the administration of the courts of first instance authorizing the mission of the court of all cases considerations, and court administration effectively in accordance with the policies, objectives, rules, regulation, and guidelines of the Courts of Justice. The chief judge is also considered as the representative of the Courts of Justice at a provincial level for interconnection of other organizations to push forward the court mission in charge to reach the goals effectively. Therefore the chief judge of the Courts of Justice has highly roles to process the court to response to the needs of social changes effectively and efficiently.

Leadership can be defined as the discipline and arts of influencing people to act in accordance with the mutual agreement among leaders and followers, who carry out the direction of their leaders whole heartedly and happily in order to achieve the assigned goals and objectives (Pichapop Phanpare, 2011, p.12). Therefore, leadership is very important and essential for leaders and administrators as it is a performance guideline on their duties to achieve the goals successfully. This would be an indicator for the progress and success of organization administration. In addition, present-leaders recognize that in order to be effective, they need to be able to create leadership themselves. Furthermore, leadership is a certain characteristic that provide leader a support in creating greater faith from the members of the organization (Somsak Khaowlarp, 2005, p.18, 25; Natepanna Yawiraj, 2007, p.92). According to the duties of the chief judge of the Courts of Justice, he/she has to act as personnel administrators for both Judge and staff. Therefore, the chief judge should have leadership capability and management competency, and be able to be a good example for colleagues.

The researcher aims to examine the model for developing the leadership of chief judge of the Courts of Justice in order to find out the appropriate guidelines for chief judge in accordance with the roles, power and duties addressed. However, there were little research and literature reviews investigating on the model for developing leadership of the chief judge of the Courts of Justice. The proposed model will assist to establish

effective leadership of the chief judges in administration of the Courts of Justice under the belief that leadership is a trait that can be developed and be able to propose the developed model for the Courts of Justice in order to refine and adjust regulations for an appointment of chief judge or a provision of better training workshop for the judge-executive in the Courts of First Instance. Also the publication of the proposed handbooks for leadership development of chief judges of the Courts of Justice will be distributed to any appointed chief judge.

## **2. Research instruments**

The research instruments were a structured interview form, and a check list form.

## **3. Methods**

The research employed the Research and Development approach which can be categorized into 3 phases as follows:

Phase I was related to examining the leadership components of chief judge of the Courts of Justice. The model investigation was divided into 4 stages: 1) document inquiries and literature reviews for research framework establishment 2) investigation of leadership components of the chief justice in the Courts of Justice through document inquiries and in-depth interviews of 18 scholars, 3) examination and assessment of its appropriateness through the structured interviews of 10 experts, 4) construction of a survey questionnaire to determine a performance level of the chief judges before the implementation. The survey questionnaire was reviewed and assessed by 5 experts, and then administrated to 3,978 Justice civil servant and clerical officers at the Provincial Court, the Juvenile and Family Court, and Kwaeng Court throughout Thailand. The samples, obtained through the Krejcie and Morgan formula, were 350 persons drawn from a total of 3,978 persons.

Phase II was divided into 2 stages: a model draft and establishment comprising: 1) model drafting and handbooks were refined and assessed for appropriateness by 10 experts, and 2) a model refinement.

Phase III was related to model implementation and result summary which involved 2 stages: 1) model implementation, and 2) summary of results.

## **4. Results**

1. The components of leadership of Chief Judge of the Court of Justice consisted of four major components as follows: 1) Knowledge and professional experiences, 2) Human relations skills and personalities, 3) Knowledge and Management skills, and 4) Moral and ethics. The leadership of Chief Judge of the Courts of Justice, as a whole,

was at a good level and a very good level, ranged from high to low respectively-moral and ethics, human relations skills and personalities, knowledge and management skills, and knowledge and professional experiences. The highest level of mean scores was fallen into the moral and ethics aspect, and the lowest level fell into knowledge and professional experiences.

2. The developed model of leadership development for Chief Judge of the Courts of Justice comprised principles, objectives, contents, process, and measurement and evaluation. The activities involved self-study and monitoring through the application of a 4 volume of handbooks which consisted of a study for developing knowledge and individual behaviors, sharing and learning together among samples and a researcher. In the monitoring period, the pre and post evaluation of the self-assessment were administrated to the samples to examine a level of performance and leadership behaviors. In addition, 3 leaders and 5 subordinates of the samples were require to assess the samples' performance and leadership behaviors before and after the model implementation in order to compare the effects. The measurement and evaluation was also employed.

However, the model implementation is still on process which might take a few months to complete data collection.

## 5. Discussion

1. The result from the first research question revealed that the component of the chief judge of the Courts of Justice involved 4 components and 17 sub-components as follows: 1) knowledge and professional experiences with 4 sub-components: 1.1) law knowledge and experiences, 1.2 ) knowledge about regulations, announcement, instruction, and rules in civil services of the Courts of Justice, 1.3) capabilities on court cases, analysis, reasoning summary, making a conclusion of the judgment of the court and instructions, court case management, witness testimony, report of the court process, and 1.4) knowledge and competence of other relevant academics; 2) Human relations skills and personalities with 5 sub-components: 2.1) capable of coordination within the organization, 2.2) capable of coordination among external organization, 2.3) having good manner, politeness, kindness and displaying good verbal and proper behaviors, 2.4) demonstrating appropriate gestures to suit individual position, status and time conditions, and 2.5) cleanliness and hygiene dress code fitting time conditions and places;3) Knowledge and management skills with 4 sub-components as 3.1) knowledge about personnel administration to manage the system and organization administration 3.2) capability in case management, 3.3) knowledge about financial regulations, accounting, inventory and supplies, financial planning and inventory, and 3.4) having vision, policy and

strategies in the Courts of Justice administration; 4) Moral and Ethics comprising 4 sub-components 4.1) Honesty 4.2) good behaviors, self-reliance, and recognition of good reputation 4.3) offering fairness to relevant persons in a court case with integrity and in accordance with lawsuit and tradition, and 4.4) upholding moral and ethics system, governance principles, righteousness, and never engaging in corrupt practice. The results from some evidences found revealed the same traits as per criteria of Federal judge selection in Canada (Federal Judicial Appointment, as cited in Institute of Research and Advice of Thammasart University, 2014, pp.28-29) with 3 guidelines as follows: 1) professional competence and experience, 2) personal characteristics, and 3) social awareness. In addition, The Law Council of Australia Selection Criteria (as cited in Institute of Research and Advice of Thammasart University, 2014, pp.29-30) in Australia indicated that the "Attributes of Candidates for Judicial Office" can be classified into 3 components as follows: 1) legal knowledge and experiences, 2) professional qualities, and 3) personal qualities.

As results the components of the chief judge of the Courts of Justice found in this research are appropriate to frame the development of chief judge of the Courts of Justice to improve competency for better work performance in the Court of Justice, which is an organization offering fairness to public who are in court cases.

2. The proposed model for developing chief judges in the Courts of Justice is designed for 5 parts: 1) model principles based on 1.1) leadership theories, leadership of chief judges in the Courts of Justice from document inquiries, and scholars' interviews and experts' refinement, 1.2) techniques and approach or learning process involving self-study as a facilitator for self-learners, and monitoring and evaluation, and 1.3) an application for chief judge and presiding chief judge who prepare to a chief judge in the future. In addition, this model suits for the development at a personal level and a group level; 2) model objectives were designed for 3 reasons: 2.1) to develop knowledge and understanding, awareness raising, and good attitudes, 2.2) to develop behaviors and skills in terms of leadership of chief judge of the Courts of Justice, and 2.3) to be a tool for chief judge in the Courts of Justice to apply knowledge and leadership skills into individual practice effectively and efficiently; 3) model contents comprising 4 packages: 3.1) professional knowledge and experiences 3.2) human relations and personality, 3.3) knowledge and administrative skills, and 3.4) moral and ethics; 4) model process involved 6 phases: Phase I was relate to an assessment period, before studying the handbooks, the participants responding a self-assessment form, and being assessed by their leaders and subordinates. The assessment form was constructed by the researcher. Phase II to IV were related to a self-studying through handbooks from unit one to unit four for six weeks. Phase VI monitor and evaluation. After two-week time, the self-assessment form was administrated to the

participants. Their leaders and subordinates also assessed the participants. The interviews with the participants' leaders and subordinates were also conducted in order to confirm the proposed model; and 5) the measurement and evaluation periods were categorized into 3 stages: 1) pre-development assessment, 2) while-development assessment and 3) post-development assessment.

From the literature reviews and findings, it can be concluded that the developed model was an appropriate model in terms of design, friendly users, and effective application for developing chief judge of the Courts of Justice. In addition, the developed model has been examining its quality through scholars and experts, and a survey. The approaches are associated with the guidelines of Rangsan Prasertsee (2007, pp. 276-289) who claimed that the ways to develop leadership were through self-perception, self-awareness development, and self-discipline. The knowledge and understandings would be trained through education and training, job experience, and coaching. The leaders should be able to develop themselves in terms of communication skills, and special skills development. In addition, an efficient leader model involved 2 components for self-leadership development:(1) self-awareness, and (2) self-discipline.

3. The aim of the third research was to assess the leadership of chief judge of the courts of justice model. The model implementation is still on process which might take a few months to complete data collection.

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**The current and desirable state of learning organization  
for school under secondary educational service area office 20**

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**Abstract**

The purposes of this research were to study components of learning organization, and current and desirable state of learning organization for schools under secondary educational service area office 20. The sample group consisted of 113 school administrators and 338 teachers. The research tool consisted of assessment form and questionnaire. The results of this research were 1) The components of learning organization for schools consisted of (1) supportive atmosphere (2) organization structure (3) vision, mission and strategy (4) organization culture (5) motivation (6) leadership (7) management (8) teamwork, and 2) The overall level of learning organization in current state for schools, it was in moderate level. The overall level of learning organization in desirable state for schools, it was in high level.

**Keywords:** learning organization, learning, organization

**Introduction**

Presently, development of technology and computer system influence the rapid change of social, economy, culture, politics, communication, education and occupation. Thus, organizations must be prepared people through constantly learning, for deal with changes and to have the ability to adapt with conditions changes and challenges moderns, must be able to institutionalize learning within the organization. The school is an organization that gives knowledge to many students, which learn, share, search and develop the knowledge all time and must develop itself to challenge the current of the world to survive. In other words, become to a learning organization. Learning organizations are bold and powerful organizations that their foundation are based on learning and the best way to improve performance in the long run, consider learning. (Sharifi & Eslamieh, 2008) To be a learning organization is challenged, and necessary to exist in globalized world whose main, object is the data and information. It is considered as a key process which contributes to organizational success (Wang and Ellinger, 2008; Curado, 2006). An

administrator, therefore, must try to make their own firm a learning organization so that its members always learning to succeed. A school administrator has to emphasize the learning organization to every member so that they are capable to work efficiency. From that reason, the researcher would like to study learning organization factors and current and desirable state of learning organization for schools under secondary educational service area office20.

## **Objectives**

2.1 To study components of learning organization for schools under secondary educational service area office20.

2.2 To study current and desirable state of learning organization for schools under secondary educational service area office20.

## **Materials and Methods**

### **3.1 Population and sample group**

3.1.1 Population of this research was 2,812 people who were 152 school administrators and 2,660 teachers under secondary Educational service area office20.

3.1.2 Sample group in this research were 451 people who were 113 school administrators and 338 teachers under secondary educational service area office20, obtained using the stratified random sampling technique.

### **3.2 Tool for data collection**

3.2.1 Assessment form components in of learning organization was a five rating scale. 3.2.2 Questionnaire was a five rating scale

### **3.3 Data collection**

3.3.1 The assessment form in components of learning organization was applied to 5 experts by the researcher.

3.3.2 Questionnaire was applied to 113 school administrators and 338 teachers under secondary educational service area office 20 by the researcher.

### **3.4 Data analysis**

The qualities of data in the assessment form in components of learning organization and questionnaire were analyzed by using means and standard deviation.

#### 4. Results

4.1 The learning organization for schools under secondary educational service area office 20 consisted of Supportive atmosphere, Organization structure, Vision mission and strategy, Organization culture, Motivation, Leadership, Management and Teamwork.

4.2 The results of learning organization in current state for schools under secondary educational service area office 20 are presented as follows :

<b>Learning organization</b>	<b>Mean</b>	<b>S.D.</b>
1.Supportive atmosphere	3.34	0.92
2.Organization structure	3.88	0.85
3.Vision, mission and strategy	3.84	0.71
4.Organization culture	3.54	0.66
5.Motivation	2.44	0.42
6.Leadership	2.21	0.53
7.Management	2.31	0.56
8.Teamwork	2.65	0.76
Total	3.03	0.28

**Table 1 learning organization in current state**

4.3 The results of learning organization in desirable state for schools under secondary educational service area office 20 are presented as follows :

<b>Learning organization</b>	<b>Mean</b>	<b>S.D.</b>
1.Supportive atmosphere	3.82	1.09
2.Organization structure	2.22	0.86
3.Vision, mission and strategy	2.49	0.88
4.Organization culture	3.43	0.98
5.Motivation	4.59	0.43
6.Leadership	4.69	0.29
7.Management	4.58	0.32
8.Teamwork	4.00	0.70
Total	3.73	0.28

**Table 2 learning organization in desirable state**

## 5. Discussions

5.1 The result of this research was the learning organization consisted of Supportive atmosphere, Vision mission and strategy, Organization structure, , Organization culture, Motivation, Leadership, Teamwork and Management conform to the findings of Fiol & Lyles (1985) suggest that the organization culture, the strategy, organization structure and the environment in which the organization operates influence the development of learning organization. Caudron (1993), Schien (1993), Garvin (1993), Marquardt (1996) have identified the important role culture plays in creating a learning organization.

5.2 The results of this research were the overall of learning organization in current state for schools under secondary educational service area office 20, it was in “moderate” level ranking in order as follows: the highest level was organization structure, and the lowest level was leadership, and the overall level of learning organization in desirable state for schools under secondary educational service area office 20, it was in “high” level ranking in order as follows: the highest level was leadership, and the lowest level was organization structure. The findings imply that A learning organization requires a leader who can help cope with the changes in the environment as well as motivate the followers to work in collaboration towards the achievement of collective as well as individual goals. The leadership trust their subordinates and give them the freedom to breathe and grow. Hence, the development and maintenance of a learning organization requires leadership.

## 6. Conclusion

6.1 The learning organization for schools under secondary educational service area office 20 consisted of eight components;

- (1) supportive atmosphere
- (2) organization structure
- (3) vision, mission and strategy
- (4) organization culture
- (5) motivation
- (6) leadership
- (7) management
- (8) teamwork

6.2 The overall of learning organization in current state for schools under secondary educational service area office 20, it was in “moderate” level ranking in order as follows: the highest level was organization structure, vision mission strategy, organization culture, supportive atmosphere, teamwork, motivation, management, and the

lowest level was leadership. And the overall level of learning organization in desirable state for schools under secondary educational service area office 20, it was in “high” level ranking in order as follows: the highest level was leadership, motivation, management, teamwork, supportive atmosphere, organization structure, and the lowest level was organization structure.

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## USING DETERMINANTS FOR DETERMINING EXTREME VALUES OF A FUNCTION OF ONE VARIABLE, TWO VARIABLES AND THREE VARIABLES

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### ABSTRACT

By using the determinants, the purpose of this presentation is to show the necessary and sufficient conditions such that a function of one variable or two variables or three variables be relative maximization, relative minimization and positive for variables which are small sufficients.

**Keywords:** *Determinant, Funtion, Relative maximization, Relative minimization, Positive.*

### 1. Introduction

Find the signs to recognize a function that it has extreme values, it is an important mission of teaching mathematics and it requires of applied mathematics. Our aim in this paper is to use determinant to study it.

### 2. Materials and methods

#### 2.1. Definition of determinant

Let  $A = [a_{ij}]$ ,  $i, j = 1, 2, \dots, n$  is a square matrix of degree  $n$  with elements in filed  $\mathbf{K}$ . The value  $|A| := \sum_{\pi \in S_n} \text{sign}(\pi) a_{\pi(1)1} \cdot a_{\pi(2)2} \cdot \dots \cdot a_{\pi(n)n}$

called determinant of the matrix  $A$ . Where each  $\pi(i)$  should be summed over  $1, \dots, n$ .

See a square matrix  $A$  of degree  $n$  is a element  $(x_1, \dots, x_n)$  of vector space  $(\mathbf{K}^n)^n$ , which

$x_1, \dots, x_n$  is columns of matrix  $A$ . Then  $A \mapsto |A|$  is a map from  $(\mathbf{K}^n)^n$  to  $\mathbf{K}$ .

After that, we let  $\mathbf{K}$  is the real filed  $\mathbb{R}$  or the complex filed  $\mathbb{C}$ .

**Example:** When  $n = 1$ , then matrix of degree 1 is elements in the filed  $\mathbf{K}$ .

When  $n = 2$ ,  $\begin{vmatrix} a & b \\ c & d \end{vmatrix} = ad - bc$ ;

When  $n = 3$ ,  $\begin{vmatrix} a & b & c \\ d & e & f \\ g & h & i \end{vmatrix} = aei + bfg + cdh - ceg - bdi - afh$

## 2.2. Definition extreme values of a function:

Let  $f$  be a function with domain  $D$  and let  $c$  be a fixed constant in  $D$ . Then the output value  $f(c)$  is the

- ✓ Relative maximum value of  $f$  on  $D$  if and only if  $f(x) \leq f(c)$  for all  $x$  in  $D$ .
- ✓ Relative minimum value of  $f$  on  $D$  if and only if  $f(x) \geq f(c)$  for all  $x$  in  $D$ .

## 2.3. Determinant of degree 1 and extreme values of a function of one variable

Let  $f(x)$  be a real function of the real variable  $x$  for  $x$  in the closed interval  $[a, b]$ , and let us suppose that it possesses a convergent Taylor series of the form:

$$f(x) = f(c) + (x - c)f'(c) + \frac{(x - c)^2}{2!}f''(c) + \dots \quad (1)$$

around each point in the open interval  $(a, b)$ .

**Theorem 1:** Let  $c$  be a stationary point of  $f(x)$ , which is to say a point where  $f'(c) = 0$

1. If  $f''(c) > 0$  then  $f(x)$  has a relative minimum at  $x = c$  ;
2. If  $f''(c) < 0$  then  $f(x)$  has a relative maximum at  $x = c$ .

In other word, if matrix of degree 1  $[f'(c)]_1$  has positive determinant then  $f(x)$  has a relative minimum at  $x = c$  and if matrix of degree 1  $[f'(c)]_1$  has negative determinant then  $f(x)$  has a relative maximum at  $x = c$ .

**Proof:**

Let be  $f'(c) = 0$

$$\text{we have } f''(c) = \lim_{x \rightarrow c} \frac{f(x) - f(c)}{x - c}$$

When  $x \in c^-$  and  $f''(c) > 0$  then  $f(x) - f(c) > 0$  or  $f(x) > f(c)$  hence  $f(x)$  has a relative minimum at  $x = c$

When  $x \in c^+$  and  $f''(c) < 0$  then  $f(x) - f(c) < 0$  or  $f(x) < f(c)$  hence  $f(x)$  has a relative maximum at  $x = c$

## 2.4. Determinant of degree 2 and extreme values of a function of two variables

For a function of two variables  $f(x, y)$ , defined over the rectangle  $a_1 \leq x \leq b_1; a_2 \leq y \leq b_2$ ; , and possessing a convergent Taylor series around each point  $(c_1, c_2)$  inside this region. Thus,

$|x - c_1|; |y - c_2|$  sufficiently small, we have

$$f(x, y) = f(c_1, c_2) + (x - c_1) \frac{\partial f}{\partial c_1} + (y - c_2) \frac{\partial f}{\partial c_2} + \frac{(x - c_1)^2}{2} \frac{\partial^2 f}{\partial c_1^2} + (x - c_1)(y - c_2) \frac{\partial^2 f}{\partial c_1 \partial c_2} + \frac{(y - c_2)^2}{2} \frac{\partial^2 f}{\partial c_2^2} + \dots$$

Here

$$\frac{\partial f}{\partial c_1} = \frac{\partial f}{\partial x} \text{ at } x = c_1, y = c_2$$



And

$$\frac{\partial f}{\partial c_1} = \frac{\partial f}{\partial x} \text{ at } x = c_1, y = c_2$$

Let  $(c_1, c_2)$  be a stationary point of  $f(x, y)$  which mean that we have the equations

$$\frac{\partial f}{\partial c_1} = 0; \frac{\partial f}{\partial c_2} = 0$$

We set  $a = \frac{1}{2} \frac{\partial^2 f}{\partial c_1^2}$ ;  $2b = \frac{\partial^2 f}{\partial c_1 \partial c_2}$ ;  $c = \frac{1}{2} \frac{\partial^2 f}{\partial c_2^2}$  And  $u := x - c_1$ ;  $v := y - c_2$

Hence  $Q(x, y) = a(x - c_1)^2 + 2b(x - c_1)(y - c_2) + c(y - c_2)^2$  (2)  
 $= au^2 + 2buv + cv^2 = Q(u, v)$

**Theorem 2:** Let  $(c_1, c_2)$  be a stationary point of  $f(x, y)$ , which is to say a point where  $f(c_1, c_2) = 0$ .

1. If  $\begin{cases} a > 0 \\ \begin{vmatrix} a & b \\ b & c \end{vmatrix} > 0 \end{cases}$  then  $f(x, y)$  has a relative minimum at  $(c_1, c_2)$
2. If  $\begin{cases} a < 0 \\ \begin{vmatrix} a & b \\ b & c \end{vmatrix} < 0 \end{cases}$  then  $f(x, y)$  has a relative maximum at  $(c_1, c_2)$

**Proof**

Consider the homogeneous quadratic expression

$$\begin{aligned} Q(u, v) &= au^2 + 2buv + cv^2 \\ &= a \left( u^2 + \frac{2b}{a}uv + \frac{b^2v^2}{a^2} \right) + cv^2 - \frac{b^2}{a}v^2 \\ &= a \left( u + \frac{bv}{a} \right)^2 + \left( c - \frac{b^2}{a} \right) v^2 \end{aligned}$$

Provided that  $a > 0$ .

From below equation follows that  $Q(u, v) > 0$  for all nontrivial  $u$  and  $v$  provided that

$$a > 0; c - \frac{b^2}{a} > 0 \Leftrightarrow a > 0; \begin{vmatrix} a & b \\ b & c \end{vmatrix} > 0 \quad (3)$$

Similarly,  $Q(u, v) > 0$  for all nontrivial  $u$  and  $v$  provided that

$$a < 0; c - \frac{b^2}{a} < 0 \Leftrightarrow a < 0; \begin{vmatrix} a & b \\ b & c \end{vmatrix} < 0 \quad (4)$$

Conversely, if  $Q$  is positive for all nontrivial  $u$  and  $v$ , then two inequalities in (3) must hold, with a similar result holding for the case where  $Q$  is negative for all nontrivial  $u$  and  $v$ .

## 2.5. Determinant of degree 3 and extreme values of a function of three variables

**Theorem 3:** Let function of 3- variables

$$Q(x_1, x_2, x_3) := a_{11}x_1^2 + 2a_{12}x_1x_2 + a_{22}x_2^2 + 2a_{23}x_2x_3 + 2a_{13}x_1x_3 + a_{33}x_3^2 \quad a_{11} > 0$$

1/ Necessary and sufficient conditions to form  $Q(x_1, x_2, x_3) > 0$  are positive definite

$$\begin{cases} a_{11} > 0 \\ \begin{vmatrix} a_{11} & a_{12} \\ a_{12} & a_{22} \end{vmatrix} > 0 \\ \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{12} & a_{22} & a_{23} \\ a_{13} & a_{23} & a_{33} \end{vmatrix} > 0 \end{cases}$$

2/ Necessary and sufficient conditions to form  $Q(x_1, x_2, x_3) < 0$  are negative definite

$$\begin{cases} a_{11} < 0 \\ \begin{vmatrix} a_{11} & a_{12} \\ a_{12} & a_{22} \end{vmatrix} < 0 \\ \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{12} & a_{22} & a_{23} \\ a_{13} & a_{23} & a_{33} \end{vmatrix} < 0 \end{cases}$$

### Proof

Consider the homogeneous quadratic expression

$$\begin{aligned} Q(x_1, x_2, x_3) &= a_{11}x_1^2 + 2a_{12}x_1x_2 + a_{22}x_2^2 + 2a_{23}x_2x_3 + 2a_{13}x_1x_3 + a_{33}x_3^2 \\ &= a_{11} \left( x_1 + \frac{a_{12}x_2}{a_{11}} + \frac{a_{13}x_3}{a_{11}} \right)^2 + \left( a_{22} - \frac{a_{12}^2}{a_{11}} \right) x_2^2 + \\ &\quad + 2 \left( a_{23} - \frac{a_{12}a_{13}}{a_{11}} \right) x_2x_3 + \left( a_{33} - \frac{a_{13}^2}{a_{11}} \right) x_3^2 \end{aligned}$$

If  $Q(x_1, x_2, x_3)$  is positive homogeneous quadratic expression, we choose  $x_1$

$$x_1 + \frac{a_{12}x_2 + a_{13}x_3}{a_{11}} = 0$$

We have homogeneous quadratic expression of two variables

$$\begin{aligned} P(x_2, x_3) &= \left( a_{22} - \frac{a_{12}^2}{a_{11}} \right) x_2^2 \\ &\quad + 2 \left( a_{23} - \frac{a_{12}a_{13}}{a_{11}} \right) x_2x_3 + \left( a_{33} - \frac{a_{13}^2}{a_{11}} \right) x_3^2 \end{aligned}$$

So  $P(x_2, x_3)$  is positive homogeneous quadratic expression that

$$\left\{ \begin{array}{l} a_{11} > 0 \\ a_{22} - \frac{a_{12}^2}{a_{11}} > 0 \\ \begin{vmatrix} a_{22} - \frac{a_{12}^2}{a_{11}} & a_{23} - \frac{a_{12}a_{13}}{a_{11}} \\ a_{23} - \frac{a_{12}a_{13}}{a_{11}} & a_{33} - \frac{a_{13}^2}{a_{11}} \end{vmatrix} > 0 \end{array} \right.$$

We consider

$$D := \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{vmatrix}$$

$$\xrightarrow[\begin{matrix} h_3 \rightarrow \frac{a_{13}}{a_{11}}h_3 \\ h_2 \rightarrow \frac{a_{12}}{a_{11}}h_2 - h_3 \end{matrix}]{\begin{matrix} a_{11} & a_{12} & a_{13} \\ 0 & a_{22} - \frac{a_{12}^2}{a_{11}} & a_{23} - \frac{a_{12}a_{13}}{a_{11}} \\ 0 & a_{23} - \frac{a_{12}a_{13}}{a_{11}} & a_{33} - \frac{a_{13}^2}{a_{11}} \end{matrix}}$$

Hence

$$D = a_{11} \begin{vmatrix} a_{22} - \frac{a_{12}^2}{a_{11}} & a_{23} - \frac{a_{12}a_{13}}{a_{11}} \\ a_{23} - \frac{a_{12}a_{13}}{a_{11}} & a_{33} - \frac{a_{13}^2}{a_{11}} \end{vmatrix}$$

Show that necessary and sufficient conditions for  $D > 0$  is ( điều kiện cần và đủ cho  $D > 0$  là )

$$\begin{vmatrix} a_{22} - \frac{a_{12}^2}{a_{11}} & a_{23} - \frac{a_{12}a_{13}}{a_{11}} \\ a_{23} - \frac{a_{12}a_{13}}{a_{11}} & a_{33} - \frac{a_{13}^2}{a_{11}} \end{vmatrix} > 0$$

Vì vậy

$$\left\{ \begin{array}{l} a_{11} > 0 \\ \begin{vmatrix} a_{11} & a_{12} \\ a_{12} & a_{22} \end{vmatrix} > 0 \\ \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{12} & a_{22} & a_{23} \\ a_{13} & a_{23} & a_{33} \end{vmatrix} > 0 \end{array} \right.$$

### Example

Find the maximization – minimization of function  $f(x, y) = x^3 + y^3 - 3xy$  at stationary point

We have

$$\begin{array}{l} \frac{\partial f}{\partial x} = 3x^2 - 3y = 0 \\ \frac{\partial f}{\partial y} = 3y^2 - 3x = 0 \end{array} \quad \hat{U} \quad \begin{array}{l} y = x^2 \\ x = x^4 \end{array} \quad \hat{U} \quad \begin{array}{l} x = 0 \\ y = 0 \\ x = 1 \\ y = 1 \end{array}$$

So 2 stationary points are  $M_1(1,1)$  or  $M_2(0,0)$

Consider at  $M_1(1,1)$

$$\text{We set } a = \frac{1}{2} \frac{\partial^2 f}{\partial c_1^2} = 3; b = \frac{1}{2} \frac{\partial^2 f}{\partial c_1 \partial c_2} = -\frac{3}{2}; c = \frac{1}{2} \frac{\partial^2 f}{\partial c_2^2} = 3$$

$$\text{So determinant } \begin{vmatrix} 3 & -\frac{3}{2} \\ -\frac{3}{2} & 3 \end{vmatrix} = \frac{27}{4} > 0 \text{ that the function had minimization at } M_1(1,1)$$

We consider at  $M_2(0,0)$

$$\text{We set } a = \frac{1}{2} \frac{\partial^2 f}{\partial c_1^2} = 0; b = \frac{1}{2} \frac{\partial^2 f}{\partial c_1 \partial c_2} = -\frac{3}{2}; c = \frac{1}{2} \frac{\partial^2 f}{\partial c_2^2} = 0$$

$$\text{So determinant } \begin{vmatrix} 0 & -\frac{3}{2} \\ -\frac{3}{2} & 0 \end{vmatrix} = -\frac{9}{4} < 0 \text{ and } a = 0 \text{ that the function is not maximization and}$$

minimization at  $M_2(0,0)$

### 3. Results

Using the determinant criteria for presenting the extreme values of a function of one variable, two variables and three variables. The theorems of the result are said by us, and the detailed proofs are presented by us. On the contrary the materials for references are said generally, but not demonstrated in detail.

### 4. Conclusions and discussion

This paper help us find the extreme values of some functions of n- variables.

### 5. Acknowledgements

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## Effects of Online Coaching in Web Programming of Business Computer Students

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### Abstract

The purposes of this research were to study the effects of online coaching in web programming of Business Computer students, and study the satisfaction of the students to the online coaching. The sampling were 32 students who studying in the course of Business Computer project. They were chosen by using purposive sampling. The students were categorized into two groups such as face-to-face coaching and online coaching. Each group including four projects which had the different title of project's name. A project based learning approach was undertaken through the project assigned. The data were analyzed by t-test at .05 level of significance. The findings were as follows: the students studied with face-to-face coaching and online coaching found no significant different upon problem solving at .05 level. Moreover, the satisfaction of students to the online coaching in total was good.

**Keywords:** Online coaching, collaborative learning, problem solving, web programming, project based learning.

### Introduction

At the present, online technology offer higher education a meaningful way to meet the need and expectations of 21st century learner. Thus, the best practices applied in the online classroom can be transferred to the face-to-face classroom to enhance students learning in any environment. The example of online technology such as online discussion board, consistent e-communications, course content video, and online conferencing are tools that can be implemented into face-to-face classroom (Olivia Burgess, 2015). Additionally, communication approaches employed in face-to-face classes should be used in online classes (Nicole L. Thompsom et al., 2013). The online discussion is one of the required learning skills for all citizens of the 21st century. The educators need to know the gender differences in discussion strategies in both within and between traditional face-to-face and online asynchronous discussion strategies. (Meng-Jung Tsai et al., 2015). Moreover, online discussion is the most common uses of technology for ESL learners (English as a second language). The learner feel

more positive about discussion condition their anxiety level was lower than face-to-face discussion (Shin-Yi Chew and Lee-Luan NG, 2015). Furthermore, the tendency for students with stronger social learning to be less successful in face-to-face classes than the students with lesser preference for social learning. (John M. Mativo et al., 2013). According to reasons above, the curriculum in higher education is also change or apply the courses into the online classroom. Especially, the courses which necessary to have discussion activity between teacher and students is require an online in anywhere and anytime.

The curriculum structure of bachelor degree of Business Administration Program in Business Computer have 130 credits. Furthermore, the fourth year students have to study Business Computer Project course which is the course requirement. The students will practice computer programming through Computer Project. The steps of learning present that students are divided into groups to work on their projects. Each group including two to four students and one teachers who are the supervisor. Thus, the discussion between teacher and students will be happening. These activities are the part of coaching that extending traditional training methods to include focus on an individual's needs and accomplishments, close observation, and impartial and non-judgmental feedback on performance (BusinessDictionary.com, n.d.). Furthermore, the usage of information communication and technology for education is rapid growth nowadays. It transformed the face of the education system to the of flexible and distance learning (Hacer Ozyurt, 2014). Because of distance education consists of many methods and technologies that enable people to take education from anywhere, on anytime (Omer Deperlioglu and Utku Kose, 2013). Moreover, many universities or high education give the computer programming education through the distance education (Ozcan Ozyurt, 2015) (Mahfudzah Othman and Nurzaid Muhd Zain, 2015) (Ionut Marian Dragomir at al., 2015) (Despima Tsompanonoudi at el., 2015) (Tung-Cheng Hsieh at el., 2013). Therefore, teachers who are the supervisor need to find the innovation of information communication and technology to support or coaching their students in distance learning.

According to Google Apps for Education (GAPE) is a core suite of productivity applications that Google offers to schools and educational institutions for FREE. (Edtechteacher, 2015). These applications include Gmail, Google Groups, Google Drive, Google Plus, Google Classroom and more other applications developed by Google. All this tools are based on cloud technology. Universities or higher education from all over the world has successfully implemented Google Apps tools within their students. Because of the Google Apps could improve collaboration between teachers and students, to increase the efficiency of their classroom but also to save costs without sacrificing privacy or security (Bogdan Logofatu and Andreea Visan, 2015) (Mirela Ionita at el., 2014) (Mariana Mirela Ilie and Beatrice Hellen Almasan, 2015) (Bogdan Logofatu and

Alina Branescu, 2014). Thus, the universities or higher education should adapt their the traditional education to use the innovation of information communication and technology for education. For the accomplishing of the expectations of 21st century learner.

## Objective

To study the effects of online coaching in web programming of Business Computer students.

To study the satisfaction of students to the online coaching.

## Methodology

This research aimed to study the effects of online coaching in web programming of Business Computer students which compared with face-to-face coaching. The research question of this study were as follows:

- What is the level of student's problem solving regarding the study in online coaching?
- What is the level of student's problem solving regarding the study in face-to-face coaching?
- What is the level in total of satisfaction of the students to the online coaching activities?

## Sample

The sample of this research consisted of 32 students who studying in the fourth year in Business Computer program in the faculty of Management Sciences, Surindra Rajabhat university, Surin province, Thailand. The sample were studying in the course of Business Computer project. They were chosen by using purposive sampling. After that they were categorized into two groups such as face-to-face coaching and online coaching. Each group including four projects which had the different title of project's name. A project based learning approach was undertaken through the project assigned. The study had been conducted in the first semester in 2015 academic year.

The schedule of coaching was showed in Figure 1

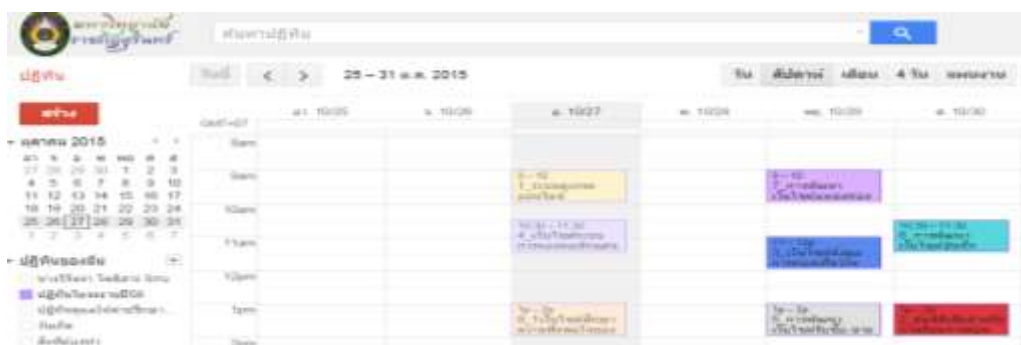


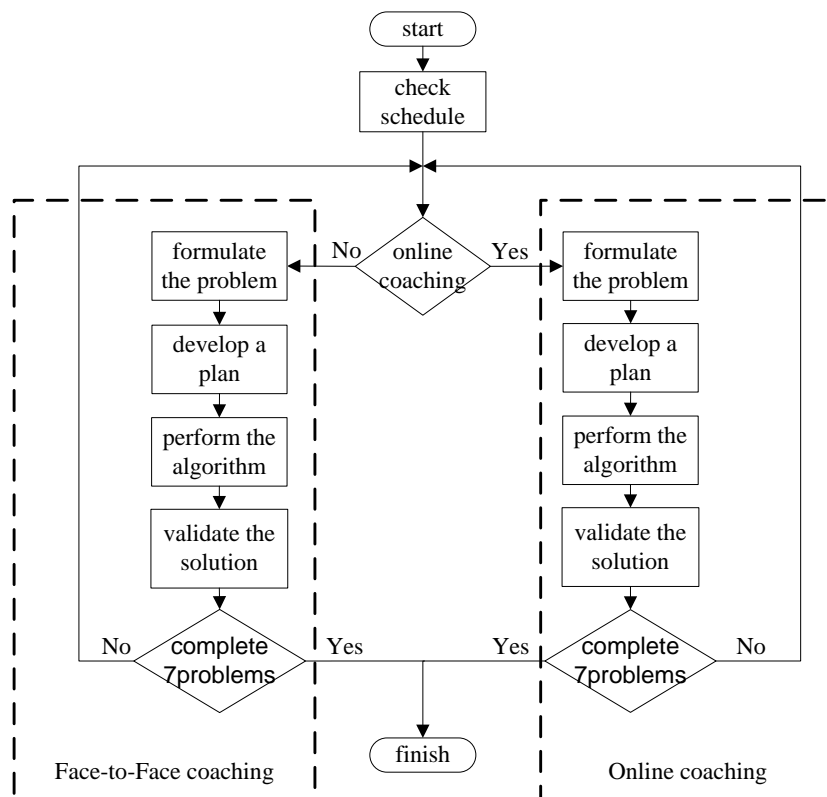
Figure 1 Online and face-to-face coaching schedule per week

### Data Collection Tool

In this research was to study the effect of online coaching in web programming of Business Computer students. It was a study the student's problem solving during code the program. Moreover, it was also study the satisfaction of the students to the online coaching activities.

The observation form was used for collect the data of student's problem solving. The form had four evaluation steps (Polya as cited in Teodor Rus, 2012) such as formulate the problem, develop a plan to solve the problem, perform the algorithm, and validate the solution as shown in Figure 2.

- Firstly, the formulate the problem, the students the student could know what are them asked to find solve? What facts do they have?
- Secondly, develop a plan to solve the problem, the student could plan what is the algorithm to solve the problem?
- Thirdly, perform the algorithm, the student could perform the algorithm or code the program follow the plan or not?
- Fourthly, validate the solution, the student could check the solution that can solve of problem or not?





### **Figure 2 Four evaluation steps in seven problems**

The scores of student's problem solving observation was showed in Marzano's four-point rating scale such as "Excellent" value as four, "Proficient" value as three, "Adequate" value as two, and "Limited" value as one. There are seven problems in the study such as web design, database design, login function, insert function, delete function, edit function, and show function. In these data collection was used while students and teacher did activities together.

Moreover, the satisfaction questionnaire of the students to the activities which consisted of ten items. It is designed as five-point Likert scales such as "Very Good" value as five, "Good" value as four, "Barely Acceptable" value as three, "Poor" value as two, and "Very poor" value as one. In satisfy data collection was used after students and teacher finished the activities.

#### **Data analysis**

The total score of student's problem solving was 112 points which separated to seven modules were as follows; the web design had 16 points, the database design had 16 points, the login function had 16 points, the insert function had 16 points, the delete function had 16 points, the edit function had 16 points, and the show function had 16 points. After finished to collect the student's problem solving data, it were analyzed by independent t-test at .05 level of significance. The findings was the effect of students' problem solving in online coaching comparing with face-to-face coaching. Furthermore, the interval scales of students' satisfaction were referred as follows: if the average between 1.00 – 1.49, it refers the satisfaction at "Very poor" level; if the average between 1.50 – 2.49, it refers the satisfaction at "Poor" level; if the average between 2.50 – 3.49, it refers the satisfaction at "Barely Acceptable" level; if the average between 3.50 – 4.49, it refers the satisfaction at "Good" level; if the average between 1.00 – 1.49, it refers the satisfaction at "Very good" level.

#### **Results**

This research was to study the effects of online coaching in web programming of Business Computer students and the results found as follow

#### **Learning activities in face-to-face coaching**

The students met teacher on schedule (see Figure 1). The coaching included the evaluation of students to solve their problems. There are formulate the problem, develop a

plan to solve the problem, perform the algorithm, and validate the solution. Therefore, the face-to-face coaching group activities showed in Figure 3.



(a) Demonstrate coding



(b) directing validation of students

**Figure 3 face-to-face coaching in web programming**

As shown in Figure 3 (a), the students had got problems and they came to ask teacher for help using face-to-face coaching. However, teacher did not told the algorithm or answers. Teacher demonstrated the steps of coding, after that student did fix the problem by themselves. Likewise Figure 3 (b), students know what are them asked to find solve. They developed a plan or more than one. They performed to code the program after they checked the solution that the algorithm can solve of problem or not. Teacher was the director for students in validate the solution.

### **Results of online coaching in web programming of Business Computer students**

The online coaching group activities such as sharing code view and design view via Google Docs as shown in Figure 4, and video conference for solving problem between teacher and students via Hangout as showed in Figure 5.

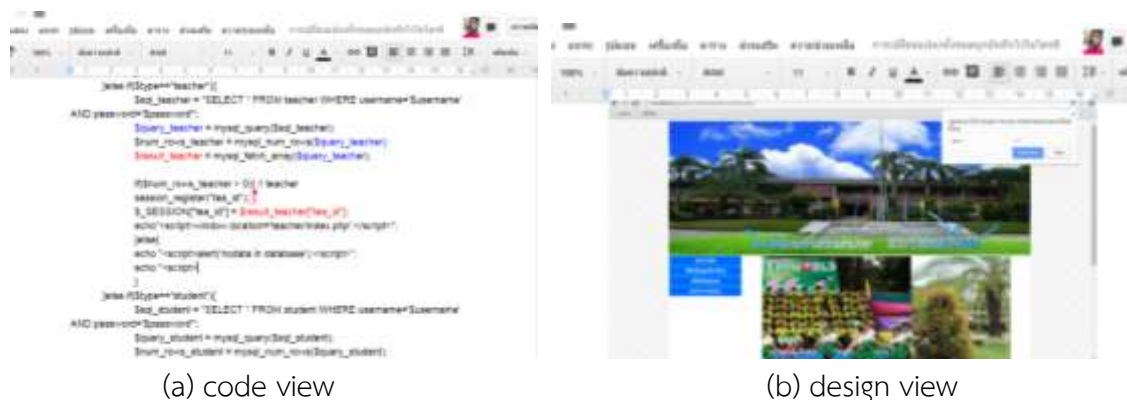


Figure 4 Online coaching in web programming

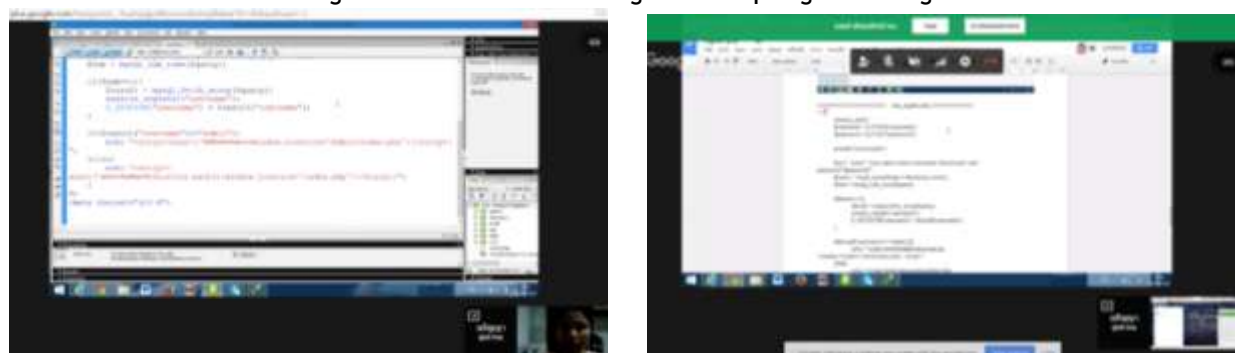


Figure 5 Hangout for solving problem between teacher and students

According to Figure 4, the students had got problems and they called teacher for help using online coaching. However, teacher did not told the algorithm or answers. Students need to show their code view and design view via Google Docs. After that teacher demonstrated the steps of coding and watched the students perform coding via Hangout (see Figure 5). Teacher checked the students follow the observation form of problem solving.

Moreover, this research also studied the satisfaction of 16 students who were categorized into online coaching groups. The data was collected after students and teacher finished the activities. The results showed in Table 1

Items	$\bar{x}$	S.D.	Result
1. It is quick to access in online coaching	3.80	0.52	Good
2. It is easy and convenient to use online coaching approach	3.83	0.34	Good
3. The main menu of the system is easy to understand and easy to access	3.92	0.34	Good

4. The learning activities were designed to motivate students to follow continuous coaching	3.93	0.51	Good
5. Preparing a channel to communicate between teacher and students	4.01	0.34	Good
6. Preparing a channel to communicate between students	3.99	0.25	Good
7. Preparing a channel to inquiry of students to solve their problems via internet	3.97	0.34	Good
8. The instructional Model encourages students to be collaborative learning	4.00	0.37	Good
9. The instructional Model encourages students to have analysis thinking and problem solving	4.00	0.68	Good
10. Appropriate design between the objectives and choosing the modern information communication and technology	4.06	0.25	Good
Total	3.80	0.51	Good

**Table 1** The satisfaction of students to the online coaching

According to finding in Table 1, the satisfaction of students to the online coaching in total was good ( $\bar{x} = 3.80$ , S.D. = 0.51) Moreover, it found that the item of "Appropriate design between the objectives and choosing the modern information communication and technology" was the highest average of all items ( $\bar{x} = 4.06$ ). Next on down item was "Preparing a channel to communicate between teacher and students" ( $\bar{x} = 4.01$ ). Moreover, the items of "The instructional Model encourages students to be collaborative learning" and "The instructional Model encourages students to have analysis thinking and problem solving" had decrease average ( $\bar{x} = 4.00$ ) and "Preparing a channel to communicate between students" ( $\bar{x} = 3.99$ ) decline sequentially. Finally, the lowest average of all items was "It is quick to access in online coaching" ( $\bar{x} = 3.80$ ).

#### Comparing of solving problem with difference coaching group

This study interested the total score of student's problem solving. There was 112 points which separated to seven modules such as web design, database design, login function, insert function, delete function, edit function, and show function. The results showed in Table 2.

Problem Solving	n = 32	Mean Score	S.D.	t	df	Sig.
Online coaching	16	81.00	2.42	1.048	30	0.303
Face-to-face coaching	16	80.25	1.53			

\*p < 0.05

**Table 2 Overall comparing of solving problem with difference coaching group using t-test**

According to Table 2, it found that  $t = 1.048$ ,  $p > 0.05$  thus the students studied with face-to-face coaching and online coaching found no significant different upon problem solving at .05 level.

## Conclusion

This study focused on the effects of online coaching in web programming of Business Computer students which compared with face-to-face coaching. The sampling consisted of 32 students who studying in the fourth year in Business Computer program in the first semester in 2015 academic year. They were chosen by using purposive sampling and categorized into two groups such as face-to-face coaching and online coaching. There were seven problems in the study such as web design, database design, login function, insert function, delete function, edit function, and show function. During coaching in each group, teacher checked the students follow the observation form of problem solving. The result of comparing of solving problem found that it was no significant different upon problem solving at .05 level. It is consistent with other studies John M. Mativo et al. (2013), Motii, B. Brian and Sanders, Tom J. (2014), Cavanaugh, Joseph K. and Jacquemin, Stephen J. (2015). However, it is not consistent with Durak, Gurhan. (2014). Meanwhile, the satisfaction of students to the online coaching in total was good. In summary, the course about computer programming could design instruction system through the distance education. It conforms to studies of Ozcan Ozyurt (2015), Mahfudzah Othman and Nurzaid Muhd Zain (2015), Ionut Marian Dragomir at al. (2015), Despima Tsompanonoudi at el. (2015) and Tung-Cheng Hsieh at el. (2013). In addition, the students should have not only knowledge but also have the necessary skills for the 21st century. It is learning and innovation skills which focus on creativity, critical thinking, communication and collaboration. In the future work, the study will encourage learning and innovation skills of the computer programming learner to work effectively.

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DEVELOPING ENGLISH READING COMPREHENSION  
ABILITY USING START STRATEGY OF  
MATTHAYOMSUKSA 2 STUDENTS

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**Abstract**

The purposes of this research were: (1) to study and compare the English reading comprehension ability before and after learning through START Strategy of Matthayomsuksa 2 students (2) to investigate the students' attitude towards teaching English reading comprehension using START Strategy.

This research was based on a one group pretest-posttest design. The sample group was 32 Matthayomsuksa 2 students at Banbuaradbumroong School in the first semester of the academic year 2015 using cluster random sampling selection.

The research instruments were: 1) twelve lesson plans using START strategy, 2) an English reading comprehension ability test, and 3) a students' attitude questionnaire. The experimental lasted twelve weeks, 3 hours a week, or 36 hours for all. Statistics used in this research were Percentage, Mean, Standard deviation and t-test for dependent. The finding of this research revealed that:

1. The students' pretest and posttest scores on English reading comprehension ability were 47.38 % and 73.56 % respectively. The students' posttest score in English reading comprehension ability was found significantly higher than that of the pretest different at the .01 level.

2. The students gained positive attitude toward teaching English reading comprehension using the START Strategy was at a good level.

3.

**Keywords:** START Strategy, English Reading Comprehension Teaching, Attitude

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## Introduction

English has an important role in the world as an international language. English is like a window to the world because by English you can learn about the world and you can get more information from the world. If you want to be a knowledgeable person, English is important to be learned. Having ability in English will also help the students to study because what he or she learned is not limited to their country but also the world. Since English is considered to be the global language or the language of the world, the number of people who learn English has increased every year. Many people would like to improve their English; some of them go aboard so that they can learn English with native speakers. Not only students but also working people, especially business people, need to learn English in order to develop and expand their business internationally. The business world, people use English to communicate and to get better in their skills.

In accordance with the Constitution of 1997 and the Education Act of 1999, Thailand has reformed educational practices (Ministry of Education, 1999: 25) in order to further develop human resources. One of the major goals has been to construct a knowledge-based economy and society (Ministry of Education, 2008: 1-2) in which Thai people can adapt themselves an ever changing world economy and social trends. In order to implement this, the Educational Act aims to increase the intellectual achievements of the population and, as a result, enable people to lead a happy and self dependent life while adapting to the changes within society and, more importantly, in the world economy.

In 2004, the Office of Education Council reported that, with an understanding of English, Thai people will be able to understand cultural and political differences, take part in the global economy and broaden their perspective of the world. They will be able to communicate with foreigners confidently, have a positive attitude towards foreign language and cultures and be in a better position to pass on Thai identity and culture to rest of the world.

English as a foreign language has been taught for decades in Thailand. All students are expected to learn English in primary and secondary education (Ministry of Education, 2008:1). The National Curriculum includes English as the basic for student ability in using a foreign language as a form of communication in accordance with the aim of the Basic Curriculum of 2001. English learners need the four skills of listening, speaking, reading, and writing to communicate efficiently, but of all these four skills, reading seems to be the most essential and necessary skill for students in both a classroom context and an extracurricular environment (Carrell,1989: 120) Many EFL students rarely need to speak English in their daily lives but they may need to read in order to access valuable information and be able to record it in English exclusively (Eskey, 2005: 563). In the reading process, the reader interacts with the text to

construct meaning using various kinds of schema: linguistic knowledge of words, sentences and paragraphs, and cognitive abilities (Carrell, 1989: 561). Reading comprehension then involves a complex combination of the reader's cognitive process, language proficiency, and metacognitive process (Cohen, 1998: 71).

For the above reasons, the research would like to improve students' English reading abilities using START strategy. Various theories and research studies have considered START strategy as interesting activities to help students perform their reading skill. According to (Scharlach, 2008: 229) students' reading comprehension using START strategy made significantly higher gains on the nationally normed, standardized Gates-MacGinitie reading comprehension test than students in the control classroom. Therefore, the researcher aims to employ this strategy with Matthayomsuksa 2 students in Banbuaradbamroong School to access whether the strategy could assist their reading comprehension abilities in the classroom and the students have a good attitude towards them. In addition, the STRAT strategy might make a greater contribution to student's abilities to use in real-life situations.

## **Methodology**

### **Population and the sample**

The population was 94 Matthayomsuksa 2 students who enrolled in fundamental English course (EN 22101) at Banbuaradbamroong School, Sakhon Nakon province in the first semester of the academic year 2015.

The sample group was 32 students Matthayomsuksa 2/1 students at Banbuaradbamroong School in the first semester of the academic year 2015 using cluster random sampling selection.

### **Research Instrument**

Three research instruments employed in this research were as follows;

1. Lesson plans of English reading comprehension using START strategy including 12 units examining the correctness, appropriateness and revision. The score was analyzed for the Index of Item Objective Congruence (IOC) which was 1.00
2. An English reading comprehension ability test was the multiple-choice test with 40 items. The value of the Index of Item Objective Congruence (IOC) was between 0.33-0.76, the discrimination value was between 0.23-0.75, and the reliability test was 0.82
3. A students' attitude questionnaire towards teaching English comprehension using START strategy consisted of 20 items related to the contents using a five point rating scale. The value of the Index of Item Objective Congruence (IOC) was 1.00

### Data Collection

This research was conducted in the first semester academic year 2015 within 10 weeks, three-hour sessions, and thirty hours in total.

### Data Analysis

The data obtained from the English reading comprehension ability test and the students' attitude questionnaire towards teaching English reading comprehension using START strategy were statistically analyzed as follows:

1. The researcher analyzed data to study the English reading comprehension ability of Matthayomsuksa 2 students using mean (X), percentage, and standard deviation (S.D.)
2. The researcher analyzed data to study the English reading comprehension abilities of Matthayomsuksa 2 students before and after learning English reading comprehension using START strategy using t-test for Dependent Samples.
3. The researcher analyzed data to investigate students' attitude towards teaching English reading comprehension using START strategy using mean (X), and standard deviation (S.D.)
- 4.

### Result of the study

After the teaching program, the sample group took posttest, in order to study and compare scores on English reading comprehension ability before and after studying using START strategy of Matthayomsuksa 2 students in Banbuaradbumroong School. The findings are displayed in Table 1 and 2

**Table 1** A comparison of English comprehension ability scores prior to and after using START strategy of Matthayomsuksa 2 students

Test	N	X	S.D.	Average score	t
Pretest	32	17.75	2.66	47.38	
Posttest	32	28.63	2.00	73.56	14.05*

Table 1 illustrates the test students' pretest mean score on English reading comprehension ability was 47.38 percent and the posttest was 73.56 percent. The result show that prior before and after using START strategy were significantly different at the .01 level. The average scores after the lesson were significantly higher than prior before the lesson.

### Result of an investigation of students' attitude towards teaching English reading comprehension using START strategy

To study the effective of teaching English reading comprehension to students' attitude, the researcher examined student attitude towards English reading comprehension using START strategy. The attitude questionnaire utilized a five-point Likert's rating scale from 5 (strongly agree) to 1 (strongly disagree) the result presented in Table 2

**Table 2** Students' attitude towards reading comprehension using START strategy

Questionnaire	N	X	S.D.	Interpretation
Students' attitude towards START strategy	32	3.63	0.37	Good

As shown in table 2, the average scores of the overall students' attitudes towards START strategy were 3.63 and the standard deviation was at 0.37

### Conclusion

A comparison of English reading comprehension ability using START strategy of Matthayomsuksa 2 students in Banbuaradbumroong School can be summarized as follow:

1. The effectiveness of STRAT strategy on students' English reading comprehension ability of Matthayomsuksa 2 students in Banbuaradbumroong School with standard criteria 70 percent. The findings confirmed by the students' pretest score on English reading comprehension ability was 47.38 percent and the posttest was 73.56 percent. The effectiveness was higher than the standard criteria.

2. Students' attitude towards START strategy. The finding showed that students gained a positive attitude after experiencing the teaching program. The average score of the overall attitude was at 3.63 Overall, the students' attitude towards START strategy was greatly improved.

### Discussion

This study was an experimental research with a one group pretest-posttest design. It aimed to study and compare students' English reading comprehension ability before and after using START strategy and to investigate students' attitude towards teaching English reading comprehension using START strategy. The course syllabus was relevant to the local curriculum which promoted students to understand the text easier. Students were assigned to perform the tasks in pairs and in groups of four which encouraged them to engage in reading activities.

Student with high reading ability helped those with low reading ability and the activities provided the opportunities for low reading ability students to perform the reading ability with increased correctness. The research findings can be discussed as follows:

1. From the study and comparison of the English reading comprehension ability of Matthayomsuksa 2 students before and after using START strategy, it was found that the students' pretest and posttest scores on English reading comprehension ability were 47.38 percent and 73.56 percent, respectively. These findings were in accordance with first hypothesis. The findings indicated that the students' pretest score on English reading comprehension ability was at a low level. The reasons might be from the lack of knowledge of vocabulary and grammar of the students.

The students did not know how to relate any of schema knowledge to what they had known or they were not familiar with the texts. In addition, they did not know how to find the main idea because they could not find the important points. However, after the students learned English reading comprehension using START strategy, they improved their English reading comprehension ability. The students' posttest score on English reading comprehension ability was significantly higher than that of the pretest at .01 level. It can be stated that START strategy influenced students' reading comprehension ability. The results supported the START strategy of (Morgan, 2003) investigated the START strategy designed for the elementary school in America for improved the reading comprehension ability. The finding was that the START strategy provided to be effective in teaching. The students' posttest score was more than 70 percent.

2. The students' English reading comprehension ability after experiencing the program was significantly higher than that of the prior and more than 70 percent of students gained a higher score on posttest than pretest. These finding were accordance with the second hypothesis. According to the result of the study, the conclusions are as follow:

First, the reason might be START strategy could enhance students' English reading comprehension. They were never trained to perform tasks like these in an English language classroom although the teacher had them in discussion group also their background knowledge. When the reader read familiar texts, they could comprehend texts that fits to their schema which was they analyze and make conclusions. This findings confirmed by (Krashen, 1987) the Input hypothesis is Krashen attempt to explain how the learner acquires a second language how second language acquisition takes place. The Input hypothesis is only concerned with 'acquisition', not 'learning'. According to this hypothesis, the learner improves and progresses when he/she receives second language 'input' that is one step beyond his/her current stage of linguistic competence. For example, if a learner is at a stage 'i', then acquisition takes place when he/she is exposed to 'Comprehensible Input' that belongs to level 'i + 1'. We can then

define 'Comprehensible Input' as the target languages that the learner would not be able to produce but can still understand. It goes beyond the choice of words and involves presentation of context, explanation, rewording of unclear parts, the use of visual cues and meaning negotiation. The meaning successfully conveyed constitutes the learning experience.

Second, reading activities using START strategy had an effect on reading comprehension, especially questioning stage activities, student discussing and giving the opinion in their group also activated their schema knowledge before reading. With mapping outline, students were able to view sentences of the related supporting details clearly and they could write in their own words. For word cards, students were directly thinking about the relationship of the topic and paid attention to relevant content; whereas self-questioning encouraged students to predict content by drawing pictures and also to motivate the readers to read the text.

3. Students' attitude towards START strategy. The finding from the students' attitude evaluation indicated that START strategy could enhance students' attitude. The sample strongly agreed that they had fun and employed doing reading activities using START strategy also, they gained more comprehension while doing the reading activities which confirmed by (Dulay, Burt & Krashens, 1982) study in that attitudes and feelings are the main factors to help learners succeed in second language learning. The teaching program motivated them to participate in doing the activities. Moreover, they strongly agreed that English reading activities using START strategy provide them pleasure while reading. The students' attitudes towards START strategy were greatly improved.

The result of the study indicated that START strategy could enhance students' reading comprehension ability. The students gained more knowledge in their abilities to produce the target language both at school and their daily lives. Besides, they had a good attitude towards English. Their English language learning helped increase their effectiveness in the texts.

### **Acknowledgement**

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## The Development of Teaching and Learning with in the Higher Education Qualifications TQF via the Internet

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### Abstract

The purposes of this study were 1) to develop of teaching and learning with in the Higher Education Qualifications TQF via the Internet with the efficiency of 80/80 and 2) Educational achievement of students who have been learning management Integrated Course Introduction to Java programming. Population used in this research. Undergraduates Computer Education, Faculty of Education, Roi -Et Rajabhat University 3rd year first semester of academic year 2014 samples used in the study were obtained from the sampling one group of 24 people. The instrument used in this study were 1) management activities through the Internet. Introduction to Java Programming Course 2) achievement test. The statistics used for data analysis were percentage, average difficulty. And finding effective  $E_i / E_2$ . The results showed that 1) the effectiveness of management systems based instructional framework for Higher Education Qualifications TQF via the Internet. Effective as the standard criteria of 82.08 / 80.14 and 2) the achievement of students who have been learning a programming language integration courses from Introduction. The mean score of 80.14.

**Keywords:** e-Learning, Higher Education Qualifications Framework TQF.

### 1. Introduction

Current technology has advanced to relentless. Agencies or organizations Government and private development, processes and technology are required to ensure the implementation of a more efficient organization in the field of education is the same. It is evident that many schools have adopted various technologies to haves improve teaching and learning for their performance and teaching in general. Many universities also offer unparalleled quality and did not meet the standard. Therefore, to successfully manage the course and the standard comparable to other universities according to standards, a high standard of teaching is required. The old system of teaching looked to teaching. The only knowledge it mainly focused was on students. Forget that the teaching has to focus on many more. And many times that teaching is done. No follow-up The instructor can not see the development of learners has continued. And students can not keep up to the task, resulting



in continuous learning. So researchers have developed a system of teaching and learning within the Higher Education Qualifications TQF (instructor) Study college education, phones reviews with a focus on teaching and learning within the Higher Education Qualifications (TQF) by TQF focus on learning (Learning Outcomes) Students must have at least five areas: (1) the multiplication of fair ethics (2) side knowledge (3) intellectual skills (4) interpersonal skills and responsibility (5) skills, numerical analysis, communications, and information technology.

Teachers are evaluated by the quality of the students under the Higher Education Qualifications Framework (TQF), students can pursue academic performance has continued.

## **2. Research Objective**

- 1) To develop a system for teaching with in the Higher Education Qualifications Framework TQF via the internet with The efficiency of 80/80.
- 2) To study the achievement of students who have been learning management Integrated Course Introduction to Java programming.

## **3. Hypothesis of the Study**

- 1) Teaching Management System of Higher Education Qualifications Framework TQF through the Internet network offers efficiency of 80/80.
- 2) The achievement of students who have been learning management Integrated Course Introduction to Java Programming is an average score of 80 percent.

## **4. Literature Review**

**4.1** Burapa University has developed a database management system based on a standard framework TQF management system of university courses in the curriculum of all schools of the University. It is convenient to the Chairman of the course instructors, staff, courses, and dean university administrators in preparing the information courses. The track management action in the neck. and the overview of all courses within the University.

**4.2** Khon Kaen University The program has developed a database program based on the National Qualifications Framework for Higher Education, Khon Kaen University KKU-TQF- MIS or to the Information Systems Management Courses. The executive courses, and instructor and courses can be recorded online.

## **5. Research Methodology**

### **5.1 Population and Samples**

Population used in this research included 119 3<sup>rd</sup> year students in computer studies in the first semester of academic year 2014 Faculty of Education Roi Et Rajabhat University 4 the classroom learning the Java Programming Introduction to the four rooms into eight groups of mixed ability students.

The sample used in this study were students in Computer Studies Semester 1 Year 3 Year 2014 Faculty of Education, University of Roi Et. They were selected by random sampling. Selecting one sample group of 24 people by sex, 13 male and 11 female students.

## 5.2 Research Tools

Research tools consisted of the following two types of media:

- 1) Teaching Management System of Higher Education Qualifications Framework TQF via the Internet. Introduction to Java programming course takes 16 teaching lessons.
- 2) Achievement test Detailed visual introduction to the Java programming 30 items.

## 5.3 Statistical Analysis

The data into 2 categories as

- 1) Basic Average (mean).

- 2) The difficulty (p) and discrimination (r) of the test achievement. The formula.

E =  $\frac{\sum x/nx100}{A}$  (3) analysis was designed follows:  
Statistics, Percentage,

Formula 
$$P = \frac{R}{N} \quad (1)$$

The performance management system based instructional framework for Higher Education Qualifications TQF via the Internet.

$$D = \frac{Ru - RL}{N/2} \quad (2)$$

## 6. Research Results

This research is the development of teaching and learning within the Higher Education Qualifications TQF via the Internet. The Introduction to Java Programming, 3rd year Computer Education, Faculty of Education, Roi Et Rajabhat University. Students had to register to use the system as shown in Figure 1 and 2.



Figure 1 Login screen.



Figure 2 Check out the assessment criteria screen.

The result of the efficiency criteria 80/80 (E1 / E2) b of the education system within the Higher Education Qualifications TQF via the Internet, Course Introduction to Java Programming, 3rd year Computer Education major, Faculty of Education, and Phones reviews are shown in Table 1

Course	E1	E2
Introduction to Java Programming	82.08	80.14

The analysis of the performance management system based instructional framework for Higher Education Qualifications TQF via the Internet. Course Introduction to Java programming.

The result of the achievement of students who have been learning management integrated. Course Introduction to Java programming. Are presents in Table 2.

the experimental	N	X	%
Students are learning integrated. Course Introduction to Java	24	24.04	80.14

The analysis of the average of the achievement that has been integrated learning. Course Introduction to Java programming.

## 7. Discussion

The result of the development of teaching and learning within the Higher Education Qualifications TQF via the Internet. Course programming in Java, and introduction to 3rd year Computer Studies showed that 1) the teaching of the efficiency criteria was 80.08 / 80.14, and 2) the achievement of students has been handled. Integrated study was found. The average score of the students was 24.04 percent, according to figures, 80.14 Ket preset thresholds. These mean Teaching Management System of Higher Education Qualifications Framework TQF powerful enough to be used in teaching. This is consistent with research results of Chata treamvittaya (2545), was found teaching series Natural Environment for students The instruction set is the quality of the evaluation was good to very good. and effective criteria was 85/85.

Another factor that makes the teaching and learning within the Higher Education Qualifications TQF via the Internet. Course Introduction to Java programming. Performance criteria defined by farmers because the system is developed. Was conducted by the Higher Education Qualifications Framework level 5 on the instructor can set. Activities and forms of learning content as well as the training activities. Specifying various criteria To assess and

track student Each side has improved When the sampling group. The system of teaching the Higher Education Qualifications Framework TQF course Introduction to Java programming. Outperform 80/80 criteria and achievement are good. This is consistent with research results. Panarat Ka Rin (2546) studied the effects of learning by teaching Integration interlace results showed that plant. The average achievement of 84 per cent over the benchmark is set at 75 percent and the number of students who pass the standard set of 80 accounted for 90 percent.

## 8. Suggestions

### Any suggestions on bringing research results to the user.

1. Adoption management system based instructional framework Higher Education Qualifications TQF via the Internet. Course Introduction to Java programming. Teachers expect the King Consistency and appropriateness criteria based on qualifications frameworks, content and context of the learner. The maximum are available benefits.
2. Should provide an opportunity for students to ask questions. Understanding the Teaching Management System of Higher Education Qualifications Framework TQF via the Internet. In part that is not fully understood.
3. Students should note that the issues and questions asked are the information used to improve efficiency even more.

### Suggestions for next research

1. Should study the development of teaching and learning within the Higher Education Qualifications TQF via the Internet should be studied. In other subjects, and levels
2. In the next study, researchers should have studied the effects of the use of teaching and learning within the Higher Education Qualifications in other aspects such as customer satisfaction levels. Relations between home and learning outcomes. Attitude of the students after learning. The results were used to improve the learner.
3. Teachers should be encouraged to develop educational resources for teaching and learning within the Higher Education Qualifications TQF via the Internet. Integrated increase to train the students to the relations of things to learn in the classroom to real life and also a response to the shortage of teachers.

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## The Effective Teachers' Collaborative Working Model

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### Abstract

An emerging trend in education research is the use of social-behavior-organizational theory and methodology to understand how teacher collaboration or an effective teachers' collaborative working model can constrain teaching, learning and educational change. The article provides critical key factors to success teachers' collaboration on missing from multi-methodologies use. The literature is more explicit and holistic attention to diagnostic factors and intervention of importance by using documentary analysis, the two groups, non-experimental comparison design, factors analysis and model verification done by connoisseurship. Building on exemplary findings of the study revealed that the majority of the pattern of integration social-behavior-organizational theory among teachers may significantly enhance our understanding of the ways in which effective teachers'

collaboration takes place and contributes to the 21<sup>st</sup> century learning, collaborative practice, relationship and professional learning community, The emphasized of effective teachers' collaborative working model are all working to the same goal or outcome for an individual or project, communication skills, and problem solving development.

**Keywords** : teachers' collaboration, collaborative working model, 21<sup>st</sup> century skills, professional learning community

### Introduction

The educational reform paradigms to improve students' quality are emphasis on instructional process management, professional learning community development and practice that enable and encourage teachers to do the best work. The 21<sup>st</sup> century is widely discussed about educational to prepare students made significant change in role of educators and special teachers, especially related to inclusion and collaboration.

Developing effective collaborative working relationships is the most effective way to access the skills of staff members, it is also address the needs of students in school. Schools as the place of practice needs to pay closer attention to the students in order to prepare them to think, learn, communicate, and work together to live in ever changing world. Global society

has increasingly more complex. In many studies, management executives and professionals are responsible for problem solving in organization. Critical decision making and effective communication are necessary in every organization. In educational institutes, these skills are needed to include in the curriculum to prepare students for competitive adaptation in global society. "The 21<sup>st</sup> century skills", as increasingly well-known, are skills related to creativity, innovation, flexibility, adaptability, leadership skills, multiple intelligence, and active learning. The core 21<sup>st</sup> Century skills is challenge for teacher preparation program that emphasized to specific learning goals and objectives that move beyond content standards in the mission to prepare students for the needs of the 21<sup>st</sup> century world (Bransford, Brown, & Cocking, 1999; Garner, 2008; Trilling & Fadel; 2009). In its traditional, "technical compliance" container used to demonstrate standards. They are essential for engaging learning process. Collaborative working relationships which are based on interdependence, communication, problem solving, and decision on consensus are the main element in organization's mechanism. Collaborative working is a key element in servicing various learning profiles in school settings. Perhaps the most importance and cited advantage to collaboration is that it creates innovation and learning (Senge, 1990; Googins & Rochlin, 2000; Cohen and Mohrman (1995; 8) As in scholarship noted "Innovation occurs when difference perspective and knowledge based are joined, resulting in the reframing of problems and solution that would not have been likely or possible from within one perspective" Collaboration can also decrease costs and lead to greater efficiency (Googins & Rochlin, 2000; Hagadoorn, 1993). This also help address students concerns more quickly, thus creating greater efficiency and effectiveness. Service offered through organizations typically involves more time to resolve problem, sending the client to multiple locations, and often leads to incomplete or inaccurate resolution. Furthermore, collaboration often leads to learning among people who work together and hence can save professional development money and create greater efficiency as the staff in various units become more effective in conducting their work. Collaboration is an acknowledgement that it can create cost savings for certain organizational functions. Also, hierarchical organization trend to be a costly way of integrating complex work. Proliferation of managerial and control rules can also result in delays and lack of responsiveness as decisions have to move up the organizational chain. One of the least described advantages of collaborative organization is that employees trend to be more motivated, committed, and job satisfaction. Working in team can increase desire for personal development. Because individuals work on variety of projects of interest and share ideal with other people who are interested in similar initiatives, they tend to be more satisfied in their positions. In short, collaboration can lead to much greater effectiveness, efficiency. It enhances organization to be open and flexible, reflects on the principals of good practice, ultimate goal, and leads to a better work environment.



## **Rationale of the Study**

Quality of the population depends on the effectiveness of education. The Ministry of Education in Thailand aims to improve educational quality by reducing the difference quality of education, educational equality and inequality standard. Moreover, learners lack the skills in learning process to develop continuously. Educational reforms are carried out to study both systems and processes. National test data such as O-NET has shown the quality of education in Thailand as undesirable standard. It is clear that the results of the national tests of the students have lower scores than average nearly in all subjects. Accordance with the international quality students such as PISA, it is found that the efficiency trend of students aged of 15 years in science, math, and reading are too low comparing to international average. Nevertheless, Thailand lacks of the study of effective teacher and collaborative working. In addition, Ruth Paradiace, et al. have conducted pilot studies about the success in developing collaborative working practices for children with speech and language difficulties (2007; 223-236). It provides evidence that teachers were benefited from the project and they believed that the children, with whom they were working, had also benefited too. However, it is needed to gain information about the impact ways of effective teachers' collaboration to enable to be success in sustained student's quality improvement.

Researcher interests in problems and needs in order to develop the model of effective teachers' collaborative working for secondary schools under the Office of the Basic Education Commission, Ministry of Education. So that the knowledge can be applied to the model in actual practice in schools to improve the quality of teachers' collaboration and students' efficiency.

## **Research Questions**

### **How does the working model of effectiveness teachers' collaboration?**

- What are the effective teachers' collaborative working model in secondary school?

## **Purpose of the Study**

This research aims to develop an effective teachers' collaborative working model for secondary schools under the Office of the Basic Education Commission. Purposes are shown as follows;

- To create the effective teachers' collaborative working model for secondary schools.
- To determine verification of teachers' collaborative working model for secondary schools.

## **Significance of the Study**

The study will provide the following significance benefits:

- The collaborative working model to develop and guide the secondary schools.
- The executive gains the body of knowledge in school through the research process with accuracy and reliability.
- Prototype of collaborative working model in educational success will be beneficial to secondary schools to develop more effectiveness and higher efficiency.
- The secondary schools can take the collaborative working model's research results to guide their development in information system for the school's operational system.
- The model can be appropriately used in the school context, as a tool, to strengthened collaborative process development and to affect the students' quality.

### Research Boundary

Initially, research and developing of effective teachers' collaborative working model was scope for secondary schools under the Office of the Basic Education Commission, Ministry of Education in the Northeast Area. The scope of the study covers as follows.

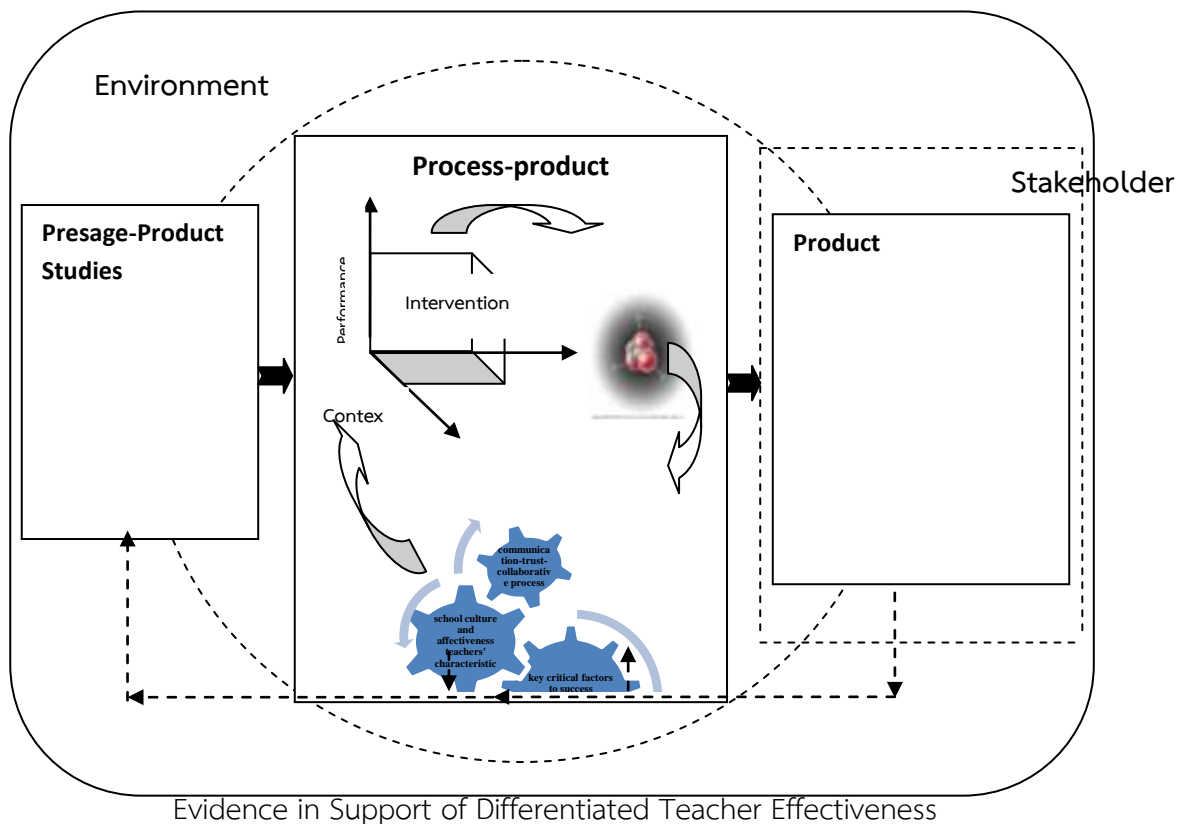
1. Variables in this study include of 4 major component , 22 Sub-component, and ninety-six indicators
2. Population and Samples are 933 schools and 40,098 principals and teachers under the Office of Basic Education Commission in the Northeast of Thailand
3. The teachers' collaborative working theoretical framework of the study applied from Jim Campbell, Leonidas Kyriakkides, Daniel Muijs and Wendy Robinson (2004) ; shown as diagram 1
4. Duration in research. The research will be conducted for 12 months.
  - 4.1 Stage 1: Validation of theoretical design and drafting documentary to develop preliminary conceptual framework of effective teachers' collaborative working model. Duration of 3 months by using document study and literature review, theoretical documentary analysis, and factors analysis; The preliminary conceptual framework shown as diagram 2
  - 4.2 Stage 2: With a factor analysis on Likert-type survey items will use as a data reduction tool by the two groups non-experimental comparison design. The two groups of samples are consisted of 288 school readers and 103 schools which received Royal King Prince during the academic years of 1998-2014 by the stratified random sampling and quota sampling methods. The analysis involve Varimax rotation and Kaiser normalization, which help to determine the ninety-six factors of teachers' collaboration and the Varimax rotation, the factors are orthogonal (uncorrelated) and independent from one another even if some

variable load on more than one factor. With the 103 sample size, loadings of at least 0.55 are considered important and used to determine which variables are included in a factor. ( $r = 0.30-0.70$ ) Extracted factors are examined and named based on an analysis of the instrument items which load on each one. Then, operators are used to create teachers' collaborative working model and manual in the duration of 2 months.

4.3 Stage 3: verification of the effective teachers' collaborative working model and presentation. This phase is done by connoisseurship, evaluation, and analysis within the duration for 3 months. The experts' verification involving 20 specialists which divided into 5 groups of educational by using connoisseurship.

4.4 Stage 4: Model improved and presentation. This stage is done by analysis experts' respectation and improve the effective teachers' collaboration working model within the duration for 3 months.

**Diagram 1** The teachers' collaborative working theoretical framework of the study applied from Jim Campbell, Leonidas Kyriakkides, Daniel Muijs and Wendy Robinson (2004)



## Research Methodology

### "Research & Development Design"

Research Approach and Rationale: A mixed method study attempts to understand the world from teachers' collaborative working point of view for secondary schools. The focus of this research is to integrate concept and theory about collaborative working, examining of teachers' collaborative working development in secondary school to understanding critical key factors to success effective teachers' collaboration and developing collaborative working model. The literatures are included; 1) meaning and value 2) relational theory 3) factors effort and 4) type and level of collaboration to the key components that influence collaborative working. The four stages and five steps of the study and informed organization framework are as follows;

**Stage 1: Document analysis and theoretical conceptual framework determining**

The focus of this research study is to create conceptual framework within theoretical concept. Researcher is determining on the understanding of the problem and the expectation of teachers' collaborative working for secondary schools. Study critical key factors to success the effective teachers' collaboration also focuses on developing collaborative working model and literature review.

**Data Collection:** Documentary analysis. I set out to complete my research during May-June, 2014. The data collection for the study includes as follow;

**Step 1:** Determining theoretical conceptual framework; determining teachers' collaborative working model and theoretical conceptual framework. The conceptual framework of the model is suggested by Mona Mourshed and others (2010). The defining critical key factors to collaborative working of key component's character.

**Stage 2: Analysis possibility factors and Creating Tentative Model:** The focus of this research study is to use the data factor analysis. Extract factors examined and named based on an analysis of the instrument items which load on each one. To know simplify expression of a particular sub-space in terms of just a few major items each. The actual coordinate system is unchanged, it is the orthogonal basis that is being rotated to align with those coordinates. The sub-space found with factor analysis. Then create tentative effective teachers' collaborative model. I also inspect revision and develop organizations of teachers' collaboration.

**Step 2 :**A factor analysis on Likert-type survey items by using questionnaires by the ways of the two groups, non-experimental comparison design.

- First, exploratory factor analysis; 288 samples for explore and preliminary determining variables.
- Second, confirmatory factor analysis; 103 samples for verification key component and factors

**Step 3 :** The analysis involve Varimax rotation and Kaiser normalization, which help to determine the 4 components and 23 factors of teachers' collaboration and the Varimax

rotation.

- factor analysis for significance verification, confirmation and improving tentative model
- determine the twenty-three factors of teachers' collaboration and the factors are orthogonal (uncorrelated) and independent from one another even if some variable load on more than one factor. With 103 sample size, loadings of at least 0.55 are considered important and used to determine which variables are included in a factor. ( $r = 0.30-0.70$ ) Extracted factors are examined and named based on an analysis of the instrument items which load on each one

**Data Collection and Factor Analysis.** The secondary schools are the target group of the research study. They are selected by stratified random sampling and quota sampling method from the secondary schools under the Office of Basic Education Commission. Population consists of 988 schools in the Northeast of Thailand. Sample consists of two groups, non-experimental comparison design consists of First 288 schools leader and the Second are 103 schools which received Royal King Prince during the academic years of 1998 to 2014. Key information consists of principals or vice deputy, head of academic department, teachers, and stakeholders. I create questionnaires for depth understanding of effective teachers' collaborative working point of views for secondary schools.

### **Stage 3: Verification and creating the effective teachers' collaborative working model**

The focus of this stage is to verification, to create the effective teachers' collaborative working model by the ways of connoisseurship 20 experts. The evaluation focuses on critical key factors, body knowledge of key component, and indicators of the discussion. Record is done by the use of an audiotape recorder which enables us to concentrate on the topic. The words, voice intonation and tone become a permanent record that was replayed for re-listening and clarification. I transcribe the entire tapes to consider and review the protocol for ensuring quality in tape recorder and transcription. After that data are analyzed by the interpretation of the content and then making the conclusion.

**Data Collection:** Content analysis. I set out to complete my research during October, 2015-April, 2016. The data collection for the study includes step as follows;

**Step 4** evaluating the teachers' collaborative working model by experts;

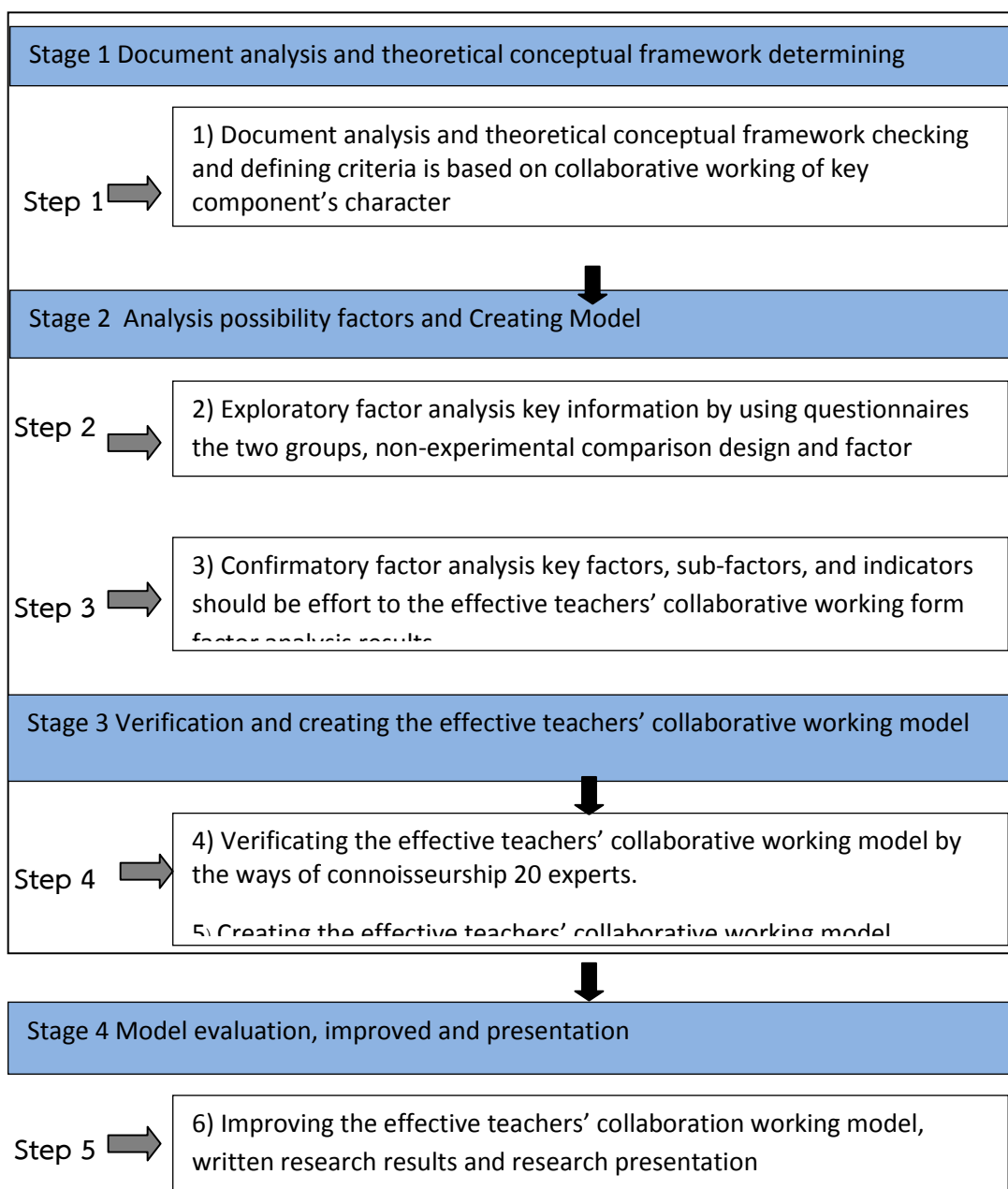
- creating tools (check list)
- connoisseurship and data analysis
- Conclusion the effective teachers' collaborative working model

**Stage 4 Model Improved the effective teachers' collaborative working Model and presentation;**

**Step 5** evaluating the teachers' collaborative working model by experts;

- Improving the effective teachers' collaborative working model
- Summarize the research results
- Writing research report
- Published research articles and presentations.

**Diagram 2 Stage, Steps of Research & Development Research Design**



## Preliminary Research Result

The Effective Teachers' Collaborative Working Tentative Model: ETCW Model;  
 preliminary recent study result

### ETCW Tentative Model Scaffolding

#### Part 1 Rationale

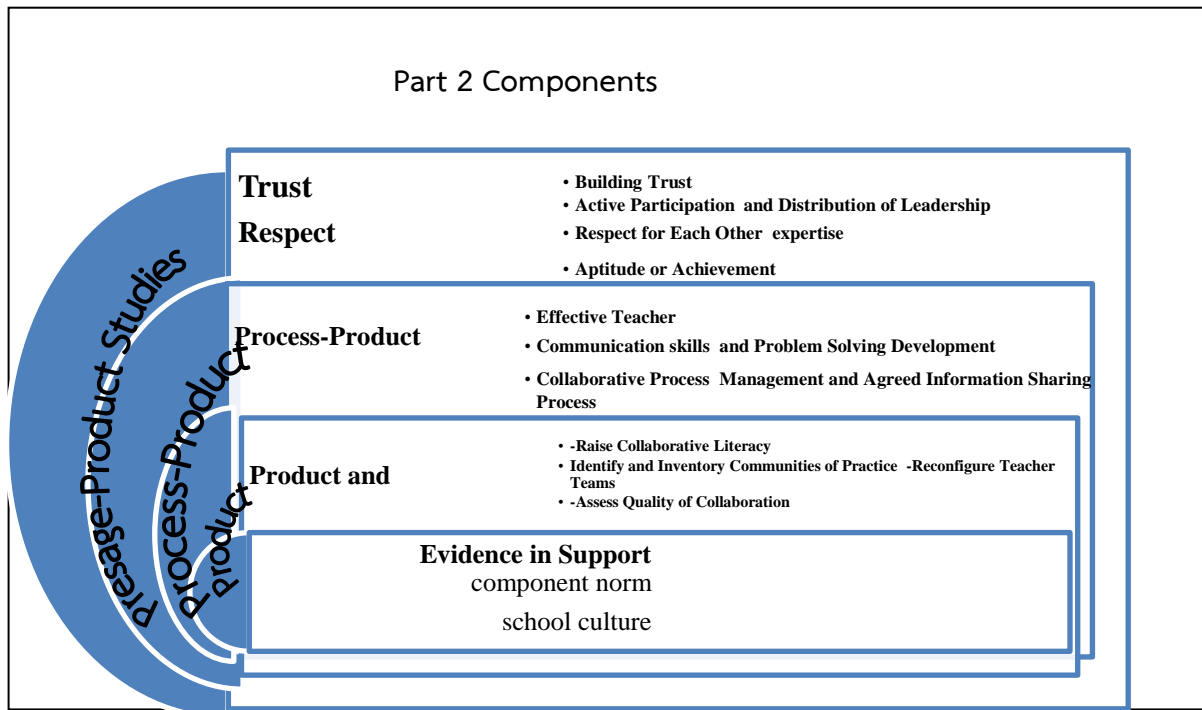
1. Principle and Rationale
2. Concept and Principle of Model
3. Objective
  - 3.1 Major expectations
  - 3.2 Desired outcome form the Collaborative Work

#### Part 2 Components

Major components

Presage-Product Studies	Process-Product	Product	Evidence in Support
-Trust and Relationship	- All Working to the Same Goal or Outcome	-Raise Collaborative Literacy	- Components, Norms, and School Culture
-Respect for Each Other expertise	for an Individual or Project	-Identify and Inventory Communities of Practice	- Encouragement and Constructive Management of Conflicts
-Aptitude or Achievement	-Communication skills and Problem Solving Development	Reconfigure Teacher Teams	-Empowerment building strong collaboration and Team
-Active participation and Distribution of Leadership	-Collaborative Process Management and Agreed Information Sharing Process	-Assess Quality of Collaboration	
		-Make Correction	
		-Recognize Accomplishments	

Diagram 3 ETCW Tentative Model Components

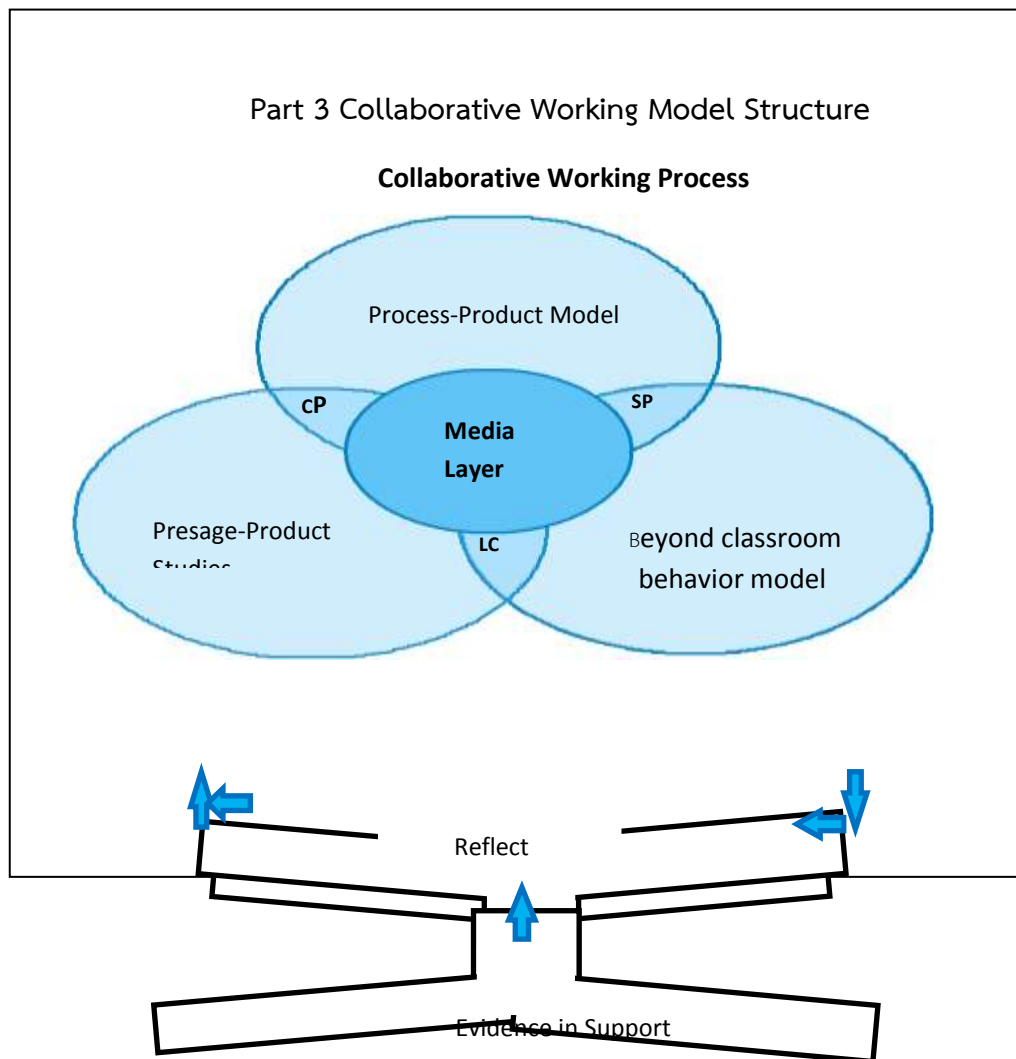


### Part 3 The Effective Teacher Collaborative Working Structure

The Effective Teachers' Collaborative Working Model: ETCW Tentative Model  
 Shown as diagram 4



Diagram 4 The Effective Teachers' Collaborative Working Model: ETCW Tentative Model Structure



#### Part 4 Implementation

- 4.1 Implementation Integrity
- 4.2 Intention for Implementation

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## Variables Affecting the Creativity of Undergraduate Students at Nakhon Ratchasima Rajabhat University

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### Abstract

This descriptive research aims to investigate the construct validity of selected variables affecting the creativity of undergraduate students at Nakhon Ratchasima Rajabhat University. Seven hundred and sixty students participated in this study. They were tested on items relating to their creativity. The results show that executive administration, teaching, instructional attitudes, motivation, and personality variables affected the creativity of the undergraduates. Creativity consisted of originality, fluency, flexibility, and elaboration. All factor loadings were over .30. After confirmatory factor analysis on creativity, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.51$ ,  $df=1$ ,  $p\text{-value}=0.47497$ ,  $RMSEA= 0.000$ ). This shows that creativity measured by the creativity test is in accordance with the empirical data. Executive administration consists of policy, mission, and identity. Teaching consists of objectives, content, activity, and evaluation components. Instructional climate consisted of support, acceptance and participation. Motivation consists of needs, drives, and satisfaction. Personality consists of freedom, trust, and self-esteem. The results of the CFA indicate that each construct was well represented by the items used for the measurements.

**Keywords:** Creativity, Factors of Variables

### Introduction

The National Education Act of BE1 2542 encourages the learning process by means of thinking practice and problem solving both of which contribute to creativity. The aim of the curriculum focuses on the creativity and thinking skills of the students (Kosum et al., 2006). The Education

Development Plan (BE 2545-2559) aims to develop Thailand into a moral society in which learning and problem solving contributes to a creative society. Students should develop three core skills, including learning skills, life skills, information and technology skills, which are collectively known as the skills of the 21st century (Trilling & Fadel, 2009). Systems thinking 'promotes the understanding that business and human life are systems, where single components affect the other elements of the set. Too many people focus on "snapshots of isolated parts" and, in effect, do not see the forest for the trees. Systems thinking integrates all

five disciplines into an organized structure (Senge et al., 2009). The Higher Education Development Plan No. 11 (BE 2555-2559) focuses on producing graduates of quality, with the potential to meet the needs of society, the ability to think critically, to communicate and work together with others with moral responsibility, and a healthy body and mind. This includes the development of teachers with expertise in teaching and research to ensure that graduates achieve the sustainability of the society (Office of the Education Council, 2013).

Creativity is the key to resolving or managing problems effectively. Many educators agree that the idea works very well. Creativity is the most important factor of all. Such new discoveries will benefit people's livelihoods (Torrance, 1994). A consortium led by psychologist Anderson (1996) shows that this leads to a new type of behavior. This is reflected in the 21st century with new verbs associated with Bloom's Taxonomy with which we are now all familiar. For example, changing verbs to describe different levels of behavior, and putting together different ideas or elements can lead to original ideas and more creative thinking.

Creativity can be promoted and developed, both directly and indirectly, but it cannot be forced. Everyone is creative in themselves and thus creativity can be developed in both children and adults. It does not require much thought, only a growth in nerve fibre. There are several factors that may be the main reason for the creative development of students, such as executive management, teaching, instructional climate, motivation, and personality.

Nakhon Ratchasima Rajabhat University is comprised of six faculties: the Faculty of Education, The Faculty of Humanities and Social Sciences, The Faculty of Industrial Technology, and The Faculty of Health Sciences. The students are both male and female and total of 20,615 people, aged between 18-25 years. The programme is for a period of 4 years, except for the Faculty of Education, where students must study for 5 years. Nakhon Ratchasima Rajabhat University has a policy about the quality of its graduates. Its vision is to be a leader in education, to train teachers and education personnel, and promote research into local development. Thus, the aim is to enhance the quality of people and society so that they have the potential to compete both nationally and internationally. Its mission is to produce graduates with knowledge and of sound morality. The creativity of students is an important feature that will strengthen the community in its work and benefit local development. The academic staff at the university play a primary role in teaching and research in line with the National Education Act BE 2542 and the policy of the university is to promote the creativity of the students. We therefore studied the causal model of the variables that influence the creativity of the undergraduates at Nakhon Ratchasima Rajabhat University. On this basis we intend to draw up a plan which will develop the creativity of the students and which may also be used as information to find solutions to the various problems experienced by students, administrators, faculty, families and society. Further collaboration with all those involved may be necessary.

## Materials and Methods

The study was conducted in two phases. The first phase was to investigate the variables affecting creativity through documentary analysis and by focusing on group discussions. The second phase was to investigate the construct validity of factors of the selected variables.

### The Sample

In the first phase, nine experts from both inside and outside Nakhon Ratchasima Rajabhat University took part in a group discussion. All the experts met the following requirements: they were doctoral holders on curriculum and instruction, or curriculum research and development, or educational measurement and evaluation, or educational administration, or experienced in using creativity measurements, or have been teaching for at least one year at tertiary level. In the second phase, respondents were 760 regular undergraduate students selected by stratified random sampling by their faculty. Among the 760 respondents, there were 190 male (25%) and 570 female (75%). The respondents' age ranged from 18 to 23 years and the average age was 21 years.

### Instrument

The instruments used in this study were a creativity test with a reliability of .914 and a questionnaire on variables affecting creativity with a reliability of .925, .949, .941, .899, and .925, such as executive administration, teaching, instructional climate, motivation and personality, respectively. In order to facilitate the collection of data, the researcher conducted creativity tests and distributed hard copies of a questionnaire to the students. The creativity test consisted of 4 dimensions, namely originality, fluency, flexibility, and elaboration. The questionnaires which included 66 items, were collected from 760 respondents through a self-designed five-point Likert scale (ranging from Strongly Agree-5 to Strongly Disagree-1). A reliability test was conducted to measure the consistency of the measuring instrument. The reliability of the measures was assessed with the use of Cronbach's Alpha. Cronbach's alpha reliability estimates are used to measure the internal consistency of the scales. As a general rule a coefficient greater than or equal to 0.70 is considered acceptable and is a good indicator of reliability.

### Data Analysis

The data collected were refined and processed by SPSS 16.0 software. Several methods of analysis were used in this research to find out and test the impact of the variables affecting creativity. After assessing the reliability of the measurements by Cronbach Alpha and the coefficient, then removing unreliable variables, confirmatory factor analysis was used. This method is very useful in determining the construct variables for the research as well as in finding the relationship between them. The researcher used confirmatory factor analysis for all

6 measurement models consisting of creativity, executive administration, teaching, instructional climate, motivation, and personality in order to investigate the construct validity of factors for each latent variable to establish the true factors in accordance with the theories of LISREL 8.80.

## Results

3.1 The variables affecting the creativity of undergraduates at Nakhon Ratchasima Rajabhat University consisted of executive administration, teaching, instructional climate, motivation, and personality.

### 3.2 The Construct Validity of Variables

3.2.1 Creativity consisted of originality, fluency, flexibility, and elaboration components. All factor loadings were over .30. After confirmatory factor analysis on creativity, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.51$ ,  $df=1$ ,  $p\text{-value}=0.47497$ ,  $RMSEA= 0.000$ ). This shows that creativity measured by the creativity test was in accordance with empirical data.

3.2.2 Executive administration consisted of policy, mission, and identity components. All factor loadings were over .30. After confirmatory factor analysis on executive administration, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.00$ ,  $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that the executive administration measurement model was in accordance with the empirical data.

3.2.3 Teaching consisted of objectives, content, activity, and evaluation components. All factor loadings were over .30. After confirmatory factor analysis on creativity, the results indicated an acceptable goodness-of-fit ( $\chi^2 = 5.49$   $df=2$ ,  $p\text{-value}=0.06441$ ,  $RMSEA= 0.048$ ). This shows that the teaching measurement model was in accordance with empirical data.

3.2.4 Instructional consisted of support, acceptance, and participation components. All factor loadings were over .30. After confirmatory factor analysis on creativity, the results indicated an acceptable goodness-of-fit ( $\chi^2 = 0.00$   $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that the instructional climate measurement model was in accordance with the empirical data.

3.2.5 Motivation consisted of needs, drives, and satisfaction components. All factor loadings were over .30. After confirmatory factor analysis on motivation, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.00$   $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that motivation measurement model was in accordance with the empirical data.

3.2.6 Personality consisted of freedom, trust, and self-esteem. All factor loadings were over .30. After confirmatory factor analysis on personality, the results indicated an acceptable goodness-of-fit ( $\chi^2 = 0.00$   $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that the personality measurement model was in accordance with the empirical data. The results of the CFA indicate that each construct was well represented by the items used in the measurements.



## Discussion

The research findings are shown as follows:

4.1 The results revealed that executive administration, teaching, instructional climate, motivation, and personality variables affected the creativity of the undergraduate students at Nakhon Ratchasima Rajabhat University. The discussion of each variable is as follows:

4.1.1 Executive administration was found by the experts in the group discussion to affect the creativity of undergraduate students at Nakhon Ratchasima Rajabhat University because, as the academics pointed out, it is the management of the affairs of an organization, such as a business or institution, the duty or duties of an administrator in exercising the executive functions of his position in all university activities. There are three major components to executive administration: policy, mission, and identity. Policy is a set of ideas or a plan for action followed by a dean, head of department, or a group of faculty in the university. For example, policy has an effect on creating educational opportunities, improving the quality of graduates, the training and development of teachers and education personnel, developing the university towards excellence, and strengthening the community. Mission is a written declaration of a university's core purpose and focus that normally remains unchanged over time. For example, the university provides various activities to promote and develop the creativity of the students. Identity means who a person is, or the qualities of a person or group that make them different from others or the state of having unique identifying characteristics held by no other person or thing. Nakhon Ratchasima Rajabhat University's identity is depending on its local settings.

4.1.2 Teaching is the activities of the faculty which are comprised of 5 main factors, such as behavioral objectives, subject matter, instruction, evaluation, and improving teaching. Behavioral objectives can be defined in terms of students' learning the forms of self-expression or acts that can be observed. Subject matter means knowledge, learning experience, practical skills, attitudes, values, process, the preliminary ideas, concepts, and thinking systems. Instructional activity is the lesson plan which needs to be implemented. Instructional evaluation is examination of all data learnt by the learner so that their learning progress can be assessed. Instructional improvement means correction, change, encouragement for development, learning, and perception of change. Academics and researchers who have examined the factors of variables affecting the creative thinking of undergraduate students are, for example, Vilaipis (2004), Samakwong (2005), Veerachareonkij (2006), Boonwan (2009), and Yokubon (2012).

4.1.3 Motivation is defined as the process that initiates, guides, and maintains goal-oriented behaviors. Motivation is what causes us to act, whether it is getting a glass of water to reduce thirst or reading a book to gain knowledge. There are three major components to motivation: needs, drive, and satisfaction. Need is a motivating force that compels action for its satisfaction. Needs range from basic survival needs (common to all human beings) satisfied by

necessities, to cultural, intellectual, and social needs (varying from place to place and age group to age group). Needs are finite, but in contrast, wants (which spring from desires or wishes) are boundless. For example, to develop the creativity of the students requires a response in terms of their expectations and their desire to continue their studies. Drive is the desire for self-actualization, need for achievement, belongingness, and status, and other such motivations based on thought patterns and social influences instead of on fundamental biological needs (food, security, and procreation). For example, students are encouraged by teachers and friends to develop their creativity on a regular basis. Satisfaction is the level of approval when comparing a product's perceived performance with his or her expectations. Also it could refer to discharge, extinguishment, or retirement of an obligation to the acceptance of the obligor, or fulfillment of a claim. While satisfaction is sometimes equated with performance, it implies compensation or substitution whereas performance denotes doing what was actually promised. For example, students have positive feelings toward themselves when they achieve creative development. Academics and researchers who have investigated the motivation variable affecting creative thinking of undergraduate students include Panjamawat (2005), Paksanchai (2008), Boonwan (2009), Yokubon (2012), Sternberg (1999), and Niu & Sternberg (2003).

4.1.4 Personality is the combination of characteristics or qualities that form an individual's distinctive character. There are three major components to personality: personal freedom, self-confidence and self-esteem. Freedom stands for something greater than just the right to act, it also stands for securing for everyone an equal opportunity for life, liberty, and the pursuit of happiness. For example, students feel that they can develop their creativity, in spite of the requirements of the university. Self-confidence means reliance on the integrity, strength and ability of a person or thing; self-confidence reflects a person's overall subjective emotional evaluation of his or her own worth. It is a judgment of oneself as well as an attitude towards oneself. For example, students believe that they have the potential to be able to do a good job of work. Self-esteem encompasses beliefs and emotions such as triumph, despair, pride, and shame. Self-esteem is the positive or negative evaluations of the self, as in how we feel about ourselves. Self-esteem is attractive as a social psychological construct because researchers have conceptualized it as an influential predictor of creativity. Self-esteem can apply specifically to a particular dimension or a global extent. Psychologists usually regard self-esteem as an enduring personality characteristic, though normal, short-term variations also exist. Synonyms or near-synonyms of self-esteem include: self-worth, self-regard, self-respect, and self-integrity. For example, students think that they have been accepted by the people in a society that is creative. Academics and researchers who viewed the personality variable affecting the creative thinking of undergraduate students include Panjamawat (2005), Boonwan (2009), Niu & Sternberg (2003).

4.1.5 Instructional attitude is an aspect of the educational environment defined by the characteristic demands of the classroom as perceived by the students to whom they are directed. There are three major components to instructional attitude: the teacher's support, the teacher's acceptance, and the student's participation. A teacher's support means to give help give encouragement to students because teachers want him or her to succeed. For example, a lecturer gives students assistance and guidance in activities which will develop creativity. Instructors focus on creative development activities resulting from the needs of students. A teacher's acceptance means the act of taking or receiving something offered, or giving it a favorable reception or approval. For example, instructors express an appreciation of the success of their students in their creative development. A student's participation means an act or instance of participating, the fact of taking part, as in some action or attempted action of students. Students participate in the evaluation of their creativity and in the planning of creative development activities. Academics and researchers who investigated instructional attitude as a variable affecting the creative thinking of undergraduate students include Samakwong (2005), Panjamawat (2005), and Boonwan (2009).

#### 4.2. The Construct Validity of Variables

4.2.1 Creativity consists of originality, fluency, flexibility, and elaboration. All factor loadings were over .30. After confirmatory factor analysis on creativity, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.51$ ,  $df=1$ ,  $p\text{-value}=0.47497$ ,  $RMSEA= 0.000$ ). This shows that the creativity measured by the creativity test is in accordance with the empirical data. Creativity can be divided into divergent and convergent thinking, although the researcher argues that essentially the same processes are involved in both. Divergent thinking is measured using the Torrance test of creative thinking (TTCT). TTCT consists of both verbal and figurative parts. Divergent thinking is also measured by Guilford's Alternate Uses Task in which one has to come up with as many uses as possible for a common household item, such as a brick. These creativity test results are scored keeping in mind a number of different creativity criteria. The most common (common to all of the above) criteria are: Flexibility, which captures the ability to cross boundaries and to make remote associations. This is measured by the number of different categories of ideas generated; Originality which measures how statistically different or novel the ideas are compared to a comparison group. This is measured by the number of novel ideas generated; Fluency, which captures the ability to come up with many diverse ideas quickly. This is measured by the total number of ideas generated; Elaboration, which measures the amount of detail associated with an idea. Elaboration means focusing on each solution/idea and developing it further. Academics and researchers who investigated creativity as composed of four components include Rojsuparat (2004), Panmanee (2007), Moonkam (2007), Dalton (1988), and Guilford (1991).

4.2.2 Executive administration consists of policy, mission, and identity. All factor loadings were over .30. After confirmatory factor analysis on executive administration, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.00$ ,  $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that the executive administration measurement model is in accordance with empirical data. Thus, all three factors must be true components of executive administration that reflection on the management of administrators with regard to university policy, mission, and identity. All of these variables have an effect on the creative activities of the students.

4.2.3 Teaching consists of objectives, content, activity, and evaluation. All factor loadings were over .30. After confirmatory factor analysis on creativity, the results showed an acceptable goodness-of-fit ( $\chi^2 = 5.49$   $df=2$ ,  $p\text{-value}=0.06441$ ,  $RMSEA= 0.048$ ). This also shows that the teaching measurements are in accordance with the empirical data. Thus, all four factors are the true components of teaching that reflect on teaching such as when a teacher asks students to explain the characteristics of what has been studied.

4.2.4 Instructional attitude consists of support, acceptance, and participation. All factor loadings were over .30. After confirmatory factor analysis on creativity, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.00$   $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that the measurements of instructional attitude model are in accordance with the empirical data. Thus, all three factors are true components that reflect on instructional attitude, such as the teacher provides a lot of materials to the students to help them with their studies and the teacher makes the students feel free to ask questions and share ideas in the classroom.

4.2.5 Motivation consists needs, drives, and satisfaction. All factor loadings were over .30. After confirmatory factor analysis on motivation, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.00$   $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that the measurements of the motivation model are in accordance with the empirical data. Thus all three factors are true components that reflect on motivation, such as the more difficult the problem, the more a particular student enjoys trying to solve it, curiosity is the driving force behind much of what such a student does.

4.2.6 Personality consists of freedom, trust, and self-esteem. All factor loadings were over .30. After confirmatory factor analysis on personality, the results showed an acceptable goodness-of-fit ( $\chi^2 = 0.00$   $df=0$ ,  $p\text{-value}=1.00000$ ,  $RMSEA= 0.000$ ). This shows that the measurements of the personality model are in accordance with the empirical data. Thus, the results of the CFA indicate that each construct is well represented by the items used in the measurements. Therefore, all three factors are true components of the model that reflect on personality, for example, the students' feeling that they can develop their creativity in spite of the restrictions of the university and the students' belief that they have the potential to be able to do a good job of work in the future.

## 5. Conclusions

The executive administration, teaching, instructional climate, motivation, and personality were major variables affected the creativity of the undergraduate students at Nakhon Ratchasima Rajabhat University. Each variable consisted of particular factors with construct validity. As a result, the results showed an acceptable goodness-of-fit. Regarding the CFA, each variable has construct validity which well represented by the items used in the measurements. Hence, the university, instructors, parents as well as students, should play their key roles to promote students' creativity.

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## AN ANALYSIS OF TEACHER'S DIRECTIVE SPEECH ACTS AND STUDENTS' RESPONSES BY GENDER

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### ABSTRACT

This study has threefold. First, to analyze the types of directive speech act used by the teacher; second, to investigate male and female students' responses of the teacher's directive speech act and third, to find out the reason from male and female students' responses toward teacher's directive speech act. The subjects of the study were the teacher and the students at vocational high school in Subang, Jawa Barat, Indonesia. The data for this naturalistic descriptive qualitative study were collected through classroom observation and questionnaire that were then analyzed by following Miles and Huberman's (1994) interactive cyclical model. The result of this study shows that there are nine types of directive speech act that used by teacher in the classroom activity, that are types of request, command, order, please, prohibit, invitation, urge, permission and permit. Then, it shows that male students responses toward teacher's directive speech acts in the classroom activity is 84,3% preferred responses and 15,2% dispreferred responses. It also shows that female students responses toward teacher's directive speech acts in the classroom activity is 88,1% preferred responses and 11,9% dispreferred responses. The last result is the reason of students' responses to the teacher's directive speech act. This result shows that there are many reasons of male and female students' in conveying preferred and dispreferred responses based on the types of directive speech acts.

**Key words:** Directive speech act, teacher, male, female, students' responses

### Background

Linguistic is the scientific discipline about language. There are some branches of linguistic in this course. They are phonetic and phonology which study about speech and vocal sound. So, Morphology and syntax which studies about concerning a form of words and conceiving a form of words into phrase or sentence, whereas semantic is a branch of linguistic describing words sentences. While pragmatic has a different definition than Stalnaker (in Tarigan 1986) made a simplified definition about the difference between syntax, semantic, and pragmatic. Syntax analyses a sentence; semantic analyses a preposition, whereas pragmatic is an analysis of linguistic act and the context. Tarigan (1986) conclude



that pragmatics is the study of meaning in relation to speech situation. Pragmatic is consists of several aspects. Those are deixis, presupposition, conversational implicature, conversational structure and speech acts. Speech acts is one aspect of pragmatic. Speech act is a central point of pragmatic. In communication, we use utterances in acting that is known as speech acts. Curtis and Hagan (2003) stated that the teaching is carried out by language that is known widely as classroom speech act. Speech act define by Searle (1979) as the basic unit of language, the production of a token in the context of a speech act. There are three kinds of speech act: locution, illocution and perlocution. A locution is an act to say something. Illocution is an act to do something and perlocution is an act that has a physiological effect to the hearer. In the classroom interaction, there are some problems in teachers' speech act. Some teachers felt that theirs students didn't obey their order and they thought the students lazy, didn't understand. In order the teacher and student can understand each other in the classroom interaction, so this research tries to find out the different between male and female response toward the teacher's directive speech act and get new finding research about type of teacher directive speech act. So the objectives are to discover the types of teacher directive speech and to investigate male and female students' response of the teacher's directive speech act in the classroom activity.

### **Speech Act**

Speech act theory originally introduced by a leading philosopher in Harvad University named John L. Austin. There are several previous assumptions said that someone who declares a sentence only intends to express something, which means has no other function than just stating something. However, Austin stated that someone who is declared the speech was not just expressing information, but also performs such an act. Then he poured entirely on a first book entitled *How to do Things with word*. The discussion then became very popular and interested. Austin (1962) stated that in someone utters a sentence not only say one thing but also perform an action. But the new theory became famous in linguistic studies after Searle (1969) published a book called *Speech Act and Essays in the Philosophy of Language*. As described by Austin that the language can be used to perform actions through the distinction between sentence statement (Constative) that describe or report on the events and circumstances in the world. Performative sentences are not 'describe' or 'report' or 'declare' any. Then the statement of the sentence is part of the action that is usually not described as an action to do something. Searle and Vanderveken in Potts (2011) said that one of the most widely studied connections between computational linguistics and pragmatics is speech-act theory. The speech act is a form of speech elements forming. Speech acts can be stated as all acts which we do through speaking, everything we do when we speak. However, this definition is too broad for most purposes. The language used to build bridges of understanding, political forces, to declare the argument, to communicate



information to each other, to entertain, to provide criticism and suggestions. A narrow sense of the speech act can be expressed as the smallest unit of a language that has a communication function with individual shows symptoms, psychological, and survival depends on the ability of speakers to produce a sentence with certain conditions. According to Austin (cited in Albantany, 2013) proposed that people do not just use language to say things, but to do things by performing actions. That's why Speech act theory explains how speakers use language to accomplish the actions and how hearers guessed the meaning form what is said. Although speech act studies are now considered a sub-discipline of cross-cultural pragmatics, they actually take their origin in the philosophy of language. A philosopher named Austin stated there are over 1000 verbs that according to speech act. Mentions some verbs such as ask, request, lead, need, ordered, command, suggest, pleading with so (beg), demand (plead), all of which mark the speech act as (cited in Muqsith 2012). In other words, speech acts are not simply equivalent to the verb that describes them.

### **Speech Act meaning**

Searle (1969) suggests that there are three types of actions that can be realized by a speaker the locution, illocution, and perlocution.

#### **Locution meaning**

Locutions speech acts are speech acts which are intended to express something; acts pronounce something with words and meaning of the sentence in accordance with the meaning of that word in the dictionary and the meaning of the sentence according to the rules of syntax. Locutions can be regarded as the act of saying something or the literal meaning of what is said. This why Nadar (2008) said that it less important in the study of speech acts because locution is easy to identify because this type gives the real meaning of a language convey by the speaker. An example of speech act locutions is when someone says "my body is tired". A speaker of speech does not refer to a specific purpose to the hearer. This narrative implies that the speaker is in a state of extreme fatigue, with no intention of asking for attention by way of example massaged by the hearer. Speakers only reveal the situation being experienced at that time.

#### **Illocution meaning**

Rohmadi (2004) revealed that illocution acts are speech acts which serve to tell or inform something and used to do something. An example of illocution speech act is "hot air". These have the intent that the utterances of the speakers asked that the door or window is opened immediately, or ask the hearer to turn on the fan. So it is clear that the speech contains a specific intent addressed to the hearer. Here is brief explanation of

Illocutionary act: *'It's hot in here'* could be, an indirect request for someone to open the window and an indirect refusal to close the window because someone is cold. A complaint implying that someone should know better than to keep the windows closed (expressed emphatically). An example of illocutionary speech act is "hot air". This supports the notion that speech the speaker asked that the door or window is opened immediately, or asks the hearer to turn on the fan. So it's clear that the speech contains a specific intent addressed to the hearer.

### Perlocution meaning

Perlocution is the act performed by saying something in a particular context. It represents the change achieved each time, in a particular context. Depending on the kind of perlocution, different conditions have to hold in order for it to be achieved. For example, the addressee in the salt example has to realize that the speaker's intention is to ultimately get hold of the salt. Another example: *'It's hot in here'* could result in someone opening the windows. A speaker pronounced often has the effect or the effect (per locution force). Effect produced by saying something that is by Austin called per locution. Effects or narrative power that can be generated by speakers intentionally may also inadvertently. Speech acts which are intended to influence the hearer is an act per locution.

### CLASSIFICATION OF SPEECH ACT

According to the explanation of speech act meaning, Yule, (1996) classification a speech acts, there are: representatives, commissives, directives, declaratives, and expressive. A representative acts are acts of language that explains what and how something is as it is, for example, states acts, demonstrate, and explain acts. Levinson (1983) provide an understanding of the speech act acts as a representative to convey the true proposition. Yule (1996) explains that representative is speech act stated by the speaker is the case or not. Here are the examples, The earth is flat, Chomsky didn't write about peanuts, It was warm sunny day. At a time using a representative, speakers match the words with the world. A commissive is a speech act that binds speakers to carry out all the things mentioned in the utterance, for example, swears, promise, threaten, and expressed capability, vows. Yule (1996) stated that commissive is the type of speech act which can be understood by speakers to attach on the future actions. An example of speech acts commissive is *"I'll be back"*. This short example showed that the speaker tried to make a compliment or in this case the speaker tried to adapt itself to the world. A directive is a speech act, where the speaker requests the hearer to carry out some action or to bring about some state of affairs. Directive speech act also known as speech act impositive. Examples are "Help me fix this task". The examples included in the directive type of speech act because it is spoken

utterances intended speakers that perform appropriate actions mentioned in the speech and help improve task. Directive speech is an indicator of the existence of an action taken by the hearer after hearing the speech. A declarative is a speech act; intended speakers to create things (the status, condition, etc.) are new. This speech act is also called a decision. Are included in this type of speech is the speech with impressive purpose, decide, cancel, prohibit, grant, permit, classify, lifting, forgive, forgive. Declaration speech act can be seen from the following example.a) "Mother does not buy toys." (Cancel) b) "The police forgive the prisoner." (Forgive) c) "I decided to teach at my high school almamater." (Decided). An expressive is a speech act, the purpose of which is to express the speaker's attitude about some state of affairs. This speech act is also called evaluative speech acts. The speakers are meant to be interpreted as an acts he said evaluation of the things mentioned in the speech, including speech thanked, complain, congratulate, laud, praise, blame, and criticize. Utterance "I work hard for money; the result is still not able to meet the needs of the family". The speech is expressive speech acts complained of which can be interpreted as an evaluation, namely the search for money that the results cannot always meet the needs of family life. Another example is the speech "very good question" (praise), "Because of your carelessness, our group was disqualified from the competition" (blame), "Congratulations, ma'am, you have a new job at Manhattan School" (congratulate).

### **DIRECTIVE SPEECH ACT**

Directive speech act is one kind of speech act classification according to Searle (1969). Faiz (2011) reveal the function of directive is to affect the hearer to take action as expressed by the speakers. Directives are concerned with people to do things. In this case, the speaker conveys his desire or wish for the addresses to do something. In using a directive, the speaker intend to elicit some future course of action on the part of addressee, and Yule, (1996) stated that when using the directive, the speaker tried to adjust the world with words. When people perform directive, they may say in declarative, imperative, and interrogative. Further, they can use the explicit and implicit performative verbs. Explicit performative utterance with contains a performative verb that makes explicit what kind of act in being performed. It is commonly realized in declarative form, for example, *I demand you*. The term of *demand* is called as explicit performative verb. Whereas, implicit performative verb is performative utterance in which there is no performative verb. It is realized in declarative, interrogative and imperative form, for example "*How about going to New York Saturday?*" it belongs to implicit performative since there is no verb naming the action.

### **Types of Directive Speech Acts**

In speech act theory, directives are defined as the speaker's acts which attempt to make the addressee do, or sometimes not do, something. There are many philosophers reveal the theories about type of directive speech acts. First, Searle (1976) said that verbs denoting members of directive class are ask, order, command, request, beg, plead, pray, entreat, and also invite, permit, and advise. second, Bach and Harnish (1979) reveal the classification of directives speech acts are advising, admonishing, asking, begging, dismissing, excusing, forbidding, instructing, ordering, permitting, requesting, requiring, suggesting, urging, warning. So, Rahardi dan Lapoliwa (cited in Nadar, 2009) writes the construction of directive speech act which is direct or indirect speech act. Pragmatic utterance with command imperative form. (*Tuturan yang mengandung makna pragmatik imperatif perintah*) e.g.: sit down! (*Duduk!*). Pragmatic utterance with order imperative form (*Tuturan yang mengandung makna pragmatik imperatif suruhan*) e.g.: try to summarize this essay. (*Coba rangkum karangan ini*). Pragmatic utterance with request imperative form (*Tuturan yang mengandung makna pragmatik imperatif permintaan*) e.g.: please turn off the AC. (*Tolong matikan AC-ny*). Pragmatic utterance with beg imperative form (*Tuturan yang mengandung makna pragmatik imperatif permohonan*) e.g.: forgive all our mistakes, please. (*Maafkanlah kesalahan kami*). Pragmatic utterance with urge imperative form (*Tuturan yang mengandung makna pragmatik imperatif desakan*) e.g.: come on, summarize the essay now!. (*Ayo, ringkas karangan ini sekarang juga!*). Pragmatic utterance with persuasion imperative form (*Tuturan yang mengandung makna pragmatik imperatif bujukan*) e.g.: do come here at seven for practice. (*Datang kesini pukul 7 untuk latihan ya*). Pragmatic utterance with appeal imperative form (*Tuturan yang mengandung makna pragmatik imperatif himbauan*). e.g.: summarize this essay well. (*Ringkaslah karangan ini dengan baik*). Pragmatic utterance with please imperative form (*Tuturan yang mengandung makna pragmatik imperatif silakan*) e.g.: please, summaries the essay. (*Silakan karangannya diringkaskan*). Pragmatic utterance with invite imperative form (*Tuturan yang mengandung makna pragmatik imperatif ajakan*) e.g.: Let us summarize this essay together. (*Mari kita ringkas karangan ini bersama-sama*). Pragmatic utterance with permission imperative form (*Tuturan yang mengandung makna pragmatik imperatif permintaan ijin*) e.g.: May I summarize this essay. (*Bolehkah saya meringkas karangan ini*). Pragmatic utterance with permit imperative form (*Tuturan yang mengandung makna pragmatik imperatif mengizinkan*). e.g.: the essay can be summarized now. (*Karangannya boleh diringkaskan sekarang*). Pragmatic utterance with prohibit imperative form (*Tuturan yang mengandung makna pragmatik imperatif larangan*) e.g.: don't summarize that essay. (*Jangan meringkas karangan itu*). Pragmatic utterance with wish imperative form (*Tuturan yang mengandung makna pragmatik imperatif harapan*) e.g.: I hope this essay summaries completed soon. (*Saya mengharapkan ringkasan karangan ini cepat selesai*). Pragmatic utterance with aspersion imperative form (*Tuturan yang mengandung makna*

*pragmatik imperatif umpatan*) e.g.: you're dead! (*Kena, kau!*). Pragmatic utterance with congratulation imperative form (*Tuturan yang mengandung makna pragmatik imperatif selamat*) e.g.: Congratulations, for your grades. (*Selamat ya atas kelulusanmu*). Pragmatic utterance with suggestions imperative form (*Tuturan yang mengandung makna pragmatik imperatif anjuran*) e.g.: you would better summarize the essay now. (*Sebaiknya ringkasannya dikerjakan sekarang saja akan lebih baik*). Pragmatic utterance with “ngelulu” imperative form (*Tuturan yang mengandung makna pragmatik imperatif “ngelulu”*) e.g.: do not study, watching TV until morning. (*Tidak usah belajar, nonton TV saja terus sampai pagi*).

## RESPONSE TO SPEECH ACT

### Response to speech act theory

Speech acts are clearly related to what conversation analyses have called adjacency pairs. Jalilifar and Dinarvand, (2013) stated that Adjacency pairs refer to conversational sequences in which an utterance by one speaker depends upon an utterance made by another speaker. Adjacency is defined by Schegloff (cited in Jalilifar and Dinarvand, 2013) as a unit which plays a central role in sequential organization. The production of the first part of an adjacency pair creates a context for the second part by making it conditionally relevant. They are utterances produced by two speakers in a way that the second utterance is identified as related to the first one and expected to follow-up to it. The two utterances form a pair. Adjacency pairs are the basic structural unit in a conversation. An adjacency pair consists of one person's utterance that necessitates an immediate reply or reaction from the other member of the conversation. Usually, the other member has two options for responding: One is the preferred reaction, what is expected as the reply. The other response is the dispreferred answer, what is unexpected, less ordinary, and more difficult to give. The production of a speech act such as an offer will normally be accompanied by a response. And this response may be a preferred one, that is, acceptance, or a dispreferred one or refusal concluded on Preference Organization. (Sidnell and Stivers in John 2007) stated there are 2 kinds of possible responses to speech acts: preferred and dispreferred. Preferred responses are those that are culturally expected, they are the ones that feel the most 'natural'. Characteristics of preferred responses: delivered promptly and brief and to the point. Dispreferred responses are those that are not expected, but they are not necessarily rude if phrased properly. Characteristics of dispreferred responses: delayed response, hesitation particles used and long-winded explanation. Levinson, (1983) He noted for example, refusals of requests or invitations are nearly always in dispreferred format and the acceptance is in preferred format. He describes a dispreferred response as one that in the eyes of the community threatens the personhood of the conversation partner or endangers the bond that can be supposed to exist between the partner and the speaker. He says

society finds such messages offensive and has decreed that they must be identified as such and their force diluted by the presence of various dispreferred markers. According to Levinson, we need a rule for speech production which can be stated roughly as follows: try to avoid the dispreferred action- the action that is generally in dispreferred or marked format. Thus, the two essential features of dispreferred actions are: (a) They tend to occur in marked format, (b) They tend to be avoided. According to Levinson, (1983) preferred seconds are unmarked; they occur as structurally simpler turns while dispreferred seconds are marked by various kinds of structural complexity.

Examples:

A: Would you shut the door on your way out, please?

B: Sure thing. (*Preferred second*)

A: Want to go to a movie tonight?

B: I can't. Sorry. I've got to study. (*Dispreferred second*)

Ping (2007) on the other hand said that preferred responses tend to be short and straightforward while dispreferred responses are normally marked in long and complex forms, we may say, however, it is misleading to insist that preference organization has certain linguistic forms or structures. Yuniarti (2010) also said that preferred or perform actions as instructed by the speakers made in two form of speech they are verbal and nonverbal preferred responses. Verbal preferred response adalah a form of preferred response where the listener answer to what the speaker said. While nonverbal is a form of preferred response where a listener give a movement as what the speaker instructed. Preferred response is natural and easy to know, and dispreferred responses is one of the response that more interesting to analyze because people in refuse something probably they do something to make a refusal. Here Beebe, Takahashi & Weltz (1990) reveal the classification of refusals.

### **Male And Female Responses To Speech Act**

In speech act analysis there are not found result about the different responses of male and female students' to teacher directive speech act while there are many analysis of other categories in speech act such as compliment. Here many previous studies which are describe the different responses of male and female to speech act. Women and men behave differently in a speech situation. According to Yousefvand (2010) on Study of Compliment Speech Act Realization Patterns across Gender in Persian suggest that, in responding to a compliment, the general tendency of Persian speakers to respond to a compliment with an agreement, in addition, they also tended to express their modesty, which is deeply rooted in their culture. The results also indicate a significant effect of gender on compliment responses. Specifically, males were most likely to reject a compliment by using a set of formulaic expressions and scaling down the received compliment; in contrast, females tended to respond with acceptance or surprise to a compliment.

Geluykens and Limberg also found in their analysis of Gender Variation, Indirectness, and Preference Organization in Threat Responses (2012) reveal that Gender has a major influence on the response type chosen, in that the female data revealed more compliant responses than the male data. Tentatively expressed, female speakers are more likely to comply with a threat than their male counterparts. Apart from the general response strategy, we had a look at different supportive moves and their use in threat response. Mitigating moves, such as apologies, are employed more by women, while aggravating moves, such as counter threats or insults, are used more by men.

### **Research Method**

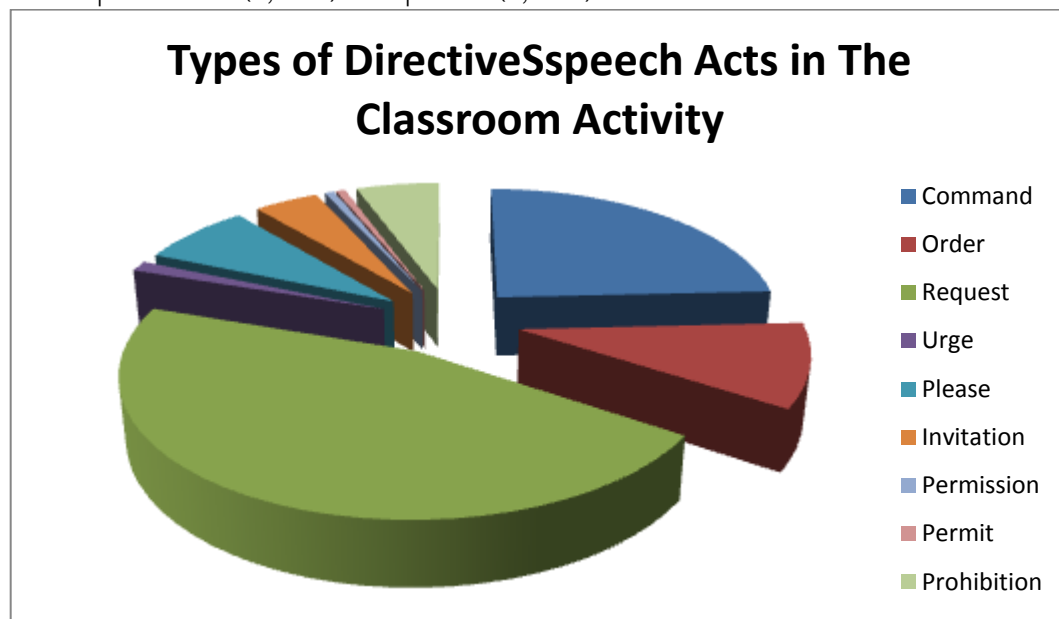
This study was conducted to find out the directive speech act used by the teacher, male and female students' responses, and the reason of students' responses toward teacher's directive speech act. Besides that, this research described the clear explanation about the teacher's directive speech act used in the class and also described the students' responses toward teacher's directive speech act. This study was conducted at a Private Vocational High School in Subang, West Java, Indonesia. The site selection was based on several reasons. First, this Private Vocational High School were welcome the researcher who would like to undertake research. Second, teacher and students enthusiasm is high toward learning activity, thus enabling occurrence of effective speech acts between teachers and students, and it is supported by the class differences between men and women, which can be seen from their respective majors. This study use a sample which is used purposive sampling. By using purposive sampling the sample obtained are expected to fulfill criteria strictly in accordance with the research to be conducted. The participants involved in this study were one English teacher who teaches two classes, 25 female members of AK 1 (Accounting) and 25 male members of PBR (Marketing). In choosing the participant, the researcher chooses the participant based on the recommendation from the teacher. The data was gathered from two main sources, they are classroom observation and questionnaire. The first instrument in this study was observation. In this study, the researcher acted as non-participant observer who did not get involved in the activity. The observation in this study was conducted to analyze type of the teacher's directive speech act in the classroom and the observation was held for two meetings in each classes. The researcher is the key instrument of data collection, aided by audio and video recorder to record all the classroom activity during the English class. The second instrument to gain the data is questionnaire. To verify results of the research, open-ended questionnaire was given to the participants. In a questionnaire, open-response items require respondents to answer question in their own words by writing in a space that is provided on the questionnaire (Heigham & Croker, 2009). To make it clear, here



is framework of questionnaire. The data were analyzed qualitatively to answer the research questions. The qualitative data gathered from observation, questionnaire and interview.

### Findings

Based on observation of the research, from 17 types of directive speech acts reveal by Rahardi and Lapoliwa (cited in Nadar, 2009) found that teacher used 9 types of directive speech acts in the classroom activity. These are request (45,96%), continue by command (24,22%), order (9,93%), please (7,45%), prohibit (5,59%), invitation (4,34%), urge (1,24%), and the least occurrence are permission (0,62%) and permit (0,62%).



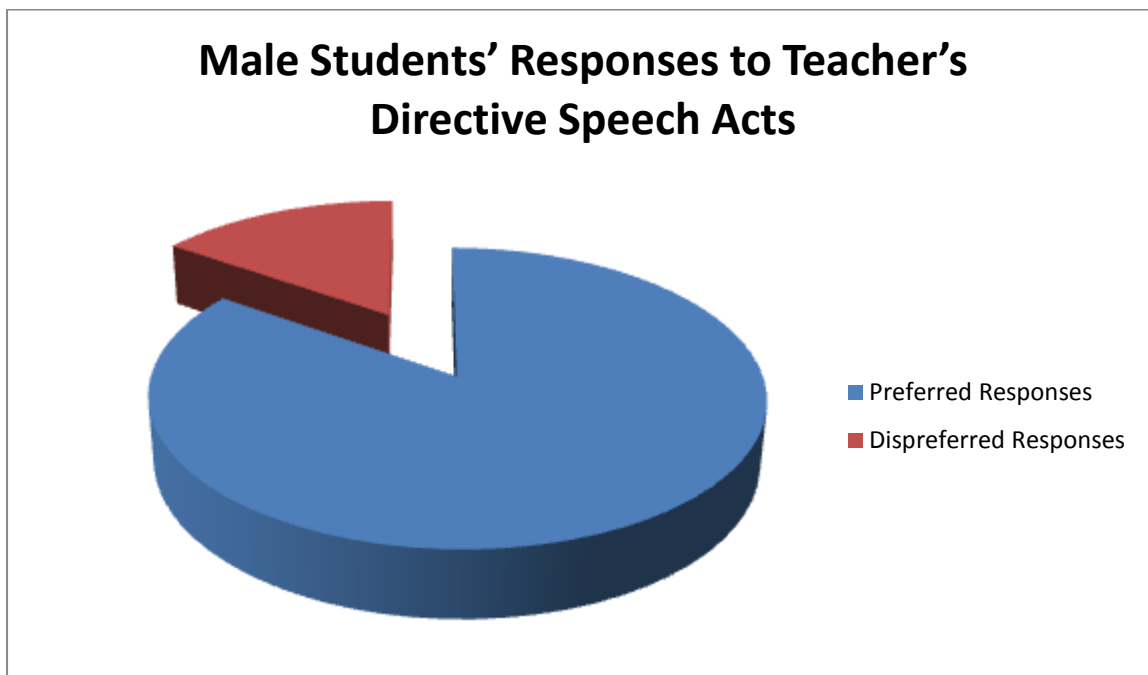
Types	Examples of Speech Act
Command	T : <i>pakai yang ini! (Use this one)</i> . (Pointing towards the text on the board as if asking students to follow what she told)
	S22 : "She did not have breakfast fried rice this morning".
Order	T : okay, I want miss, Miss Dewi, <i>coba diartikan</i> . (try to give the meaning, without giving any cues)
	S5F : I went
Request	T : eeerrr maybe before we start our material, I have some question for you. For Fresa. <b>Can you stand up please?</b> (Without move the hand up)
	S3 : (stand up directly)
Urge	T : <i>Ayo, untuk kalimat negatifnya bentuknya seperti apa? (Come on, how is the form of negative sentence?)</i> (Without giving any cues)
	S6M : I did not go to Cikuda



Please	T : <i>boleh lihat modulnya dulu, silakan. (You can see your book, please)</i> Simple past tense (only slightly move the hands)
	S16 : (immediately she opened her bag to see the module)
Invite	T : could you please tell me about the pattern of simple past tense? <i>Maju aja sini nggak apa-apa please came on (no problem, come here, please come on).</i> (While moving her hands up as if asking student to come forward)
	S5M : (immediately she came forward while glancing at her friends)
Permission	T : <b>may I see?</b> <i>Saya ingin tahu</i> what do you write.
	S1M : (immediately he submitted the book that he was carrying)
Permit	T : Deviariani, can you please to write the pattern? (While moving her hands front as if asked Devi to write the pattern) <b>You can bring your book</b> (while moving the her hands forward as if allowing the student to look at book).
	S16 : (He was still looking at his book while sitting)
Prohibition	T : just kidding, <b>don't be shy okay.</b> And <b>please don't be angry with me.</b> (While moving her hands like giving prohibition to S4 in order not to angry to her)
	Ss : She was laughing.

#### Male Students' responses to teacher's directive speech acts

The results of the study found that there are some responses used by male when responding to directive speech acts was uttered by the teacher. The strategies used by the male students in responses the teacher's directive speech act are accept (preferred) without protest with use of verbal or nonverbal response and refuse (dispreferred) to speech act or perform a variety of denial of directive speech act were expressed by speakers. From the entire male responses found that 84,3% preferred responses and 15,2% dispreferred responses. The forms of these responses include:

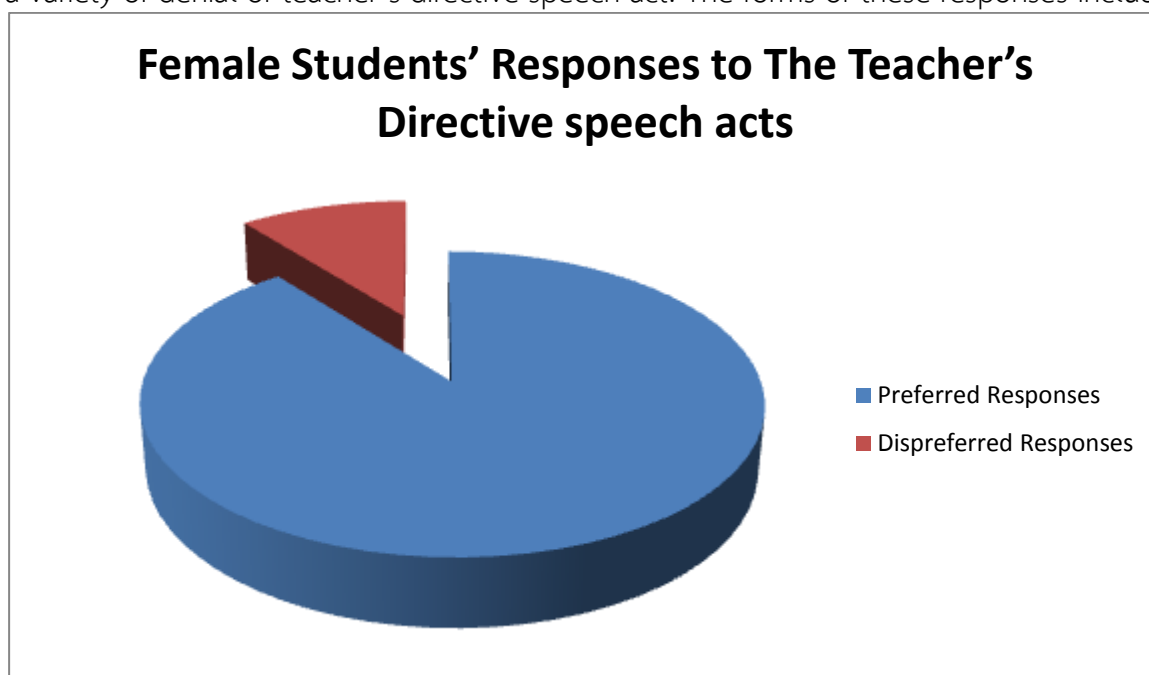


The result of this study showed that male students responses toward teacher's directive speech acts in the classroom activity are 84,3% preferred responses. It is showed from the male preferred responses to the teacher's directive speech act by using verbal and non verbal preferred responses. Here are a few examples from male with nonverbal and nonverbal preferred responses. When teacher said, "*Coba liat, anak-anak yang cowok liat rumusnya sudah?/let see, have you done?*". The student directly replied "sudah/already". This response includes the *verbal response* and it shows that preferred to the speech act. When the teacher said, "**You can sit down**". The student directly straight back to his seat. Because S32M straight back to his seat. This response include to the *nonverbal response*, so it shows that he preferred to the speech act. So it shows that he preferred to the speech act. Beside that, The result of this study also showed that male students' responses toward teacher's directive speech acts in the classroom activity is 15,7% dispreferred responses. The strategy of male student dispreferred responses are acceptance which functions as a refusal (lack of enthusiasm), silence as non-verbal avoidance, hesitation as non-verbal avoidance and the non-performative statement of direct refusal which has been explain in the table above. Here are the examples of each responses of refusal. When the teacher said "**The second sentence is for you**". The student responded with silence and it was included in the form of denial, silence as non-verbal avoidance. When the teacher said "**Please mention one example of verb!**" The student responded by asking as if he does not pay attention what the teacher asked and it belongs to the lack of enthusiasm in the form of acceptance of which function as refusal. When the teacher asked "*Berdiri ayo Ahmad / stand up, Ahmad*", the student responded with stand up slowly, hesitated, like still glancing his friend, so that it can show the form of nonverbal avoidance and hesitation as he refuses / dislikes to the speech. When the teacher asked "**Ok Rianda could you please tell me what does the verbal**

**sentences mean?”** with a form of request. The student immediately replied *"henteu / no"*, and this response was included in the non-performative statement of direct refusal so that it can show that he rejected / dispreferred to the speech.

### Female students' responses to the teacher's directive speech acts

The results of the study found that there are some responses used by students when responding to directive speech acts uttered by the teacher. The strategies used by female students in responses the teacher's directive speech act are accept (preferred) 89,4% without protest use verbal and nonverbal preferred response, and refuse (dispreferred) 10,6% to speech act or perform a variety of denial of teacher's directive speech act. The forms of these responses include:



Here are the examples of female verbal and nonverbal preferred responses. When the teacher said **"I want Miss. Kokom to write the pattern of interrogative sentences!"**. The student came forward directly and writes on the board what the teacher requested. This response includes the *nonverbal response*, so it shows that she accepted / preferred to the speech act. When the teacher said **"Ok Vina, can you mention one subjek, satu aja subjeknya"** the student responded by answering *"ya"* to what the teacher asked. This response includes the *verbal response* so it shows that she accepted / preferred to the speech act. Here are the examples of female refusal to the teacher directive speech act. When the teacher said **"Ratna please close the door"**. The student responded by a silent response (avoidance as nonverbal refusal) as if it did not understand and did not pay attention (acceptance which function as a refusal) so it can show that she rejected / dispreferred to the speech. When the teacher said **"Nggak apa-apa stays in here"**. The student

responded by came forward even when the teacher says stay in place so it looks like lack of enthusiasm for what the teacher ordered and that showed that (acceptance which functions as a refusal) rejected / dispreferred to the speech act. When teachers said “*Silakan ditulis rumusnya.*” as if ask students to write down the pattern. The student responded by asking againts the teacher (repetition of part of the Directive as a verbal avoidance) so the response shows that she dispreferred to speech that the teacher gave. When the teacher said “*Sari jangan mikirin pak Jajang aja kamu*”. the student refused by saying "nggak bu" and that as a form of non-performative statement of refusal and this shows that she rejected / dispreferred to the speech act.

### The reason of male and female responses toward the teacher's directive speech act

The questionnaire was used as an instrument in order to gain what are the students' reasons when delivering the responses to the teacher's directive speech act. Based on the result of questionnaire, found that there are many varieties about the reason of male and female responses. Here are the explanation of each types based on the reason of male and female students' responses.

Reason Percentage to preferred responses

Preferred Response	CM		OR		RQ		UR		PLS		INV		PER		PRO		PERM	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Understandable	-	62,5	-	44,4							15	20		20				
Strict	63,5	25	-	-			11,2			37,5					28,6	29,4		
Good speech	-	12,5	53,3	27,7			44,4	100	72,8		75		61,1	40	71,4	70,6	21,4	38,9
Obey the command	36,5	-	-	-														
Clear			6,7															
Obey The Order			40	27,7														
Polite					78,6	50				25	10		22,2	40			78,6	61,1
Obey The Request					21,4	50												
Obey The Urge							44,4											
Obey The Please									27,2	37,5								
Obey The Invitation												80						
Obey The Permit Type													16,7					

Reason Percentage to dispreferred responses

Preferred Response	CM		OR		RQ		UR		PLS		INV		PER		PRO		PERM	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Did not understand	35,7	35,2	42,9		36,3	13,3		20	42,8					50				
Too strict	42,9	23,5																
Lazy	21,4	5,8	57,1	57,1	9,1	20	6,3	10	35,8	33,3	100	-	42,9	50				
Impolite		35,2		42,9	54,6	66,7												
Inappropriate utterance									21,4	66,7							45,4	42,9
Too hasty							25	40										
Too imposing							68,7	30										
Not firm													57,1				54,6	57,1
Too strict															63,6			



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## THE PROCESS OF STUDENTS' EXPERIENTIAL RESPONSE IN RESPONDING LOVE SONG LYRICS

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### ABSTRACT

The aims of this study are first to investigate the process of students' experiential response in responding song lyrics, and second to investigate the difference of experiential process response between male and female students. The subjects of this research are three male and three female students. Some principles of qualitative research are employed in this study. *A Thousand Years* and *Someone Like You* are songs used as the instruments for gathering students' responses. The data are analyzed based on written document and based on the principal of Reader-Response Theory especially in the process of experiential response. The findings reveal that the process of students' experiential is engaging. It shows that students use their emotion or their feeling when they put their response toward the love song lyrics. In addition there are no differences between male responses and female responses. Both of them tend to use engaging process and involved their emotion and their feeling. It can be concluded that in responding to love song lyrics, students involve their emotion or feeling. Moreover, expressing the emotion and feeling are not influenced by the gender, male and female tend to show the same expression.

Keywords: *readers' response, experiential response, song lyric, gender.*

### Background

Reader response helps readers to learn how to respond to a literary work or a passage of text that can stimulate the reader to respond to the text. It is very important how a text or literary work is successful if everyone can understand and then respond to enjoy the work. Rosenblatt (1938) the importance of reader response in a literary work is to explore how a reader capable animate atmosphere of literary works written by the authors, one of which is a response to the reader.



Reader response is very important for each student in learning by starting from high school to college, where students are given education directly in developing skills to read, understand, and respond. Karodiles (2000:6) said that the texts understandability and the reader's active participation, the relationship between reader and text is dynamic, the reader responding is also dynamic, alive to stimulus and response. Further, what a reader makes of a text will reflect the reader's state of being at a particular time and place and in a particular situation, as well as the reader's relationship to the text.

Beach (1993:6) states that reader response theorists also argues that readers respond for a range of different purposes. Readers may respond to express their emotional reactions, to explore difficulties in understanding, to corroborate or verify their opinions with others, to build a social relationship through sharing responses, or to clarify their attitude.

Song lyrics as part of literary work is interesting to be explored by the readers it expresses the emotion, feeling, and mood of the writers. Therefore the content of song lyrics will have interesting messages for the listener and readers. Rahmanto (1988) states that, we need to underline that the vast majority of our satisfaction in reading a literary work comes from the ability and habits we appreciate literature.

Language song is actually not much different from the language of poetry. This is in accordance with the understanding the lyrics of the song by Semi (1988: 106) said, "the lyrics are short poems that express the emotions

However, teaching English implemented in many schools and colleges are less directed towards fostering appreciation of literary work. Discussed limited to the formal elements of song lyrics. Choice of words, the composition of the line or lines, and the temple is not seen as a support function in relation to the overall beauty of song lyrics. As a result, the students see the formula rhyme and verse as mere phenomena, as a formal element that is not functional.

The creative teachers will see literary work from different perspective. Teacher can use song lyrics for improving their student English skill by asking to respond to the song lyrics, and students will produce language both writing and speaking. In addition, students will use their brain to expose their emotion, feeling, and experience when they respond to the song lyrics, this makes students active and creativity an event critical.

### **The Processes of Experiential Response**

Rosenblatt (1938:30-31) states experiential response focus on the nature of readers engagement or experiences with text the way in which, for example, readers identify with character, visualize images, relate personal experience to the text, or construct the world of the text.

On the basis of Rosenblatt transactional theory, theorists have delineated a number of specific response processes (Purves and Beach; Beach and Marshall) in Beach (1993):

1. Engaging

Readers have a chance to put their own reaction toward the text. Readers usually involve their experiences such as emotional reaction, empathy, and involvement. In responding to the text, readers may state what they feel, what they see and what they remember.

The readers' experience with the literature, they will feel anger, sadness, pity, fear, love, shame, sympathy, etc. Solomon (1986) in Beach (1993) called the experience as the language of emotion, which he defines as a particular way to perceive or judge the reality. He also argues that the readers gain insight into the reality of being human.

2. Constructing

Along with their involvement with the text, readers come into an imagined world that they created. While having a transaction with the text, readers construct an imagined text world. Readers create their own conception of the text world.

Langer in Beach (1993) describes the four basic processes in creating readers' conceptions. The first is making contact with the genre, content, structure and language of the text. Second is using their prior knowledge and the text to further their creation of meaning. Third is using their conceptions to reflect their own previous knowledge or understanding. And the last is reflecting on and reacting to the content, text and the experience.

3. Imaging

Imaging or visualizing is another part of experience that creates visual mental images in responding to the text. Readers create their mental images of characters, setting, and events that related to their emotional and their understanding of the text. As the reader continues to read the text, they may make revisions on their mental images because they get new information. In addition,

readers may also express their response with the artistic images rendering of their experience.

4. Connecting

In this process readers connect their response to someone or their past autobiographical experiences or previous reading to the text. In connecting the autobiographical, the more readers can elaborate the experiences, the more they can use the experiences to interpret the story.

5. Evaluating

Readers will have expectation when they read certain text. They hope they can get a lot of information or knowledge from the text and they can learn something from the text. In addition, Beach (1993) said readers will evaluate from aesthetic aspect such as the language, the design, etc. This makes readers decide whether the novel, poem or movies is good or bad.

### **Method**

This research focused on the process of students' experiential response in responding song lyrics and also focused on finding the different of process of students' experiential response between men and women.

This study used a case study because this study attempted to gain deep understanding of the process of students experiential response in responding song lyrics. The participants of the study were students of eight semester, it consisted of six students; three men and three women. The data were gathered after reading sessions. The students were asked to write their response related to song lyrics. The song lyrics were 'A Thousand Years' by Christina Perri and 'Someone Like You' by Adelle. The lyrics were phenomenal and had been awarded from some music event. In analyzing the data, the researcher used some steps as suggested by Miles and Hubberman (1984). The first step is data reduction where the data were selected. The second step is data display where the data were assembled and were classified. The third step is conclusion drawing. This step is the beginning process in deciding the possible meaning of the data. The last step is verification. Data were linked to the related theories.

## Result

The first participant (male) in responding song lyrics by saying, *sangat menyentuh hati* (very touch my heart), *membuat saya sedih* (I feel sad). This statement can be categorized as engaging experience. Then he said *saya mendalami sekali serasa saya yang ada dilirik lagu itu* (I feel so deep, it feels that I'm the person in the lyric). This statement belongs to connecting experience. After that he said *lirik lagunya sangat indah* (the lyric of the song is so beautiful). The participant tried to evaluate the song lyrics.

The second participant (male) responded the lyrics by involving the language of emotions. This can be seen in his statement *menyentuh hati saya* (it touch my heart), *membuat saya ingin menangis* (make me want to cry), and then *membuat saya emosi* (make me emotional). The participant tried to show his feeling.

The third participant (male) in responding the song lyrics tend to evaluate the song lyrics. He wrote that the lyrics have *mempunyai bahasa yang baik* (has good language), *grammar yang sesuai* (the grammar is appropriate), *bahasanya agak british* (the accent is British), *lirik lagunya sangat disukai pendengar* (the listeners like the lyrics), *jenis lagu pop* (the genre is pop music), and then *menceritakan kisah romantis* (telling a romantic story).

The fourth participant (female), she wrote the respond related to her feeling. She wrote *membuat saya terharu dan sedih* (make me affected and sad). Then she said *menceritakan seseorang yang menunggu* (tell someone who is waiting for someone) this belongs to identifying. And the last she said *pernah mengalami* (had experienced it), it means the participant connected her experience to the text.

The fifth participant (female), she also showed her felling in responding the lyrics. It can be seen from her statement that *membaca lirinya saya sedih dan ingin menangis* (reading the lyric, I feel sad and want to cry). Then she tried to identify the lyrics by saying *menceritakan penyesalan* (it is about someone's regret).

Respondent 6 (women)

The sixth participant (female), tended to evaluate or judge the lyric. It can be noted her respond by saying *bahasa yang tidak terlalu baku* (the language is informal), *bahasa british* (the accent is British), *bertema kisah cinta atau romance* (the theme is about romance) and *Jenis lagu pop* (the genre is pop music).

Table 1

Students' response to the song lyrics

The Process		Statements
Engaging	Involved language emotions	<i>sangat menyentuh hati</i> (very touch my heart)
		<i>membuat saya sedih</i> (I feel sad)
		<i>menyentuh hati saya</i> (it touch my heart)
		<i>membuat saya ingin menangis</i> (make me want to cry)
		<i>membuat saya emosi</i> (make me emotional)
		<i>membuat saya terharu dan sedih</i> (make me affected and sad)
Empathizing/identifying		<i>membaca lirinya saya sedih dan ingin menangis</i> (reading the lyric, I feel sad and want to cry)
		<i>menceritakan seseorang yang menunggu</i> (tell someone who is waiting for someone)
		<i>menceritakan penyesalan</i> (it is about someone's regret)
Connecting	Auto biographical experience	<i>saya mendalami sekali serasa saya yang ada dilirik lagu itu</i> (I feel so deep, it feels that I'm the person in the lyric)
		<i>pernah mengalami</i> (had experienced it)
Evaluating	Judging	<i>lirik lagunya sangat indah</i> (the lyric of the song is so beautiful)
		<i>mempunyai bahasa yang baik</i> (has good language)
		<i>bahasa yang tidak terlalu baku</i> (the language is informal)
		<i>Jenis lagu pop</i> (the genre is pop music).
		<i>Jenis lagu pop</i> (the genre is pop music)
		<i>bertema kisah cinta atau romance</i> (the theme is about romance)
		<i>lirik lagunya sangat disukai pendengar</i> (the listeners like the lyrics)

### Discussion

Based on the research results from written document, it can be seen that the students already involved their experience in love. Respondents seem familiar with the lyrics of the songs. Based on the table .., it can be noted that in the process responding student involved emotions, connecting, and evaluating process toward song lyrics.

It can be seen from the participants' statements, the participants no 1,2,4,5 tend to respond the song lyrics by involving their emotion. Their reaction to the text showed that they wanted to express what they felt. It can be seen that the participants can understand what the writer's feel. As a human they have the same feeling. This is like Solomon (1986) said that the readers' experience with the literature, they will feel anger, sadness, pity, fear, love, shame, sympathy as the language of emotion, which he defines as a particular ways to perceive or judge the reality.

However, participants no 3 and 6 tend to respond song lyrics by evaluating or judging. They saw the lyrics from different point of view. Their comment focused on the language of the lyrics and the aesthetic aspect. This means they assess the quality of the lyrics. As Beach (1993) states readers will evaluate from aesthetic aspect such as the language, the design, etc. This makes readers decide whether the novel, poem or movies is good or bad.

Based on the data, both male and female did the same thing. They involved their emotion when they response the song lyrics. They showed how their feeling was when they connected their experiences to the song lyrics. Male and female will have the same experience in love, therefore they did not doubt to share their feeling. This indicated that gender does not always become the aspect to make it different. This also indicated male will share their true feeling regarding to their experience in love.

### CONCLUSIONS

Based on the findings, it can be concluded that the participants tend to involve the language of emotion in responding the song lyrics. They always show what they feel. In responding the lyrics, the process of students' experiential that appear are engaging, connecting, and evaluating. In addition, the data show that there is no difference between male and female response. They tend to do the same thing, so gender is not the matter.

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**Mindset of senior students in the Faculty of  
Education, Roi Et Rajabhat University, Thailand, 2015.**

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**Abstract**

This research was aimed to 1) study mindset of the senior students in the Faculty of Education, Roi Et Rajabhat University, Thailand in 2015, 2) compare the mindset of the senior students in term of gender, level of graduation, curriculum, major, family career and family income (per year) and 3) study student's self-perception.

The sample were 326 senior students in the Faculty of Education, Roi Et Rajabhat University in 2015 by stratified random sampling based on type of curriculum. The sample size was calculated by formula of Krejcie and Morgan (1970 cited in Boonchom Srisa-ard, 1995). The data was gathered by questionnaire with the content validity (IOC : item objective congruence Index) are during .68-1.00 and the reliability is .88 analyzed by using Cronbach's alpha coefficient. Statistics utilized for analyzing the data were percentage, mean, standard deviation, t-test (independent sample), F-test (One-Way ANOVA) and Scheffe's method.

The results of this research were

- 1) The mindset of senior students in the Faculty of Education, Roi Et Rajabhat University in 2015 as an overall measure was at a moderate level. The aspect with the good level were the effort and the criticism, the aspect with the moderate level were the challenge, the obstacle and the success of others.
- 2) Mindset of male and female students were significant different at the .05.
- 3) Mindset of different level of graduation' students were significant different at the .01.
- 4) Mindset of different curriculum' students were significant different at the .01.
- 5) Mindset of different major' students were significant different at the .01.
- 6) Mindset of different family career' students were indifferent.
- 7) Mindset of different family income' students were significant different at the .01
- And 8) Most students (90.43 %) had the positive self-perception such as "I have an effort"



“I am patient” and “I am a good person”.

**Keyword :** Mindset.

## Introduction

### 1. Rationale

The world is changing rapidly, especially in the era of globalization, information society, the cooperation and competition. So it is important in the development of human resources quality, the knowledge, ability and skills in various living and competition. The state of this incident resulted in educational management must focus on improving the quality of students sustainable. Not just the measurement and evaluation of curriculum but include application in working life. Although the current ideas about the students development have a variety , one idea is considered as the main concept of the development of students is the concept of Bloom's taxonomy (Bloom *and others*. 1956) proposed that developing students need to develop both 3 aspects: cognitive domain, affective domain and psychomotor domain. New ideas including Changing Education Paradigms (Robinson, 2008) for 21<sup>st</sup> century. We can see that the students' development, human resource development is not just only one dimension, but as the development of holistic and the study of *Dweck, C. (2006)* found that the Important to affect the present and the students future is mindset.

Mindset is a set of beliefs or a way of thinking that determines one's behavior, outlook and mental attitude (*Dweck, C. 2006*). Mindset is a [set](#) of assumptions, methods, or notations held by one or more people or groups of people that is so established that it creates a powerful incentive within these people or groups to continue to adopt or accept prior behaviors, choices, or tools (<https://en.wikipedia.org>). Your mindset is one of the most important determining factors in your life; whether you are successful, or stuck in a rut is as a result of your mindset. It's easy to blame circumstances and other external factors for whatever is wrong in your life but the fact is that the heights you attain in your business and your personal life will depend mostly on your mindset (<http://www.fictionblueprints.com>).

It is important for educators to discuss this mindset as it relates to the presence of failure and perseverance in education. The growth mindset is the belief that you can cultivate and improve upon your abilities through practice and effort. Someone with a fixed mindset believes these abilities are predetermined and largely unchangeable (*Dweck, C. 2006*).

There are many myths about ability and achievement, the real ingredients of achievement and what makes some people achieve less and some more. The people who

impart, often inadvertently, a certain mindset to children and students. Every day teachers send messages to students about how to think of themselves. These can be growth mindset messages: you are developing and I am interested in your growth. Or they can be fixed mindset messages: your traits are permanent and I'm going to judge them. Of course no one sets out to do the latter (*Dweck, C. 2006*).

Therefore, researchers were interested in studying the mindset of students of Faculty of Education, Roi Et Rajabhat University, Thailand in 2015's final year (senior students) in as an essential information that will set the guidelines and how to develop the their growth mindset, which surely affects achieving success in their lives and to build a growth mindset for their followers (their students) as well.

## **2. Research Question**

How about the mindset of the senior students in the Faculty of Education, Roi Et Rajabhat University, Thailand in 2015 ?

## **3. Research Objectives**

These were research objectives

- 1) to study mindset of the senior students in the Faculty of Education, Roi Et Rajabhat University, Thailand in 2015.
- 2) to compare the mindset of the senior students in term of gender, level of graduation, curriculum, major, family career and family income (per year).
- 3) to study student's self-perception.

## **4. Significance of the study**

The results of the study will be an essential information that will set the guidelines and how to develop the their growth mindset, which surely affects achieving success in their lives and to build a growth mindset for their followers (their students) as well.

## **5. Definition of terms**

The keys variables will be used in this study include 1) independent variables : gender, level of graduation, curriculum, major, family career and family income and 2) dependent variable : mindset consists of 5 aspects Challenge, Obstacle, Effort, Criticism and Success of

others according to the conceptual framework of *Dweck, C. (2006). The mindset is determined to operational as follows :*

Mindset is a set of beliefs or a way of thinking that determines one's behavior, outlook and mental attitude consists of 5 aspects as follows :

Challenge is a set of beliefs or a way of thinking of a person on the [difficult task](#), especially one that the person making the attempt finds more enjoyable because of that difficulty.

Obstacle is a set of beliefs or a way of thinking of a person on something that [impedes, stands](#) in the way of, or holds up [progress](#).

Effort is a set of beliefs or a way of thinking of a person on a [force](#) acting on a [body](#) in the direction of its [motion](#).

Criticism is a set of beliefs or a way of thinking of a person on the act of [criticising](#); a critical judgment passed or expressed; a critical observation or detailed examination and review; a [critique](#); [animadversion](#); [censure](#)

Success of others is a set of beliefs or a way of thinking of a person on the success, [wealth](#), [respect](#), [fame](#) and happiness of others.

## 6. Conceptual framework

independent variables    dependent variable

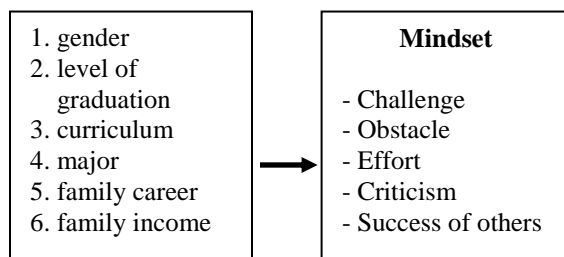


Figure 1 Conceptual framework

## 7. Research Methodology

### 7.1 Population and sample

Population were 1,146 senior students in the Faculty of Education, Roi Et

Rajabhat University in 2015. The sample were 326 senior students in the Faculty of Education, Roi Et Rajabhat University in 2015 by stratified random sampling based on type of curriculum. The sample size was calculated by formula of Krejcie and Morgan (1970 cited in Boonchom Srisa-ard. 1995).

## 7.2 Data gathering and data analysis

### 7.2.1 Data gathering instrument

The data was gathered by questionnaire with the content validity (IOC : item objective congruence Index) are during .68-1.00 and the reliability is .88 analyzed by using Cronbach's alpha coefficient. This questionnaire has three parts, part 1 is designed to gather the data on general information of sample, part 2 is designed to gather the data on mindset of the senior students and part 3 is designed to gather the data on student's self-perception.

### 7.2.2 Data gathering procedures

Gathered data during the 1-5 October, 2015.

### 7.2.3 Data analysis

Statistics utilized for analyzing the data were percentage, mean, standard deviation, to compare the mindset of the senior students in term of gender, level of graduation and curriculum by t-test (independent sample) and to compare the mindset of the senior students in term of major, family career and family income by F-test (One-Way ANOVA) and compared each pair by Scheffe's method.

### 7.2.4 Data interpretation

For analysis of means to find the level of mindset was interpreted as follows:

- 1.00 – 1.49 refers to “very bad” level of mindset
- 1.50 – 2.49 refers to “bad” level of mindset
- 2.50 – 3.49 refers to “moderate” level of mindset
- 3.50 – 4.49 refers to “good” level of mindset
- 4.50 – 5.00 refers to “very good” level of mindset

## 8. Conclusions

The results of this research were

- 1) The mindset of senior students in the Faculty of Education, Roi Et Rajabhat University in 2015 as an overall measure was at a moderate level. The aspect with the good level were the effort

and the criticism, the aspect with the moderate level were the challenge, the obstacle and the success of others as show in Table 1.

n = 326

mindset	Mean	interpretation
- Challenge	3.46	moderate
- Obstacle	3.43	moderate
- Effort	3.68	good
- Criticism	3.51	good
- Success of others	3.23	moderate
Overall	3.46	moderate

**Table 1 The mindset of senior students**

2) Mindset of male and female students were significant different at the .05 as show in Table 2.

mindset	Male		Female		p-value
	Mean	level	Mean	level	
- Challenge	3.38	moderate	3.49	moderate	.04*
- Obstacle	3.36	moderate	3.46	moderate	.06*
- Effort	3.57	good	3.72	good	.03*
- Criticism	3.48	moderate	3.53	good	.31*
- Success of others	3.10	moderate	3.30	moderate	.00**
Overall	3.38	moderate	3.50	good	.02*

\* p-value < .05 , \*\* p-value < .01

**Table 2 Compare mindset by gender**

3) Mindset of different level of graduation' students were significant different at the .01 as show in Table 3.

mindset	High school level.		Bachelor's Degree.		p-value
	Mean	level	Mean	level	
- Challenge	3.43	moderate	3.60	good	.02*
- Obstacle	3.40	moderate	3.62	good	.00**
- Effort	3.61	good	4.02	good	.00**
- Criticism	3.49	moderate	3.63	good	.02*
- Success of others	3.16	moderate	3.62	good	.00**
Overall	3.41	moderate	3.71	good	.00**

\* p-value < .05 , \*\* p-value < .01

**Table 3 Compare mindset in different level of graduation' students**

4) Mindset of different curriculum' students were significant different at the .01 as Table 3.

5) Mindset of different major' students were significant different at the .01 as show in Table 4 and compared each pair by Scheffe's method as show in Figure 2-7.

		Sum of Square	Mean Square	F
Challenge	Between Groups	10.151	1.269	6.065**
	Within Groups	66.322	.209	
	Total	76.472		
Obstacle	Between Groups	6.770	.846	3.993**
	Within Groups	67.185	.212	
	Total	73.955		

Effort	Between Groups	12.397	1.550	4.591**
	Within Groups	107.000	.338	
	Total	119.398		
Criticism	Between Groups	3.557	.445	2.876**
	Within Groups	49.000	.155	
	Total	52.557		
Success of others	Between Groups	17.774	2.222	7.238**
	Within Groups	97.308	.307	
	Total	115.082		
Overall	Between Groups	8.926	1.116	7.628**
	Within Groups	46.371	.146	
	Total	55.297		

\*\* p-value < .01

Table 4 Compare mindset in different majors

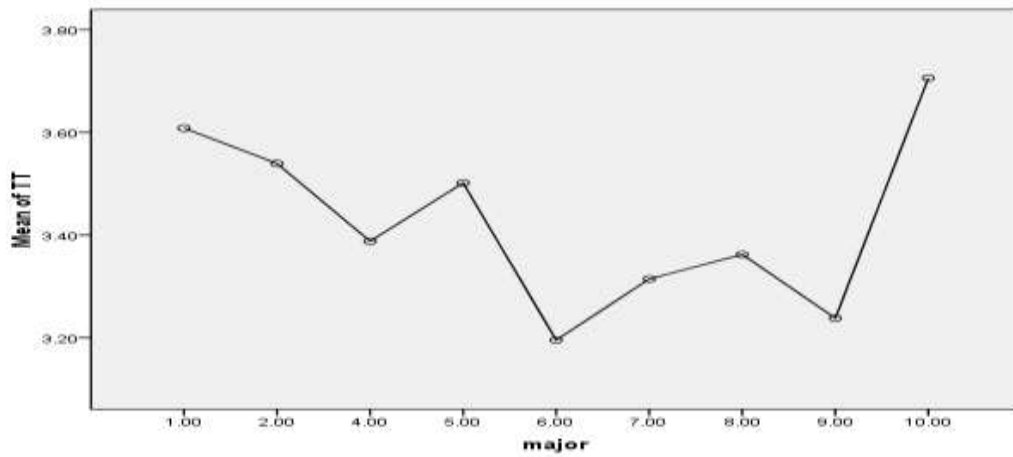


Figure 2 Compare mindset of different major' students in overall.

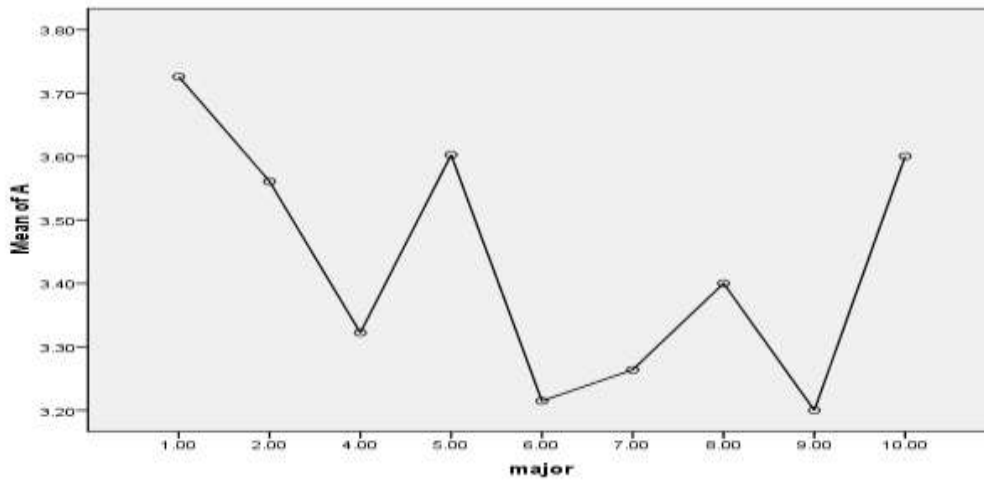


Figure 3 Compare mindset of different major' students in the challenge aspect.

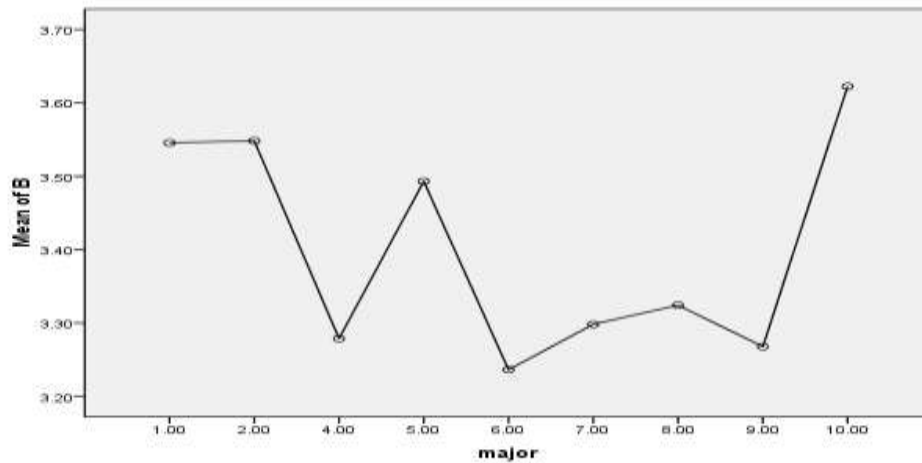




Figure 4 Compare mindset of different major' students in the obstacle aspect.

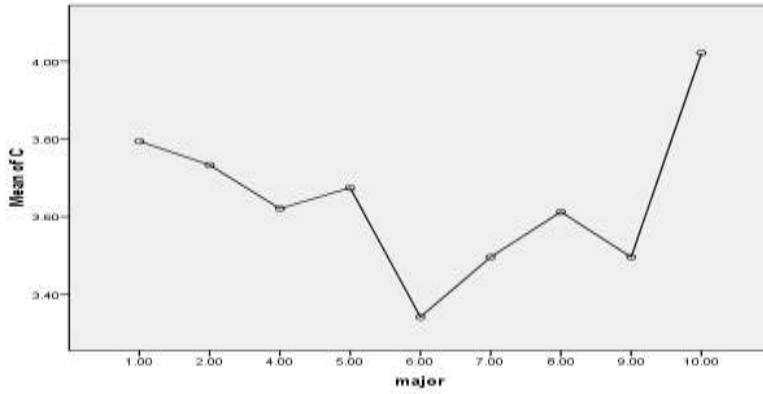


Figure 5 Compare mindset of different major' students in the effort aspect.

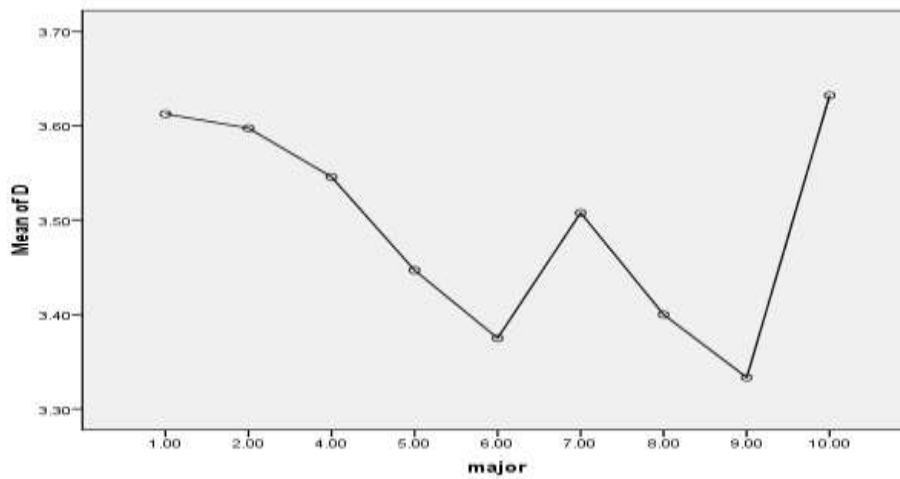


Figure 6 Compare mindset of different major' students in the criticism aspect.

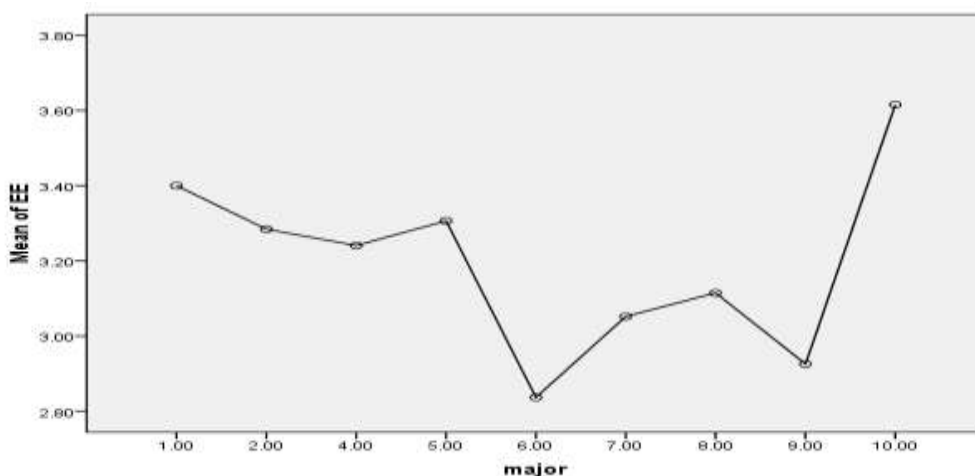


Figure7 Compare mindset of different major' students in the success of others aspect.

6) Mindset of different family career' students were indifferent.

7) Mindset of different family income' students were significant different at the .01 and then compared each pair by Scheffe's method we found that family income' 300,000 Baht up was significant different at the .01 with 100,000-199,999 Baht and significant different at the .05 with Lower 100,000 Baht .

And 8) Most students (90.43 %) had the positive self-perception such as "I have an effort" , "I am patient" and "I am a good person"

## 9. Discussions

9.1 This research found that overall of students mindset was in the moderate level because of Thai culture not focusing on the development of it, such as the challenge, the obstacle, the criticism and the success of others. And this was the new haven't received discover and development seriously for Thai education. Thai Culture emphasis on practice and modeling more than focused on the way of thinking. People emphasized the generosity, compromise, sufficiency. And they didn't want to struggle too much. As Dweck .C. (2006) said " the mindset is an important part of the personality, but you can change. When you know that there are 2 kinds of mindset, you can begin to think and act .When they change themselves to ensure successful growth mindset-dare challenge them to learn from their failures. When the fixed mindset appear, they will remind themselves and others and change it. This does not

mean that we should change every mindset that we can change because we must accept that its imperfection in ourselves, especially what does not hurt our life and others”.

Growth mindset of teacher is main role to help students achieve their mission and potential fulfilled. Teachers must set high standards and provide guidance to make students achieve their goals with praise their process, methods, efforts, alternatives choice, positive criticism and feedback to improve and develop them. Open yourself to get ready to become growth mindset person. Some research found that people with a growth mindset had their own character and potential, such as research of Blackwell. L. and others (2003) which present the results of research about the training mindset by divided students into 2 groups, before the start of training students' mathematics score were too low. After the training mindset, the students in group 1: who were trained with growth mindset got much higher scores. They did better than other students in another group.

9.2 This research found that students in different majors had different levels of mindset. Caused by the beliefs and values of teachers in their respective fields and life experience were cultivated and transmitted later. Including the curriculum and the instruction of each major were different. A teacher with a growth mindset love to learn and to teach, it is a wonderful way to learn about people and motivation, about himself and about life. A teacher with a fixed mindset tend to think of himself as goods. His role is simply to teach knowledge, standing in front of the student group and teach the same thing for a long time (C. Dweck., 2006).

For example, the research finding of Rheinberg. F. (2001 cited in C. Dweck., 2006), he studied the different mindsets of teacher, it was found that teachers who followed the fixed mindset in the classroom with students who started in the highly had the same ability as a graduate. And students with low proficiency in the beginning, it was capable of the same level throughout the study as well. But some teachers taught and followed the growth mindset, they highlighted the idea that "all students can develop their skills", research showed that no matter the students began with the high or low ability group, but at the end both groups got higher ability and the difference between the group disappeared under the guidance of teachers who aimed to improve their students. The finding of Marva. C. and Civia. T. (1992) which was presented on the effect of setting high standards and build climate to support such an climate of love and care, but there is still a real discipline, etc. The teacher taught how to reach those high standards. They taught to love learning and have their own mind and persevere so their students can read high standard for his age range, such as 7 years old children read the Wall Street Journal and talk about the book Republic of Plato. Children love to read books and asked to read more.

According to Dweck. C. (2006) has said that the fixed mindset limited success. It's interfering in the person mind, it makes an attempt to be something boring and lead to worse learning strategies. But with the growth mindset is the key success, the aim is clear and take all efforts and various strategies. They must also have good partners in learning, such as friends, teachers and their network. And the best teachers are the learners who Learn continuously with students and tell them at the first time (Marva. C., 1992). Therefore, the greatest teacher is not born to be, but it starts with the growth mindset about themselves and the students. There are the desire to reach young minds and inspire them, as the finding of Lewis M. (2004) talked about his baseball coach, "I recognize the new taste for more training and realized that how good my life, if I take the enthusiasm from the baseball field to everything. As if the coach came in my mind and found the rusty switch that says " Enthusiasm before trying to use and switch off "".

9.3 Most students had the positive self-perception such as "I have an effort" "I am patient" and "I am a good person" etc. because Thai people emphasize the effort or the self-reliance so the efforts of students at a good level as well. Because of Thai culture emphasis on diligence, self-help. People praised the successful people from self-reliance and these stories as an example to next generations to learn and follow.

## **10. Recommendations**

### **10.1 Recommendations from the finding**

The staff of Faculty of Education and Roi Et Rajabhat University should arrange activities including improving curriculum that focuses on student's growth mindset to cultivate even more so he can sustain life and career. They will become teachers so when they have a growth mindset would believe that they taught and treated their students to be growth mindset as well. Whether they be male or female, every major, comes from a family whose income, however, all must be attentive, training and refining this issue seriously. Especially the challenge, the obstacle and the success of others with mindset levels in the moderate.

### **10.2 Recommendations for further study**

(1) Research mindset with other students of other fields, including university

staff all because these people are very important to improve the quality of university and education as a mastermind of a mindset that will lead to the development of an efficient organization and important in the development of the nation as well.

(2) Research and development

program to change mindset for students as growth mindset.

affecting students' mindset, process of effective change, strategies that use and the consequences that followed.

(3) Integrated research method

should be the quantitative research and qualitative research to identify factors

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EFFECTIVENESS OF MELANKOLIS AS LEARNING  
MEDIA TO INCREASE ABILITY TO READ OF CHILDREN  
WITH MILD INTELLECTUAL DISABILITY CLASS III IN  
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**Abstract**

This study began when researchers discovered the problems of children with mild intellectual disability in SLB ABC IBNU SINA Bandung. The problems are the subject of research have problem learning in reading and communicating caused by abnormalities of speech organs. Based on these problems, researchers tried to create media that can help children to read and then communicate by writing, the media named MELANKOLIS (Early reading and Communicate by writing). The research method used was experimental research with SSR (Single Subject Research) approach and A-B-A design. Through MELANKOLIS, proven ability to read on the subject of research can be increased, it can be seen from the increase in the ability to read, where the early conditions of children only scored 33.3% before treatment was given. And then when treatment was given using MELANKOLIS media, children got score 60% with researcher's help. And in the last phase children got score 80% after treatment was given using MELANKOLIS media without help from researcher. From these data it can be concluded that MELANKOLIS is effective media learning to help children read and communicate by writing.

**Keywords :** *Intellectual Disability,  
MELANKOLIS, Single Subject Research, Reading, Communication*

## 1. INTRODUCTION

**AAMD (American Association on Mental Deficiency)** define that mental retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive, and manifested during development period (Grossman and Robert Ingalls: 1987 ).

Clasification	Binet	Wechsler
Mild Intellectual Disability	68-52	69-55
Moderate Intellectual	51-36	54-40
Severe Intellectual	35-20	39-25
Profound Intellectual	< 19	< 24

### Intellectual Disability Children Level Classification Based on intelligence

According Sutjihati Somantri (2006: 106) that mild mental retardation has an IQ between 68-52 according to Binet scale, while according Wischler scale (WISC) had an IQ of 69 - 55. They can still learn reading, writing and simple arithmetic. According Munzayanah (2000:22) Children mild mental retardation are those who still have the possibility of obtaining an education in reading, writing and calculating at a certain level at a special school. Usually for the group can reach a certain level, a level with the fourth grade elementary school, and can learn simple skills.

Reading ability is the basic for the mastering various fields of study. If children of school age do not immediately have the ability to read, then he will have difficulty in studying the various fields of study. Therefore, children should learn to read so he can read to learn. (Lerner, 1988: 249). According to Kirk, Kliebhan and Lerner (1979 : 202) there are eight factors contribute to success in learning to read, as follows :

- a. mental maturity
- b. visual ability
- c. auditory ability
- d. speech and language development
- e. thinking ability and attention

- f. motoric development
- g. social and emotional maturity
- h. motivation and interest

Warner and Sujawanto (2005:73) explain that “Children with intellectual disability is children which has delay on their mental development, child slowly than other children on the same age, the child may be late to start moving, smiling, showed interest in various things or objects, sitting and walking. Children with intellectual disability have difficulty in abstract thinking ability, it making them difficult to imagine anything”.

MELANKOLIS is a concrete instructional media and effective to increase early reading ability. MELANKOLIS is important to train and to reinforce student’s ability to know language symbols, word and sentence. Approach model to train early reading is use SAS (Structure, Analysis, Synthetic) method. Phase of use this media start from concrete, semi concrete and abstract.







Figure 1 Learning Media Melankolis

## 2. RESEARCH METHOD

Our research was implemented in SLB ABC Ibnu Sina Bandung starting from September until the month of November 2014. subject was students in class III SLB ABC Ibnu Sina Bandung. This student was classified as mild intellectual dissability that has an IQ of 69-55 according to the Wechsler's scoring scale.

Our research use experimental method with Single Subject Research (SSR) approach, which aims to identify the effect of a treatment or intervention provided to individuals repeatedly within a certain time. And in this approach is use A-B-A design. In this design there are three conditions, A-1 is baseline-1, B is intervention and A-2 is baseline-2

In this study, researchers implement experimental research steps according Jaedun (2011) as follows:

- Selecting and formulate problems, including going to test-piloted treatment;
- Select the subjects that will be subjected to get treatment and subjects that are not;
- Selecting experimental research design;
- Develop measurement instruments (instruments to collect data);
- Carry out research and data collection procedures;
- Analyze the data;
- The formulation of conclusions.

Implementation procedures A-B-A design shows that target behavior was continuously measured at baseline condition 1 (A-1) with a period of 30 minutes per session. Collecting data on the condition of the intervention implemented continuously until the data reaches the level of a clear and stable. After the measurement in the intervention condition, measurements at baseline condition 2 (A- 2) is implemented as a control condition of intervention so as to enable the researcher to conclude that there is a functional relationship between the dependent variable (ability to early reading) and the independent variable (MELANKOLIS).

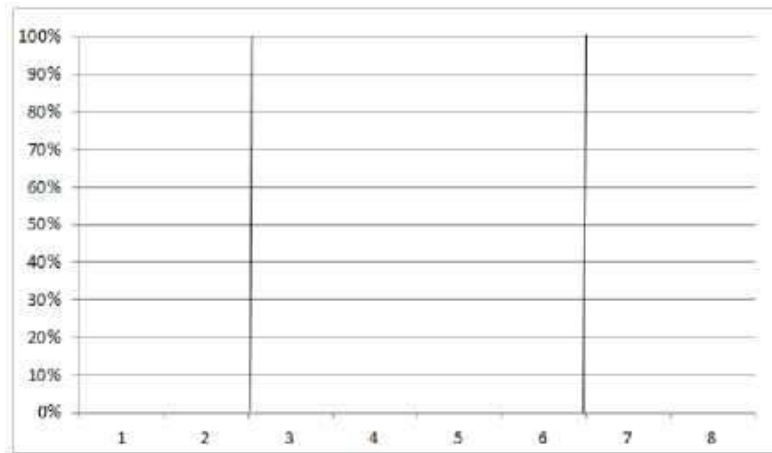


Figure 2. A-B-A Design

Descriptions about A-B-A are described below:

A-1 (baseline-1): Conditions of basic ability, in which the target behavior measurements implemented on natural circumstances before any treatments given. At this step, the subjects were given the test to name the numbers and count how many objects were given. Subject observed and taken data naturally so it looks early ability possessed subject in which observation and data collection is done repeatedly.

B (Intervention): Condition of subjects while treatment of reading learning using MELANKOLIS repeatedly.

A-2 (baseline-2): Observation without intervention after the subject was given treatment. This baseline serves as a benchmark of success and as an evaluation to see how far the effects of a given intervention.

The way to determine whether there is the effect of a given treatment it is observed by comparing the results of research subjects in the time before and after the treatment was given. After all data collected, data processed and analyzed into descriptive statistics and present data by using a graphics. The use of graphics is expected to clarify the picture of the implementation of the experiment before and after the treatment. After all the data collected then it fully analyzed. These steps are performed:

- a. Scoring for baseline-1;
- b. Scoring for intervention;
- c. Scoring for baseline-2
- d. Make recapitulation progress table for scores which have been obtained at baseline-1, intervention and baseline-2.

### 3. RESULT AND DISCUSSION

### 3.1 Result

This research is supposed to get description about MELANKOLIS as teaching media to increase student's reading ability with mild intellectual disability. MELANKOLIS uses in learning process are implemented as many as 8 times in eight sessions consisting of two sessions for *baseline-1* (A-1), four sessions for *intervention* (B), and two sessions for *baseline-2* (A-2). In this study, there is one subject, she is MK, who are elementary school student with mild intellectual disability in class III.

*Baseline-1* (A-1) is the first phase for gathering data about the early conditions of students with intellectual disability. First we test her early reading ability. In this step, each research subject was given about as many as 15 items; with the maximum score are 15.

Next phase is to provide the *intervention* (B). In this step we use MELANKOLIS to increase her early reading ability. At the end of learning with MELANKOLIS in each session given the research subjects and scoring about the same as in the *baseline-1* (A-1).

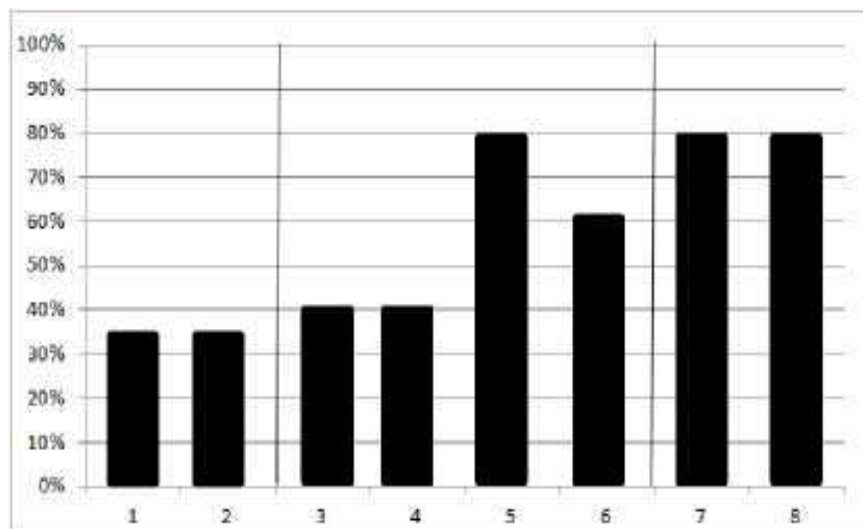
Final phase is the re-measurement of early reading ability. This step called the *baseline-2* (A-2). In this step, are do as same as in the *baseline-1* (A-1).

After successful data retrieval, researchers compared scores obtained at *baseline-1* (A-1), *intervention* (B), and *baseline-2* (A-2) so subject's improvement in early reading ability is observed. Data progression subject MK in Table 2 are described in the result and discussion, which is as follows:

Sessi	Baseline-1 (A-1)	Sessi	Intervention (B)	Sessi	Baseline-2 (A-2)
1	33,33%	1	40%	1	80%
2	33,33%	2	40%	2	80%
		3	80%		
		4	60%		
Mean	33,33%		60%		80%

Table 3.1 Recapitulation Progress Subject MK In Early Reading Ability

In Table 1, we can see that the mean on *baseline-1* (A1) is 33,33%, the mean on *intervention* (B) is 60% and the mean on *baseline-2* (A2) is 80%. So, the percentage of subject MK in early reading ability show that there are improvement from A-1 to B about 26,67% and from A-1 to A-2 about 46,67%.



Graph 3.1 Recapitulation Progress Subject MK In Early Reading Ability

### 3.2 Discussion

These are following discussion of subject progress.

#### 3.2.1 Baseline-1 (A-1)

When we conduct an assessment during two sessions to MK by do test in her early reading ability, at this point we conclude that MK has difficulty in reading ability. It can be seen from the result of the assessment above that MK was unable to complete the entire test correctly. MK is able to know and understand few letters alphabet, such as vocal letters a, i, u, e, o and consonant letters such as, f, g, l, k, m and only could articulated letter a and l. Based on the assessment result can be sure that MK has problems in early reading ability.

#### 3.2.2 Intervention (B)

In this phase, after MK trained using learning media MELANKOLIS, we perform a total of four session. In this phase MK experienced a considerable increase compared to the previous phase. The improvement are about 26,67%. It can be seen that there is an positive progress from baseline-1 to the intervention phase, which originally MK obtain 33,33% increased to 60%. It is evident that MK can resolve most test correctly after treated with learning media MELANKOLIS. MK is able to know and understand all of letters alphabet, subject could articulated a, u, o, b, l, d, h, and subject could read a simple word. Based on the result of this intervention, we can be sure that MK has positive progress in early reading skill using learning media MELANKOLIS.

#### 3.2.3 Baseline-2 (A-2)

In this phase, re-assessments performed to determine early reading the ability after MK already use learning media MELANKOLIS. MK has increased from 33,33% to 60% and the

baseline-2 MK got 80%. So it looks MK has positive progress in early reading ability about 46,67% from the *baseline-1* (A-1) to the *baseline-2* (A-2).

#### 4. CONCLUSION

Based on research by our team, using MELANKOLIS as learning media to increase early reading ability, it can be concluded as follows:

- 4.1 The effect of using learning media MELANKOLIS to increase subject's early reading ability of the children with mild intellectual disability in class III SLB ABC Ibnu Sina, Bandung are positive.
- 4.2 Subject MK get increased early reading ability about 46,67% of phase A-1 (baseline-1) to phase A-2 (baseline-2)

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## Parents' satisfaction toward Student Tracking System By SMS : A Case study of

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### Abstract

The purpose of this research is to study the satisfaction of parents to acknowledge the notification by SMS from the student tracking system. The system that Srisongkhram Industrial Technology College, Inakhon Phanom University used to care for students in the second semester of academic year 2557. Student tracking system was a system use to record and report the student class attendant to the parents. The system will notify the name of the students who did not attend class and who did not in lineup in the morning sent in the form of SMS to mobile phones of parents as soon as the teacher checks the name of the students in the system. The samples of this study were 187 parents of students who were study in the college. Survey questionnaire were used to collect data. The data were analyzed by frequency, percentage, mean and standard deviation. The results of this research found that parents were satisfied with the student tracking system. The overall satisfaction level was very high ( $x = 4.63$ ,  $SD = 0.38$ ).

**Keywords:** Student tracking system,

Satisfaction of parents, Short messages (SMS)

### 1. Introduction

Currently graduates in vocational education be required of the labor market is huge. The government's policy enhancing value to students studying vocational more. Graduates can apply their knowledge in private career or work in the industrial sector, which currently requires workers who are graduates of vocational majority. But the education management for vocational education has many of the problems. Especially the problems from student dropout and no graduation of the period prescribed in the curriculum. This is important because the dropout rate of students is increasing.

Students care to be able to graduate on time. It is an important mission of the institution in the vocational. That will help for students were able to apply the knowledge acquired on the further job and application for build ability to their life as being important labor market.

Srisongkhram Industrial Technology College, Nakhon Phanom University is educational institution in vocational give the importance to care student. Therefore the College brings the student tracking system to take care of the students in second semester of academic year 2557. Student tracking system was a system use to record student information such as information about students who did not attend class information about students who did not in line-up in the morning and system can summary report about those student information to teachers or administrators to know to apply for primary care students. Highlights of the system is can notify the name of student who did not in class and did not in lineup in the morning sent in the form of SMS to mobile phones of parents as soon as the teacher checks the name of the students in the system. This make parents knows basic information about student in college quickly.

From the reasons discussed. The researchers got the idea for the study of satisfaction of parents on student tracking system with SMS to use as a guideline to improve system efficiency in further.

## **2. Materials and Methods**

The researcher use materials and methods to study satisfaction of parents on student tracking system by SMS were conducted as follows.

### **2.1 Tool**

This study was a questionnaire to collect information were divided into 2 part

2.1.1 General information about the Parent's gender, age, education, occupation, income, parents of students in major

2.1.2 10 Questionnaire is 5 rating scale regarding satisfaction of parents. When already done to collecting information then use the frequency information takes the average. The sample to determine the level of satisfaction as table 1

## 2.2 Population sample

The samples of this study were 348 parents of students in the college who register courses in second semester of academic year 2557. To determine the sample size using the formula of Taro Yamane (1967). The resulting sample size is demonstrated in Equation 1.

$$\frac{348}{1 + 348(0.05)^2}$$

## 2.3 Collection Data

The collection data for this study divided into 2 categories.

2.3.1 Primary data is in the nature of words, facts and opinions which collected from sample of the population studied. This type of information can be collected by means of surveys. Using the tool is a questionnaire.

2.3.2 Secondary data is in the nature of the document. facts which has already collected in various media such as books, journals, research reports.

## 2.4 Data Analysis

This study use tool for analysis data 3 methods as follows.

2.4.1. Descriptive Statistic and Percentage

2.4.2 Mean

2.4.3 Standard Deviation

Satisfaction Level	means
4:50 - 5:00	Most
3:50 - 4:49	more
2:50 - 3:49	medium
1:50 - 2:49	low
1:00 - 1:49	least

Show Satisfaction level and means



### 3. Results

The results for study were divided into 2 parts **as follows**.

3.1 The results from general information. Analysis by frequency distribution and percentage. Results were as follows

3.1.1 Parent's gender results is Male 41.18% Female 58.82%

3.1.2 Age results is 30 - 39 years 19.25% 40 - 49 years 40.10% 50 - 59 years 22.99% more than 60 years 17.64%

3.1.2 Education results is Primary education 54.54% secondary/Vocational 27.27% Vocational/Diploma 11.76% Higher Bachelor's Degree 6.41%

3.1.4 Career results is General work 32.62% Farmers/Farm/Ranch 44.91% Government/State Enterprises 6.41% Personal Business 16.04%

3.1.5 Income (Bath/Month) results is less than 5,000 8.55% 5,001 - 10,000 37.43% 10,001 - 15,000 35.82% more than 15,000 18.18%

3.1.6 Parents of students in branch results is business computer 18.71% Accounting 24.06% Electrical 17.64% Electronics 14.97% Automotive 24.59%

3.2 The results from 10 questionnaires regarding satisfaction. Analysis by mean value standard deviation and evaluation. Results found the satisfaction of parents on student tracking system by SMS overall a very good level ( $x = 4.63$ ,  $S.D = 0.38$ ) When consider by item was found the a very good satisfaction level is Parents recognize the non-attendance of students ( $x = 4.86$ ,  $S.D. = 0.37$ ) Parents recognize the non- in lineup in the morning ( $x = 4.74$ ,  $S.D. = 0.48$ ) Parents have benefit from the student tracking system ( $x = 4.74$ ,  $S.D. = 0.47$ )

SMS text easy to understand ( $x = 4.64$ ,  $S.D. = 0.50$ ) Parents can get information quickly ( $x = 4.63$ ,  $S.D. = 0.50$ ) Collage has student tracking system ( $x = 4.61$ ,  $S.D. = 0.54$ ) The performance of the student tracking system ( $x = 4.57$ ,  $S.D. = 0.55$ ) Add channel to contact between parents and college ( $x = 4.53$ ,  $S.D. = 0.52$ ) and a good satisfaction level is Make relationships between parents and college ( $x = 4.48$ ,  $S.D. = 0.54$ ) can reduce the problem of nonattendance of students ( $x = 4.47$ ,  $S.D. = 0.58$ ) respectively

### 4. Discussions

The results from research satisfaction of parents on student tracking system by SMS. Results were as follows

4.1 The satisfaction of parents on student tracking system by SMS overall a very good level ( $x = 4.63$ ,  $S.D = 0.38$ ) The item with the 3 highest is Parents recognize the non-attendance of students, Parents recognize the non- in line up in the morning and Parents have benefit from the student tracking system.

4.2 Suggestion college should add develop system the part of participants and the

results of the study. To make the system more efficient.

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## **A Model for Developing Effective Leadership for Administrators in World-Class Standard Schools in the Northeast**

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### **INTRODUCTION**

In the present time, the global currents, economic system have been progressed in terms of science and technology and communications that help make the globe smaller and smaller. Thailand, with no exception, has to connect itself with the global society based on the equal dignity on competitiveness ability along with cooperation with the global society or globalization. Thai citizens have to develop themselves to knowledge of how to choose the cultural currents in harmony with the cultivation of consciousness of being Thai or Thainess. The good management of education with efficiency affects the quality of Thai citizens in every aspect in order to make Thailand become a developed country. However, the existing problems on educational management faced in Thailand include the quality on educational management compared to the international level or even to the countries in the same region such as ASEAN countries.

Regarding the said problems , preparedness in developing the knowledge-based respect with quality and efficiency should be kept in pace with any changes in the future. The Ministry of Education administers educational policy in developing Thai citizens to obtain a better quality and efficiency through the upgrade of the leading schools up to the World-class Standard schools in order to become schools furnished with the system on the development of learners, curriculum, learning resources, environment together with learning administration management conducive to learners to be able to study by themselves continuously. The said schools should be future- oriented schools with quality at the degree of world class. Hence, in order to develop and uplift school standards up to the World-Class Standard schools in the future. Thus, school administrators pay an important role in terms of developing and upgrading these schools up to the level needed particularly in terms of leadership of the school administrators that play an important role in developing

components on the educational leadership of the school administrators up to the World-class Standard schools. According to coaching supervision along with application evaluation on the World-Class Standard schools excluding quantitative data, the school and working staff obtaining findings and recommendations concerning the application of educational management development during academic years 2010-2012., it was found that what was needed by the schools in terms of development comprised the following aspects: 1) curriculum development and learning management, 2) quality management, 3) personnel development, 4) the use of learning resources, and 5) learner quality. Thus, there was a necessity for doing research and developing the school administrator leadership based on the World-class Standard school consisting of 6 components: quality management, curriculum development and the learner- centered approach , learner quality development, being a change agent, obtaining vision and community relationship in order to obtain a model on leadership development with efficiency as well as affecting results in leadership development to employ in developing educational management and apply in the World-class Standard schools with knowledge ,understanding and attitudes toward behaviors of employing the effective leadership to be applied inn managing the World-Class Standard schools.

#### OBJECTIVES OF THE RESEARCH

The objectives of this study were as follows:

1. To investigate components of effective leadership
2. To build and develop a model on the effective leadership development
3. To report the effects of employing a model on the effective leadership of the school administrators in the World-Class Standard schools in the Northeast of Thailand

#### METHODOLOGY

This study was conducted in 3 phases:

PHASE I- An analysis of components of the effective leadership appropriate for the school administrators

PHASE II- Presentation of the model on the effective leadership development PHASE III- Effects of the effective leadership in forms of evaluation and conclusion on the effective leadership development among the school administrators in the World-Class Standard schools in the Northeast

#### CONCLUSION

The model on the effective leadership development of the school administrators in the World-Class Standard schools in the Northeast could be concluded that:

1. The components of the effective leadership were composed of: quality management, curriculum development and learner-centered approach, learner quality development, being a change agent, obtaining vision and relationship with community.

2. The model of the effective leadership development among the school administrators in the World-Class Standard schools in the Northeast included:

2.1 The principles of the model comprised: 1) The developed model based on the ideas and theories of the effective leadership, 2) applying theory of the learning of adults, and 3) employing the collaborative process focusing on the participants' self-study on the manual by themselves up to gaining new knowledge continuously.

2.1.1 The general objectives were: 1) To develop knowledge, understanding, awareness and attitudes regarding the effective leadership, 2) To develop behaviors and skills in using the effective leadership by applying knowledge and skills on the effective leadership by putting into practice efficiently.

2.1.2 The specific objectives included: 1) Obtaining knowledge and understanding on behaviors of implementing the effective leadership based on 6 components, 2) practicing skills needed on applying the effective leadership of the school administrators at the World-Class Standard schools.

2.2 The contents of the model consisted of 6 units as follows: 1) quality management, 2) curriculum development and the learner-centered approach, 3) learner quality development, 4) being a change agent, 5) obtaining vision, and 6) community relationship.

2.3 The development activities were composed of the self-study of the manual via learning details of the contents containing 6 components in each copy. According to the self-study manual comprised: directions on contents application, pretest and posttest, end-of-chapter exercises, monitoring and evaluation of self-study.

2.4 The desirable effects included behavior evaluation in applying the effective leadership of the school administrators in the World-Class Standard schools both before and after a self-taught development experiment by letting the school administrators in the experiment group did the self-evaluation concerning self-evaluation on the effective leadership behaviors in all 6 components.

3. The results of the effective leadership development of the school administrators in the World-Class Standard schools revealed that:

3.1 The school administrators gained a better knowledge and understanding toward behaviors of applying the effective leadership of the school administrators at the World-Class Standard schools after the development through the implementation of the self-taught manual than before the development.

3.2 The perception toward the development of the effective leadership of the school administrators in every performance of the effective leadership in the World-Class Standard schools indicated that the ideas after the development were at the highest level in general and in particular.

## DISCUSSION

This study aimed to find out a model of the effective leadership development among the school administrators in the World-Class Standard schools in the Northeast through the researcher's presentation of discussion according to the objectives of the study in order to develop the effective leadership development as follows:

1. The results of investing components of the effective leadership of the school administrators in the World-Class Standard schools through literature review concerning principles, ideas and theories on the effective leadership along with development of the effective leadership including investigation on many academia who studied and interviewed scholars who were experts in principles, ideas and theories based on leadership and effective leadership as well as the learned and experienced 's performances on the implementation of the World-Class Standard schools. This included the explanation on the effective leadership performance among the school administrators in the World-Class Standard schools in the Northeast which have been assessed and approved by mm revealing that the perception in general toward the characteristics of the effective leadership of the World-Class Standard schools should be actually practiced on particular tasks, duties and status of the appropriate leadership for job performance. of the school administrators including 6 components: 1) quality development^ curriculum development and the learner- centered approach, 3) learner quality development^ being a change agent, 5) obtaining vision, and 6) community relationship as follows:

1.1 The quality system management included the following important components e.g. quality of school administrators, obtaining vision and abilities to lead schools to becoming the World-Class Standard schools, fundamental factors, network on collaborative development, indicators on development as well as research and development, a committee to identify and find out a model of developed school toward excellence of the World-Class Standard school based on the criteria of evaluation of the committee of basic education.

1.2 The development based on the learner-centered approach consisted of the following main characteristics: designation of learning content, learning units and learning activities of school curriculum as well as school curriculum implementation appropriate and beneficial for learning for leaders and community based on the learner-centered approach.

1.3 The learner quality development was composed of the key characteristics, for instance, setting up of guidelines on the development of teachers concerning instruction, the use of language for communications with fluency both in Thai and English, application of teaching on the learning substance of science-mathematics, an emphasis on the use of textbooks, instructional materials in other learning substances together with ICT both online and offline systems in order to foster the ideas and production of outputs with creativity.

The research and development model of the World-Class Standard schools along with the monitoring and evaluation of performance, report on public relations as well as the dissemination of knowledge to the public with influence and ideal thoroughly.

1.4 Being a change agent comprised the following main factors through the 4 special behavioral factors: ideal influence, and inspirational awareness of individualism as well.

1.5 Obtaining vision consisted of the following key characteristics: creation of vision, setting up of vision, following of vision, adjustment of vision, evaluation improvement and recreation of vision, presentation of vision, explanation of vision, as well as communications to individuals both inside and outside the agency/organization.

1.6 The relationship with community included the following main factors: participation in educational management, mobility of resources from the community to be applied for collaborative use, management of education to meet interests and needs of the community as well as instructional implementation on subject contents to learners in order to apply in the community and family etc. The components of the effective leadership comprised all of the 6 components of the effective leadership along with characteristics of the school administrators in the World-Class Standard schools essential to affect educational performance based on roles, duties, and tasks assigned, framework or tasks to be fruitful with efficiency and effectiveness in line with the Basic Education Commission (2010) to be in the same direction and characteristics of the components in order to be used to test the indicators and guidelines of the application in terms of management or obtaining the effective leadership. In order to enhance organizational effectiveness, the school administrators of the World-Class Standard schools were required to obtain the effective leadership and able to analyze tasks according to situations encountered. The application of the effective leadership refers to quality management, curriculum development, being a change agent, obtaining vision as well as relationship with the community.

2. The model of the effective leadership among the administrators in the World-Class Standard schools in the Northeast consisted of 5 stages:

2.1 Principles of the format including: 1) being a developed model based on ideas and theories of the effective leadership, 2) applying adult learning theories as well as principles of adult learning, and 3) employing the collaborative procedure with major principles on the self-study of the manuals by attendants up to gaining new knowledge continuously.

2.1.1 The general objectives comprised: 1) To develop knowledge, understanding, create awareness and attitudes regarding the effective leadership, 2) To develop behaviors and skills on the effective leadership application to put knowledge and skills on the effective leadership to be applied into practice with competence.

2.1.2 The specific objectives included: 1) To obtain knowledge, understanding on the behaviors regarding the effective leadership application on the 6 components, 2) To practice

skills on the use of the effective leadership among the school administrators in the World-Class Standard schools.

2.2 The contents of the format were composed of 6 units as follows: 1) quality management, 2) curriculum development and the learner-centered approach, 3) learner quality development, 4) being a change agent, 5) obtaining vision, and 6) community relationship.

2.3 The development of activities consisted of the study of the learning manual through details of contents in each copy. The self-taught manual contained directions on the content use, pretest and posttest, end-of-chapter exercises along with a form of self-evaluation.

2.4 The desirable outcomes comprised: an evaluation on the behaviors on the effective leadership application among the school administrators of the World-Class Standard schools both before and after the development experiment via the self-taught process. The administrators in the experiment group did the self-evaluation process concerning behaviors of the effective leadership on the 6 components based on the application of the effective leadership as a target and guidelines. The results of this study in the first stage were composed of the components and structures on the components of the effective leadership regarded as information originated from the bringing data to be processed and structurally classified with system and harmony with frameworks, structures, as well as theories to be able to be compared with the creation of detailed curriculum with classification, that is, contents with classified sub-topics in order to make details in each issue of the curriculum clearer. After being set up, any topics would be arranged in order continuously and harmoniously. In order to get ideas, skills or behaviors to be developed systematically, the use of behavioral learning principles as guidelines of building the model of the effective leadership was employed including: leadership theories, and synthesis of system creation on the effective leadership with 6 said stages. Later on, the effects of the first stage would be added to the system structure of the effective leadership development to become the model of the effective leadership development. The implementation of leadership theories to be a part of designation of the development model as well as the significant final stage referred to end the the development because the improvement and development would be the point to connect the new spiral of the appropriate development. In this stage, educators, school administrators in the World-Class Standard schools as well as stakeholders would play an important role for one another to be developed via a supportive role for one another with continuity and sustainability.

3. The effects of the effective leadership development of the administrators in the World-Class Standard schools in the Northeast using the self-taught learning manuals referred to the provision of knowledge on principles and theories based on leadership. The



6-component effective leadership was a self-development method through the provision of knowledge and experience to be applied in performance, behavioral evaluation on the self-application of the effective leadership both before and after selfdevelopment. In addition, the report on the effects of the effective leadership development among the school administrators in the World-Class Standard schools in the Northeast revealed that:

3.1 The development of the effective leadership of the administrators in the World-Class Standard schools through the application of self-taught manuals was focused on the issues on principles, ideas and theories of the effective leadership, knowledge and skills of the effective leadership with 6 components indicated as follows:

3.1.1 After being self-developed through the adult self-taught method, it was found that the school administrators gained achievements on knowledge, understanding in principles, ideas and theories of leadership, and the effective leadership as well. Knowledge and the 6-component effective leadership together with the effective leadership development were at the higher degree than before the development. In addition, after self-development, the school administrators gained enthusiasm to change their behaviors on applying the effective leadership via self-development first leading to the application of the effective leadership in others.

3.1.2 After being self-developed, the school administrators gained attitudes toward the application of the effective leadership at the highest level. The reason was that the school administrators attended the development session through an adult self-taught technique. After applying understanding in principles, ideas and theories of the effective leadership as well as the 6-component effective leadership, the administrators could analyze ideas on behaviors and found that they were the behaviors employed in the effective leadership among the school administrators in the World-Class Standard schools after the self-development session via the self-taught management method for adults at the highest level.

The findings of this study was in line with the study of Thawatcha Pailai ( 2012: abstract) who explored the model of development on academic affairs leadership in local administration organizations concluded that the development through the use of training sessions and manual study could be summarized that after the development and manual study , there was a better development than before the intervention. This was consistent with the study of Yaowalak Sutakhot (2019:202-203) who identified the status development of leadership of the municipal officials: a case study of the Office of Mukdahan Town Municipality indicated that after the training session, the officials attending the session gained knowledge, principles, and theories on leadership at the higher level. This was also in line with the study of Saruttiiphong

Phuwatwaranon (2011) who studied a model of development on academic leaders through integrated learning for school administrators in the schools under the Offices of the Secondary Educational Service Area in the 3 southernmost provinces revealed that the model on leadership development comprising 5 components: principles, objectives, contents, system of the integrated learning management as well as measurement and evaluation. The said model was appropriate and possible to be applied. Moreover, the co-researchers based on the model gained a better learning according to objectives and good attitudes toward the developed learning.

3.2 The results of the development evaluation of the effective leadership of the school administrators in the World-Class Standard schools showed that:

3.2.1 The opinions toward the effective leadership development among the school administrators in the World-Class Standard schools ranging from high to low were: 1) quality management, 2) curriculum development and the learner-centered approach, 3) learner quality development, 4) being a change agent, 5) obtaining vision, and relationship with the community respectively. The reason why it was like that was after being developed by an adult self-taught method which was regarded as the effective leadership development. In addition, the school administrators, excluding the gain of knowledge, understanding on the role with responsibility, guidelines of educational management in the World-Class Standard schools, obtaining of the 6-component effective leadership, gained awareness of tasks responsible e.g. job management to make educational management in the World-Class Standard schools achieve the effective objectives set in organizations particularly the implementation in line with standard criteria in educational development in 4 aspects: 1) school curriculum development, 2) learning management, 3) quality administration management, and 4) learner quality development (desirable characteristics of learners). Thus, whenever the training session to develop the effective leadership for the school administrators in the 6 components and covered the framework and tasks of the school administrators based on the framework of the World-Class Standard schools affecting the administrators to apply knowledge and skills earned from the training session to put into practice in authentic states. This would make the behaviors on applying the effective leadership of the school administrators in the World-Class Standard schools be at the highest level. The effects of this study were consistent with the idea of Darawan Maikhammi (2010: 11) who stated that the personnel development was regarded as the development for advancement in career in order to get new knowledge, abilities both in terms of academic knowledge and obtaining behaviors on monitoring the progress of new technologies that have been quickly changed. This study was also in line with principles and rationales on the personnel development in an organization conducted by Anan Si-amphai (2007: 11) who stated that reason of the development relied on knowledge and abilities in

working and awareness of benefits and progress occurred from working and when one met an opportunity for self-development up to the higher degree. This was also consistent with the study of Yaowalak Sutakhot (2010: abstract) who did a research on development of leadership of municipal officials: a case study of Mukdahan Town Municipality using a curriculum on training as guidelines of development. The effects of this study revealed that those officials who attended the training session gained knowledge, understanding on principles, ideas, leadership theories, leadership development, high attitudes toward leadership as well as obtaining behaviors in applying leadership in performance after the training session at the higher level than before the intervention. Moreover, the effects of the effective leadership development through the evaluation of the school administrators, officials, performers, as well as general public as the clients of the services based on the performance of the effective leadership among the school administrators in the World-Class Standard schools were at the high level in every aspect. The self-development was a learning procedure

that applied knowledge, data, information, skills, ideas and experiences newly acquired to change and improve in order to be able to work efficiently and effectively. The personnel development was regarded as the enhancement of knowledge, understanding together with abilities in performance both in terms of academic affairs and technology advancement in order to improve and develop working behaviors with quality and efficiency. When the researcher applied the guidelines of the effective leadership of the school administrators through the adult self-taught learning management via the self-taught technique and skills affecting the administrators in the World-Class Standard schools to obtain attitudes toward the application of the effective leadership in job performance at the highest level.

#### RECOMMENDATIONS

1. The recommendations in applying the effects of this study

1.1 In order to reinforce the job performance of the school administrators in the World-Class Standard schools, the job performance of theirs as well as the performance in the best practice educational management to be a model and to be recognized as the World-Class Standard schools of best practice in order to be an honor and morale in further job performance.

1.2 The effects of this study in order to promote and support the school administrators, knowledge and skill reinforcement in managing various types of learning together with coaching supervision for those who are responsible for the monitoring should be employed. Learning application, creation and development of learning innovation in order to manage the learner-centered approach should be administered and child care takers as well as executives should take part in educational management.

1.3 Regarding the results of this study, the school administrators' knowledge and

understanding applied in doing research as well as the effective leadership development were at the high level. But the development would become better if there were documents on conclusion on bodies of knowledge, exhibitions, seminars, workshops, learning exchange, models or guidelines of job performance in the World-Class Standard schools, study tours and the use of the Internet to develop bodies of knowledge in order to obtain higher efficiency in working.

2. The recommendations in doing further research

2.1 There should be more researches on the development of the effective leadership among the school administrators in schools under the offices of the secondary educational service area in various regions.

2.2 There should be studies on evaluation of job performance of school administrators and teachers as well in order to affect the aspect on the improvement of efficiency on tasks, roles and duties of the school administrators and teachers in the World-Class Standard schools.

2.3 There should be more studies on development of efficiency on job performance of the school administrators in other levels in order to enhance the efficiency of schools in the future.

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## Humanities and Social Science

DEVELOPING THE COMMUNICATIVE CULTURAL ENVIRONMENT BETWEEN  
LECTURERS AND STUDENTS IN THE CLASSROOM IN THE COLLEGE FROM MOUNTAINOUS  
AREAS IN SOME PROVINCES OF THE NORTH CENTRAL – VIETNAM

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**Abstract**

The communicative cultural environment between lecturers and students in the class of the College of Pedagogy in some mountainous provinces in the North Central region – Vietnam These objective and subjective restrictions are: The students are not respected by lecturers and classmates as expressing their opinions in the study; Students are not encouraged to exchange, making debate in the learning activities, the not good relationship between students- lecturers; lecturers – students, students-student support, help and sharing; lecturers, students do not make full use of the modern equipment for learning. For reasons: Limited knowledge and weak methods of interaction, communication between teachers and students in classroom; some particular students are bad at coordination; non self-confidence in interaction and communication with lecturers and classmates; Poor pedagogical communication skills etc.

Solutions of developing cultural environment of interaction and communication between lecturers and students in the classroom: To train lecturers and students methods of developing the cultural environment of interaction and communication between lecturers and students in classroom; To organize innovative activities of learning, lecturers. To actively participate in scientific researches on communication skills. Meanwhile there should be direction and reasonable policies for promoting the positive role of lecturers in developing a safe, friendly learning environment etc. The Ministry of Education and Training should add the subjects of Social Communication/ pedagogical communication in curriculum for all training levels.

## **1. Introduction**

Cultural communication - a part of the overall culture means the cultural ways of communicating in society (politeness, friendliness, attitude, openness, sincerity, mutual respect) as combination of elements: words, gestures, acts, attitude and behavior etc.

Cultural communication in classroom covers various activities in classroom i.e. training and studying activities. All activities must be in compliance with the cultural norms in schools.

The cultural environment means the living space of cultural values including the cultural activities: developing, distributing, protecting, making use of cultural products. Cultural environment is developed by the core elements of cultural human and social relations.

The cultural environment of communication between teachers and students in the pedagogy classroom contains basic and specialized knowledge, professional skills, professional qualities, ethics, social life experience developed by two core elements of teachers and students with their relations in classroom.

To develop the cultural environment for lecturers and students in classroom is to create favorable conditions for the teaching objectives. To develop the cultural communication between lecturers and students in classroom is to develop the interaction of training and learning activities aiming at: creating a safe psychological environment, democracy for effective participation; teachers can fully show their enthusiasm, passion for teaching as well as other classroom activities; teachers are well aware of class situation; fully understand every learning ways and student various strengths, limitations for appropriate response; to guide students on self-assessment of learning and personal training process and teacher remark.

To develop the cultural environment of communication between lecturers and students in classroom, it is required to pay attention to some basic conditions such as: awareness, attitudes and actions of teachers and students; facilities, vehicles, equipment, and utensils in classroom etc.

## **2. Method of the study**

The main methods are: Theory study, observation, survey by questionnaires, activity study, and data processing by mathematical statistics.

## **3. Research questions**

Are there any restrictions of the construction of the communicative cultural environment between lecturers and students in the class of the College of Pedagogy in some mountainous provinces in the North Central region - Vietnam? What are necessary solutions to overcome these limitations?



#### 4. Results and discussion

4.1. Status of developing communicative cultural environment between lecturers and students in Lao Cai Teacher Training College - Vietnam

To assess the status of cultural environment of communication between lecturers and students in Lao Cai Teacher Training College, we conducted the survey by questionnaires with attending in 10 classes of 5 teachers. We prepared two forms: KS-01 Form for lecturers and KS-02 form for students. The number of students questioned: 90.

For the questionnaire in such two forms, the teacher and student answers are categorized as very good, good, fair, average, and poor by percentage as shown in the table below:

No	Description	Very good, good, fair (%)	Average, bad (%)
1	Teaching-Learning Method applied regularly and effectively in class	69.48	30.53
2	Teachers make learning relaxed, fun	48.42	51.58
3	Students are always encouraged to make dialogue, debate in the learning activities	47.37	52.63
4	Relationship students-students; students – teachers	47.37	52.63
5	Teachers always make plan and guidance on learning activities	57.89	42.11
6	Students support, help, sharing as necessary	48.42	51.58
7	Learning tasks appropriate to student improvement (knowledge, skills etc.)	68.42	31.58
8	Teachers organize many fascinating learning activities	73.69	26.31
9	Student are respected as expressing study opinions	45.21	55.79
10	Teachers concern and guidance on learning activities	72.63	27.37

11	Student awareness, performance, compliance with the teacher guidance on learning and interaction activities	43.16	56.84
12	Teachers, students make full use of modern equipment for learning	48.44	51.56

**Table 1.** Implementation of the classroom activities of lecturers - students

Combining data of Table with observation of periods, observing the activities of teacher and students in 10 periods, for comments on strengths and weakness as follows:  
 The strengths were achieved: During learning time, teachers held fair, good and very good of content, method relating to organization of academic activities for students, specifically as: teachers and students appreciated highest for: Teacher who organized many types of impressed academic activities with 73.69%; The second is the concern, guidance of teachers to students to perform the academic activities with 72.63%; and the lowest is 58.89% for the opinions: teachers always design and control the academic activities , etc. The data is entirely consistent with the results of observation in periods of 5 teachers.

The weakness: During learning time, awareness of students always perform and adjust under the guidance of teachers to implement academic activities, communication is not good, the highest rate assessment of teachers and students occupied at average and rather weak is 56.84%; The second weakness, 55.79% on average, rather weak is respected to express opinion in the study by teacher and friends; 52.63% is for assessing factors: teacher always encourage student to exchange and discuss in the academic activities, the relationship between student - student; teacher - student, students give - get the support, help and share of friends and teachers if necessary. The finally weakness: Teachers, students used radically modern equipment serving for learning, 51.56%.

Combining with observation in studying hours, we realized that: Many students having difficulties completing tasks in group, teachers have just guided but not implemented; when those students were appointed to finish tasks, they were hesitated and embarrassed, then the class became noisy, looked and felt "pity" for them and the teacher asked them to sit down and expressed dissatisfaction, etc.; In 10 periods, only 4 periods that teachers used projectors and students used mini boards to write results of the group discussion.

#### 4.2. The reason affected the limitation of building cultural environment of communication between teachers and students in classrooms in Lao Cai Teacher Training College

Learning subjective reasons affected to the building of cultural environment of communication between teachers and students in classrooms in Lao Cai Pedagogical Colleges in three aspects: perception, attitudes and actions. As:

No.	Reason	Total	%
1	The building of cultural environment of communication between teachers and students in class is very important	95	100
2	Knowledge and methods to create an environment of communication between teachers and students in the classroom is limited	93	97.89
3	Knowledge of student is not sufficient	76	80.00
4	Communication skills are limited in pedagogical	91	95.79
5	Teaching activities are complex, difficult and diverse	70	73.68
6	No confidence in educating students	61	64.21
7	Particular students are complex and lack of cooperation	93	97.89
8	Students lack confidence to show before teacher and friends	93	97.89
9	Students have not determined intent, learning motivation and training yet	81	85.26

**Table 2.** The causes affected the restrictions on developing of communication cultural environment between lecturers and students in the classroom

The results of table 2 show that: Most of the reasons are determined to be caused by students: 3 basic causes are identified by teachers and students, ranked as the second (2<sup>nd</sup>) causes with 97.89% of: knowledge, methods of creating a communication environment for teachers and students in class are limited; For the complex students and lack of coordination; Students lack confidence in presenting before teachers and friends. Ranked as the third (3<sup>rd</sup>) causes: pedagogical communication skills are limited, the percentage of 95.79%. Next, the

fourth (4<sup>th</sup>) causes: Students who have undetermined purpose, learning motivation and training with 85.26%.

No.	Emotional expression	Levels of emotional expression		
		Frequently	Sometimes	Never
1	Restraint, calm, confidence in looking for a measures to create good communication environment	40	43.2	16.8
2	Anxiety and calm to find a cooperation measures	44.21	33.7	22.11
3	Embarrassing to find measures to create a communication culture environment between Teachers and Students	58.95	18.9	22.11
4	Stressful when looking for cooperation measures	52.63	32.63	14.74
5	Unable to restrain, keep calm to find a remedies for problem	55.79	30.53	13.68
6	Indifference, as if it is normal and not effected on teaching and learning	49.47	41.05	9.47

**Table 3.** The attitude of teachers and students in the classroom environment

The results in Table 3 show that:

The main reason of this limitations affected on the attitudes of teachers and students in frequent level is: Embarrassing when looking for a measures to create good communication culture environment between teacher – student, ratio up to 58.95%; followed by: 55.79% of comments that: Teachers cannot control and keep calm to find out a remedies for the problem; 52.63% of teachers and students said that: Stressful when finding out a cooperation measures and 49.47% of which were indifferent, considering as if it is normal and not effected on teaching and learning.

As such, in the class teachers and students are regularly worried but still stay calm to find out the measures (44.21%); Restraint, calm, confidence in looking for a measures to create communication environment is 40%; However, because there are no remedies, there is the phenomenon of loss under control in the class, keep calm and find measures to create a favorable communication environment and it affected the teaching process.

Information received under the table as well as the reasons that we have observed, recorded in the 10-hour weather as expected.

The actions of teachers and students in the building of the communication cultural environment each other are described in detail and analyzed at the above restrictions exist.

## **5. Findings**

### **5.1. Lecturers' difficulties.**

Embarrassing when looking for a measures to create good communication culture environment between lecturers – student; lecturers cannot control and keep calm to find out a remedies for the problem; Stressful when finding out a cooperation measures and of which were indifferent, considering as if it is normal and not effected on teaching and learning.

### **5.2. Students' difficulties.**

During learning time, awareness of students always perform and adjust under the guidance of teachers to implement academic activities, communication is not good; on average, rather weak is respected to express opinion in the study by teacher and friends; teacher always encourage student to exchange and discuss in the academic activities, the relationship between student - student; teacher - student, students give - get the support, help and share of friends and teachers if necessary; Students used radically modern equipment serving for learning; Students who have undetermined purpose, learning motivation and training

## **6. Some suggested solutions**

### **6.1. Principle of Construction Solutions**

- Make sure that the problems of restrictions affecting the communication culture environment between teachers and students in the school will be solved.

- Ensure that the formation of knowledge and skills in communication of student and teachers will be associated.

- The construction must be based on the inheritance and development of communication level of teachers and students in the classroom.

- Promote the positive training of the students under the direction, organization, control of teachers during studying time.

- Training objectives of the school, guiding viewpoints of all levels and branches.

### **6.2. Solution for building a communication cultural environment in the class between lecturers and student at Mountainous areas in some provinces of the north central - Vietnam**

6.2.1. Raising awareness and behavior of lecturers and student at Lao Cai Teacher Training College in building of communication cultural environment for teacher and student in class.

Objective: lecturers and student shall be deeply aware of the building a communication cultural environment between teacher and student. Since then, creating a demand for each teacher and student in teaching process and each teacher will actively create a communication cultural environment for student and student will accept and carry out effectively.

As for lecturers: Organizing training course, seminar on the real status for contents and method in building a communication cultural environment between teacher and student in the class of Lao Cai Teacher Training College in current period. Exchanging views on the importance of creation for a communication cultural environment between teacher and student in the class; Organizing and compiling of documents to be internally circulated, about the conditions for gaining a high-effective school hour etc. at Lao Cai Training Teacher College. The document is compiled basing on characteristics of psychology, communication, specific culture beauty of ethnic minority students in the college. This will be “handbooks” for each student to be able to self-research and properly and flexibly apply in real condition of the student to be charged. As for student: In "working week of first-year student", it supplies student many meanings and the importance for creating a communication cultural environment in the class, including communication between teacher and student.

During teaching process, a subject teacher shall spend proper time for exchanging views on scientific base, instructing student to practice, developing some basic communication skills. These exchanging and instruction can be carried out in some first sections of the subject – aiming to brief introduce about requirement features, contents of the subject and learning method of the subject in the class. lecturers need to emphasize the necessity of coordination between teacher and student in the class and those must be skills which must be established and developed by students and they are meaningful in learning and skills of a future teacher.

6.2.2. Lecturers and students are equipped with contents and method in building a communication cultural environment between teacher and student in the class.

In order to create conditions for teacher and student having implementation basis, applying in the class to be in charge of, being suitable for subjects and condition of the class, it is necessary to gain the following contents and method:

Firstly, building a regulation and rule on communication and behavior in the class with the participation and decision of student;

When student participates in the process for building a regulation and rule on behaviour in the class, the degree of effectiveness of these regulations will be significantly improved (Marzano, 2011a). This initially shows the democracy, a fair atmosphere and respect between teacher and student, when these general regulation of the class is not only imposed by teacher or the college, enforcing student to obey in all conditions.

Contents of regulation or rule of behaviour in the class must be expressed actively, to avoid an aspect of over-prohibition. Each opinion on this regulations given by student must be

acknowledged and respected, however, teacher should guide student to good habits and behaviours on behalf of prohibition or threatening by punishment if offended.

An example for the class regulation for student at Lao Cai Teacher Training College is given as follows: To be serious in class hour; Effectively implementing learning activities; Always respecting each other; concentratively listening teacher's lecture or when other friend expressing their opinion; Not to interrupt when it is not allowed; When working in group: please say "if you please" and "thank you"; Correctly behaving with group member; correctly do individual duty in the group etc.

Organization of discussion for students: You had thought about a safe and self-respect team, therefore, which regulation and moral rules should you gain for building that team? In the class, how to build a safe and self-respect team? Teacher requires student to copy into a shared convention of the class, to be nicely decorated and glued in the most easily-seen position.

Secondly, improving the relationship of teacher-student and creating a strong attachment, deeply knowing and trusting among students in the class through many various and creative activities: The relationship of teacher-student is one of the most important factor to create a psychological atmosphere of the class and having greatly influence on the effectiveness of teaching process (Marzano, 2011b). Creating conditions in order by means of learning activities, students can "talk about themselves", showing their personality, ability and strong points in discussing, giving personal comments on a subject and content in the class. For this purposes, the association with head teacher or discussion organizer during class activity or overtime studying time is necessary.

Thirdly, the teacher always needs to treat her students in such a respectful, knowledgeable and friendly way: Exemplarity requires her not only professional knowledge, good understanding of pedagogics and pedagogical skills but also a consistency and reasonableness expressed through her words and acts, a clearly sense of how her acts and language effect and impact to each of her student.

Fourthly, it is necessary to personalize the teaching and education process, and specially pay attention to characteristics of culture, belief, spirit... of ethnic students. By understanding each of her student's psychological and physiological personalities, the teacher may create favorable conditions for him to develop his ability and strengths in studying and help him to be more confident and ever-improved. The teacher's understandings of characteristics of local ethnic minorities' culture, spirit and belief... are also her strength which could be utilized as a tool to approach her students, organize her class-time, build real faith and share things with ethnic students in such a better and more effective way.

6.2.3. Teachers and students strictly comply with processes and techniques of positive teaching methods.

This is to create favorable conditions for students to perform studying activities according to an identical process; encourage and promote students' sense of activeness; reinforce studying effectiveness; strengthen personal responsibilities within a team; mobilize different capacities from students in studying; strengthen the cooperation, communication and experience sharing; develop supportively listening and responding skills. We can put into practice many methods and techniques such as: Group discussions, studying agreements, studying projects, tablecloth technique, studying "fairs", etc... Each teacher needs to clearly understand and organize their class based on each method's process, however, it also requires creativeness in order to employ above methods and techniques in such an appropriately way with specific conditions and situations of the educational environment.

6.2.4. The College and Board of science shall direct and encourage bodies, individuals to perform scientific studies related to building up an environment of cultural communication between teachers and students in classrooms according to several studying ways such as: Basic science; applied pedagogical science, etc... The College shall promulgate specific provisions, encouraging policies/regulations of award and punishment related to class management, setting a friendly and positively studying environment... in order to create convenient corridor and supportive conditions for teachers and students in teaching, studying and education. The College shall also frequently organize different activities for purposes of group building and creating sound studying environment as a way to foster teaching and studying senses of students and teachers respectively.

6.2.5. Ministry of Education and Training needs to supplement many credits of Social communication/ Pedagogical communication to studying programs of every education level: These credits shall equip students with concepts, styles, skills, language of communication and allow students to attend more studying sections of practice above topics and have more opportunities to shape and develop their own communication skills which are appropriate with teaching.

## **7. Conclusion**

Of course there are still several weaknesses in communication environment between lecturers and student, specially that students do not have many opportunities to join in appropriate activities organized by teachers; lack of respect in classroom; teachers still do not encourage students enough to discuss and argue during studying activities; weak student – student and lecturers– student relationships; students do not perform well in giving to – receiving from, helping, sharing with their peers and teachers; most of teachers and students concern about this subject, however there is still no reasonable solutions in order to create convenient communication environment in classrooms.



This essay determines a system of solutions which is: to provide lecturers and students further training of knowledge and how to establish a communication environment between teachers and students in classrooms; to organize studying activities in such a way of creating positive techniques and methods..., to participate in science studies related to communication skills. At the same time, it requires reasonable directions and policies promulgated by The College in proving roles and positiveness of teachers related to creating a safety and friendly education environment...

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ENHANCING COMMUNICATION SKILLS FOR ETHNIC MINORITY STUDENTS IN LAO CAI  
TEACHER TRAINING COLLEGE- VIETNAM

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**Abstract**

Communication skill is one of the most important features of human beings which helps people develop mentally, achieve higher efficiency, productivity quality in the activities they take. Thus, each individual should practice communication skill seriously. At Lao Cai Teacher Training College, more than 80% of the students are of ethnic minority who come from remote areas. The living and studying condition in these areas are really poor and result in difficulties for these students to catch up with the curriculum at the college.

On entering new environment in Lao Cai Teacher Training College, students appear to be shy in communication. Many lecturers found it difficult to work with these students. Thus this research concentrates on assessing current communicating ability of the students, figuring out causes and proposing solutions to improve communication skills for students. The research reveals that: Most of the ethnic minority students in Lao Cai Teacher Training College are weak at communication skills resulting from their lack of instructions and training specifically and scientifically.

Enhancing the communication skills for these future teachers requires a combination of methods to develop their activeness, self-consciousness. These includes organizing more in-class activities and extracurricular which provide students with chances to practices and experience as much as possible. Also the student assessment should be revised so as to evaluate the communicative ability of students more precisely. Good communication skills shall help students be more confident, quickly adapt to the requirement of further career and the continually changing social context.

**Key words:** Communication; skills; students; Ethnic; Minority;

## 1. Introduction

Communication skill is the major requirement for a teacher. It's the fundamental tool for teachers to delivery their lecture. As a result, it's essential that future teachers should be trained and given more chances to practice communicating and meet the requirement for teachers. Communication skill includes movements, gestures, behaviors, speech which are properly made to achieve high efficiency in interaction with other people. To enhance the training quality to ethnic minority students, Lecturers and Staffs in the college have to pay special attention to making a favorable environment for developing skills of students, especially communication skills.

## 2. Research method:

Survey; We carried out a survey (Multiple choices questions) on 125 random ethnic minority students in Lao Cai Teacher Training College.

## 3. Findings

### 3.1. Current communication ability of ethnic minority students in Lao Cai Teacher Training College.

Lao Cai is a Northern Moutainous province of Vietnam with more than 25 ethnic groups and most of them are Hmong, Tay, Dao, Day...

As 80% of total students in Lao Cai Teacher Training College are Ethnic Minority students, Staffs and Teachers in the college face a challenge to deal with the diversity in the cultures and languages of these students. For these students, most of them speak Vietnamese as a second language so they lack vocabulary to express their idea in special context. As a result, these group lack confidence in communicating with the other groups.

To evaluate the communication ability of these groups of students, we made up a survey base on the study of V.P.Zakharov on 125 random ethnic minority students. The results are illustrated in table 1 (8 questions for each skill and each questions are marked as: 0: Never, 1: seldom, 2: usually)

No	Skill	Average point	Rank
1	Establish relationships	7,02	8
2	Balance the individual demand and partner's demand	8,51	4
3	Listening	10,23	1
4	Control emotion, behaviors	9,47	2
5	Self-control	8,23	5
6	Clear and understandable expression	6,14	10

7	Flexible in communication	7,31	6
8	Persuading skill	7,11	7
9	Actively control communication process	6,59	9
10	Sensitiveness	9,13	3
	Average		

**Table 1.** Survey on communicating skills of Ethnic minority students in Lao Cai Teacher Training College.

In general, communicating skill of these students are weak especially the ability to express ideas clearly which is the most important skill in communication. Some other skills: Actively control communication process; Establish relationships; Flexible in communication are terrible too as their scores in these skills are really low (Under average level).

### 3.2. Factors affecting communication skill of students

To figure out the causes of ethnic minority students' weakness, we had conducted a survey on more than 125 students and the result is as the below table:

No	Cause	Number of Students	%
1	Small and closed living environment	85	68
2	Little instruction from lecturers	108	86,4
3	Do not know how to practice	117	93,6
4	Language barrier	81	64,8
5	Lack of confidence	82	65,6
6	Little chance to express his/her self	93	74,4
7	Problem with lecturers' teaching method	97	77,6
8	Limited interaction with skillful communicator	56	44,8

**Table 2.** Factors affecting communication skills of ethnic minority students in Lao Cai Teacher Training College.

Reasons for the weakness of these students vary but we can easily point out some major causes: Students do not know the efficient method to practice communicating, little instruction from lecturers and problems with lecturers' teaching method.

## 4. Proposed solutions to improve the communication skills for ethnic minority students in Lao Cai Teacher Training College.

### 4.1. Basis of the proposed solutions

- With an ambitious goal of training professional, independent and active teachers, Lao Cai teacher training colleges pay special attention to enhance the communication skills for the future teachers. They would become high quality labor supplied to the society.
- As for the result of our mentioned survey on 125 ethnic minority students in Lao Cai Teacher Training College, these students score under average point in 5 Out of 10 categories. Thus enhancing their skills is an urgent mission.
- Each student themselves also wish to be equipped with necessary skills to meet the requirement of society and develop their further career

## **4.2. Solutions to improve communication skills for students.**

### **4.2.1. Lecturers should provide more instruction to students to practice communication skills in class hours.**

Along with equipping students with academic knowledge, lecturers should provide them with more opportunities to practice and apply active teaching method (team work; role play) in order improve their team work skills,idea expression and problem solving skills; In some subjects which require social knowledge like Psychology, education, communication skills, lecturers should make students to share their real life experience and make the class hours more attractive and joyful.

For example, on studying on conflict settling skill, lecturers should encourage students to share their own stories; their difficulties toward complicated situation in life, in love so as to make the class a forum. What is special about this is that students are the ones to share their own problems and they would themselves propose solutions. In the hours of practicing teaching techniques, Lecturers may devide class into many small groups so that they can have more opportunities to practice. In Lao Cai Teacher Training College, each class includes about 50 students. Thus, class can be devided into small groups (Each group from 4-6 members). They shall plan the contents, share their ideas and contribute to each other's ideas. By this way, their skills shall be enhanced time by time. They also have the chances to compare, assess the ability of each other and learn from each other to complete themselves.

### **4.2.2. Organizing extracurricular activities**

The extracurricular activities should not be rigid, they should be active and encourage the creativity of students. These activities may include : Clubs – Where students with same interest share their ideas and interact with each other; The voluntary activities in the remote areas, the trips to explore different cultures of ethnic minority shall help students to improve their confidence, their communication and interaction skills.

The organizations in the college (Youth Organization, Student union) should send students to assist teaching and deliver knowledge to the poor, remote area.

The head teachers and consultants should be closed to students to quickly give advices to them on their study and also their difficulties in real life relationships.

#### **4.2.3. Revise the curriculum, the number of students to suite with the real situation.**

The lecturers in Lao Cai Teacher Training college had proposed the extension of “Vietnamse Practice” in order to provide students with the chances to improve their reading, speaking and writing skills. We also incorporate Communication skills, creative experience into the curriculum.

The intern period for students also increases from 9 weeks (standard period stipulated by ministry of education) to 13 weeks.

Also, The colleges offer students with certain class hours in their ethnic languages so that they can adapt to the job when they are back working in their home town.

#### **4.2.4. Tightening the co-operation with other schools**

Every year, Lao Cai Teacher Training College co-operate with local department of education and training to get students trained by teachers (who are currently teaching at local schools). They would share experience to students (the future teachers) especially the communication skill as this is the fundamental skill for students to develop the other skills more easily.

The college usually sends students to the local schools to help them interact with pupils.

They would participate in the real teaching hours, extracurricular activities to support pupils.

This is a good chance for them to prove their ability and set up a detailed plan to improve themselves.

#### **3.2.5. Amending testing and assessing system.**

Instead of using the traditional writing tests, the falcuties in the college are now applying new kinds of test like oral test, practice test, assignments, researches, projects. These new kind of test shall help increase the competitiveness for both lecturers and students to adapt to the increasingly demanding requirements of the society.

### **5. Discussion**

Do students of minority groups in your area face problem with communication skill?  
Do they get any special support?

### **6. Conclusion:**

Communication skill is one of the most important skills for students – the future teachers to get adapt to the changing demand of the society. At Lao Cai teacher training college, most of students are of ethnic minority which results in the fac that their communication skill is quite weak. After examining the causes, I would like to propose a group of solutions (Organizing class, extracurricular activities, curriculum, tightening the co-

operation with other schools, local department of education and training, amending the testing system to step by step improve the quality of the students. Improving quality of students is also an important commitment of the college to the society.

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**Technical cooperation between Thailand and Lao PDR : Transitions and Internal conditions of Lao PDR**

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**ABSTRACT**

This research aims to describe the internal conditions of technical cooperation scholarships of Lao PDR with Thailand. The study was conducted with a qualitative approach and the study area was mainly of the technical cooperation between Thailand and Lao PDR. The units of analysis were at both individual and organization level. Data were collected by in-depth interview with 8 key informants who had knowledge of international relations and technical cooperation between Thailand and Lao PDR. A content analytical method was employed for the data analysis.

The study found that the internal conditions of technical cooperation scholarships of Lao PDR consists of 5 components: 1) policy of International cooperation development of Lao PDR 2) Economics of Lao PDR 3) Millennium Development Goals - MDGs 4) Attitude of Laos 5) No interfere with the internal affairs in Lao PDR

These various elements are interrelated in each other. Moreover, it also reflects to the international relationships between Thailand and Lao PDR.

**Key Words:** technical cooperation, aid, Thai-Laos, scholarship, regionalism

**1. Introduction**

The international political context has changed dramatically in the late 1980s when the Cold War was collapsed, each region had entered into a framework of international cooperation. When the Soviet Union was collapsed in to independent states or we called “The Commonwealth of Independent States (CIS)”. This group was opened to receive the



international cooperation from various Donors and conditions of the technical cooperation between the countries included the internal and external conditions. Davis and Dombrowski (2000) had focused on many external conditions for example: the International Institute, provided the effective assistance and political motivate of donor countries to the international cooperation, while Gani and Clemes (2003) said that the offer of cooperation between countries to developing countries was to stimulate economic growth and national development.

The cooperation between the countries of Southeast Asia has begun with the International cooperation after the relaxing of the political tensions. Especially after Lao PDR has adopted Policy "New Economics Mechanism -NEM" in 1986, which means Lao PDR has modified the rules that was the obstacle of trade. There had a lot of the investment and cooperation between countries which is going to develop countries and human resources to support the development of Lao PDR in all fields.

So when the Lao PDR, opened to receive more international cooperation in the period after 1991, especially given the technical cooperation scholarships between countries from Thailand, the researchers want to know how was the internal conditions of Lao PDR in order to get the cooperation from Thailand?

## **2. Research Methodology**

This article is the qualitative research by In-depth interviews with key informants used to analyze qualitative data by content analysis. Areas of study: Thailand and Vientiane, Lao PDR. and the personal residence in Vientiane. Target groups include: Ambassador of Thailand to Lao PDR, former Ambassador of Lao PDR to Thailand, expert from international relation between Thailand and Lao PDR and Lao students who are studying in Thailand and Lao students who graduated from Thailand's, total 8 persons.

## **3. The research and discussion.**

### **3. 1 Development of technical cooperation scholarships between Thailand and Lao PDR.**

The technical cooperation scholarships between Thailand and Lao PDR had divided into two periods: 1) **technical cooperation scholarship in the era of strengthen the relationship between Thailand - Lao PDR. 1992-2000**, In the early of 1990s focused on scholarships to the undergraduate Lao student. Then in the mid-1990s, this cooperation had suspended and adapted to provide scholarships for Masters and PhD students because Lao PDR was afraid that the young graduates will be potential political dominance by economy and society of Thailand  
2) **The technical cooperation scholarships in the response of regional integration since**

**2001 to 2011**, especially from the ASEAN Summit in 2000, ASEAN wants to reduce the development gap among members, such as Cambodia, Lao PDR, Myanmar and Vietnam (CLMV). And ASEAN had the project of initiative for ASEAN Integration: IAI to prepare for integration into ASEAN Community in 2015 that made the human resources development set in one of the three pillars of the ASEAN Community.

In 2003 with the integration of the Mekong countries the projects of Ayeyawady-Chaophraya-Makong Economic Cooperation Strategy-ACMECS . Under the cooperation has focused on human resources development with the cooperation under the framework of ACMECS we have a positive impact to the development of the CLMV significantly (Muenthaisong, Chanajai., Et al (2014) The technical cooperation scholarship between Thailand and Lao PDR was not smooth sometimes but it can cooperate with each other.

*"Thai, Laos relationship is based on common tradition and culture which lead the cooperation between the two countries, in the past, there had some problems however the relations of the two countries can compromised because most of them are relatives "* . (Interview with senior officials Department of Treaty of Lao PDR August 23, 2012).

Technical cooperation scholarships between Thailand and Lao PDR at the beginning was a collaboration of Thailand who want to strengthen the relation with Lao PDR because of both countries have been distance during the Cold War. For the second part of cooperation occurred of the integration of the regional economy which is an important condition that causes technical cooperation between countries.

### **3.2 Role of International Cooperation of Thailand.**

Thailand was the recipient of international cooperation country, since after World War II . Receiving cooperation from the donors countries based on that Thailand is a developing country with great potential for development then they need the external factors to support the economic and social development of the country to be effectively (Pichet Sunthornpipit,1992).

The cooperation sources includes USA, United Nations, bilateral cooperation of the European Union, Colombo Plan, Japan and International Organizations (NGOs). The United States gave the high cooperation during the Cold War which was focused on the poverty alleviation and infrastructure construction (Department of Technical and Economic Cooperation (DTEC), 1999). An international collaboration of Thailand had a major turning point in the year 1992 when the government of Anan Panyarachun has announced that technical assistance was an instrumental in the implementation of Foreign Policy and Thailand gave the high technical cooperation to Lao PDR (Noppadol Chartprasert, 1997).

*"Thailand has shifted from recipient countries to donor countries over 20-30 years, when we grow up wealthy, but we cannot have the statements like USA, Japan, France, because Thailand had limited budget. We will set as first priority and Thailand chose CLMV Cambodia, Laos, Myanmar, Vietnam, ..."* (Interview with former Minister of Foreign Affairs of Thailand May 1, 2013).

As Thailand had economic growth continuously to make Thailand to be in the country of the South-South Cooperation and Thailand want to strengthen relationship with the Lao PDR and cooperation between countries must consider the need of the Lao PDR.

*"The cooperation from Thailand to Laos, Thailand must realize which is their strong point, then consider the needs of Laos, in order to contribute the international cooperation effectively..."* (interview, Ambassador of Thailand to Lao PDR, August 28, 2012). And technical cooperation scholarships between countries based on national economic and social development plans of both countries.

### **3.3 Internal Conditions of Lao PDR in technical cooperation scholarships with Thailand**

Lao PDR has opened for international cooperation between the countries after get independence from France in 1954 (Phraxayavong, 2009) and has the international cooperation with Thailand, even in Lao PDR was changed the politics, but cooperation still had on a limited scale (Noppadol Chartprasert, 1997) by the internal conditions technical cooperation scholarships between Thailand in the post-Cold War contain as following:

#### **3.3.1 Internal conditions of the policy of international cooperation of Lao PDR**

The policy of international cooperation of Lao PDR is the policy that changes follow the context of international politics (Phraxayavong, 2009). During of 2000, the international cooperation was under the framework of the Paris Declaration, which was a forum for discussion between the country's international cooperation with the recipient country, international cooperation and has embraced the principles applied in a concrete plan for social and economic development plan 6<sup>th</sup> and leads the Country Action Plan of Vientiane Declaration on Aid Effectiveness 2007-2010 and had the Round table meeting which held every three years in order to increase efficiency of the mechanisms of international cooperation and international cooperation to reduce duplication (Asian Institute Chulalongkorn University, 2012, interview executives of the Neighboring Countries Economic Development Cooperation Agency (Public Organization): NEDA, February 13, 2013). The technical cooperation between countries of Lao PDR wants to develop human resources in order to support the ASEAN Economic Community in 2015.

### 3.3.2 Internal condition of Economic

Lao PDR is a landlocked and medium size country, the economy of around 7.9 Billion USD (2011) GDP real economic growth at 8.3, Inflation 8.7, economic growth was approximately 8.7 and Lao PDR want to leave poor countries in 2020 (Robert, 2012).

*"Laos is a neighbor country, according to data from the World Bank indicate that Laos was in a poor countries 's group. However, within 10 years Laos can be more develop because there are a lot of resources. It was just six million population that would be a barrier to trade within the country. However, it may be the hub of production for export. And Thailand will have enough potential to help Laos. In the framework of the South-South cooperation, Thailand must help and support Laos to develop and this is the policy of the UN"* (interview executives of the Neighboring Countries Economic Development Cooperation Agency (Public Organization): NEDA, February 13, 2013).

However, overall economic of Lao PDR has to rely on cooperation from foreign countries to help decrease the gap of savings and capital for investment in the public sector. (Phraxayavong, 2009). The cooperation between countries depends on the National Socio-Economic Development Plan of Lao PDR. They must set 20 year development plan by the 5<sup>th</sup> National Socio-Economic Development Plan as a short-term plan and medium-term plan during 2001-2010 and long-term plans during 2001-2020 (SiriKrai, 2005). In order to achieve the Millennium Development Goals – MDGs. In 2011, international assistance to the Lao PDR amounted to 8.5 percent of the GDP and a number of 90 percent of the government budget (Roberts, 2012). *"... first of all, need to be filled the gap because there have a lot of gaps between members that could have a problem and the cooperation will decrease the gap between members"* (interview, former Ambassador Lao PDR to Thailand, August 27, 2012), but the development may have some obstacles because of the small population of the Lao PDR in the year 2011 which were about 6.4 million people (Robert, 2012) which could be affected the selection of individuals to receive a scholarships, so some people have developed a more frequently than others.

### 3.3.3 Conditions of the Millennium Development Goals of the Lao PDR

Lao PDR is a country in the group of Least Develop Country (LDCs) who want to get the most development in Southeast Asia. Lao PDR had a population of 6.5 million people in 2012, with the population of youth ages highest number reached 59 percent under the age of 25 years, which will be benefit to the developing countries in the future but must to increase knowledge and skills to this group.

In 2011, the Lao PDR had upgraded from the Lower income group to the Lower middle income, with national income (Gross national income -GNI) 1,130 USD). Since Lao PDR had adjusted country from central planning to Market Oriented Economy in 1986 which directly affected the growth and economic strength of the Lao PDR (MDG, 2013).

Lao PDR has committed to develop the country out of poverty by setting national development strategies and national development within the framework of the Millennium Development Goal (MDG) aims to achieve in 2015 (Institute of Asian Studies. Chulalongkorn University, 2011). However, although several times Lao PDR has tried to set target, even they could not achieve the goals but the government of Lao PDR always put the effort to resolve in order to achieve the target finally, which is admirable. (Interviews, expert of international relationship between Thailand and Lao PDR, February 14, 2013).

### **3.3.4 Internal Condition of the attitude of the people of Lao**

Lao students who choose to study in Thailand, partly because of the language and culture of the two countries which are very close, so they don't worry to adapt themselves and the transportation is very convenience, and the attitude of Laos who come to study in Thailand. It consists of :

#### **3.3.4.1 Values**

The value from Thai media and the values of Lao student's parents, Thailand and Lao PDR are close and did not see the difference (Interviews with officials from the Ministry of Planning and Investment of Lao PDR., November 5, 2012).

#### **3.3.4.2 Alumni**

For long-established university may take advantage of the fame and even when students graduate and have a chance to prove themselves and to build a reputation in a variety of fields. This will affect those who are interested in coming to study in the university (Interview University of International Relations in Thailand March 15, 2013).

It is said that the Laos students may choose to study in Thailand, which is a free country, after graduation they may not be up to the rank of major position. With this opinion the chief executive of the Lao PDR, who graduated from Thailand said that it may not concerns but it may depend on the network, including their abilities (Interview students who graduated from Thailand, Laos, November 12, 2012). The Lecturer in Lao PDR describe that the graduate from Thailand has to persevere and prove themselves that graduate from Thailand is not worse than a person who graduated from socialist countries (Interview students who graduate from Thailand, Laos, November 14, 2012).

### 3.3.4.5 non-interference in the internal affairs of the Lao PDR

Technical cooperation scholarship between Thailand and Lao PDR is a partnership that both sides were set on the principle of non-interference focus on the demand from Lao PDR by considering the National Socio-Economic Development Plan of Lao and Thailand. The agreements of cooperation of the technical collaboration between countries is held annually. In collaboration with no obligation, for the principle of non-interference in internal affairs are essential conditions that lead to cooperation in many areas.

*"... To recognize the sovereignty of the other, non-interference in the internal affairs ..."*  
(interview with Ambassador of Thailand to Lao PDR, August 27, 2012).

International cooperation in the framework of South-South Cooperation has given priority to this issue, and found that this condition prefer by the recipient countries of the South Africans and South Africans prefer to have cooperation with China more than the western donors because China was not interfere in the internal affairs (Nordtveit, 2011).

### Conclusions

Technical cooperation scholarship between Thailand and Lao PDR had begun officially after the cold war was over and ASEAN has accepted a new members, which comes from the CLMV (Cambodia Lao PDR Myanmar Vietnam), made ASEAN shall establish a project to reduce the gap in regional.

Internal conditions of Lao PDR which is consisted of the conditions of the policy of international cooperation need to breakout from poor countries, Lao PDR want to achieve the Millennium Development Goals. The terms of these three conditions are linked to donors and Lao PDR had tried to achieve the goal. In particular, the transparency of international cooperation. And condition that comes from the close relations such as the attitude of the people of Laos. The values and alumni who have graduated from Thailand, the progress of technology and academic of Thailand, technical cooperation between the two. Although the Lao PDR is a small country and needs a lot of international development, however, Lao PDR doesn't want the other country to intervene in domestic affairs, which showed that a small country can be negotiate with donors as well.

Thailand has given the first priority to the Lao PDR, in order to make effectiveness of collaboration, Thailand should focus on internal conditions of the Lao PDR .

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## Building environment Vietnamese communication for ethnic minorities children 5 to 6 years old in Lao Cai, Vietnam

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### Abstract

For children from 5 to 6 years of ethnic minority people in Lao Cai, Vietnam to integrate, exchange and acquire knowledge and skills in academic programs in schools are better, children must know to communicate by Vietnamese language. Because the Vietnamese as a means, a tool unique to children of ethnic minority people learn and acquire knowledge and skills as well as integration with your friends, teachers in the classroom. Helping children from ethnic minority know Vietnamese communication is dependent on many factors including Vietnamese communication environment is a very important factor, it is an opportunity for children to learn, to experience thereby helping children positive, proactive and more confident when using the Vietnamese language in communicating with teachers, friends and the people around. Through research, field surveys in some kindergartens in ethnic minority showed that teachers in grades 5 to 6 years old in the preschool also recognize the importance of creating Vietnamese communication environment for children from ethnic minorities, but they do not know how to build Vietnamese communication environment, unknown motivate, encourage children to use Vietnamese in communication. Therefore creating Vietnamese communication environment for children 5 to 6 years of ethnic minorities in Vietnam is very necessary.

**Key words:** ethnic minority, Vietnamese communication, kindergarten



## **1. Introduction**

For ethnic minority children in Vietnam, the the largest "obstacles" in reaching, perceived knowledge and skills in school that is Vietnamese language. We known to promote, protect and preserve their mother tongue language is extremely important. However Vietnamese language is fundamental for ethnic minority children integrate, exchanges, learning in school. Therefore, the ethnic minority children must know Vietnamese, and communicate in Vietnamese. For ethnic minority children communicate in Vietnamese, building and creating environments for them to communicate in Vietnamese is one of the very important requirements. Living in an environment where the people around them using their language proficiency are learning, they have the chance to be regularly exposed to the language, understand what others say although can not create words said likewise immediately. In that environment, forcing children to communicate in Vietnamese to meet the communication needs of people. Thus they have the chance to experience, used Vietnamese language to communicate. Also, children are constantly getting the help of teachers, friends, imitate their way of speaking and sometimes people fix bugs if the language used is not accurate. Based on basic theoretical and communicate the status of Vietnamese, ethnic minority children we studied and proposed a number of measures to build Vietnamese communication environment in order to improve communication efficiency Vietnamese for ethnic minority children at the ages of 5 to 6 years old.

## **2. Method of the study**

- Observing classes in some kindergartens in ethnic minority areas
- Survey questionnaires
- Analyze, synthesize and comparison

## **3. Research questions**

3.1. What are the difficulties do teachers at kindergartens at ethnic minority area in Lao Cai often meet in teaching Vietnamese vocabulary to ethnic students?

3.2. How can we help teachers to overcome to teach Vietnamese for these students effectively?

## **4. Findings and results**

To assess the status of the building of Vietnamese communication environment for minority children 5 to 6 years old, we use questionnaires combined exchange, shared with teachers, personnel manager at some preschools on highland Lao Cai province and observe the organization of day activities for children of teachers for creating environments Vietnamese communicate for child.

We surveyed 105 management staff and teachers in kindergarten schools 5 to 6 years old in Bac Ha district, Sa Pa district, Muong Khuong district, Si Ma Cai district, Bat Xat district in Lao Cai province, where ethnic minorities account for large percentage (over 70% of the population are ethnic minorities). When asked about "The need to build Vietnamese communication environment for children of ethnic minorities", 90% of teachers and management staff to be very necessary; 10% deem necessary. The above results show that the majority of teachers have identified the importance of building communication environment for children Vietnamese in the process of teaching children to speak Vietnamese. From the perception that the majority of teachers (95%) were interested in creating Vietnamese communication environment for children. But their way mainly: teachers speak Vietnamese and then ask the child to say follow; teachers questioned by Vietnamese, children answered in Vietnamese. If it is too difficult question child not answered by Vietnamese, the children answered in the mother tongue, then ask good child speak Vietnamese by Vietnamese translations. Observe some of the activities of the teacher in the classroom we find teachers unknown motivate, encourage children communicate in Vietnamese, on the contrary they make children lose confidence in themselves in the learning process speak Vietnamese. For example, when the teacher asked the child does not answer, the teacher would have to motivate or encourage children to speak in Vietnamese, in such cases we see the teacher immediately asked other children with unhappy attitude. Observing reality we see, children have fewer opportunities to communicate regularly Vietnamese, anytime, anywhere, with teachers, with friends, with others that communicate only a little Vietnamese through preschool classes therefore, children often reserved, shy, less confident in communicating Vietnamese.

## **5. Some suggested solutions**

From this reality we think that it must have appropriate measures to build Vietnamese communication environment for children of ethnic minorities in a specific way, fascinating. These are some ways to create and build Vietnamese communication environment for ethnic minority children from 5 to 6 years old:

### **5.1. Create Vietnamese communication environment in class**

The time in class (period) is a form of organized learning activities intentionally in preschool. During school periods the child is interacting with teachers, with friends, through which children perceive the world icons around. Overall this is a good opportunity to teach children to communicate in Vietnamese. Therefore, teachers need to make use the periods of classroom to organize for children to learn and communicate in Vietnamese. To create an environment Vietnamese communicate effectively in the classroom, teachers should:

Firstly, the implementation classes entirely in Vietnamese. This helps give children the opportunity to be heard, to speak Vietnamese. Initially the child may experience some difficulty in comprehension knowledge and communication but this work is essential to help children get to hear Vietnamese regularly, grasp of Vietnamese vocabulary and have a chance to speak Vietnam in the communication process - interaction with the teacher, with friends. Then, the ability to communicate in Vietnamese for ethnic minority children is improved.

Secondly, in the process of organizing classes in Vietnamese, teachers should encourage children to use Vietnamese to interact with the teacher and with their friends. Since then, children reinforce confidence, more boldly to express themselves and create a lot of excitement in learning, communicating Vietnamese.

Thirdly, incremental new words to children in each class. With the consolidation of Vietnamese children had have, teachers should give children new words related to the content of the lesson. The number of new words to provide children in each class do not need much, the problem is to help children correct pronunciation, understand the meaning of words and use them in communication.

Fourthly, use of visual media (CD, cassette) and information technology for children in school more lively and attractive. These tools have function effectively supporting the process of learning Vietnamese and the children's communication. Because these instruments inspire, focus their attention strongly, helping children learn Vietnamese easier.

## **5.2. Create Vietnamese communication environment at anytime anywhere**

The environment for Vietnamese communication in each class are limited in time and space. Therefore, need to enhance communication competence Vietnamese for children have a chance for to communicate anytime, anywhere, in any activity.

First and foremost is the chance to use Vietnamese children in fun activities. Encourage children use Vietnamese to negotiate with each other on the subject of play, the contents play, how to play and perform role play, mission play. Collecting, organizing of games with the lyrics, especially folk games (Vietnamese) so that children speaking Vietnamese softly, comfortably.

Example: The game "snake dragon on the cloud", "chi chi chanh chanh", "drop leeches, tortoise" When held for children walking and other outdoor activities, teachers should provide opportunities for children to use Vietnamese to exchange, share with teachers, with friends about what they observed. Through that children not only have more knowledge about nature, society where children's Vietnamese vocabulary were also added.

When organizing children sleep, the teacher used the Vietnamese lullaby to put children to sleep. In the state not only does the child feel safe and gentle but also comprehend the lyrics, singing (in Vietnamese) easily and deep.

During mealtimes, teacher provides opportunities for children use Vietnamese to practice telling stories, reciting poetry, singing and dancing, to reinforce the vocabulary and the ability to speak Vietnamese.

### **5.3. Create Vietnamese communication environment for children in their family**

We know that 2/3 times a day children living with their families. So if in family life children used Vietnamese to communicate with parents, grandparents, siblings the children's ability to communicate in Vietnamese will be enhanced. Through actual observations we see, although the majority of parents and other elders in the family of ethnic minorities in Vietnam, but they only use Vietnamese as socializing in places like: fairs, schools, but rarely used in family life. To create an environment communicate Vietnamese in families for children, requires teachers to help parents understand the importance of the family in improving their ability to communicate Vietnamese. Encourage parents because the future of their children, regularly communicating with children by Vietnamese in family to expand vocabulary and improve communication for children.

### **6. Conclusion**

Vietnamese is the basic language for ethnic minorities children integrate, exchange and learning in schools. Therefore, children have to know the Vietnamese and communicate in Vietnamese. For ethnic minority children communicate in Vietnamese, the formulation Vietnamese communication environment for children is one of the very important requirements.

Vietnamese communication environment to ensure that children have the chance to use Vietnamese to communicate anytime, anywhere, any activity. To do that requires close collaboration between the school, families and society in creating communication environment for Vietnamese for ethnic minority children.

This article is guide teachers in kindergarten schools for 5 to 6 age ethnic minority areas in Vietnamese developing communication environment for ethnic minority children.

### **7. Discussion**

- Do children of ethnic minority groups in kindergartens in your area face problem with language communication skills? How do you solve these issue?
- Do children of ethnic minority groups in kindergartens in your area get any special support?

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## Information Literacy Level of the Islamic Private Schools' Students in the Southernmost Provinces of Thailand

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### Abstract

This research aims to investigate information and ICT literacy level and compare the information and ICT literacy level with variables: sex, stream of learning, GPA, and school's location of the upper-secondary students in Islamic private schools in southernmost provinces of Thailand. Data was collected from 390 samples using the information and ICT literacy test designed accordance to the standards and indicators of the Information Literacy for Thai Students and the ICT Literacy of Ministry of Education. The developed standards consisted of 7 standards that expect students' abilities. The test had a total of 56 items, each had 4 multiple choices. The statistics used for data analysis were percentage, mean, standard deviation, and Turkey test. The main results revealed that most of the students in the private Islamic schools were female, had grade average point at good level, studied in science-mathematic stream, studied at schools located in Pattani province. The students had overall information and ICT literacy of the 7 standards at Pass level. They had Pass level in standard 1, and standard 6, Good level in standard 2, Not pass level in standard 3 and standard 7, Moderate level in standard 4 and standard 5. This research proposes implementing the research results that the students lacked the abilities in standard 3, able to analyze, evaluate and select information needed and in standard 7, have knowledge and necessary skills to use ICTs by redesigning teaching and learning activities that more encouraging students to analyze, evaluate and select information. Classrooms, libraries, and computer rooms should be equipped with modern ICTs for students' uses.

**Keywords:** information literacy, Islamic private schools, southernmost of Thailand, upper secondary students

## Introduction

### 1. The Importance of Information and ICT Literacy

The need for effective functioning in the knowledge society, and to cope with continuous social, economic and technological changes, has caused a wide debate about what competencies young people need for successful life and work in the 21st century. While there is a growing agreement on the importance of competencies for individual, social and economic development, “there is far less agreement on which competencies and skills make the difference” (OECD, 2001, 100).

At the European and transnational level several organisations and projects have attempted to define the necessary competencies for the knowledge society. For example, within the project of the Organisation for Economic Co-operation and Development (OECD) Definition and Selection of Competencies (DeSeCo) three broad categories of key competencies were developed: functioning in socially heterogeneous groups, acting autonomously and using tools interactively. Competencies have been defined and selected from the vantage of their contribution to sustainable development, social welfare, cohesion and justice, as well as personal well-being (OECD, 2005).

The European Council and the European Parliament adopted, at the end of 2006, a European framework for key competences for lifelong learning. The Framework identifies and defines, for the first time at the European level, the key competences that citizens require for their personal fulfillment, social inclusion, active citizenship and employability in our knowledge-based society. The framework includes competences in ‘traditional’ subjects, such as mother tongue literacy, numeracy, and knowledge of foreign languages, science and technology. But it also covers other competencies, such as learning to learn, digital competence, social and civic competences, initiative taking, entrepreneurship, cultural awareness and self-expression (European Commission, 2007).

The project Tuning Educational Structures in Europe (TUNING) which started in 2000 as a project to link the political objectives of the Bologna Process and at a later stage the Lisbon Strategy to the higher education (HE) sector distinguishes generic and subject specific competences. Three types of generic competences are categorized as follows: instrumental competences, interpersonal competences and systematic competences (Tuning, 2009).

The United Nations Educational, Scientific and Cultural Organization (UNESCO) 2009 World Conference on Higher Education concludes:

Postsecondary education has to prepare graduates with new skills, a broad knowledge base, and a range of competencies to enter a more complex and interdependent world. Agencies throughout the world are struggling to define

these goals in terms that can be understood and shared across borders and cultures. (UNESCO, 2009a, 64)

Many authors believe that in our modern society everyone needs an increasingly sophisticated set of competencies for information finding, handling and use. In library and information science (LIS) literature these competencies are called 'information literacy' (IL). Proponents of IL believe that it is the absolutely critical literacy for the 21st century and for the realization of most personal, academic and professional goals as well as for economic development. IL is perceived as a prerequisite for lifelong learning (ALA, 1989), "active, effective and responsible citizenship" (Correia, 2002, 1), personal growth, empowerment (ALA, 1989), self-actualization (Boekhorst, 2003) and social inclusion (Bundy, 2004). It is believed that IL will help to bridge the digital divide, strengthen the employability of a workforce, counter information overload, and support evidence-based policy and decisions in governments and the professions (Corrall, 2003). IL is highlighted as a core educational goal that is "common to all disciplines, to all learning environments, and to all levels of education" (ACRL, 2000, p.3) and an important factor in the workplace (ALA, 1989). IL is perceived as an ongoing process that should be facilitated throughout a whole life (Boekhorst, 2003, cited in Virkus, 2006).

Librarians have tried to help library users to develop competencies to locate and find information for many years. However, debates about IL have intensified during the last decade (Bertelsmann Foundation and AOL Time Warner Foundation, 2002; UNESCO, 2003, 2005a, 2005b, 2006, 2009b; Obama, 2009). In the increasingly complex information environment students face diverse, abundant information choices, information is available in different forms, places and increasingly in unfiltered forms and in uncertain quality (Wilson, 2001, 2). Students have been found to have insufficient IL in a series of studies (e.g. Ray and Day, 1998; Hepworth, 1999; Armstrong et al, 2000; OECD, 2000; Andretta, 2002; Pejova, 2002; Mittermeyer and Quirion, 2003; Stern, 2003; Cole and Kelsey, 2004; UNESCO, 2006; Gunter, 2008). It is also believed that constructivist thinking and pedagogy and alternative modes of educational delivery are creating new demands for IL and the need to move away from the dominant paradigm of pre-packaging information for students to facilitating learning in an authentic and information-rich context. Therefore, the facilitation of the development of information literacy as an essential competency for the 21th century is an utmost importance. It has also created a need for a re-conceptualisation of the roles and responsibilities of library and information professionals in a new learning environment (Virkus, 2006, 468).



## 2. The concept of information literacy

Since 1970s many definitions of IL have been offered and several overviews and analysis of the concept have been published. Table 1 shows a range of these definitions.

Author/ organization	Definition
American Library Association (1989, 1)	To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information
Doyle (1994, 40)	IL is] the ability to access, evaluate and use information from a variety of sources, to recognize when information is needed, and to know how to learn
Shapiro and Hughes (1996)	[IL is] a new liberal art that extends from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure, and its social, cultural and even philosophical context and impact
ACRL (2000)	Information literacy is a set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.” Information literacy, on the other hand, is an intellectual framework for understanding, finding, evaluating.
Johnston and Webber (2003, 336)	Information literacy is the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with critical awareness of the importance of wise and ethical use of information in society
UNESCO (2003)	Information Literacy encompasses knowledge of one’s information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of lifelong learning

Abid (2004)	Information literacy is an intellectual framework and a social process for understanding, finding, evaluating, communicating and using information – activities which may be accomplished in part by fluency with information technology, in part by sound investigative methods, but most important, through critical discernment and reasoning. Information literacy initiates, sustains, and extends lifelong learning through abilities which may use technologies but are ultimately independent of them
Lupton (2004)	Information literacy is a way of learning through engaging with information. Information literacy includes ‘library research skills’ and ‘IT literacy’ but it is broader than these. Information literacy is not just about finding and presenting information, it is about higher order analysis, synthesis, critical thinking and problem solving. It involves seeking and using information for independent learning, lifelong learning, participative citizenship and social responsibility
Abilock (2004,.1)	Information literacy is a transformational process in which the learner needs to find, understand, evaluate, and use information in various forms to create for personal, social or global purposes and using information - activities which may be accomplished in part by fluency with information technology, in part by sound investigative methods, but most important, through critical discernment and reasoning. Information literacy initiates, sustains, and extends lifelong learning through abilities which may use technologies but are ultimately independent of them
CILIP (2005)	Information literacy is knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner
Lloyd (2010, 1)	Information literacy is a socio-cultural practice, one that is embedded and interwoven through the practices that constitute a social field (i.e. a context) and as such is subject to collaborative arrangements and activities. It is constituted by a set of interwoven understandings that

	guide interaction and is linked to the activities around information and knowledge sanctioned by any given setting
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**Table 1 Definitions of Information Literacy**

### 3. Southernmost Context

The southernmost provinces of Thailand, namely Narathiwat, Yala, Pattani, Satun, and 4 districts of Songkla is located near the border of Thailand and Malaysia. Most of the people are Muslim, and they counted as the largest group of Muslim community in the country. The South Thailand Insurgency is an ongoing conflict centered in [southern Thailand](#). It originated in 1948 as an ethnic and religious [separatist insurgency](#) in the historical [Malay Pattani Region](#), made up of the three southernmost provinces of [Thailand](#) and parts of a fourth, but has become more complex and increasingly violent since 2001. Over 6,000 people died and more than 10,000 were injured between 2004 and 2014 in a formerly ethnic [separatist](#) insurgency, which has currently been taken over by hard-line [jihadis](#) and pitted them against both the Thai-speaking Buddhist minority and local Muslims who have a moderate approach or who support the Thai government. The conflicts and violence has affected the economic, social, mental, and daily life of people in this region. Resulting to the low educational quality, poverty, and unemployment. A research entitled “Residential Areas and Family Function Influencing Mental Health and Behavioral Problems of Juveniles in the Areas of Unrest Situation in Three Southernmost Provinces of Thailand” by Muslin Tohkani (2012). The purpose of this research was to examine factors influencing mental health and behavioral problems of juveniles who have lived under unrest situations in three southern border provinces of Thailand. The sample was 540 juveniles randomized by cluster technique aged 15–18 years who have lived in Pattani, Narathiwat and Yala Province. The data were collected by the Strengths and Difficulties Questionnaire (SDQ) and Chulalongkorn Family Inventory (CFI). Multiple Regression analysis was used to analyze factors influencing mental health and behavior problems. The results revealed that 11-90% youths had mental health and behavioral problems and 76.30 % had strength. Residential areas, impact of unrest situations, and family functioning predicted the mental health and behavior problems at 2.5%, predicted the prosocial behaviors at 11.4%. The indirect impact had a positive influence on mental health and behavior problems but the red zone and an excellent level of family functioning had a negative influence on those one. Moreover, a slight level of family functioning had a negative influence on prosocial behaviors. This study recommended that, should surveillance mental health and behavior problem in juveniles who received indirect impact from unrest situations,

problem solving assistance in mental health and behavior problems which should focus on family functional improvement and encourage more strength of the young people in the red zone.

A research entitled “A Factor Analysis of Teachers’ Working Morale in Yala Province” studied by Chantima Hassanee, Chidchanok Churngchow, and Withada Sinprajukpol (2013). The purposes of this research were to analyze factors related to working morale of teachers in Yala province and to compare their working morale based on sex, job experience, and risk area. The subjects were 496 teachers in Yala. A questionnaire was used in data collecting while principal component analysis with Varimax rotation, means, standard deviation, and t-test were used in data analysis. The findings discovered 5 factors related to Yala teachers’ working morale, which included community rapports, administrative policies, interpersonal relationships, security and safety, and welfare and career advancement. The comparative analysis discovered that male and female teachers showed no difference in every factor related to their morale. However, teachers with different job experience showed differences in security and safety as well as welfare and career advancement at the significant level of .01, and in community rapports and interpersonal relationships at the level of .05. In similar way, teachers working in different risk areas had differences in security and safety at the significant level of .01, and in welfare and career advancement at the significant level of .05. It was recommended that qualitative research should be conducted to examine model in developing teachers’ morale based on opinions of those really affected by unrest situations in southern border provinces.

A research entitled “Factors Affecting Teaching Efficiency of Islamic Private School Teachers in Three Southern Border Provinces of Thailand” studied by Niloh Wae-u-sengn (2013). This study was aimed to examine factors effecting teaching efficiency, teaching efficiency, the relationship between the two factors effecting teaching efficiency and teaching efficiency, and the predictors of teaching efficiency of Islamic private school teachers in three southern border provinces. The samples were 800 school teachers. Questionnaires were used to collect data. The statistical analysis included percentage, arithmetic means, standard deviations, and multiple regression. The result reveals that in overall and in each aspect, factors effecting teaching efficiency i.e., attitudes towards teaching profession, attitudes towards subjects taught, teacher characteristics, academic competency, motivation in teaching, are found to be high. This is similar to the result of teaching efficiency comprising determination of purposes and objectives of courses, determination of contents, arrangement of teaching activities, use of instructional media, and measurement and evaluation. In addition, teacher characteristics, academic competency, motivation in teaching, and relationship between teachers and students are positively related to teaching efficiency of Islamic school teachers in three southern border provinces at a .001 significant level and could possibly predict significantly 70.9 % of teaching

efficiency. The best predictor of teaching efficiency of Islamic private schools is the relationship between teachers and students.

Apparently, educational management by Education Ministry for students living in this area has been through difficulties comparing with other parts of the country in Thailand. The attitudes of the Muslim locals with ethnic Malays in this area to the general public schools that it is a tool of assimilation Malay, and their strong religious believes, make them prefer to study in Ponok (Religion schools) or private Islamic schools. It results in low educational quality in this region. It is reported in research entitled "Education Reform in Southern Border Provinces" by Farrungsang, F; Uttayawalee, K; Sungtong, E; and Haji-Awang, F (2011). This research aims to analyze education management in three areas: 1) curricula integrated with local wisdom, 2) structural problems of effective educational administration and 3) government policy on education management in southern border provinces. The study is a qualitative research using a combination of three methods: documentary analysis, interview and group discussions, and participatory action research (PAR). The results reveal three main issues. Firstly, curricula analyzed are inconsistent with learning capacity of the locals. Learning assessment for main courses is found to be low. This is a result of ineffective learning process due to the lack of effective communication, analytical thinking and teaching personnel. Cultural diversity is also an issue. In addition, teaching personnel are not conversant with curriculum design and development. There should be integrated curricula, proper transfer systems and capacity development of teaching personnel. Secondly, as for the structure of education administration, each area lacks proper cooperation with educational agencies. The government should strengthen effective structural administration of private schools and develop or improve supervision units to ensure the quality. Lastly, in respect of policies on education management, the government should promote more learning opportunities for education and decentralization should be used based on education reform. According to the living of the people, there are various kinds of schools, especially in the Islamic private schools.

Empower individual student with information and ICT literacy is a vital way to enhance the students' abilities to live in a global community and a vulnerable situation in the south. This research will help schools and teachers preparing their students ready for knowledge-based society.

### **Objectives of research**

This research aims to investigate and compare information and ICT literacy level of the upper- secondary students in Islamic private schools in the southernmost provinces with variables: sex, stream of learning, GPA, and school's location.

## Research methodology

The population was 16,228 upper - secondary students in 5 provinces including Narathiwat (4,349), Yala (3,719), Pattani (6,020), Satun (950), and Songkla(1,190) (particularly in the district of Thapa, Jana, Nathavee, Sabayoi). The sample of 390 students were selected by stratified random sampling.

Data was collected using: 1) information literacy test designed accordance to the Standard and Indicator of the Information Literacy for Thai Students and the ICT Literacy of the Ministry of Education; the developed information and ICT literacy test had a total of 56 question-items, each had 4 multiple choices. Data from 390 participants was analyzed using statistical software package for the social sciences according to the research's objectives. The statistics used were percentage, mean, standard deviation, t-test, F-test and Tukey test.

Criteria used for justifying score from the all 7 standards of information (56 items of test) and ICT literacy test and information and ICT literacy level were the following:

score 44.8-56.0 = Excellent

score 39.2-44.7 = Good

score 33.6-39.1 = Fair

score 28.0-33.5 = Pass

score 0-27.9 = Not Pass

Criteria used for justifying score from each standard (8 items of test) of information and ICT literacy test and information and ICT literacy level were the following:

score 6.4-8.0 = Excellent

score 5.6-6.3 = Good

score 4.8-5.5 = Fair

score 4.0-4.7 = Pass

score 0-3.9 = Not Pass

## Findings and discussions

In this section, the findings and discussions of this research presents in 3 parts: 1) samples' demographics, 2) information and ICT literacy level of upper-secondary students in Islamic private schools, and 3) comparison of the information and ICT literacy level of upper-secondary students in Islamic private schools in the southernmost provinces with variables: sex, stream of learning, GPA, and school's location.

### 1.Sample's demographics

The sample's demographics revealed that most of the students in the Islamic private schools were female (70%); male (30%), had average grade at good level (63.9%); fair level (23.8%); excellent (12.3%), studied in science-mathematic stream (80%); art stream (20%), and

studied at schools located in Pattani province (37.2%); Narathiwat (26.7%); Yala (22.8%); Satun (5.9%); and Songkhla (7.4%).

<i>Sample demographics</i>		<i>No.</i>	<i>Percentage</i>
	<b>Total</b>	<b>390</b>	<b>100.00</b>
sex	male	117	30.0
	female	273	70.0
stream of learning	Science	312	80.0
	Art	78	20.0
GPA	excellent	48	12.3
	good	249	63.9
	fair	93	23.8
Province (location of school)	Narathiwat	104	26.7
	Pattani	145	37.2
	Yala	89	22.8
	Satun	23	5.9
	Songkhla	29	7.4

**Table 2** Number and percentage of the samples in the Islamic private schools

## **2. Information and ICT literacy level of the upper-secondary students in Islamic private schools**

The main results of the students' information and ICT literacy found that in overall of 7 standards, they got Pass level (average score 31.45 out of 56). Considering in each standard, they got Pass level in standard 1 (average score =4.34), able to recognize the importance and necessity of information in learning and daily life; and in standard 6 (average score =4.15), have ethic, respect law and responsible to society on issues relating to information; Good level in standard 2 (average score =5.92), able to access information resources and know how to use information search tools; Moderate level in standard 4 (average score =4.96), able to collect,

organize, synthesis, and use information; and standard 5 (average score =4.83), able to use information for producing new work and knowledge in a creative way.

Not pass level in standard 3 (average score =3.93), able to analyze, evaluate and select information needed, relevant to a research of Chang et al.(2004) studied on research titled “accessing information literacy skills in secondary schools in Singapore” found that needed to develop skills in these aspects: usage, synthesise, and evaluate of information. Studies from western countries also showed that students in secondary schools were lacks of skills in synthesizing and evaluating information. Adams (1999) revealed that the upper-secondary school students had difficulties evaluating information during doing their assignment in science subject. Brem, Russell, and Weems (2001) discovered that the upper-secondary school students could not decide about reliability and correctness of website. Brill, Falk, and Yarden (2004) found that the upper-secondary school students studied in biology subject slightly read science document without thinking and analyzing content. Heinstrom (2006) found that most of the students trend to decide the relevance of information based on easy access and slightly use criteria for considering information.

In standard 7, have knowledge and necessary skills to use ICT in various ways; they got Not pass level (average score =3.33), this is relevant to the study of Sunisa Sirivipat and (2555) that students in the three southern border provinces had problems using the Internet in moderate level, their opinions were: not enough computers available, slow Internet access, and could not access to the Internet.

Information and ICT literacy of students		S.D.	Level
total	31.45	5.76	pass
<i>standard 1:</i> recognize the importance and necessity of information in learning and daily life	4.34	1.30	pass
<i>standard 2:</i> able to access information resources and know how to use information search tools	5.92	1.58	fair
<i>Standard 3:</i> able to analyze, evaluate and select information needed	3.93	1.26	Not pass
<i>standard 4:</i> able to collect, organize, synthesis, and use information	4.96	1.46	moderate
<i>standard 5:</i> able to use information for producing new work and knowledge in a creative way	4.83	1.66	moderate
<i>standard 6:</i> have ethic, respect law and responsible to society on issues relating to information	4.15	1.64	pass



*standard 7*:have knowledge and necessary skills to use ICT in various ways 3.33 1.20 Not pass

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**Table 3 Information and ICT literacy of the upper-secondary students in Islamic private schools in overall and in each standard (n = 390)**

### 3. Comparing the information and ICT literacy level of upper-secondary students in Islamic private schools in the southernmost provinces with variables: sex, stream of learning, GPA, and school's location found that:

Comparison level of information and ICT literacy with variables: sex, stream of learning, and GPA found that there were statistically significant differences at the level .05.

#### Suggestions

This research proposes implementing the research results that the students lacked the abilities in standard 3, able to analyze, evaluate and select information needed and in standard 7, have knowledge and necessary skills to use ICTs by redesigning teaching and learning activities using collaboration based teaching among teachers, school-librarians, and ICT personnel to enhance students' information and ICT literacy. Additionally, the educational supervisory unit and the upper-secondary school administrators should set guideline/standard for libraries, and computer rooms for providing modern ICTs for students' uses.

Suggestions for further studies in information and ICT literacy were: activities supporting each standard of information and ICT literacy, awareness of the importance of information and ICT literacy from both students and teachers of the upper-secondary students in Islamic private schools. In addition, more studies on library management, librarians, technologies in library, computer rooms/laboratories need to be done. Lastly, learning and teaching process need to be explored and investigated in order to support the students' information and ICT literacy efficiently and effectively.

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## Needs Analysis and Problems on English Skills for Coffee House Employees

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### Abstract

The research aimed to study and compare needs and problems on English skills used by the employees of the coffee houses in the northeastern region of Thailand. The samples were 100 coffee houses: 50 baristas and 50 waiters & waitresses, from the coffee houses in the northeastern region of Thailand. They were selected by multi-stage random sampling technique. The research instrument was a set of questionnaires. The collected data were analyzed by using frequency, percentage, mean, standard deviation and independent samples t-test. The findings revealed that they need English skills for working at the high level. The listening is the most needed, followed by speaking, reading and writing. In addition, the coffee house employees faced the problems when they communicate with the foreign customers at the moderate level. Also, they faced the listening skill most, followed by speaking, reading and writing. However, it was not different of needs and problems on English skills classified by positions; baristas and waiters & waitresses who work in the coffee houses in the northeastern region of Thailand.

**Keywords:** Needs analysis, problems, English skills, Coffee house employees

### Introduction

At present the business of coffee house is spread around in Thailand. It's not especially in the big cities such as Bangkok, Chiangmai, Pattaya or Phuket. But, it's most popularity in the northeastern region of Thailand such as Nakorn Ratchaseema, Khon Kane and Ubon Ratchathani. But, the employees who can speak English in order to effectively serve their foreign customers are in the little amount. Those workers providing services need to be trained both in service and technical English skills. Moreover, the results will provide the guidelines for developing the English using skills that correspond with the needs of this group of employees.

### **Research Objective**

- 1 To investigate the problems on English skills of the coffee house employees in Northeastern region in Thailand.
- 2 To investigate the needs of English skills for working of the coffee house employees in Northeastern region in Thailand.
- 3 Compare needs and problems to provide the guidelines for developing the English skills that are mostly beneficial to coffee house employees in Northeastern region in Thailand.

### **Population and Samples**

The population is the group of employees who are working at the business of coffee houses located in the Northeastern region of Thailand. The samples are 100 employees who work in 50 coffee houses in Northeastern region. They are selected by the multi-stage random sampling as the following steps:

First the 10 from 20 provinces in the Northeastern region of Thailand are selected by simple random sampling.

Second the 5 coffee houses in each selected province are chosen by purposive sampling.

Third, 2 employees who are in the positions of barista and waiter or waitress are obtained by purposive sampling.

### **Research Instruments**

The questionnaire is designed for employees of coffee house in the Northeastern region province to survey their needs and problems in using English in their routine jobs at the present time. The questionnaire is consisted of 3 parts; general information, needs and problems, and expectation for contents and methodology of the training course.

### **Data Collection**

After getting a cover letter from the chief of Graduate School, Buriram Rajabhat University. The questionnaire used in the study is distributed to 100 employees in 50 coffee houses in the 10 from 20 provinces in the Northeastern region of Thailand. The researcher collects data by himself and the questionnaire will administer with a target from December 2013 to February 2014 with the total 3 of months.

The questionnaire package will be made to include:

- 1 A cover letter from the Dean of Graduate School, Buriram Rajabhat University, asking for co-operation in completing the questionnaire.
- 2 A copy of the questionnaire.

The questionnaires were distributed by hand to 100 samples. All samples finished the questionnaire on the same day, then receive so the copies are collected back with 100 %

return rate. The questionnaires are collected right away. Then the codes are assigned to the data, which is used with the SPSS software program in order to analyze the data.

### **Data Analysis and Statistical Procedures**

Statistical Package for Social Sciences (SPSS) is used to analyze the data from the final questionnaire collection.

1 The items of the test are edited and revised by the advisors before proposing to the experts to examine the validity by using IOC (Index of Congruence) formula as follows (Phattiyathanee, 2003, 219).

2 The Cronbach Alpha Coefficient is employed to ascertain the reliability of the responses for those items which used a five point Likert scale. Reliability coefficient of the satisfaction questionnaire by using Cronbach's Alpha-coefficient ( $\alpha$ -Coefficient) (Srisa-ard. 2002: 99)

3 Percentage (%) and Frequency (f) is used in the analysis of answers concerning general background.

4 A five-point Likert scale is used to score the levels of the needs and problems of present typical characteristics of English for coffee house business and the level in using present typical characteristics of English for coffee house business in each employees' routine jobs.

5 Mean ( $\bar{x}$ ) is used to calculate the average level of needs in using coffee house business to be emphasized the suitable English training course on specific English skills using in the routine jobs for the employees of coffee house.

6 The standard deviation is a numerical value used to indicate how widely individuals in a group vary. If individual observations vary greatly from the group mean.

7 Independent Samples t-test is used to determine the two sets of data (The barista and the waiter or waitress) are significantly different from each other, and is most commonly applied when the test statistic would follow a [normal distribution](#) if the value of a scaling term in the test statistic were known.

### **Result**

Base on the research questions, the results of data analysis were as follow;

#### **Problems on English skills used by the employees of the coffee houses in the northeastern region of Thailand.**

When the employees of the coffee house were asked to rate their problems for English skills used in their work they rate all macro four English skills used as shown on table1.



**Table 1** Problems on English skills used by the employees of the coffee houses in the northeastern region of Thailand.

<b>Problems on English skills</b>				
Skills	x	S.D.	Meaning	Rank
Listening	3.20	0.73	Moderate	1
Speaking	3.00	0.90	Moderate	2
Reading	2.92	1.03	Moderate	3
Writing	2.83	1.00	Moderate	4
<b>Total</b>	<b>2.99</b>	<b>0.92</b>	<b>Moderate</b>	<b>-</b>

As shown in table 1, the result show that the coffee house employee rate all four skills as the moderate level ( $\bar{X} = 2.99$ , S.D. =0.92). When considering in each English Problem skills, it was found that listening is considered the most problems in their work ( $\bar{X} = 3.20$ , S.D. = 0.73), followed by speaking ( $\bar{X} = 3.00$ , S.D. = 0.90), reading ( $\bar{X} = 2.92$ , S.D.= 1.03) and writing ( $\bar{X} = 2.83$ , S.D.= 1.00), respectively.

**Problems on English listening skills used by the employees of the coffee houses in the northeastern region of Thailand.**

When the employees of the coffee house were asked to rate their problems for English listening skills used in their work they rate all macro four English skills used as shown on table 2.

**Table 2** Problems on English listening skills used by the employees of the coffee houses in the northeastern region of Thailand.

Listening Skills	X	S.D.	Meaning	Rank
I cannot translate English into Thai for conversation	3.28	0.94	Moderate	1
I cannot understand foreign culture and custom	3.07	0.96	Moderate	4
I cannot negotiate with foreign customer	3.23	1.09	Moderate	3
I cannot understand foreigners	3.25	1.02	Moderate	2
<b>Total</b>	<b>3.20</b>	<b>1.00</b>	<b>Moderate</b>	<b>1</b>

As shown in table 2, the coffee house employee rate the problems on English listening skills at the moderate level ( $\bar{X} = 3.20$ , S.D. = 1.00). When cannot translate English into Thai for conversation is the most problem ( $\bar{X} = 3.28$ , S.D. = 0.94), followed by cannot understand foreigners ( $\bar{X} = 3.25$ , S.D. = 1.02), cannot negotiate with foreign customer ( $\bar{X} = 3.23$ , S.D. = 1.09) and cannot understand foreign culture and custom ( $\bar{X} = 3.07$ , S.D. = 0.96).

### Problems on English speaking skills used by the employees of the coffee houses in the northeastern region of Thailand.

When the employees of the coffee house were asked to rate their problems for English speaking skills used in their work they rate all macro four English skills used as shown on table 3.

**Table 3** Problems on English speaking skills used by the employees of the coffee houses in the northeastern region of Thailand.

Speaking Skills	X	S.D.	Meaning	Rank
I cannot translate Thai into English for communication	3.22	1.13	Moderate	1
I cannot converse with foreigners face to face	2.85	1.16	Moderate	6
I cannot give suggestion or explanation to customer	2.98	1.10	Moderate	4
I cannot communicate on the telephone	2.99	1.18	Moderate	3
I cannot perform well with foreign customer	2.92	1.15	Moderate	5
I can understand what the foreigner say but cannot communicate back	3.07	1.18	Moderate	2
<b>Total</b>	<b>3.00</b>	<b>1.15</b>	<b>Moderate</b>	<b>2</b>

From the table 3, the coffee house employee rate the problems on English speaking skills at the moderate level ( $\bar{X} = 3.00$ , S.D. = 1.15). The employee rate the translate Thai into English for communication as the most problem ( $\bar{X} = 3.22$ , S.D. = 1.13), followed by can understand what the foreigner say but cannot communicate back ( $\bar{X} = 3.07$ , S.D. = 1.18), cannot communicate on telephone ( $\bar{X} = 2.99$ , S.D. = 1.18), cannot give suggestion or

explanation to customer ( $\bar{X} = 2.98$ , S.D. = 1.10), cannot perform well with foreign customer ( $\bar{X} = 2.92$ , S.D. = 1.15) and cannot converse with foreigner face to face ( $\bar{X} = 2.85$ , S.D. = 1.16), respectively.

**Problems on English reading skills used by the employees of the coffee houses in the northeastern region of Thailand.**

When the employees of the coffee house were asked to rate their problems for English reading skills used in their work they rate all macro four English skills used as shown on table 4.

**Table 4** Problems on English reading skills used by the employees of the coffee houses in the northeastern region of Thailand.

Reading Skills	X	S.D.	Meaning	Rank
I cannot translate English into Thai for reading	2.97	1.22	Moderate	1
I cannot translate Thai into English for reading	2.90	1.08	Moderate	2
I cannot understand letters, messages or reports	2.89	1.12	Moderate	3
<b>Total</b>	<b>2.92</b>	<b>1.14</b>	<b>Moderate</b>	<b>3</b>

As shown on table 4, the coffee house employee rate the problems on English reading skills at the moderate level ( $\bar{X} = 2.92$ , S.D. = 1.14). When cannot translate English into Thai for reading is the most problem ( $\bar{X} = 2.97$ , S.D. = 1.22), followed by cannot translate Thai into English for reading ( $\bar{X} = 2.90$ , S.D. = 1.08), cannot understand letters, message or reports ( $\bar{X} = 2.89$ , S.D. = 1.12).

**Problems on English writing skills used by the employees of the coffee houses in the northeastern region of Thailand.**

When the employees of the coffee house were asked to rate their problems for English writing skills used in their work they rate all macro four English skills used as shown on table 5.

**Table 5** Problems on English writing skills used by the employees of the coffee houses in the northeastern region of Thailand.

Writing Skills	X	S.D.	Meaning	Rank
I cannot translate English into Thai for writing	2.88	1.10	Moderate	3
I cannot translate Thai into English for Writing	2.93	1.16	Moderate	1

I cannot write letter or E-mail	2.89	1.18	Moderate	2
I cannot fill forms or document in English	2.62	1.11	Moderate	4
<b>Total</b>	<b>2.83</b>	<b>1.13</b>	<b>Moderate</b>	<b>4</b>

Table 5, the rate of the rate of the problems on English writing skills is in the moderate level ( $\bar{X} = 2.83$ , S.D. = 1.13). The most problems on English writing skills is cannot translate Thai into English for writing ( $\bar{X} = 2.93$ , S.D. = 1.16), followed by cannot write letter or e-mail ( $\bar{X} = 2.89$ , S.D. = 1.18), cannot translate English into Thai for writing ( $\bar{X} = 2.88$ , S.D. = 1.10) and cannot fill forms or document in English ( $\bar{X} = 2.62$ , S.D. = 1.11).

#### Needs on English skills used by the employees of the coffee houses in the northeastern region of Thailand.

When the employees of the coffee house were asked to rate their needs for English skills used in their work they rate all macro four English skills used as shown on table6.

**Table 6** Problems on English skills used by the employees of the coffee houses in the northeastern region of Thailand.

#### Needs on English skills

Skills	$\bar{x}$	S.D.	Meaning	Rank
Listening	3.81	0.94	High	1
Speaking	3.67	0.89	High	2
Reading	3.59	0.91	High	3
Writing	3.43	0.88	Moderate	4
<b>Total</b>	<b>3.62</b>	<b>0.90</b>	<b>High</b>	<b>-</b>

As illustrated in Table 6, the coffee house employee rate the needs on English reading skills at the high level ( $\bar{X} = 3.62$ , S.D. = 0.90), and it is found that the employee needs to improve their listening English skill first ( $\bar{X} = 3.81$ , S.D. = 0.94), followed by speaking skill ( $\bar{X} = 3.67$ , S.D. = 0.89), reading skill ( $\bar{X} = 3.59$ , S.D. = 0.91), and writing skill in the moderate level ( $\bar{X} = 3.43$ , S.D. = 0.88).

**Needs on English listening skills used by the employees of the coffee houses in the northeastern region of Thailand.**

When the employees of the coffee house were asked to rate their needs for English listening skills used in their work they rate all macro four English skills used as shown on table 7.

**Table 7** Needs on English listening skills used by the employees of the coffee houses in the northeastern region of Thailand.

Listening Skills	X	S.D.	Meaning	Rank
Listening for communicating with foreign customers	4.00	1.00	High	1
Listening for daily life	3.91	1.01	High	2
Listening for multimedia usage	3.60	1.07	High	4
Listening for main idea	3.73	1.09	High	3
<b>Total</b>	<b>3.81</b>	<b>1.04</b>	<b>High</b>	<b>1</b>

As shown on table 7, the coffee house employee rate the needs on English listening skills at the high level ( $\bar{X} = 3.81$ , S.D. = 1.04). When listening for communicating with foreign customer is the most problem ( $\bar{X} = 4.00$ , S.D. = 1.00), followed by listening for daily life ( $\bar{X} = 3.91$ , S.D. = 1.01), listening for main idea ( $\bar{X} = 3.73$ , S.D. = 1.09) and listening for multimedia usage ( $\bar{X} = 3.60$ , S.D. = 1.07).

**Needs on English speaking skills used by the employees of the coffee houses in the northeastern region of Thailand.**

When the employees of the coffee house were asked to rate their needs for English speaking skills used in their work they rate all macro four English skills used as shown on table 8.

**Table 8** Needs on English speaking skills used by the employees of the coffee houses in the northeastern region of Thailand.

Speaking Skills	X	S.D.	Meaning	Rank
Conversing general topics	4.00	1.01	High	1
Specific conversation for coffee house	3.76	1.07	High	2
Strategy and psychology for speech	3.60	1.04	High	4
Telephoning	3.44	1.09	Moderate	6
Conversation for career purpose	3.58	1.00	High	5
Conversation for making impression	3.69	1.08	High	3
<b>Total</b>	<b>3.67</b>	<b>1.04</b>	<b>High</b>	<b>2</b>

As shown on table 8, the coffee house employee rate the needs on English speaking skills at the high level ( $\bar{X} = 3.67$ , S.D. = 1.04). When conversing general topic is the most problem ( $\bar{X} = 4.00$ , S.D. = 1.01), followed by specific conversation for coffee house ( $\bar{X} = 3.76$ , S.D. = 1.07), conversation for making impression ( $\bar{X} = 3.69$ , S.D. = 1.08), strategy and psychology for speech ( $\bar{X} = 3.60$ , S.D. = 1.04), conversation for career purpose ( $\bar{X} = 3.58$ , S.D. = 1.00), and telephoning ( $\bar{X} = 3.44$ , S.D. = 1.09).

#### Needs on English reading skills used by the employees of the coffee houses in the northeastern region of Thailand.

When the employees of the coffee house were asked to rate their needs for English reading skills used in their work they rate all macro four English skills used as shown on table 9.

**Table 9** Needs on English reading skills used by the employees of the coffee houses in the northeastern region of Thailand.

Reading Skills	X	S.D.	Meaning	Rank
Reading general articles	3.73	1.08	High	1
Reading government letters and formal document	3.38	1.09	Moderate	6

Principle of general reading	3.68	1.02	High	3
Reading for main idea	3.69	1.03	High	2
Reading for details	3.56	1.03	High	4
Reading for pleasure e.g. movies, novel	3.51	1.15	High	5
<b>Total</b>	<b>3.59</b>	<b>1.06</b>	<b>High</b>	<b>3</b>

As shown on table 8, the coffee house employee rate the needs on English reading skills at the high level ( $\bar{X} = 3.59$ , S.D. = 1.06). When the content of reading general articles is the most problem ( $\bar{X} = 3.73$ , S.D. = 1.08), followed by reading for main idea ( $\bar{X} = 3.69$ , S.D. = 1.03), principle of general reading ( $\bar{X} = 3.68$ , S.D. = 1.02), reading for details ( $\bar{X} = 3.56$ , S.D. = 1.03), reading for pleasure e.g. movies, novel ( $\bar{X} = 3.51$ , S.D. = 1.15), and reading government letter and document ( $\bar{X} = 3.38$ , S.D. = 1.09).

#### Needs on English writing skills used by the employees of the coffee houses in the northeastern region of Thailand.

When the employees of the coffee house were asked to rate their needs for English writing skills used in their work they rate all macro four English skills used as shown on table 10.

**Table 10** Needs on English writing skills used by the employees of the coffee houses in the northeastern region of Thailand.

Writing Skills	X	S.D.	Meaning	Rank
Writing general topics	3.62	1.09	High	2
Writing for coffee house business	3.67	1.14	High	1
Writing schedules and programs	3.21	1.02	Moderate	9
Writing for suggestion and comment	3.28	1.05	Moderate	8
Writing English for business purpose	3.33	1.07	Moderate	7
Writing for sympathy or comforting	3.51	1.14	High	3
Writing letters or E-mail	3.35	1.16	Moderate	6
Writing memo	3.48	1.12	Moderate	5

Principle of writing	3.49	1.06	Moderate	4
<b>Total</b>	<b>3.43</b>	<b>1.09</b>	<b>Moderate</b>	<b>4</b>

From table 10, the rate of needs on English writing skills is at the moderate level ( $\bar{X} = 3.43$ , S.D. = 1.09). The employees rate writing for coffee house business as the most ( $\bar{X} = 3.67$ , S.D. = 1.14), followed by writing general topics ( $\bar{X} = 3.62$ , S.D. = 1.09), writing for sympathy or comforting ( $\bar{X} = 3.51$ , S.D. = 1.14), principle of writing ( $\bar{X} = 3.49$ , S.D. = 1.06), writing memo ( $\bar{X} = 3.48$ , S.D. = 1.12), writing letter or e-mail ( $\bar{X} = 3.35$ , S.D. = 1.16), writing English for business purpose ( $\bar{X} = 3.33$ , S.D. = 1.07), writing for suggestion and comment ( $\bar{X} = 3.28$ , S.D. = 1.05) and writing schedules and programs ( $\bar{X} = 3.21$ , S.D. = 1.20), respectively.

### Comparison of problems

#### Comparison of problems on English skills used by the employees of the coffee houses in the northeastern region of Thailand.

This part describes the comparison of problems on English skills used by employees of the coffee house in the northeastern region of Thailand classified by the position; barista and waiter & waitress.

**Table 11 Comparison of problems on English skills used by the employees of the coffee houses in the northeastern region of Thailand.**

Skills	Barista		Waiter & Waitress		t	P-value
	$\bar{X}$	S.D.	$\bar{X}$	S.D.		
Listening	3.31	0.63	3.10	0.81	1.398	0.165
Speaking	3.04	0.88	2.96	0.93	0.421	0.675
Reading	2.94	1.00	2.89	1.09	0.256	0.799
Writing	2.85	0.94	2.81	1.06	0.198	0.843
<b>Total</b>	<b>3.03</b>	<b>0.86</b>	<b>2.94</b>	<b>0.97</b>	-	-

As shown in Table 11, it reveals the comparison problems on English skills used by employees of the coffee house in the northeastern region of Thailand classified by the position; barista and waiter & waitress. The finding indicates that there were statistically significant differences of problems on English skills used.



**Table 12 Comparison of needs on English skills used by the employees of the coffee houses in the northeastern region of Thailand.**

This part describes the comparison of needs on English skills used by employees of the coffee house in the northeastern region of Thailand classified by the position; barista and waiter & waitress.

Skills	Barista		Waiter & Waitress		t	P-value
	$\bar{X}$	S.D.	$\bar{X}$	S.D.		
Listening	3.79	0.89	3.83	1.00	-0.211	0.833
Speaking	3.67	0.83	3.68	0.95	-0.019	0.985
Reading	3.53	0.85	3.65	0.97	-0.673	0.503
Writing	3.29	0.79	3.58	0.95	-1.648	0.103
<b>Total</b>	<b>3.57</b>	<b>0.84</b>	<b>3.68</b>	<b>0.96</b>	-	-

In table 12, it reveals the comparison needs on English skills used by employees of the coffee house in the northeastern region of Thailand classified by the position; barista and waiter & waitress. The finding indicates that there were statistically significant differences of needs on English skills used.

## Discussion

The finding from this present investigation can be discussed in the following points.

### 1. Problems on English used skills

The finding showed that the employees of the coffee house rate the problems on English used skills in the moderate level. In conclusion, listening is regarded as the most problem of the employees followed by speaking, writing, and reading, respectively. They concern the problem of listen to foreign customers almost as much as to speak to them.

It is generally accepted that English is widely spoken in Thailand, sometimes, even by those employees in very low skilled positions and presumably with fairly limited education. There can be little doubt that English is the most commonly used language of tourists and travelers worldwide. In many parts of the world, including Thailand, (Prachanant. 2012) although the study of English is not limited to school any more. Nevertheless, most Thai people rarely use English in their daily life especially in listening and speaking, which is considered as very serious problems.

This may be explained that not all employees of the coffee house can speak English fluently. Some may use English like a native while others may be able to use a little English or cannot communicate with the language at all. Therefore, it is possible that the tourism

employees cannot comprehend and listen to the variety of English accents accurately, choose the appropriate words and expressions, use correct grammar when speak read and write about coffee house.

## 2. Needs on English used skills

The finding showed that the majority of the employees of the coffee house in the study rate the needs on English skills as highly needed. In conclusion, listening is regarded as the most problem of the employees followed by speaking, writing, and reading, respectively.

Listening is rated as the most needs on English skills. This clearly explains that listening to the foreign customer' enquiries is the most important because it is the key factor that leads the employees of the coffee house to understand the thing that the foreign customer would need and want when they ask for the services or the information.

Speaking is the second most needs on English skills. They need to speak English fluently as well as appropriately because they have to make the conversation with the foreign customer; therefore, they need to practice the conversation to answer or describe the information.

For the reading skills, the employees of the coffee house need to read the information when the foreign customer asks for the information or reading the request. They also need to practice reading for understanding and scanning information. Besides, they need to practice guessing the meaning.

With the writing skills, it was viewed as the least important by tourism employees. This is perhaps explained by the fact that writing is only use when employees of coffee house prepare and outline the information that they give to the foreign customer. The result consistent with this study is found that writing was ranked as less important than the other skills.

## Conclusion

Based on the findings of the study, it is suggested that English activities course for the employee should be contain the needed information for the employee needs of the staffs who need to use English in their job, the communicating with the foreign tourists who seek a certain form of assistance from them.

The researcher believes the study will be the evidence of the employees of the coffee houses in the northeastern region of Thailand (barista and waiter & waitress) needs and problems in English used. It is hoped that the work achieved here will be an important first step in creating changes in process of teaching and learning as well as doing research in the field of English.

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## SOME CHARACTERISTICS OF MONG ETHNIC MINORITY STUDENTS AT PRIMARY SCHOOL IN LAO CAI PROVINCE IN STUDYING DESCRIPTIVE LITERATURE

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### Abstract

In Lao Cai province, there are many classes have 100% of elementary school students in a class is the ethnic Mongolian students. Due to the differences in living conditions, language and communication style to elementary school children, Lao Mong Cai difficulties in learning Vietnamese and text description. Articles referring to the physiological characteristics of the center, the characteristics of the language of the ethnic Mongolian students to help teachers better understand students Mong, from which appropriate teaching method to contribute to improving the quality of learning genre described in elementary and enhance their ability to communicate in Vietnamese for the children.

**Key words:** *characteristics, Mong ethnic minority students, descriptive literature*

### 1. Introduction

Lao Cai is a mountainous border province located in northwestern Vietnam. Lao Cai has 25 ethnic groups live together industry harmony in which minorities accounted for 64.09%, accounting for 22.21% Mong total provincial population. Up to 2014 the province has nearly 30,000 primary pupils are ethnic Hmong (representing 35.56% of the total number of primary school students), students are learning under the Primary Education program of the whole country.

Elementary students Mong is the future of the motherland in Lao Cai. At each school, the student is the purpose, the object and the subject of the teaching process. All school activities have focused on the progress and development of students. For the teaching activities described essay writing really effective, the student understand the human, that they have certain advantages, what difficulties they have, what they wanted to depict education is one of the basic requirements for each primary school teachers.

### 2. Research task

- Overview introduces the concept of documents described in the primary, some basic characteristics of the documents described.

- Learn some characteristics of primary school students of ethnic Hmong Lao Cai province, Vietnam.
- From the general characteristics of the ethnic Mongolian students, the analysis, pointing out the difficulties of studying them in writing and describe.

### **3. Method of the study**

- The method of investigation, survey
- Methods of observation - attended,
- Methods of analysis - synthesis.

### **4. Results and discussion**

#### ***4.1. Descriptive Literature***

There are many different ways to understand Descriptive Literature. As interpreted in the Sino-Vietnamese dictionary, description is defined as taking the drawing line or literal sentence to express the truth of things," [Quote, 9, p331]. Or Descriptive Literature is the quintessence of sophisticated comments, deep impetuses felt by the writer through observing the life" [9, tr332], Dao Duy Anh affirmed. According to Xuan Thi Nguyet Ha, "Descriptive Literature is a kind of literature using the language means to draw the outstanding features of the objectivities in the objective reality (landscapes, objects, human beings ..) in particular manner and vivid and suggestive method as it is in life to create lifelike effect for the readers as well as the listener, "[2, p13]. In our opinion, Descriptive Literature is a literary type use tool as language to reappear the object, phenomenon or human beings truly and lively. The students' capacities such as life observation, surrounding life understanding and language capacity are often represented in Descriptive Literature. Also, Descriptive Literature is comparable as a authentic mirror depicting the student.

Although language is also used as a means of expression mean, Descriptive Literature has its own unique characteristics compared to other document types. In addition to aesthetic notification and sentiments of love, pride and compassion ... of the writer towards life and humans, the real life is vividly reflected in essays by languages with a lot of images, emotions and shaping features.

Practical writing of Descriptive Literature, with own knowledge and Vietnamese language, students write an essay, showing truly and attractively the objects chosen. This is a general practical subject, requiring knowledge of many subjects, diverse understanding of society and human and fluent usability of Vietnamese.

As an ethnic minority, Mong students, in pursue to the national educational curriculum, faces a lot off difficulties in schooling, especially in studying and writing Descriptive Literature.

## ***4.2. Some characteristics of Mong ethnic minority students at primary schools in Lao Cai province.***

### *4.2.1. Physical health*

Due to the environmental characteristics, Mong's children, right since being born, are received the fresh living environment and safe food, they are almost healthy and physically balanced. The biggest difference of mountainous students in comparison with city ones are that they have an immense natural living space and high independence because they must work right from childhood. They are fond of activities and labor. They get acquainted with the household works like cooking, carrying water, house cleansing ... from a very young age. Despite of at the age of primary school, they actively engaged in production activities, closely connected to the real life: buffalo herding, corn milling, weeding, etc. They are often soon involved to important works, such as the sacrifice of the family, weddings, funerals, and festivals of the village ... thence they are very clever and agile.

### *4.2.2. Awareness*

Mong ethnic minority primary students are very intelligent and quick-witted. They have the ability to maintain and develop their intention. They have a good intentional memory and logical thinking. Due to living in immense natural space, and soon involving to the daily works, they have the opportunities to interact with the animal world, rich nature so they can understand much about their surrounding world. Thanks to hardworking life at the childhood, they are able to treat a lot of unexpected situations. They are quickly aware of them to give response, like discovery and curiosity.

### *4.2.3. Aesthetics*

Mong ethnic minority primary students love artistic activities or trumpet leaves, like singing and listening to music (a small radio is always carried to listen to the song while working and walking labor, go on the road and at rest). The ability to listen and feel the sound, the color of the sound is very accurate. They are enthusiastic and fond of common activities. They know to feel the beauty of nature, life, love the new and strange things; to create beautiful products from sewing, embroidery, vegetables, flowers and classroom decoration...

### *4.2.4. Social emotion*

Being inherited good traditions from the nation and their parentage, Mong ethnic minority students are very studious and esteemed, emotional life and harmonic with everyone and enthusiastic in assisting friends and teachers in study and communication (they are able to understand thoroughly Mong language and transfer its meanings from Vietnamese to Mong language quickly, so they are excited and delighted speaking mother tongue and helping teachers in school's work, especially in interpreting the complicated words by mother tongue for teachers).

They live orderly and respect the local rules and regulations, especially they never infringe on the conventions of the village, seriously implement the prohibitions in rituals of their ethnic group (such as no trees- cutting, no branches/ leaf-breaking in forest worshipping,; no home intrusion when the leaf (tree) suspension at the door; no theft, burglar ...), therefore, they are honest, upright, brave and self-respective in life.

Parents of Mong ethnic minority students give a immerse love for them. They barely hit them and treat them equally and give their children rights to express their mind and be respected equally. A big advantage which is lesser received by other ethnic groups' is daily share of schooling issues of parents, siblings and communities. Many Mong mothers take the view at school. Parents, or Mong communities willingly join in the education of children, or assistance for the schools, such as land donation for school building, labor contribution of school restoration, table chairs, and wooden tables for students; help pupil mobilization to schools. Many parents also teach them to sing and dance, embroider sew; cook for boarding students without remuneration; assist teachers in teaching Vietnamese for their children. What they do not know shall be explained by the elders, brothers and sisters in the family. This creates their rapid maturation in life, obedience and politeness to the elders, however they easily self-love and self-esteem. They dare to actively make proposals and bravely express their emotions and themselves perceptions, gender and their desire to express themselves. They have spiritual life, rich emotions and high responsibility for nature and human.

#### *4.2.5. Language and communication*

Mong ethnic minority students have a thorough understanding of mother tongue, communicate in the mother tongue fluently, but know too little about Vietnamese. Their vocabulary is not enough leading to the situation that they lack of bravery and confidence in communication, have not civilized in communication in Vietnamese, they have not preferred to go to school and are afraid of studying Descriptive Literature. Causes of this phenomenon may be due to several factors:

##### *4.2.5.1. Harsh living conditions*

Mong minority lives mainly in the high and remote mountains which are far from highways, they have a few conditions to approach mass media, so their personal experience and social understanding are very limited; there are very few Mong children who can speak Vietnamese. Only when going to school, they become familiar with Vietnamese. Attending the school, they have to receive a large amount of scientific knowledge that is learned in Vietnamese, while they have never had Vietnamese vocabulary in their mind. Through each lesson and period, they gradually learn how to pronounce, how compose a word and how to use Vietnamese in communication, and they have to apply immediately that negligible vocabulary on learning, working and playing. On the other hand, because of living under the form of small villages, which away from each other, the people around them are also Mong

people, their friends are the same ethnic people, so they just say, write Vietnamese when studying at the school, also in communicating and playing around with each other during the recess or after school. Upon falling in line with daily life, they talk and communicate in their mother tongue.

#### 4.2.5.2. *Effect of dialects*

Mong people have their own script and language. Mong language has some characteristics being different to Vietnamese, communication style has differences, so when communicating, learning and studying Descriptive Literature, Mong ethnic minority students face many difficulties in distinguishing the sound, letters, meaning and grammatical structure ... between Vietnamese and Mong language. There is a phenomenon of transferring language in a negative way from their mother tongue into Vietnamese:

- Phonetics: Mong language has 58 consonants, in which, there are no consonants of /bl/, /cx/, /đh/, /đr/, /hm/, /hn/, /hl/, /hnh/, /f/, /fl/, /gr/, /kr/, /mf/, /nkh/, /nkr/, /nq/, /nr/, /nt/, /nth/, /nj/, /nz/, p/, /sh/, /ts/, /tx/, ...in Vietnamese. Mong language is limited in syllable system. There are only 24 syllables and no closed syllables ending with voiceless final consonants, such as: p, t, c, ch. The phenomenon of sound transfer leads to wrong pronunciation in Vietnamese, incorrect use in meanings, incorrect verbalization in conversation and spelling mistakes in writing
- Grammar: In noun system of Mong language, the factor showing ownership always stand in front (for example: cur "l" tsêr "house" = my house), so students often make mistakes in in arranging the order of words in sentences, they often write and tell back to front.
- There are differences in describing and using comparable measure. When expressing or describing an object and phenomenon, Mong people often use familiar images to describe (for example: When being asked about the distances, they often use images of scarves to tell: The distance is measured by one or two scarves or two knives...). Mong people often make comparison, but compare in very specific and truthful way. Comparative images are close things and phenomena that are around human life, so the sentences are simple and not beautiful (for example: fat like pigs, eyes as sharp as dog's eyes; skin as white as rock beneath the stream...). This affects the thinking of students as they compare, so sentences sometimes are silly, crude and comic.
- The usage of reduplicative words is unlike the usage in Vietnamese: The reduplicative words in Vietnamese often decrease the meaning of the words, while reduplicative words in Mong language increase the meaning of the words (for example: we have the words of “đỏ đỏ, đỏ đỏ” with the decreased meaning of “slightly red” when the word “red (đỏ)” used by the reduplicative method in Vietnamese, while in Mong language, “laz laz” means “very red”; “đươz đươz” = very white; “cuz cuz”= very hot...)
- In communication style. In greeting: when meeting each other, Mong people often express their feelings by using questions instead of greetings (for example: when meeting teachers,



while Kinh students say: Em chào thầy ạ! (Hello teacher!), Mong students ask: "Caox môngl kreir tus ax theix zaoz? = teacher, where are you going?). In the wording of addressing, Mong people often do not use addressing words, or addressing words being not in accordance with communication relations (people with lower position to people with higher position). The cause of this phenomenon is that their mother tongue has word system for kinship relationship that is nearly equivalent to the words for kinship relationship in Vietnamese (aunt, uncle, grandfather and grandmother...), but in the culture of addressing, Mong people do not pay attention to the hierarchical relationship, attitudes and feelings that the speakers want to express when communicating. They often use the word "cur" (equivalent to first person addressing words in Vietnamese: tôi, tao, tớ, em, con, cháu,...); the word "caox=you" is the personal pronoun of second person (including ông, bà, cha, mẹ, anh, cô giáo, ngài, sếp...); the word "nul=it" is the personal pronoun of third person (ngài ấy, ông ấy, bà ấy, chị ấy...)...to address with communicating participants in different role relationships, whether in parity or hierarchical conversation. The use of words showing gender is also not clear, Mong people often use the word "tul" for "đứa, thằng", so students often use the word "thằng" to call both males and females when addressing. This makes their essays dissenting, unclear in roles of communication or no personal words.

#### *4.2.5.3. Learning conditions at school and at home*

Because students mostly study scientific knowledge of the subjects at school, there is no time for learning Vietnamese as a second language. The schools have noticed that the ability to use Vietnamese of Mong ethnic minority students is limited, but not pay attention to their Vietnamese study seriously, not assign students to study Vietnamese at home. At home, the children have no conditions and means to learn Vietnamese. They have no playgrounds or environment to communicate in Vietnamese, and no demand of speaking Vietnamese. Therefore, their vocabulary and communication skill in Vietnamese are very limited, this makes them afraid to communicate with other ethnic groups. Lack of Vietnamese vocabulary makes them difficult to study, they cannot express when writing an essay. They do not know what we can express when writing an essay, have no skill to write essays and do not like studying.

#### **4.3. Characteristics of Mong ethnic minority students in studying Descriptive Literature.**

Literal Writing is a general practical subject. Each student must use their own words and earned knowledge to make a essay, so nobody can help or do it for them. Learning Descriptive Literature, students have an opportunity to take part in a playground with plentiful communication situations, they, at their own discretion, say and write what they had known or observed before. The physical, cognitive, aesthetic and affective characteristics of Mong ethnic minority students show that they start from a good foundation, and then they are capable of learning Descriptive Literature well. These are strong points and favorable conditions for Mong ethnic minority students.

The language difference is the biggest barrier for Mong ethnic minority students in learning Descriptive Literature. This makes the poor quality of their writings, even some of them can't make a writing (Writings often contain a paragraph of 7-10 lines inadequately describing a targeted object); Reading their writings, I normally meet with the complete similarity. They can't describe a selected object in their own thinking but based on the samples offered by me. Their writings don't use vocative words, sentences are lack of subjects and unconnected to each other and even unexpressive and absurd. Few signs of affection are used and they don't know to apply literal methods such as comparison, personalization to make good and vivid sentences. Nevertheless, they make several mistakes including expression, wording, sentence-making, misspelling.

Necessary conditions including good health, quick perception, beauty love and rich affection are inadequate for Mong ethnic minority to write make a good writing. They should focus on observing the surrounding environment, have a thorough understanding of subject, nature, society and human being; in addition, they must equip themselves with a certain number of Vietnamese vocabularies which is enough to express what they want to say and write and especially they should be inspired to make a qualified writing.

### **5. Conclusion Kết luận**

The features described in Mong students shows they have many advantages, these advantages can help them integrate learning with students of other ethnicities. Every teacher should be aware of this, based on the specific characteristics of students that choose the content and methods of teaching accordingly, in order to promote these advantages. In the reformation trend, students are always regarded as the central element in teaching to improve their capabilities. Teaching Descriptive Literature means creating an environment for students to show their different abilities (listening, speaking, writing, observing, working skills...), as well as conditions for teachers to help them overcome the limitations of language to each school day for the children is a happy day.

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Intervention and prevention child labor in view of social work at "Safe and Sound"  
Project- Phu Vang District-  
Thua Thien Hue Province, VietNam

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### Abstract

Article focuses on analyzing the concept of children, child labor and child labor situation, analyze the social work service is being made in the project "Safe and Sound" at Phu Vang district - Thua Thien Hue province to intervene and prevent the situation of children in the district go to work early. Thereby, point out a number of recommendations and suggestions to improve the effectiveness of intervention and prevention of child labor go early in the project "Safe and Sound " at Phu Vang district, Thua Thien Hue province.

Child labor is an issue of state particularly interested in the mechanisms and legal policies. Vietnam is the first country in Asia and the second country in the world to ratify the Convention on the Rights of the Child. Children are special citizens, should be a priority to develop physically, mentally. But in fact, abuse of child labor is relatively high. Investigations by the International Labour organization ILO, Vietnam now has about 1.75 million child laborers in the total 80 million population (National survey data on child labor in Vietnam by Organization international Labour Organization (ILO) World Day announced in child labor prevention 12/6). Blue Dragon Children's Foundation was founded in 2003, headquartered in Hong Ha street, Hoan Kiem, Hanoi, is a non-governmental organization supporting function of children in difficult circumstances, street children through programs and projects to help them solve problems and overcome themselves to change lives. In Hue, the Blue Dragon Children's organizations have been implementing the project "Safe and sound" since 2008, for children living in Phu Vang district to help children and families aware of the importance of life care for

children as well as help them escape becoming child labor so that they can live "safe and sound".

## 1. Introduction

The concept of children, the rights of children under Vietnam law, labor and child labor in Viet Nam.

The concept of children: Article 1 of the Law on Protection, Care and Education of Children 2004 "Children are the citizens of Vietnam under 16."

The rights of children under Vietnam law: Law on Protection, Care and Education of Children (Parliament adopted on 12-8-1991 and 16-8-1991 effective date) has now been amended and supplemented by Resolution so51 / 2001 / QH10 December 25, 2001 of the X th, National Assembly, 10th session, has the rights of children in Vietnam is included birth and nationality (Article 11), to be cared for and taught to develop physically, intellectually and morally (Article 12), are living with their parents (Article 13), to be respected and protected life, body, dignity and honor; express opinions and wishes on matters related (Article 14). care and health protection (Article 15), to education and talent development (Article 16), which is fun, healthy recreation (Article 17), which has the property, the right to inherit and the right to enjoy insurance regimes (Article 19), the right to access information, express opinions and participate in social activities (Article 20) .Each violations of children's rights, damaging the average growth Children often severely punished (Article 6). Law prohibits the use of child labor laws contrary harmful for normal children development (Article 7).

The concept of labor: Labor is the activity with the will and purpose of human impact on the world around them to create material values and spirit to meet the needs of their increasingly diverse. Basic characteristics, the most important is the positive labor and purpose of manufacturing operations, using the tools and means to carry out certain functions.

From the concept of children and labor concept as above, we can build the concept of child labor is labor performed by children at ages earlier than the provisions of the law.

Currently, child labor concept soon as understood by the International Convention on the Rights of the Child in 1989 "Child labor as workers under 18 except in cases where the law applicable to the child, the age regulations mature earlier. " Vietnam Labor Code does not give a definition of child labor, but labor defines a juvenile as defined in Article 6 of the Labour Code "Workers are at least 15 years of age who are capable labor contracting ", Article 119 stipulates that" labor is labor minors under 18 "[1]. In protections care and education of children

prescribed age is 16 years old. Thus, the law of Vietnam has contained child labor in the concept of workers to protect minors in the company of no legal capacity and full capacity behavior. Children are eligible for employment but allowed to join the special labor because they must comply with the purpose and nature of individual employees to ensure the right to education, development, protection of children's rights. In view of the International Labour Organisation (ILO), the concept of child labor requires age outside perspective, there must be approached from the perspective of the nature of work that actors must do: About age ILO that children who are under 18; About the nature of work, child labor, including work that negatively affect the comprehensive development of children.

## **2. Research objects and research methods**

In article , we have use database and report from research of Thesis master “Socia work with child labour at Blue Dragon Children Foundation in Thua Thien Hue Province ( Case study with project “ Safe and Sound “ at Phu Vang District- Thua Thien Hue Province) – written and report by Master Socia worker Nguyen Thi Phuong Thao, in 2015, University of Social Sciences and Humanities, Viet Nam National University

## **3. Results and discussion**

### ***3.1.Current situation of child labor in Vietnam***

Currently in Vietnam there are about 1.75 million children aged 5 to 15 who are in child labor, of which a third of the children have time to work on seven hours a day or 42 hours a week, some time long working time affects the learning of the children, many children are not in school (the national survey data on child labor, the Ministry of Labour Invalids and Social Affairs in 2012, published on 14 / 3/2014). The majority of child labor work and domestic labor due to the nature of work is a long working time and often can not attend school. (7.1% Llao worked to help the family under 18 old.). Parts of children living in rural areas, working in the agricultural sector and to support their families are not paid. Among them, about 30,000 children are engaged labor in heavy work, such as work in hazardous working conditions outdoors and travel more prone to accidents, work environment with harmful chemicals , work in mines, child labor should meet lesions affecting the physical development (The survey of child labor ILO announced in March 2014.). Ages participation of child labor often begins early ages 12 and older so the participating labor situation affects learning about 55% of children do not attend school, participate and influence early labor to the physical development of children; child labor is involved in many areas, places diverse labor, children engaged in labor

around 120 fields of child labor exploitation mainly working in the production facilities do not allow , illegal form of labor to support their families as the descendants and relatives; or work in the gold mines, coal mining, working in the sewing facilities, child laborers are engaged to work in restaurants. Child labor involved in labor relations are usually not signed labor contracts in writing. The employers take advantage of this point to labor exploitation of children, and when disputes arise no legal basis to deal with offenders and protect children's rights. Verbal contracts are common forms of labor relations in fact, for children, for there is no legally binding between the employer and child labor, so every violation of law the use of child labor is difficult to detect, prove unfounded exploitative child labor. This is contrary to the provisions of international conventions on children's rights, violate the right to development and protection of children's rights.

### ***3.2.Current situation of child labor in Phu Vang District – Thua Thien Hue Province***

Currently, not only Phu Vang but in most provinces across the country are young state, workers go to work in other areas of economic development. Especially young people, migrants groups often focus on the big cities like Hanoi and Ho Chi Minh city to find work and earn a living. The "statistics reported migrant workers in Ho Chi Minh City travel period 2010- 2013" of Labor - Invalids and Social Affairs, Phu Vang district, Phu Vang district has 12 354 employees active youth aged 18 to 22 years old to work in Ho Chi Minh, ages 22 to 35 have total 34 112 employees. Thus, with a district with the district population of 200 thousand people, the total number of migrant workers in the district is 46,466 people, accounting for nearly 23% of the district population. According to the Department of Labour, Invalids and Social Affairs of Thua Thien-Hue province each year from 800-1000 Children leave home to go hard for a living, most are TP. HCM. Of these children come from Phu Vang district accounts for about 350 children. These are also being exploited child labor and tortured ruthlessly brutal.

Currently, under the support of organized Blue Dragon Children's Foundation , project “ Safe and Sound” skin on the declaration in Phu Vang district since 2008. The last years, the effectiveness of the project will bring to children and community coastal districts Phu Vang great. Shown in the number of children sent to work soon to be rescued returning home, the number of children returned to school ... can tell the work of the intervention and prevention of child labor by the project soon, the project deployed in Phu Vang district - Thua Thien Hue province has brought positive values to children and people living in the district .

### ***3.3. Intervention and prevention child labor in view of social work at the project "Safe and Healthy" - Phu Vang district - Thua Thien Hue province.***

Child labor interventions in terms of social work at the project "Safe and Healthy" - Phu Vang district - Thua Thien Hue province implemented in the work of rescue child labor and provide the social work services supporting individual child labor after return.

Rescue is the most important component in the fight against human trafficking. Rescue children from the terrible working conditions of course is essential for children and their families. It is also the best way to educate the community about child labor and why they should not let their children work in other localities. These children have been rescued back can be great advocates in persuading other children and family do not believe in the false promises of traffickers object.

This is a social work service has great significance and remarkably effective. As noted above, the majority of working children were soon put to work in Saigon. Hue distant place thousands of kilometers to the return home for children under the pliers premature labor of the object pairs employers may soon say is very difficult. Trouble from persuading her family to search for a place children in detention to premature labor.

In July 2015 the project was supported and conduct rescues 183 children trafficked, men and women, as workers in factories back home safely. All the children, to date has now arrived home safe and they are planning their own individual. We can say the road rescue for working children early is not easy when work with other agencies and organizations seeking assistance . 183 childrens are different cases to help childrens from the worst place harsh labor is back with their family.

Providing services to help social work intervention and prevention of child labor. These services include social work services individual social work, social work services group, and community development

Currently the project is personal support for early child labor. including support services such as money months, support to school and to school, support related issues, such as psychological counseling, resolve personal problems ...

Support Money months: monthly, each child was rescued after returning home in the next 18 months, they will receive a grant received is 180,000 VN / month. At the August ,2015, the total number of children supported by " safe and sound" project for 657 children respectively. In particular, the number of children being supported by the end of the month every month is 267 kids. Although small grants but with average incomes locally, this allowance to help them have more costs to pay for personal needs or solve the immediate difficulties



arise. Of the children surveyed, 87% of children today still receive monthly allowance in the amount of 180,000 VN / month, equivalent to 87 children. 13% is the project support in a long time, have a stable life support should not need any more money monthly.

Support to school: it can be said, with large numbers of children from 9 to 12 years old their basic needs and their largest is to be returned to school, go to school. However, given the difficult economic conditions and obstacles to school, where the majority of students have pointed out the difficulty lies in the issue of school fees and lack of knowledge skills should be afraid to go to school. Problem support children to go to school and go to school poses an urgent task. Current projects perform social work services for child labor in Phu Vang district in the following activities: Support fees and donations, support for books, uniforms and supplies learning, support bicycles, support at school through the forms with volunteer tutors at home, visiting the child at school, working with children - the school-family- teacher.

Support and counseling: this is a very necessary service segment in the field of social work with child labor Phu Vang district. Activities supported psychological counseling can take place on the client, such as children, families, schools .... This can help the client can reconcile and perform social functions. For children under the project psychological counseling is very important accounting tasks. Counseling helps them psychologically stable after being rescued to go home, consultants agitated psychological moment want to return to Saigon, advice to live in family, relationship members .... Comes with counseling, psychological support , social worker always approach children like to visit school, creating facebook groups, school visits, phone calls. The reported "Summary report 5 years, 2008- 2013", project ATVLM, Hue, in 2013, then 100% of the children participating in the program are receiving the assistance, psychological counseling, 5% of children were examined and identified deep psychological damage in the central intervention and therapy. 1% of children in need of treatment, intervention and the project was supported to perform timely intervention.

Health care services: In order to ensure that children under the project best cared for medically, and also reduce the burden of health care on families. Projects support 100% of all children in the program is currently going to school, to buy health insurance at the school. For children have stopped learning, vocational training, social worker will support their family insured locally. Thereby, you get the best health care to conditionally physical development. In " Sumamryl Report 5 years, 2008- 2013", there were 1.584 children respectively project supported health examination, which conducts intensive treatment is 134 children. This activity is very significant because after a period of overwork than age, many children coming home was infected with diseases such as dermatology, tuberculosis ... needs long-term treatment period.

Furthermore, the batch will help medical screening and classification of disease and better treatment. Ensuring health care for the most comprehensive child.

Life skills – Living values : not only interested in material life, projects longer interested in the spiritual life of the children shown in the activities to support life skills and values to live for children. These activities, often taught at Hai Tien center for children in the whole project, but with the group of children away, unable to downtown Hai Tien, fish often use the project system community center of social activities to organize activities that stri life skills .At now, the project has supported teaching life skills to 342 children under the project, the programs are run by project staff to teach.

Orientation careers : The activities of the orientation program is designed for children from 15 years of age or older, with the trades tend economic fit - of local society. Currently, the career-oriented program is the project officer organize different forms. Time to organize activities often on weekends or vacation time. Where organizations include Hai Tien center and cultural home communes to help them conditional remote access program.

### ***3.4 Preventing child labor in view of social work at project "Safe and sound" - Phu Vang district - Thua Thien Hue province***

Building house for childrens: since the project operation in 2008, the project has supported build 35 houses, including 20 house building support for the family fishing boat no housing, to settle on land, repairing and renovating 11 homes, helping homeowners with stable spacious house, with storms and safe for all children. The support housing on the one hand to secure, on the other hand is also enabling families with a stable life, not the nomadic on the fishing boat, through which the child will live on fishing boat have more opportunities to access social services such as schooling, health care

Vocational training: projects not implemented vocational training services, however, the project was coordinated with vocational training establishments and business services to collaborate and vocational training for children with vocational training needs.

Communication, Community Development: To improve the efficiency of the fight against premature labor, the media and community development are being implemented in parallel with the process of rescue work. Because of the impact on the awareness of the people in the community to detect and help the labor case soon. Currently, the project has been implemented of communications services, community development in aspects such as training content for parents on prevention of premature labor (2 times / year), the main training Local

labor early (1 year / time), training in the field of prevention of premature labor (2 years / times), support personal paperwork, residence for families in the districts (1 year / time).

In summary, the social work activities on advocacy and community development not only short-term in nature but also long-term objectives in the process of child labor prevention. These services, not only towards children working group soon, but toward the development of community services in the area of operation of the project.

#### **4. Conclusions and recommendations for the intervention and prevention of child labor in the project , "safety and sound" at Phu Vang district - Thua Thien Hue province**

##### ***4.1. Conclusions***

First, the project Safe and Sound helped bring hundreds of children who are victims of labor soon be back with his family and with the support services so that they can eliminate the stigma and rise in life, become useful to themselves, their families and society.

Secondly, the project Safe and sound has helped enhance community capacity, community development and enhance community capacity at Phu Vang district constitutes the " barrier " to prevent child labor Phu Vang district . These changes, so great was the impact from the government departments and project organizations ,we can say, with the help of social work services were brought to the child labor soon a new life, a new face

##### ***4.2. Recommendations for the intervention and prevention of child labor in the project , "safety and sound" at Phu Vang district - Thua Thien Hue province***

To intervene and prevent child labor, Phu Vang district - Thua Thien Hue in particular and child labor in general need to incorporate synchronous multiple different solutions, which first of all to the improvement of laws on child labor.

Next is the need to strengthen the propaganda education of legislation on combating child labor, in order to improve understanding of the legislation on child labor in communities, families and employers; Campaign simultaneously poor families so that children do not have to work to earn a living. Promoting the role of the organization, community and society on preventing state using child labor.

Third, strengthen oversight to prevent and tackle child labor to early, to work hard; strengthening the implementation of the inspection and test for early detection and strict handling and timely legal violations on the use of child labor; and family responsibilities associated with the child labor case soon to affect learning and develop physically,

intellectually; in addition to the intervention measures resolutely to support poor children from the working environment.

Fourth, the prevention of child labor must be attached to hunger eradication and poverty reduction. State should support policies aimed at creating jobs and stable incomes for poor families to ensure children attend school; Besides, there should be measures to support poor families locally to tackle radical immigration status because of economic reasons.

And finally, the need to create a safe environment, friendly to child labor in order to eliminate or reduce to the minimum the risk of injury to children

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Challenges in English vocabulary teaching for ethnic  
minority students at Lao Cai Teacher Training College  
and  
some suggested solutions

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**Abstract**

In the trend of global integration of my country, teaching and learning English has become more and more essential to Vietnamese, especially the young people. Lao Cai in Viet Nam is a mountainous province, however, education managers are focused on developing foreign language competence for students. And teaching and learning English in Lao Cai, Viet Nam have received active attention from training institutions, schools and colleges, especially at Lao Cai Teacher Training College, in Viet Nam. However, English teaching and learning is facing many difficulties. One of the problems is teaching and learning English for ethnic. It is the challenge which needs to to solve. In this paper I mentioned the challenges of Lao Cai Teacher Training College in teaching English for ethnic minority students. One of the difficulties is teaching English vocabulary. In addition, I also introduce the difficulties of ethnic students when they learn a new language as the 3rd language at school, especially learning vocabulary in the conditions of lacking background knowledge, deficiency of Vietnamese, learning materials are not appropriate, ... From the difficulties I suggest some solutions to overcome the difficulties that teachers and students are having. Purposing improve the quality of teaching and learning English for students from ethnic minorities.

### **1. Introduction.**

Lao Cai is a remote and mountainous province. There are 27 ethnic minorities living here. In schools, most students are from different ethnic groups. Each group has its own language and Vietnamese in their second language. Two thirds of them cannot speak Vietnamese well. When students come to the college, English seems to be their second foreign language (third language). Teaching them to learn English words is really a challenge. In Lao Cai Teacher Training College English is a compulsory subject. English is taught with the purpose bring students some basic knowledge of English to help them in communicating and use it as a key in the future and students have to take an English language test to get certificate before graduating course. However, at Lao Cai Teacher Training College, there are many ethnic students, they mainly have difficulties in learning English, especially English vocabulary teaching and learning.

### **2. Method of the study**

To achieve the objectives about description, comparison and statistics, the author use different methods during doing the research.

Firstly, the author talked to teachers who are teaching English at Lao Cai Teacher Training College and ethnic students to get confidence into the research questions.

Secondly, observing classes were organized in order to identify how effectively students learn English Vocabulary.

Finally, survey questionnaires were conducted.

### **3. Research questions.**

3.1. What are the difficulties do teachers at Lao Cai College often meet in teaching English vocabulary to ethnic students?

3.2. How can help teachers to overcome to teach these students effectively?

### **4. Results and discussion.**

Through the interviews, observation and survey, most of my colleagues once again agreed that teaching vocabulary to ethnic minority students is a big problem because these students are not at the same level of fundamental knowledge, such as, Vietnamese competence, English competence... Most of students are passive in learning.

From the answers of the questionnaire to teachers, the result is most of the correspondents answered "yes". It makes me believed that, these are the common problems, which teachers at Lao Cai Teacher Training College are facing and needed to be solved.

Question: How do you think about teaching vocabulary to ethnic minority students?

- A. Difficult                      B. Not very difficult  
C. Easy                            D. Others

	Degree of difficulties	Number of people	Percent %
1	Difficult	10	100%
2	Not very difficult	0	0
3	Easy	0	0
4	Others	0	0

Table 1

When I talked to students, they also give the same answers as their teachers'. They said that;

\* Some words in Vietnamese are very strange for them so they cannot understand very well

\* Students do not have clear reasons for their learning; some of them even do not know the reason for learning English.

\* They are lack of the basic knowledge so when they learn English they face many difficulties.

When I did observation, I found that;

\*Students are passive in learning.

\* Classes are too large to control the activities in the class well.

## 5. Findings

From the data collection and analysis, the researcher found that there are some kinds of difficulties in teaching English vocabulary to ethnic students at Lao Cai Teacher Training College: Teachers' difficulties; students' difficulties and difficulties from English vocabulary.

### 5.1. Teachers' difficulties.

#### 5.1.1. Students' deficiency of Vietnamese

Vietnamese is the second language with ethnic students, and for most of them, Vietnamese is very difficult. When the teacher explains the meaning of English words in Vietnamese for students, they sometimes do not understand, because their Vietnamese vocabulary is very limited. Being asked on this topic each of the interviewed teachers gave his/her own story.

"When teaching Unit 5 Likes and Dislikes in Lifelines –Elementary text book, part reading and writing, I teach students vocabulary about food and drink, the words 'cheese' I provided Vietnamese equivalent 'pho mát'. I tried explain what 'pho mát' means but none of them seemed to understand. I was so upset, finally I realized that my students had no idea about 'cheese'. They have never seen and eaten it. There are some more English words in some

units that are very difficult to explain to them such as, *pasta, pudding, underground, tram, houseboat, chairlift,*

### **5.1.2. Students' passiveness in learning.**

In the class, ethnic students have become accustomed to the traditional classroom methods. They always sit motionlessly, take notes while the teachers teaching, and speak only when teacher ask. After many years of schooling in traditional settings, students rely heavily on teacher's teaching, now it is extremely different to make them to be active to satisfy the innovation of development learner capacity. Some teachers shared

*"The ethnic students are too deserved, so it is difficult to get them learn new words or do some class activities."*

*"They are too passive in learning, they only do or react when they are called or requested. In English lessons, of course, it is not good."*

*"Students are always in hesitating to share opinions. This symptom is from the general psychology of students. They are not confident about their ability. They afraid of laughing at wrong talking."*

## **5.2. Students' difficulties.**

### **5.2.1. Lack of fundamental knowledge**

In learning a new language, fundamental knowledge is one of the essential conditions help learners in getting knowledge from the new language. Learning a language means learning the new culture of the community which possesses the language. It is the fact that, having background about world knowledge is necessary for us to master a new language, but to ethnic students, they seem to have no fundamental knowledge. Most of them spend their lifetime in remote places, they have never been to cities or town centers. It is difficult for them to express themselves when see the new things that happen only in cities or in the world. Some students shared me about their difficulties in learning English.

"In some lessons, such as, Unit 8, Entertainment, topic WOMAD; Unit 9, topic Travel with many vocabularies about this topic; Unit 14, topic experiences; ....., We have no ideas to talk about them, we also have no imagination something about them. They are very new with us. There are many things or places we have never seen or heard before. When we study these topics it is really hard for me to remember or use".

"When talking about my holiday, I have nothing to express about it, because I have never had opportunity to experience a holiday so I do not have any information about it. My family is very poor, my parents just support enough for us to school. Having a holiday is a valuable property".

### **5.2.2 Deficiency of Vietnamese**

When answer the interview, two third of students explained that, their Vietnamese is a big problem.



“I live in my family and even living community, every people using our own language to communicate with each other. When I talk to them by Vietnamese, they are difficult to understand. At school and in the rent room, roommates also don not use much Vietnamese so I have no opportunity to use Vietnamese each day that why my Vietnamese is really a problem.”

“I know that if we use Vietnamese more often, our Vietnamese competence will be improved, but I do not have much opportunity to learn Vietnamese. At home, my parents are not comfortable if we communicate with each other in Vietnamese. At school, I want to talk to the Vietnamese classmates, but they usually laughed at me when I make any mistake, after some situations like that I lost my motivation and confident when using Vietnamese.”

“There are some words even in Vietnamese I cannot understand so how can I understand and use English words correctly in the contexts.”

### 5.2.3. Lack of an appropriate syllabus for ethnic minority students

In the Vietnamese school systems, all of the students use one syllabus. There is no appropriate syllabus for ethnic students. In the syllabus, there are many topics are strange to ethnic minority students. In the syllabus, the customs and traditions of the ethnic minority are not concerned enough. An appropriate syllabus for ethnic minority students is needed to help them in learning English vocabulary.

## 5.3. Difficulties from English vocabulary.

### 5.3.1. Some sounds do not exist in Vietnamese.

In English language, some sounds do not exist in Vietnamese so they make students easy to confuse include Kinh students, such as, /a:/, /ʌ/, /ɔ:/, /ɔ:/, /ə/, /ɜ:/, /ʊ/, /ɔ:/, /θ/, /ʃ/, /ʒ/, /θ/, /tʃ/, /dʒ/,... During learning English vocabulary, Vietnamese learners often meet difficulties in using these sounds. Students pronounce these sounds like some similar sounds in Vietnamese, but not the same, this action leads to serious mistakes and it is hard to correct them. The mistakes as we can see in the following table:

	English sound	Vietnamese sounds
1	/a:/	/a/
2	/ʌ/	/ã/
3	/ɔ:/	/o/
4	/ə/	/ɔ/
5	/ɔ:/	/ô/
6	/ɜ:/	/ɔ/

Table 2

### 5.3.2. Differences between the spoken and written form.

In English, spelling is usually inconsistent and irregular. Students cannot safely predict the pronunciation from the spelling. Nor, given the pronunciation, can the students reliably infer the spelling. This is one of the difficulties to Vietnamese students, because they are familiar with their language spelling, so they can safely pronounce all the words from spelling. All of the teachers and students confirmed like that.

## **6. Some suggested solutions.**

### **6.1. Improve the students' Vietnamese competence**

As the author mentioned in the difficulties between teachers and students, one of the biggest challenges in English vocabulary teaching is Vietnamese competence. To have good results in teaching English vocabulary to ethnic minority students, teachers should help them overcome their problems in their Vietnamese deficiency. Schools and society should give them more opportunities to take part in activities inside and outside schools. Encourage them to join in some clubs or groups of students at school, or giving them some roles, which are related to people relationships. Teachers design the topics which related to their life to help them share or present about the topics. Through these activities, students can use Vietnamese more often and as the result, their Vietnamese competence would improve day by day to help them in English learning as the third language.

### **6.2. Improve basic knowledge of students**

Nowadays, the life condition of remote and ethnic minorities in Lao Cai has been significantly improved. They also recognize the value of education training, they have a high awareness of their children to school to learn. Therefore, from primary schools to universities and colleges, there are many ethnic minority students. Although they are allowed to schools but they have no chance to contact with the world around beside families and schools. That is the reason why they lack of fundamental knowledge, society and school, include teachers should help them enrich their basic knowledge by giving them the opportunities to visit some of the famous places in the country, such as visiting the sea, beach, museums and cities. If the schools do not have enough fund, they should give students video shows on some certain topics of the books, such as the sea, technology, famous people, famous places, football, history, cultures...Through these activities, their fundamental knowledge will improve.

### **6.3. Adapting the textbook.**

English textbooks using in English teaching at Lao Cai Teacher Training College are original edition. The information given in the book is about society, politics, culture, tourism, ... and contains many different topics. However, some of the units in the textbooks are not very relevant to ethnic minority students' background and daily life. The contents are about things they have never experienced, for example; beach, resorts, supermarket, ...Therefore, it is necessary for teachers to adapt textbook to make it interesting enough to students.

Depend on certain units and lessons to adapt teaching material by re-ordering, combining, adding tasks, ...There is an important thing when adapting teaching material is everything presented needs to be made clearly and specifically. It is better to start teaching ethnic students to improve their confidence in learning.

#### **6.4. Upgrade vocabulary teaching techniques.**

##### **6.4.1. Using vocabulary cards**

Using vocabulary cards is a word learning strategy for independent learning in or out of class. On one side of the card is written the word to be learnt. On the other side is the word's meaning, usually in the form of a first language translation.

*Levels:* beginners

*Aims:* learn new vocabulary

*Class time:* 15 - 20 minutes

*Procedure*

1. Show the learners how to make and learn from cards. When learning from cards they should keep changing the order of the cards, use mnemonic tricks to fix the meaning in their minds, look at the cards at spaced intervals rather than spending a long amount of time in one go, and make sure that similar words are not in the same group of cards.

2. The learners make 10 - 15 cards each day and keep a record of their progress.

##### **6.4.2 Using pictures**

One of the useful techniques in teaching vocabulary is using pictures, photos. This way learners know and remember what they have never heard of or seen before, even in their language. Indeed, new words to be taught can be embedded in pictures or graphs to help students recognize and memorize the meanings easily (see Pictures 1 & 2). One of the important things is that the teachers can easily get visual aids from many sources such as newspapers or internet. Besides, the teachers can design simple pictures themselves so that they make the use of their sources of visual aids repeatedly in class.



*P 1.*

*Underground*

*P 2. Kangaroo*

Follows is an example of teaching vocabulary through pictures.

*Parts of a house*

*Levels:* Beginners

*Aims:* describe a room in the house.

*Class time:* 15 minutes

*Preparation*

Cut out lots of newspaper photographs (or drawings/caricatures) of rooms in a house, parts in the house, and things in the house ...

*Procedure*

1. Show the students all the photographs you have selected and make sure they can identify and name rooms in the house, things in the house and parts of the house.

2. If necessary, prompt you students with questions. This stage will fuel your students' minds with ideas for the next part of the activity.

3. Spread out the photographs and ask each student to choose a room that interests them. Tell them to display their photographs on walls or desktops.

4. Explain that each student should begin with their photograph, write some sentences about the room on the sheet, and then move to another student's photograph sheet and do the same. They should continue working this way until they have written something about all the room. Tell them to read what other students have written to make sure that they do not repeat any information.

5. Begin the activity. Be ready to supply any vocabulary or language your students need.

6. When everyone has run out of ideas, tell each student to collect the photograph sheet they first chose.

7. Now tell your students that they should read all the information on their sheet and use it to help them write a short description about the room they like.

8. When your students have finished their writing, display their work around the classroom and ask everyone to read each other's work, if you wish you could collect in your students' writing to mark and comment on.

**6.4.3. Through experiential activities.**

Learning by doing develops students' maturity, and it is an effective way to remember things quicker and keeps in their mind longer. Learning by doing helps students understand things from their experience. There are some activities which I usually do with my students to help students receive language by doing them.

\* Drawing pictures

\* Doing role play

\* Playing games

**7. Conclusion**

Lao Cai is a developing province, the teaching and learning English is improving each day. There are various opportunities for people to improve their knowledge, even though, the difficulties still exist in many places in my province.

In teaching and learning a new language, vocabulary is obviously significance. In teaching English to ethnic minority students, the role of it is greater. All the teachers who are teaching English vocabulary to ethnic minority students Lao Cai Teacher Training College are facing many difficulties such as deficiency in spoken English, students' deficiency of Vietnamese, lack of support or difficulties caused by English vocabulary itself etc. Through this study, the researcher finds that these teachers really need solutions or helps overcome their problems. There are some vocabulary teaching techniques and some suggestions for solutions to help teachers improve their situations. The researcher suggests some vocabulary teaching techniques, which he believes that they will be effective to ethnic minority students such as teaching vocabulary through using pictures, using vocabulary cards, through experiential activities,... If these techniques are used by all teachers at Lao Cai Teachers, the difficulties could be reduced and ethnic students will learn and remember English vocabulary well.

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## **The Efficiency of Radio and Television Buddhist Propagation Project Based on Tyler's Goal Attainment Model and the Stake's Congruence Contingency Model**

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### **Abstract**

Mahamakut Buddhist University is a higher education that has provided education according to Mahamakut Buddhist University Act B.E. 2540 (1967) stating "propagation of Buddhism to the public". In 2014, Kalasin Buddhist College under Mahamakut Buddhist University, therefore, had a budget to propagate of Buddhism under the Radio and Television Buddhist Propagation Project. This research is the evaluation research that its objectives were to study the goal attainment of the project and to study the transactions and outcomes of the project. The samples were 24 project participants who are monks, novices, university students, and school students living in Kalasin Municipality. The research instrument was the three-rating scale questionnaire based on Tyler's Goal Attainment Model and the Stake's Congruence Contingency Model. It was checked its accuracy and reliability by the focus group with three specialists as well as the meeting with 30 committees who concerned with the project. The standard criterion according to the Stake's Congruence Contingency Model was at 2.30 levels. The statistics to be used for analyzing the data were frequency, percentage, mean and standard deviation. The findings of this research were found that the goals of the project were attained which was reached to the appointed criterion. The project transactions were also achieved especially in speakers who had ability in teaching, the subject contents were up to date, and the contents were useful for training as a DJ radio or TV reporter. Lastly, the outcomes of project found that the participants satisfied with the services, had good desirable characteristics based on the program, and felt worthiness.

**Keywords:** Project evaluation, Tyler, Stake, Buddhism

## 1. Introduction

Mahamakut Buddhist University is a higher education that has provided education according to Mahamakut Buddhist University Act B.E. 2540 (1967) stating “propagation of Buddhism to the public”. In 2014, Kalasin Buddhist College under Mahamakut Buddhist University, therefore, had a budget to propagate of Buddhism under the Radio and Television Buddhist Propagation Project. To get reasonable information for improving the project in the next year, it seems that research plays an important role for many reasons.

The project evaluation is an important process. In order to identify the ways to improve the operation of the next project, project evaluation is an evaluation of the project value by using the result to measure different aspects of the assessment to be considered and concluded that how is the value of the developed project, is it valuable or not?, or have the project results met the expected objectives or not?, which part should be revised. Considering the project to see that it meets the expected goals or not is an important process for project evaluation, is an activity that must be done continuously to monitor and to audit the defects, and also is a tool to point out how effective the project could be. The results of the project will be the information in order to decide for the improvement, or project’s change.

The Dharma propagation through radio and television project has been allocated the budget from Mahamakut Buddhist University by the public relations division of Kalasin Buddhist College as the project operator. There are 24 project participants consisting of monks, novices, students and college students. So, in order to obtain the information for next year project improvement, the researchers have designed the evaluation by the combination of Tyler’s concept which focuses on the evaluation based on project objectives, and have applied Stake’s congruence contingency model to evaluate the transactions and the outcomes

## 2. Objectives of the Study

2.1 To evaluate the goal attainment

objectives of the Dharma propaganda through radio and television project.

2.2 To evaluate the transactions and the outcomes of the Dharma propaganda through radio and television project.

## 3. Materials and Methods

This study is an evaluative research. The project evaluation of Dharma propagation through radio and television is during 24th - 25th January, B.E. 2558. The instruments used for data collection are two project evaluation forms which were applied from the evaluation models of Tyler and Stake. The steps by the research material and methods are listed down below.

3.1 Population. There were 24 persons participated in this study, including college students, students, and project training observers. They applied for this project that the college sent mails to target population.

### 3.2 Validity and Reliability

3.2.1 The instrument used in the research is the Project Evaluation Form which was applied from the models of Tyler and Stake (Prommuang, 2015). The steps of operation are as follows.

3.2.2 Studying evaluation models and selecting the appropriate models for the project. The models of Tyler and Stake are suitable for this evaluation. That is to say, Tyler's goal attainment model was applied to evaluate the appraisal of the project by based on the research objective as a guideline to set the questions. Next, Stake's model was applied 1) to evaluate the transactions, including the guest speakers, topics, activities, and atmospheric environment, and 2) to evaluate the outcomes, including the satisfaction, characteristics, and cost awareness of project participation.

3.2.3 The evaluation form was created. A three-rating scale questionnaire consisted of two parts: goals or intents and actuality or observation.

Goals or Intents 3 means high level of intent

2 means moderate level of intent

1 means low level of intent

Actuality or Observations

3 means high level of actuality

2 means moderate level of actuality 1 means low level of actuality

To interpret mean scores of the respondents, the researcher used criteria for data interpretation based on the following formula:

$$\frac{\text{Maximum} - \text{Minimum}}{3}$$

2.34 - 3.00 means high level of Intent or actuality

1.67 - 2.33 means moderate level of Intent or actuality

1.0 - 1.66 means low level of Intent or actuality

3.2.4 Data collection. The researchers collected data on January 25th at 08:30 am to 11:30 am. The procedures were as follows:

1) Inform the participants about how to evaluate the project.

2) Distributing the evaluation forms and appointing the time to hand in the evaluation forms at the director table.

3) Collect the evaluation forms. 24 forms were returned.

4) Data analysis and interpretation. After data collection was completed, the researchers



analyzed the quantitative data by using a computer to process in order to calculate for the statistics, including frequency, percentage, average, and standard deviation.

4.1) The statistics used in the research includes descriptive statistics, which are frequency, percentage, average, and standard deviation.

4.2) Research presentations were related to the general information about the participants, the results of the process or transactions, and outcomes.

4.3) About the criterion for project evaluation, the researchers reviewed the evaluation criteria from the theses, and they found that most of the criteria are set at the high level (Ruengchuay, K., B.E. 2555). Therefore, the researchers set the criteria at the high level which is 3.30.

#### 4. Results

4.1 The research results found that the project has achieved all goals of objectives. However, the participants have higher Intents than the actual results which had means of 2.52 and 2.41 respectively. When considering each aspect, it was found that there was only one aspect that had higher actual results than the Intents which was to bring knowledge to the Dharma propagation through radio and television with an average of 2.39 and 2.33, respectively, as shown in Table 1.

Items	Intents		Actuality		Evaluation	
	X	SD	X	SD	Intents	Actuality
<b>Goal attainment (Standard criteria X = 3.30)</b>						
1. Applying knowledge to the Dharma Propagation through the radio and television	2.33	.65	2.39	.66	> standard criteria	> standard criteria
2. Applying knowledge to radio and television broadcast	2.55	.59	2.32	.80	> standard criteria	> standard criteria
3. Impression of Kalasin Buddhist college	2.67	.65	2.52	.63	> standard criteria	> standard criteria
Total	2.52	.45	2.41	.53	> standard criteria	> standard criteria

shows the comparison of the mean and standard deviation between intents and actual outcomes in achieving the objectives of the project.

4.2. It was found that the results in terms of the transactions and outcomes based on the Intents were higher than the defined criteria. However, in all aspects, the Intents were higher than the actual results; it can be explained that the overall Intent had the average of 2.72 and the actual results were 2.44. When considering each term, all aspects had higher results than the defined criteria, but the average Intent was higher than the actual results. Especially, in term of speakers having the ability to pass on knowledge had the averages of 2.71 and 2.57 respectively. Next, the content was up to date and current technology had the average of 2.62 and 2.45. And, content could be developed into radio or television operator having the average of 2.57 and 2.48, as shown in Table 2.

Items	Intents		Actuality		Evaluation	
	X	SD	X	SD	Intents	Actuality
<b>Transactions (Standard criteria X = 2.30)</b>						
Speakers have the ability to pass on knowledge	2.71	0.46	2.57	0.62	> Standard criteria	> Standard criteria
Content can be developed into radio or television operator	2.57	0.59	2.34	0.75	> Standard criteria	> Standard criteria
Content is modern and appropriate to learners,	2.57	0.67	2.48	0.66	> Standard criteria	> Standard criteria
Content is up to date and current technology	2.62	0.62	2.45	0.70	> Standard criteria	> Standard criteria
Learning activities can develop the students to be the radio and television operators	2.52	0.71	2.41	0.76	> Standard criteria	> Standard criteria
sharing activities have the interesting atmosphere	3.00	4.72	2.39	0.75	> Standard criteria	> Standard criteria
<b>Total</b>	<b>2.72</b>	<b>0.95</b>	<b>2.44</b>	<b>0.57</b>	<b>&gt; Standard criteria</b>	<b>&gt; Standard criteria</b>

shows the comparison of the average and standard deviation between the intents and the transaction outcomes.

4.3 The results in the terms of service, characteristics, and cost awareness were higher than the appointed criteria as described below.

4.3.1 In term of the service, the overall result was higher than the Intents by having the average of 2.58 and 2.60 respectively. When considering each aspect, the average of Intents and actual results in all aspects was equal to 2.52.

4.3.2 The characteristic aspect found that the overall Intents of the participants and the actual results were equal, and the average value was equal to 2.56. When considering each aspect, it was found that there was one aspect that had the actual results higher than the Intents, which was interested in studying the Dharma, which has the average of 2.55 and 2.54 respectively. For the rest of the aspects, the Intent was higher than the Actuality. In particular, in term of having the ability of relationship development with other had the average value of 2.63 and 2.57 respectively. Next, in term of having ideal and resolution to cooperate with social benefits had the average value of 2.59 and 2.55 respectively. And, in terms of ability to

communicate had the average value of 2.51 results, which was equal to the average of

and 2.41 respectively. 2.95. The details are shown in Table 3.

4.3.3 In terms of cost

awareness found that the

participants had equal

Intents and actual

Items	Intents		Actuality		Evaluation	
	X	SD	X	SD	Intents	Actuality
<b>Service (Standard criteria X = 2.30)</b>						
1. Refreshments	2.52	0.70	2.52	0.70	> Standard criteria	> Standard criteria
2. Location used for the project is appropriate	2.66	0.61	2.66	0.61	> Standard criteria	> Standard criteria
3. The training atmosphere is conducive to learning	2.64	0.65	2.64	0.65	> Standard criteria	> Standard criteria
4. Duration of the project is appropriate	2.57	0.70	2.57	0.70	> Standard criteria	> Standard criteria
<b>Total</b>	<b>2.58</b>	<b>0.54</b>	<b>2.60</b>	<b>0.57</b>	> Standard criteria	> Standard criteria
<b>Characteristics (standard criteria x = 2.30)</b>						
1. Ability to communicate	2.51	0.68	2.41	0.69	> Standard criteria	> Standard criteria
2. Interest in studying Dharma	2.54	0.71	2.55	0.66	> Standard criteria	> Standard criteria
3. Ability of relationship development	2.63	0.66	2.57	0.66	> Standard criteria	> Standard criteria
4. Having the Ideal and resolution to cooperate with social benefits	2.59	0.59	2.55	0.70	> Standard criteria	> Standard criteria
<b>Total</b>	<b>2.56</b>	<b>0.63</b>	<b>2.52</b>	<b>0.56</b>	> Standard criteria	> Standard criteria

Items	Intents		Actuality		Evaluation	
	X	SD	X	SD	Intents	Actuality
<b>Cost awareness (Standard criteria <math>\times = 2.30</math>)</b>						
Cost awareness of project participation	2.95	2.88	2.95	2.88	> Standard criteria	> Standard criteria

shows the comparison of the average and standard deviation between the Intents and Actuality in terms of outcomes

## 5. Discussions

5.1 The research findings, in overall, the project meets all the appointed objectives. However, the participants have higher Intents than the Actuality. By considering each aspect, it was found that there is only one side that the actual result is higher than the Intents which is bringing knowledge to the dharma propagation through radio and television. This might be the participants expected that attending this program is a great opportunity to meet, or have a chat, or share experiences with a famous DJ who is the DJ of Kalasin Relations Department, but the schedule was changed due to DJ's engagements. In addition, the participants did not have a chance to practice skills which are the attributes of being a DJ. or radio operator as they should. Thus, it can be seen from the afternoon schedule that the participants, especially students have drowsiness. However, the participants gained knowledge in Dharma exceeding to their expectations, and the knowledge can be applied in their daily life as well. To sum up, from this point, the Radio and Television Dharma Propagation Project has achieved the appointed objectives, especially in term of applying the knowledge of Dharma for propagation.

5.2 From the research results, the project participants' Intent is equal to the actuality, where the highest level is the average of 2.95. This can be explained that participants were impressed with this project that achieved their demands for bringing the Dharma principles to apply in their life, entertainment brought to them by college students from the Kalasin Buddhist College, opportunities to get close to the famous actor, and the service of teaching staff and non-teaching staff.

To sum up, from this point, providing the education and entertainment simultaneously can impress the participant and create the worthy feeling for joining the project.

5.3 From the research results, in term of the service, characteristics, and cost awareness, these aspects have exceeded the defined criteria, especially in the term of service. This is

probably because the location used for the project, refreshments, the training atmosphere, and duration of the project are appropriate, and the services are impressive. From observation, it can be seen that there were refreshments serving services throughout the project all the time. In this way, it is a response to the physical demands of the participants, which is consistent with McLeod (2014) who mentioned the theory of Maslow's Hierarchy of Needs that the physical demand for human is food. In terms of the characteristics of the project, it was found that the participants' Intent is equal to the actual result with the average of 2.56. When considering each aspect, it was found that there is one aspect that the actual result is higher than the Intents which is in terms of interesting in studying the Dharma, with the average of 2.55 and 2.54. This can be explained that there were monks and novices participating in this project, so the atmosphere was favorable to study Dharma, and also the explanation of each guest speaker and activity reflected the ideas of living.

To sum up, from this point, the Dharma propagation through radio and television projects can develop the youth to become more interested in studying the Dharma.

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## Business Administration and Management

**The auditing process of government accounting and financing at district non thai  
nakhon, ratchasima province.**

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**Abstract**

The research on The auditing process of government accounting and financing at district non thai nakhon, ratchasima province. Objectives. (1) To study The auditing process of government accounting and financing at district non thai nakhon, ratchasima province. (2). To study the problems about The auditing process of government accounting and financing at district non thai nakhon, ratchasima province. The researcher used consists of 4 population management, staff and related the auditing process of government accounting and financing at district non thai nakhon, ratchasima province. The 173 people and analyzed the result by using the computer program. Conclusion as follows. Answerer Most of the 109 women, 63.0 percent, followed by a male of 64 people, representing 37.0 per cent aged between 26 - 30 years were 60 percent, 34.7 a minor between the ages of 31-35 years, the number 56, representing 32.4 percent of undergraduate study of 79 people, representing 45.7 percent, followed by 68 or equivalent, accounting for 39.3 percent. Current Position A Financial Officer and Accountant 138 percent of 79.8, followed by a Chief Executive of the District and Head of Finance of 12 people, representing 6.9 percent work 6-10 years the number 66, representing a 38.2 percent secondary. Down more than 10 years experience of 54 people, representing 31.2 per cent respectively. The auditing process of government accounting and financing at district non thai nakhon, ratchasima province. A similar opinion was moderate considering it was found that the officers and staff involved Of government accounting and financing. Including number one planning to perform the audit. Opinions on the 2nd level of performance monitoring. Opinions are moderate 3rd reporting inspection results. Opinions are moderate 4th track inspection results. Opinions are moderate.

**Keywords :** Internal audit, Accounting and Finance.



## 1. Introduction

Constitution of the Kingdom of Thailand BE 2550 was featured on local government, obviously. The group may be determined by five fundamental principles of the State Section 78. The scheduled The state must decentralize local self-reliance and self-determination in local affairs. Have the ability to improve the economy. Utilities and public infrastructure market until 2550 Constitution of the Kingdom of Thailand has set up a group with 14 local authority from Section 281 to 290. Concluded that the state must ensure the independence of the principles of local self-government in the spirit of Jean local residents. The local governments will have the freedom to set policies governing the service. Personnel management Money and Finance and have their own specific duties. Regulation Committee and the Auditor's fiscal 2544 budget discipline. Guilt about getting the money. Keeping the money to pay the administrative budget, and so on. As a result, local governments need to focus more on the subject of management. Finance Spending money Debt and Assets The responsible authorities must act with prudence and careful work with the honest good faith. Carefully and get paid As to the transparency regulations Ministerial check paid. The disbursement of funds to keep the money. And the funds of the local government in 2547. Non Thai District consists of 12 local governments.

Currently, the monitoring of financial and accounting organization of the internal audit unit. Defects in operational finance and accounting. Example cashing agent Those who do are the same person. The one person perform several functions, a practice which is incorrect and inappropriate to the internal control system of government. This may cause damage to the finances of the government. And the local government has paid out to creditors who have paid by check or cash. Registration is not controlled bank current accounts. Registration is not worth the money and the budget. Registration oversight evidence and withdraw money outside the budget control register different types of preparation are not present or is not in compliance manuals for accounting units. And from operations, finance and accounting with several problems, namely the issue of withdrawal - cost accounting. And operations not required by regulation to submit a withdrawal and then be brought back to fix. As a result of withdrawal - late payment. The withdrawal of the government as the cash cost of official travel. The preparation of plans and programs remains unclear. Spending money does not go as planned. Lack of personnel with knowledge. The ability to act as finance and accounting. May affect the administration of local government in the future.

The importance of such issues, The study, therefore, is to study the process of internal audit, accounting and finance of local governments Non Thai District, Nakhon Ratchasima. The problem occurs. To guide practice in a systematic way. The findings could be useful in planning a system of local government finance and accounting to a more efficient and effective.

## 2. Objectives

1. To study the auditing process of government accounting and financing at district non thai nakhon, ratchasima province.
2. The study on the auditing process of government accounting and financing.

## 3. Conceptual Framework

The research aims to study the auditing process of government accounting and financing at district non thai nakhon, ratchasima province, which is based on the audit process within government. (Chanathap Inthamra . 2553 : 26) The study identified four areas: operational planning. Performance Monitoring Report.

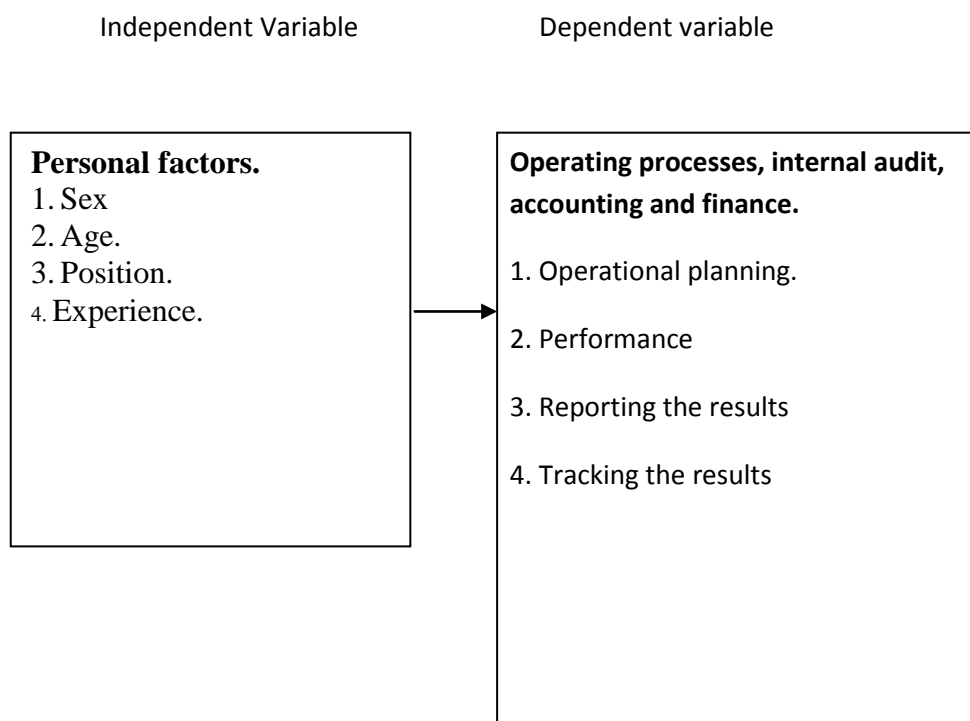


Figure 1 Research Framework

#### **4. Research methodology**

Type of Survey Research study The auditing process of government accounting and financing at district non thai nakhon, ratchasima province. The procedure is the following.

##### **4.1 Population and Samples**

Population The executive officers and personnel of the relevant accounting and financial services of Government area Non Thai District Nakhon Ratchasima Number 173 people

##### **4.2 Instrumentation**

This research used questionnaires to collect data. Where the questionnaire is divided into three steps:

1. The personal information of respondents, including gender, age, position, experience.

Check list

2. A level query comments on research have built a query by using the Likert's scale a gauge. The characteristics of the text using a positive manner. The scoring is divided into 5 levels.

- 3 Open-ended questionnaires so that respondents suggest

##### **4.3 Collection of data**

1. This research method is used to collect information from time to time in the months of January to April 2558 (2015)

2. Researchers have collected data by questionnaire distribution and questionnaires returned

##### **4.4 Data analysis**

Researchers to analyze data with queries that have returned all analyzed and processed by a computer program.

The statistics used in data analysis were percentage, mean, standard deviation

#### **5. Results**

1. The respondents are mainly female, number 109 people accounted for 63.0 percent so as male number of 64 people of 37.0 percent between 26 -30 year 60 people accounted for 34.7 percent of secondary age 31-35 years 56 people, current position, 32.4 percent as current position is a financial and accounting officer of the number of 138 people accounted for 79.8

percent secondary is a sub-district administrative organization President and head of the financial section. The number of people accounted for 6.9 percent of 6-10 years work experience number of 66 persons accounted for 38.2 percent of secondary work experience more than 10 years, the number of 54 people think 31.2 percent, respectively. Followed by the Chief Executive of the district and Head of Finance of 12 people, representing 6.9 per cent. Experience 6-10 years, the number 66, representing a 38.2 percent lower than 10 years work experience of 54 people, representing 31.2 percent respectively.

2. The auditing process of government accounting and financing. The overall opinions in the middle level. Considering it was found that the executive authorities and the relevant personnel of the accounts and finances of local governments. Ranked first planned audit. Opinion at a high level. Ranks second to perform the audit. The comments are moderate. Ranked third report of the inspection. The comments are moderate. Ranked fourth follow-up inspection. Opinions are moderate, respectively.

2.1 The operational plan audit found that the management staff and personnel of the relevant accounting and financial services of local governments. Comments on many levels overview include the scope of performance monitoring to be sufficient for achieving the objectives of the audit. The preparation of the annual internal audit plan. And approved the proposed executive And are audited agency. Activities and audit issues Is moderate The final rating

2.2 The audit found that the management staff and related personnel of the accounts and finances of local governments. Opine Overall is moderate. When considered individually, are preparing the working paper form to perform the audit. The analysis and evaluation of data obtained from monitoring. The audit plan prior to authorization. There is a lot of comments and summarize the issues detected in the validation message. There are moderate opinions.

2.3 The report found that administrators, staff, and the relevant personnel of accounting and finance, local organizations with feedback. Overall level, including. Are gathering information from spreadsheets to record inspection results. Opinion at a high level. Identifying key risk management should acknowledge the results of the audit report. The comments are moderate. The preparation of the audit report. The comments are moderate.

2.4 The results showed that administration officials and personnel involved in the accounting and finance of local governments. Opine In the overview in the medium. It is planned to follow Executives report inspection results to the benefit of the administration. And the implementation of follow-up. The comments are moderate.

## 6. Discussion

Research of the operating internal audit processes, accounting and financial services of local governments. Brings debate Is as follows:

The practice of internal audit, accounting and finance of local governments. According to a review of the management staff and related personnel. Overall opinion is moderate. Unlike research results. Piyawan Manikanchon (2007)<sup>1</sup> Study of the district staff on internal audit case study Tambon Administration Organization in Kanchanaburi district staff found that the overall opinion on the internal audit in the strongly agree.

Planning the audit found that the opinion of the directors, officers and personnel involved in the accounting and finance of local governments. Opine The overall level also. The scope of performance monitoring to be sufficient for achieving the objectives of the audit. The preparation of the annual internal audit plan. And approved the proposed executive And in the audited agency. Activities and audit issues Is moderate This is consistent with research Waruni Suksai (2007)<sup>2</sup> Studies were made. Development process, internal audit of the rajabhat University A case study in Ubon Ratchathani rajabhat University showed that an overview of operational issues of the internal audit process, which consists of. Assessment of the risks to the audit plan for the year. Managing the annual audit plan Proposed audit plan for approval an annual operating plan To review the assessment of internal control auditing annual financial work in paradise. Check operation check the parcel delivery service. Providing counseling, organizational alignment and development of personnel. Practice in medium

The audit found that the opinion of the directors, officers and personnel involved in the accounting and finance of local governments. Opine The overall level moderate. Preparing the working paper form to perform the audit. The analysis and evaluation of data obtained from monitoring. And to inform the audit plan for the audit before the audit. Opinion at a high level. And outlining the issues detected in the examination. The comments are moderate. This is consistent with research Nitiwat Setatemi (2007 : 98 - 103)<sup>3</sup> the Study on the development of the financial and accounting operations, the school house boat. Amphoe PHO Chai et found that finance and accounting duties, tasks, knowledge, understanding. For information about how to control and monitor the work of all three is: The preparation of financial and accounting evidence. The payout And to keep the money even more. And closely supervised Create a good atmosphere in the workplace. No stress, relieve anxiety on duty. When the control and inspection that is required by regulation. The resulting operational and financial account were controlled in compliance with the regulations and guidelines are valid. And the present Ready for a review of the director and the agency involved.

The report found that the results of the audit opinion of the management staff and related personnel of the accounts and finances of local governments. Opine In the overall picture is moderately include gathering information from spreadsheets to record inspection results. Opinion at a high level. There is the risk that the administration should acknowledge the results of the audit report. And has prepared a report on the audit results. The comments are moderate. This is consistent with research Waruni Suksai (2007)<sup>2</sup> Studies were made. Development process, internal audit of the rajabhat University A case study in Ubon Ratchathani rajabhat University showed that an overview of operational issues of the internal audit process, which consists of. Assessment of the risks to the audit plan for the year. Managing the annual audit plan Proposed audit plan for approval an annual operating plan To review the assessment of internal control auditing annual financial work in paradise. Check operation check the parcel delivery service. Providing counseling, organizational alignment and development of personnel. Practice in medium

The monitoring found that reviews the executive officers and personnel involved in the accounting and finance of local governments. Opine Overall, the medium level is planning a follow-up inspection. Executives report inspection results to the benefit of the administration. And are conducting follow-up inspections. The comments are moderate. With research results Somsong Thanakit (2007)<sup>4</sup> Study of knowledge understanding and attitude towards the internal audit operations of local governments, amphur Muang, Trat province administrators found that local governments play an important role in the execution of internal audit, but what you want and to provide support is to provide knowledge and training, internal audit as well as executive management, because local governments lack the knowledge and understanding of the regulations. The laws and practices relating to the practice of internal audit did not attend and participate in the internal audit of enterprise. You also need to focus on the factors promoting knowledge and understanding of the performance audit process audit. To get the cooperation of the Audit Practice of Internal Auditing Agency. Reporting and follow-up monitoring. And educating the advice of internal auditors should have a basic knowledge. The Civil and Commercial Code, regulations, statistics and computer. By studying more Attend the training and education of specialists. To my knowledge constantly.

## **7. Suggestions**

1. There should be a study of performance about performing the internal audit of the sub-district administrative organization etc.

2. Should the study compares the performance of internal audit of the Tambon Administrative else. To see the pros and cons and take the results to improve. Editor in operational efficiency.

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## Construction of identification system to improve efficiency exploiting geographical indications in Vietnam

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### ABSTRACT

Today, in the global integration trend, the protection, management and exploitation of Geographical Indications have tremendous significance in the development of comprehensive national and national brands. Geographical indications not only contribute to promoting and improving the quality of rural agricultural development, but also plays an important role in the consumer market and have greater competitiveness in the global trade. To develop Geographical Indications really effective, the building work identification system for products bearing the geographical indication is essential.

#### 1. Introduction

Develop identity system geographical indication in a comprehensive way is the best way to brand communication geographical indications. This is a long-term strategy must be properly concerned, invested and managed on brand development journey of geographical indications. However, in practice, identity system geographical indication in Vietnam have separately characteristics, asynchronous, so there are still many restrictions and not really effective.

#### 2. Research Methodology

Collect, research and analyze documents on the theoretical basis and practical evidence relevant to the issue of geographical indications and the role of geographical indications.

#### 3. Research Result

##### *3.1. Some of basic concept*

A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originating in a given place. In addition, the qualities, characteristics or reputation of the product should be essentially due to the



place of origin. Since the qualities depend on the geographical place of production, there is a clear link between the product and its original place of production<sup>1</sup>.

Protection of Geographical Indications is exclusive protection by residents of an area using Geographical Indications for products originating from that area and meet the requirements of quality and certain characteristics.

Identification system for Geographical Indications is a unified set of informations, specific signs of Geographical Indications which are presented in a certain manner and criteria had been provided to communicate the message of the product to create the ability to easily distinguished from other products on the market.

The elements constituting identity system for Geographical Indications include: Logos, positioning the core values, brand communication and product delivery systems.

### ***The role of the construction of identity system for Geographical Indications***

Consumers easily recognize the product is a geographical indication. Brand identity for products bearing the Geographical Indications convenient for the product consumption strategic on the market. Identification system helps elevate the brand value of products bearing the geographical indication. The design of brand identity for products bearing Geographical Indications well can make competitive advantage in the market and reduce the cost of the product marketing.

### ***3.2. The situation of identification system for geographical indications in Vietnam***

Vietnam currently has identification system for geographical indications but not built in a synchronous manner from the State to the, haven't the links between the product and the control of identified elements not closely leads to the ability to identify low. That is shown in the protected products as geographical indications in Vietnam will bring its own logo and own label templates that haven't a common logo. The design and stamping labels onto products mostly due to Manufacturers Association manage is not that state management agencies manage overall.

As of the date 03.31.2014, Vietnam has 41 geographical indication protected in the country, including 38 products of Vietnam, the majority belong to agricultural specialties of locals. Among them are three products is Phu Quoc fish sauce, Moc Chau green tea and Ban Me Thuot coffee was officially recognized as a geographical indication in foreign.

Vinh orange



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<sup>1</sup> Article 22 of the TRIPS Agreement

Binh Thuan Dragon fruit



Phu Quoc fish sauce



Thanh Ha Litchi



The identification system of the products bearing geographical indication in Vietnam outstanding following restrictions:

*The first, labels of geographical indications are abused:* On the market, most of products known as geographical indications through word of mouth. Many business establishments unlabeled Geographical indications but still inscribed on the signboard are products bearing Geographical Indications. There are many coffe shops carry signboards "Buon Ma Thuot Coffee" on Ho Chi Minh City routes.



*A Buon Ma Thuot coffee shop*

*Secondly, the geographical indication labels are not enough reliability and ability to distinguish:* Stamps, labels attached to the products were symbolic, and many consumers can not distinguish real stamps, labels. In case of Vinh Orange is a example, with a label sample used for three kinds of orange were protected geographical indications, that make consumers difficult to distinguish.

*Third, the lacks consistency on prices making consumers confused:* The same product known as Geographical Indications with many different prices, consumers will not be able to identify appropriate price a real product.

*Fourth, many counterfeits appear on the market - problem exclusive distribution channel:* there are many unofficial wholesale - retail channels, arbitrarily change the product's origin.

*Fifth, the control mechanism of identified factors don't really closely:* lack of regulations on the use of trademarks, labels for products such as the circulation in the market and regular inspection operations to the attached and the use stamps, labels.

### **3.3. Construction Solution identification system for Geographical Indications Experience building identification system for geographical indications of Thailand:**

Thailand is one of the pioneer countries in Asia regarding the protection of geographical indication and Thai law recognises both local (such as Phetchabun sweet tamarind) and foreign geographical indications (Pisco, Champagne etc.). In addition, the Department of Intellectual Property and the Department of Export Promotion regularly promote Thai geographical indications locally and internationally.

Thailand has total registered GI of 64 products. Thai GI 53 products. Foreign GI 11 Products.

This is Thai GI Symbol for Thai GI products.



To obtain Thai GI Symbol, the GI producers must have: Working Manual and Internal Control Plan to ensure that the production procedure complies with the specific criteria of GI

Who can use GI Symbol? They are Producers of the goods in the geographical origin of the goods and Traders related to the goods

Through this common logo, consumers only need to rely on it to determine the quality and origin of products. The use of the logo is clearly stipulated in intellectual property law. This symbolic can only be attached on the products included in the registration list, meeting the requirements in the product description, can be used for products that have been certified in Thailand as well as in all world market.

Therefore, the brand promotion and management of activities related to products bearing a geographical indication in Thailand achieved maximum efficiency.

Following are pictures of products protected geographical indications and product exhibition activities of Thailand.



*Thus, to complete the identification system for geographical indications in Vietnam can design common logo attached on the protected geographical indication*

Requirements for the common logo: simple, easy to see, easy to understand, especially to must ensure that is new identification signs, not yet exist on the market, aestheticism and legitimate.

Besides, need to build of standards that can be measurable for products eligible about: quality criteria, models ... these are the products have passed the quality inspection. Also



specified position of attached logo on the product, use units and manage offices, guide way that identifying geographical indications logo through the media and official documents.

#### 4. Conclude

In recent years, Vietnam is increasingly perfecting the legal system of Geographical Indications and has achieved certain success in exploiting geographical indication. However, to further improve the management efficiency of Geographical Indications and build systems to identify high-quality products affirmed its position.

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## Factors Influencing the Decision to Purchase a House in Muang District, Chaiyaphum Province

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### Abstract

This research is to study factors influencing the decision to purchase a house in Muang District, Chaiyaphum Province by using questionnaire as a tool for data selection from 400 samples. The result showed that most people needed to purchase contemporary houses (46.75%) and modern houses (37.5%), two-storey single family houses cost between 2.5 - 4 million baht (41.75%) and one-storey single family houses cost between 1.5 – 2.5 million baht. Reason of purchase is for housing (90%). Factors influencing the decision to purchase a house include urban areas (59.25%), near workplace (54.00%), and near the city/community/economic zone (51.50%). The importance level of marketing mix factors is at the high level including product ( $\bar{x}=4.06$ ), price ( $\bar{x}=4.17$ ), sales channels ( $\bar{x}=4.11$ ), and promotion ( $\bar{x} =3.94$ ).

**Keywords:** Marketing mix, Decision to purchase, House, Chaiyaphum Province

### Introduction

One of the four requisites essential for human life is the habitat or “house”. A house is important not only because it’s a place to live in, but also a place for knowledge, a starting point for a good quality of life, and a beginning of prosperity in other aspects of life. According to the lifestyle of nowadays society, family structure has altered to be less traditional. People prefer building their own houses and emphasize on convenience, security, and good quality of life. This leads to the greater demand for houses. From the abovementioned trend, many entrepreneurs invest in real estate industry, particularly the housing estate, to serve the greater demand for houses and to meet the customers’ needs of convenience and security in the future [1].

The demand for houses in Muang District, Chaiyaphum Province is increasing every year, particularly the housing estate, due to the economic expansion and urbanization. Nowadays, land price in urban and suburban areas is rising more than before. For instance, land price in the area of Chaiyaphum Tadton Road, Chaiyaphum Rajabhat University in 2010 is about 500,000 baht per Rai. Nowadays the price rises up to 3,000,000 baht per Rai due to the speculation from university community expansion. It has an important implication

towards economic expansion in Chaiyaphum Province in the last few years since it leads to construction projects of commercial buildings, apartments, single-family houses and others.

Customers' needs and behaviors in the last few years have changed from primary emphasis on price of a house to primary emphasis on designs, quality, services, and lifestyles while the local entrepreneurs do not adapt to keep up the trend due to a lack of knowledge and professional skills of management, marketing, architecture, and engineering [2]. In order to be able to meet customers' needs in Muang District, Chaiyaphum Province, the author, therefore, study the factors influencing the decision to purchase a house of the people in Muang District, Chaiyaphum Province.

### **Objectives**

To study the factors influencing the decision to purchase a house of the people in Muang District, Chaiyaphum Province.

### **Methodology**

#### **3.1 Sample**

The sample used in the research is 400 people in Muang District, Chaiyaphum Province which calculated from Yamane's solution [3].

#### **3.2 Tool used in the research**

Tool used in the research is the questionnaire which is divided into three categories. First category - general information including sex, age, status, education, occupation, income, and family members. Second category - information about customer's decision making behavior including house styles, reason of purchase, house types, price, factors influencing the decision to purchase a house, participants in decision making, and source of the information about housing estate. Third category - Marketing mix factors which influence the decision to purchase a house including product, price, sales channels, and promotion.

#### **3.3 Data selection**

Data selection used for the questionnaire is Convenience Selection from 400 samples in Muang District, Chaiyaphum Province.

#### **3.4 Statistics in data analysis**

Statistics used in the research for data analysis consist of frequency, percentage, mean, and standard deviation.

### **4. Results**

#### **4.1 General information**

From the questionnaire analysis found that most of the respondents are female (57.50%), age between 31-39 years old (30.25%) and age between 40-50 years old (23.50), single (45.00%) and married (41.75%), Bachelor Degree (42.25%), government officials (38.50%) and private employees (15.75%), income per month 20,001-30,000 baht (27.25%) and 15,001-20,000 baht (21.00%), family members 3-4 people (54.25%).\

#### 4.2 House purchase behavior

The results showed that most of the respondents needed to purchase contemporary houses (46.75%) and modern houses (37.25%), two-storey single family houses cost between 2.5-4 million baht (41.75%) and one-storey single family houses cost between 1.5-2.5 million baht (32.75%). Reason of purchase is for housing (91.00%). Factors influencing the decision to purchase a house include urban areas (59.25%), near workplace (54.00%), and near city/community/ economic zone (51.50%). Participants in decision making are father/mother (57.50%) as shown in Table 1.

**Table 1** House purchase behavior

Customer's behavior	Amount	Percent
<b>House styles</b>		
Contemporary houses	187	46.75
Modern houses	149	37.25
Applied Thai Tradition houses	58	14.50
Classic houses	6	1.50
<b>Reasons of purchase</b>		
Housing	364	91.00
Lease out	30	37.25
Social status/social acceptance	27	6.75
Speculation	25	6.25
Others such as return gratitude	3	0.75
<b>House types and prices</b>		
Two-storey single family houses cost between 2.5-4 million baht	167	41.75
One-storey single family houses cost between 1.5-2.5 million baht	131	32.75
Two-storey twin houses cost between 2-3 million baht	51	12.75
One half-storey single family houses cost between 2.3-2.9 million baht	33	8.25
Two-storey townhomes cost between 1-2 million baht	11	2.75
Three-storey townhomes cost between 2-3 million baht	7	1.75
<b>Factors influencing the decision to purchase a house</b>		



Urban areas	237	59.25
Near workplace	216	54.00
Near city/community/economic zone	206	51.50
Low price	198	49.50
Convenient to travel	144	36.00
Security guard	107	26.75
Reputation of the project owner	65	16.25
<b>Participants in decision making</b>		
Father/mother	230	57.50
Spouses	113	28.25
Child	27	6.75
Relatives/siblings	24	6.00
Friends	6	1.50
<b>Source of the information about housing estate</b>		
Advertising signs	157	39.25
Seeing by themselves (frequent passers-by of the project site)	72	18.00
Friends/acquaintances	67	16.75
Sale agents	59	14.75
Website	45	11.25

### 4.3 Factors influencing the decision to purchase a house

The importance level of marketing mix factors influencing the decision to buy a house is at the high level including product ( $\bar{x}=4.06$ ), price ( $\bar{x}=4.17$ ), sales channels ( $\bar{x}=4.11$ ), and promotion ( $\bar{x}=3.94$ ) as shown in Table 2.

**Table 2** marketing mix factors influencing the decision to buy a house

Marketing mix	$\bar{x}$	S.D.	Result
<b>Product</b>			
1. Quality of materials/construction	4.43	0.66	Most
2. Number of bedroom	4.12	0.67	High
3. Number of restroom	40.1	0.78	High
4. House types/styles	4.27	0.75	Most
5. Utility space	4.40	0.70	Most
6. Build-in furniture	3.52	0.97	High
<b>Average</b>	<b>4.06</b>	<b>0.81</b>	<b>High</b>
<b>Price</b>			

1. Low price	4.09	0.78	High
2. Low interest	4.09	0.87	High
3. House price is reasonable for location and environment	4.43	0.65	Most
4. Low down payment	4.08	0.88	High
<b>Average</b>	<b>4.17</b>	<b>0.79</b>	<b>High</b>
<b>Sales Channels</b>			
1. Opening booth/advertisement	3.68	0.85	High
2. Sale office	4.08	0.70	High
3. House designs	4.39	0.72	Most
4. Show houses	4.39	0.67	Most
5. Sale agents	4.01	0.75	High
<b>Average</b>	<b>4.11</b>	<b>0.74</b>	<b>High</b>
<b>Promotion</b>			
1. Discount/giveaway	4.19	0.77	High
2. Leaflet	3.65	0.83	High
3. Advertising signs	4.04	0.74	High
4. Website	3.89	0.82	High
<b>Average</b>	<b>3.94</b>	<b>0.79</b>	<b>High</b>

## 5. Discussion

The results showed that most of the respondents needed to purchase contemporary houses and modern houses. Reason of purchase is for housing. Factors influencing the decision to purchase a house include urban areas, near workplace, and near the city/community/economic zone. Participants in decision making are father/mother. Source of the information about housing estate is advertising signs. In accordance with Charoenwanit [4], the results showed that customers needed to purchase modern townhome. In accordance with Majaroen [2], the results showed that influential person in decision making is family. In accordance with Rongpol [5], the results showed that customers receive the information through advertising signs and reason of purchase is for housing.

The importance level of marketing mix factors influencing the decision to purchase a house is at the high level which is in accordance with Majaroen [4]. In accordance with Poolpipat [6], the results showed that marketing mix affect the decision to purchase a house at the high level. And in accordance with Kunlog [7], the results showed that the importance of marketing mix factors influencing the decision to purchase housing estate is in the high level. In addition, entrepreneurs and investors can use the research results as a guideline for real estate development and investment in order to serve customers' needs.

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## Labor Market Needs of Tourism and Hospitality Industry in Cambodia

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### Abstract

This study aimed to study USEA graduates' job outcomes in Phnom Penh and Siem Reap and industry needs in Phnom Penh, Siem Reap, and Sihanouk Ville. Two kinds of questionnaires were developed to collect data from USEA graduates and industrial personnel in three main tourist destinations in Cambodia namely Siem Reap, Phnom Penh, and Sihanouk Ville. The sample used in this research were 70 USEA graduates in 3 generations in the field of Tourism and Hospitality Management and 420 industry personnel in 3 regions of Cambodia namely Phnom Penh, Siem Reap, and Sihanouk Ville. The data were analyzed by frequency, percentage, mean, and standard deviation.

The research findings were as follows:

#### 1. USEA Graduates' Job Outcomes

1.1 Relationship between Academic Studies and Labor Market Needs: The 3 highest aspects from their perspectives were 1) Quality of USEA education, 2) Teaching methodology of USEA lecturers, and USEA THM curriculum.

1.2 Challenge Fields in Job Performance: The three main challenges for them in their job performance were 1) communication with superiors, 2) communication with external parties, and 3) technical skills.

1.3 Key useful skills in job performance: The first three important skills were: 1) communication skill, 2) technical skill, and 3) organizational skill.

1.4 Personal quality in job performance: There are many aspects for personal quality to be succeed in job performance were listed as follows 1) positive attitude toward work, 2) punctuality, 3) commitment, 4) creativity, and 5) responsibility and accountability.

#### 2. Industrial Perspectives

2.1 Employee Performance Evaluation: As the perspective of the employers in evaluate their employers, the first highest three aspects were 1) Dependability and reliability, 2) Job performance (quality), and 3) Job productivity (output).

2.2 Lacking Skills: The employers thought that their staff is now lacking some skills as follow: 1) English, 2) Front office administration, and 3) Solving problems.

2.3 Area of Tourism and Hospitality Management (THM) graduate needs within 5 years: In the next five years, the first three areas that they need were 1) Front office administration, 2) Service, and 3) Food and beverage.

2.4 Needs of THM to be focused on: The main things that they need THM Curriculum to be focused on were 1) Practice, 2) English, and 3) Other languages.

2.5 Essential skills to be succeed in job performance: The first three skills that they think their employee will be succeed were 1) Foreign languages, 2) Communication skills, and 3) Problem solving skills.

**Keyword:** Tourism and hospitality Management

### **Introduction**

For over two decades, Cambodia came across political instability and civil war making it a poor country. Despite the following economic and social restoration and development, Cambodia has not completely eliminated the poverty of the citizens and it faces more challenges such as population growth, incompetent people, unemployment, social restructuring, social values, and health problems. To deal with these problems, the Royal Government has formulated a rectangular strategy. Tourism is one of main fields. (Royal Government of Cambodia 2013)

Tourism is a systematic sector which is globally, regionally, and nationally interrelated and it is considered a vital element of economic development and relationship expansion, especially, promotion of culture, tradition, and peace. As a matter of fact, the number of local and international visitors increases every year. Nearly 2 million tourists arrived in Siem Reap, with a growth of 7 percent every year on average. In 2020 following ASEAN integration, Cambodia will get about 7 million tourists. In the meantime, Siem Reap will get from 3 to 3.5 million tourists. (Ministry of Tourism 2012: 3-4)

Tourists come from around the world creating a big challenge for the local labor market. A big gap of service supply and demand will result in a decline of tourists in the future. The Royal Government of Cambodia (RGC) focuses on human resource development, especially in tourism industry. The University of South-East Asia (USEA) supports the RGC policy and will undertake a need analysis of graduates and industry to fulfill the labor market needs.

### **Methodologies**

In this study, two kinds of questionnaires were used- a survey questionnaire for 70 USEA graduates in the field of THM in two regions of Cambodia namely Siem Reap and Phnom Penhd and a semi-structure interview questionnaire for 420 industry personnel in three regions of Cambodia namely Siem Reap, Phnom Penh, and Sihanouk Ville.

In other to get the accurate data, the questionnaires were conducted with 30 USEA graduates and 30 industrial personnel in Siem Reap. The data were collected and analyzed by frequency, percentage, mean, and standard deviation.

In interpreting of the mean, the following rule was followed:

4.51 – 5.00 means Very satisfy

3.51 – 4.50 means Satisfy

2.51 – 3.50 means Neither

1.51 – 2.50 means Dissatisfy

1.00 – 1.50 means Very dissatisfy

#### Results

The results were divided into two main parts- USEA graduate and industrial personnel survey.

#### USEA Graduate Survey

#### Relationship between Academic Studies and Labor Market Needs

Table 1: Relationship between academic studies and labor market needs

No.	Description	Mean	S.D.	Interpretation
1	Quality of USEA education	3.94	0.69	Satisfy
2	Teaching methodology of USEA lecturers	3.78	0.52	Satisfy
3	USEA THM curriculum	3.77	0.75	Satisfy
4	Practice for the current labor market	3.77	0.73	Satisfy
5	Providing new occupational skills	3.70	0.63	Satisfy
6	Increasing their work performance	3.65	0.72	Satisfy
7	Teaching, learning, and research materials provided by USEA	3.61	0.65	Satisfy
8	Matching with the current labor market	3.50	1.02	Neither
9	Field-study activities	3.40	1.00	Neither
Total		2.33	0.50	Satisfy

**Table 1** showed that in the overall and individual aspects, USEA graduates satisfied with what USEA provided except good matching for the current labor market and field-study activities that they think in a neither.

Challenges of USEA Graduates in Performing Their Job

**Graph 1:** Challenges of USEA graduates in performing their job

performance were 1) communication with superiors, 2) communication with external parties, and 3) technical skills.

Key skills in job performance

**Graph 2:** Key skills in job performance

Graph 2 showed that the first three main skills that USEA graduates need in their job performance were 1) communication skills, 2) technical skills, and 3) organizational skills.

Personal quality in job performance

**Graph 3:** Personal quality in job performance

Graph 3 showed that the three main quality of the employees were 1) positive attitude towards work, 2) commitment, and responsibility and accountability.

Industrial Personnel Survey

Employee Performance Evaluation

**Table 2:** Employee Performance Evaluation

No.	Description	Mean	S.D.	Interpretation
1	Dependability and reliability	3.92	0.72	Satisfy
2	Job performance (quality)	3.83	0.76	Satisfy
3	Job productivity (output)	3.82	0.68	Satisfy
4	Compliance with policy	3.79	0.73	Satisfy

Table 2: Employee Performance Evaluation (Con't)

No.	Description	Mean	S.D.	Interpretation
5	Willingness to learn new skills	3.76	0.81	Satisfy
6	Leadership	3.67	0.81	Satisfy
7	Decision making	3.61	0.75	Satisfy
8	Interpersonal skills	3.54	0.72	Satisfy
9	Goal setting	3.52	0.71	Satisfy
10	Problem solving	3.52	0.80	Satisfy
11	Initiative and creativity	3.49	0.84	Neither
12	Conflict resolution	3.48	0.78	Neither
13	Planning and organizing	3.48	0.79	Neither

14	Oral presentations	3.33	0.82	Neither
15	Writing business correspondence	3.28	0.79	Neither
Total		2.41	0.56	Satisfy

**Table 2** showed that in the overall and individual aspects, employers satisfied with their employees' job performance initiative and creativity, conflict resolution, planning and organizing, oral presentations, and Writing business correspondence that they think in a neither level.

Lacking skills

**Graph 4:** Lacking skills of employees

Graph 4 showed that the first three main lacking skills of the employees were 1) English, 2) problem solving, and 3) front office administration.

Area of THM graduate needs within 5 years

**Graph 5:** Area of THM graduate needs within 5 years

Graph 5 showed that the first three main areas that the employers need are 1) front office administration, 2) service, and 3) food and beverage. Needs of THM Curriculum to be More Focus

**Graph 6:** Needs of THM Curriculum to be More Focus

Graph 6 showed that employers need THM curriculum be focus on 1) practice, 2) English language, and 3) other languages. Essential Skills to Job Successfulness

**Graph 7:** Essential Skills to Job Successfulness

Graph 7 showed that the three main essential skills to be success in job performance were 1) foreign languages, 2) communication skills, and 3) problem solving skills.

## Conclusion

From the above results, 3 main conclusions can be made as follows:

1. USEA graduates satisfied with USEA education. They believed in education quality at USEA. They could find a good job in a right field after the graduation. USEA provided them knowledge through good inputs such as educational system, curriculum, and especially teaching methodology of USEA lecturers.
2. For the employer perspectives, their employees were lacking of three main skills such as English and other languages, front office administration, and problem solving skills.



3. Employers requested THM curriculum be focus more on practices, not theories. Foreign languages and communication skills were other two essential skills for job successfulness.

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## Science and Technology

## Biodiversity of Plants Producing Essential Oils in Pu Mat National Park

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### Abstract

Essential oils are the most highly valued with a large market demand in groups of Non-timber Forest Products. Pu Mat is considered to be the biggest Special Use Forest in Northern Vietnam. Core zone accounts for 94.804.4 hectares, and buffer zone accounts for 86.000 hectares, in which 94% of the area is still covered by forest and about 22% are primary forests. In the Pu Mat forest, Non-timber Forest Products have been exploited and trafficked in bulk, most of them are exported to China, including plants which produce essential oils. According to the survey results, there were 125 species that produce essential oils and oleoresins within 88 genera, 41 families of higher plants in Pu Mat National Park. The most remarkable is that 8 rare and precious species named in Vietnam Red Book (2007) and IUCN Red List are being overexploited in Pu Mat National Park. This phenomenon causes many species become scarce and that can lead to depletion.

**Keywords:** Pu Mat National Park, Essential oil plants

### 1. Introduction

Essential oil is one of the most highly valued Non-timber Forest Product. In the nature, essential oils are mainly derived from plants. There are over 3000 species of plants worldwide have the ability to provide essential oils, they widely distributed in the tropics of which 660 species in Vietnam. Demand for essential oils of pharmaceutical industry, food industry, cosmetic industry and life is massive and rapidly increasing. During the years from 1965 to 1970, the volume of essential oils being produced and processed all around the world is approximate 25 -35 thousand tons, but that number had reached 80 thousand tons by 2000, of which 20 thousand tons were produced in China and 17 thousand tons were from Brazil. The price of essential oils are very high, the most precious and expensive essential oil is Frankincense (about 100.000 USD/kg), followed by Rose essential oil (73.500

USD/kg) and Ambette (*Abelmoschus moschatus*) (5.000 USD/kg). The population of Pu Mat National Park is over 93.800 people, those who live in buffer zones in Pu Mat National Park are mainly ethnic minorities, their lives depend heavily on the exploitation of forest resources.

## 2. Materials and Methods

### 2.1. Materials

Pu Mat National Park is a national park in Nghe An province, in Vietnam's North Central Coast region. It is part of the Nghe An Western Nghe An Biosphere reserve. Pu Mat National Park has a large core zone, bordered by Laos, and its buffer zone stretches over forest stands of three mountainous districts (Con Cuong, Anh Son and Tuong Duong).

### 2.2. Research Methods.

- Collecting plants from main areas, based on the document of Nguyen Nghia Thin 1997 [6].
- Identifying plants based on the document of Nguyen Tien Ban [1], Pham Hoang Ho [5], Vo Van Chi [4], the scientific name's revision according to Vietnam plants catalog [1].
- Identifying rare, precious and endangered species according to the Vietnam Red Book [2].
- Interviewing households about exploiting and utilization essential oil plant by survey forms and then tracking statistics on Excel.

## 3. Research results

### 3.1. The diversity of plants producing essential oils and oleoresins.

The research result has listed 125 species that produce essential oils are being exploited and used by local people in many different purposes. These are high-value forest products in many economic fields as well as in the lives of people living in the buffer zone of Pu Mat National Park. The distribution in quantity and proportion of families, genera and species producing essential oils in Pu Mat National Park are shown in Table 1.

Orders		Families		Genuses		Species	
		No.	%	No.	%	No.	%
Pinophyta		5	12,20	6	6,82	8	6,40
Magnoliophyta	<i>Magnoliopsida</i>	28	68,29	68	77,27	102	81,6
	<i>Liliopsida</i>	8	19,51	14	15,91	15	12,00
<b>Total</b>		<b>41</b>	<b>100</b>	<b>88</b>	<b>100</b>	<b>125</b>	<b>100</b>

Table 1. Distribution of the number and proportion in taxa of essential plants

Most of these species are concentrated in Magnoliopsida, accounting for 81,6% of total species. The families that possess many species producing essential oils included Euphorbiaceae, Lauraceae, Poaceae, Zingiberaceae, Lamiaceae. In the flora of Vietnam, Asteraceae is the family that has most genres and species produce essential oils. But people living in Pu Mat area just exploit and use these species for medicinal purposes, as vegetables and flowers. These are plants that their abilities in biosynthesis and accumulation oils are common characteristics and popularity of most species or genres.

### 3.2. Diversity of trunks and harvested parts.

The plants containing essential oils and resins usually have different life forms; many of them are timber trees and shrubs, such as Anise (*Illicium* sp.); Cinnamon (*Cinnamomum* sp.); Orange (*Citrus* sp.); Chang (*Litsea* sp.), etc. There are also many herbaceous plants, Ginger (*Zingiber* sp.); Galangal (*Alpinia* sp.); Lemongrass (*Cymbopogon* sp.) are some of them. They grow in many different habitats. The proportion of essential oil plants in Pu Mat National Park classified by trunks is presented in Chart 1.

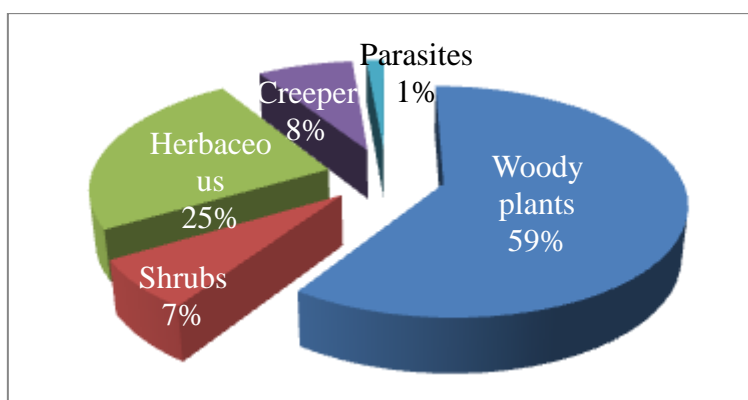


Chart 1. Proportion of essential oil plants in different types of trunks

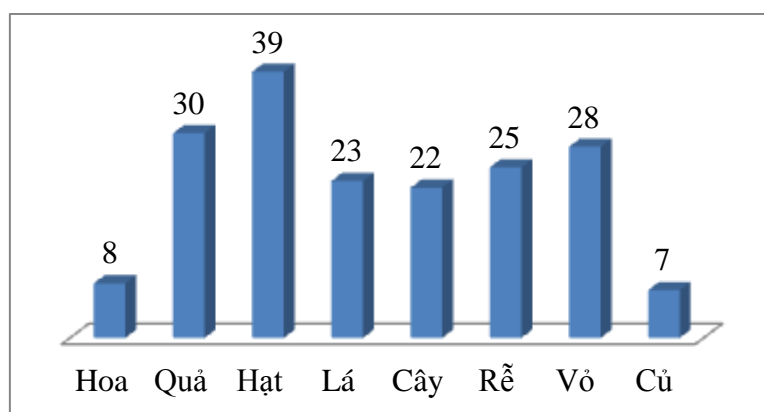


Chart 2. Segmentation in types of trucks of essential oil plants

Plants producing essential oils in Pu Mat National Park are divided based on harvesting parts is shown in Chart 2. The most commonly harvested part to extract the oil are seeds (39 species), fruits (30 species), tree barks (28 species) và roots (25 species), leaf (23 species) and trunks (22 species). Flowers and tubers are harvested the least.

Essential oils have a stimulating effect that can strongly antiseptic, anti-inflammatory, antibacterial so it was used in the pharmaceutical industry, food processing, cosmetics long ago. In everyday life, we often use or exposure to oils and products containing the compounds that are separated from the oil such as medicines, food, drinks, toothpaste, soaps, detergents, washing powder, perfumes, skin cream, etc. People living in buffer zone of Pu Mat National Park exploit essential oil plants for, killing insects; medical treatment, perfuming skirts, shirts, pillows, blankets; making curative medicines, seasoning, candles, incense, insecticides, and especially for sale recently.

### 3.3. The rare and precious species.

In total 125 species are exploited essential oils in Pu Mat National Park, there are 8 species of rare higher plants listed in the Vietnam Red Book and IUCN Red List.

	<i>Science name</i>	Vietnamese name	<i>Families</i>	<i>Categories</i>
1	<i>Fokienia hodginsii</i> (Dunn) A. Henry & H. H. Thomas)	Pơ mu *	Cupressaceae	EN
2	<i>Taxus chinensis</i> (Pilg.) Rehd.	Thông đỏ bắc *	Taxaceae	VU
3	<i>Cunninghamia konishii</i> Hayata	Sa mộc dầu *	Taxodiaceae	VU
4	<i>Kibatalia laurifolia</i> (Ridl.) Woods.	Thần linh lá quế	Apocynaceae	VU
5	<i>Acanthopanax trifoliatum</i> (L.) Voss.	Ngũ gia bì gai *	Araliaceae	EN

6	<i>Cinnamomum balansae</i> H. Lecomte	Gù hương *	Lauraceae	VU
7	<i>Cinnamomum parthenoxylon</i> (Jack.) Meissn.	Re hương *	Lauraceae	CR
8	<i>Aquilaria crassna</i> Pierre ex Lecomte	Trâm hương *	Thymelaeaceae	EN

Table 2. Rare essential oil plant species named in the Vietnam Red Book, 2007

#### 4. Conclusions.

There are 125 species producing essential oils and oleoresins of 88 genera, 41 higher plant families in Pu Mat area (core zone and buffer zone) in which 8 endangered species listed in the Vietnam Red Book (2007) and the IUCN Red List. These species are being exploited continuously and in danger of depletion.

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## Actual Situation Of Using Plant Protection Drugs In Rice Field In Nghi Thach Commune, NghiLoc district, NgheAn province, VietNam

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### Abstract

Using Plant protection products in agricultural cultivation is a necessary activity, how to know if the farmers were perform farming comply with that principle, we proceeded a quick interview with 50 farmers who are planting rice by a list of questions about Plant protection products they are using and how much, what time and how do they spray that products. In Nghi Thach village, NghiLoc district, NgheAn province, result we have is the Plant protection products were not used right technical. The farmers always use more quantum then Manufacturer's recommendation, too much times of spraying Plant protection products with short isolation time and especially there are no farmer protective equipment.

**Keywords:** Plant protection products, planting rice.

### 1. Introduction

Nghi Thach is a commune of NghiLoc district, NgheAn province, is near the East Sea and Cua Lo town to the east and near Nghi An commune (Vinh City) to the south. The commune has a total area of 713.62 hectares with the agricultural land's area as 509.49 hectares (71.39%), in which the area of growing rice accounts for 268.32 hectares (over 52.66% of agricultural land in the commune) [1]. In recent years, under the guidance of agricultural workers in the application of science and technology to the rice intensification, the productivity has become increasing and therefore contributed actively to bringing the high economic value. However, the intensive cultivation and wish to improve rice yield have led to the significantly increased pest status; using many drugs to ensure the production has led to the fact that farmers increase the use of plant protection drugs (PPD), sometimes overused, creating a risk to humans and the cultivated area's environment. This topic will reflect and come up with recommendations for this above situation.



## **2. Subjects, contents and research methodology**

### **2.1 Subjects**

This research was conducted on the rice growing lands in Nghi Thach commune, NghiLoc district, NgheAn province, VietNam

### **2.2 Contents**

To investigate the actual area and the rice yield in Nghi Thach commune.

To investigate the actual use of plant protection drugs on the rice growing lands in Nghi Thach commune

### **2.3 Research methodology**

To survey if the use of PPDs in rice plants of Nghi Thach farmers has used the "Four Correct Actions" principle (right drug, right dosage, right time, right way), we conducted a survey of 50 farmer households at random and 10% of stores selling plant protection drugs in the commune under the method of asking and answering quickly. Besides, the topic also used statistical methods, data processing on Excel or Word.

## **3. Research results and discussion**

### **3.1 The actual situation of growing rice in Nghi Thach commune**

Rice growing lands in Nghi Thach commune are mostly mixed sandy soil which is distributed quite among communes. According to a statistical structure of the communal farmland, rice is planted on 2 main seasons yearly and the area of rice growing lands of the commune is as follows:

+ Summer-autumn season: use of 241 hectares out of the total area of growing rice as 268.32 hectares; 27.32 remaining hectares is not the farmland [2].

+ Winter-spring season: 100 hectares, because the total area of hydroponic rice growing lands consists 100 hectares wetland and 168.32 hectares shallow farmland which is only wet in from July to November. Therefore, in Winter-spring season, farmers in Nghi Thach commune only plant rice crops on 100 hectares wet land [3].

**Table 1** Distribution of rice growing land in Nghi Thach commune

*(Source: Agricultural committee of Nghi Thach commune, 2014)*

No.	Hamlet	Target of the crop (hectare)	
		Summer-autumn season	Winter-spring season
1	Xuan Lac	22	9
2	Xuan Tien	20	7
3	Xuan Hoa	20	7
4	Xuan Thinh	18	8
5	XuânPhuc	24	7
6	Xuan Hoa	16	7
7	Tay Thach	19	10
8	Bac Thach	23	9
9	Nam Thach	20	11
10	Dong Thach	20	11
11	Dai Cu	16	7
12	TrungKhanh	23	7
	Total	241	100

### 3.2 The actual situation of using the plant production drugs on the rice growing lands of Nghi Thach Commune

#### 3.2.1 The commercial plant protection drugs are commonly used

According to the survey of 50 farmer households and the plant protection drug stores in the area, in collaboration with Agriculture Committee of Nghi Thach commune, we have listed 13 commercial pesticides used when growing rice as follows:

**Table 2 Commonly used plant production drugs in the study area**

(Source: Investigate farmer households, plant protection drugs in the area, in collaboration with Agriculture Committee of Commune, 2014)

No.	Commercial product names	Uses	Percentage of farmer households using products (%)	In the allowable list
1	Ferin	Kill weeds	86	Yes
2	PBBC 5 chiménprely feed	Take root, hard crops, etc.	48	Yes
3	Tilt super 300 EC (10ml)	Prevent flat seeds	76	Yes
4	Regent 800 WG	Kill pests	100	Yes
5	Beam 75 WP	Eliminate rice blast disease	24	Yes
6	Altach	Kill stink bugs	20	Yes
7	Suri	Kill weeds	20	Yes
8	KATANA 75 WP	Eliminate disease	44	Yes
9	Kabim 30 WP	Eliminate disease	10	Yes
10	Filia 525 SE	Eliminate disease	12	Yes
11	Bankan 600 WP	Eliminate disease	10	Yes
12	Biorat	Kill mice	16	Yes
13	Vista 72,5 WP	Eliminate disease	6	Yes

From the results of the above survey, it can be seen that a positive signal is the fact that 100% of commercial plant protection products used by people are in the permitted list issued by Department of Agriculture and Rural Development.

It was found that:

- 100 % farmer households use Regent 800 WG because:

+Regent 800 WG is one of the traditional pesticides of bayer company (Federal Republic of Germany). Apart from the effect of killing specific crop pests, this drug also works to prevent panicle rice mite, a dangerous pest on rice.

+ This drug can stimulate plant growth

- + This drug has little influence on the living environment and beneficial insects (natural predators) in the nature such as *Cryptohinus lividipennis*, *Amblyseius* sp, etc. which contribute to killing the number of pests in the field.
- + The final difference of Regent 800 WG compared with other drugs is due to the application of advanced techniques, active ingredient contents in the products always ensure the standard.
- 86% of farmer households use Fenrin because: Fenrin is a mixed herbicide of the new generation, has selective effects, pre- and post-germination, is distributed through the leaves, stems and roots of the weeds. The drug can kill most of weeds in rice fields belonging to 3 groups of weeds: narrow leaf, broad leaf and sedge such as *Echinochloa crus-galli* (*Sclerachne punctata*), honey grass), *Leptochloa chinensis*, *Marsilea quadrifolia* L, *Jussiaea repens* no otheracene, *Sphenocleazeylanica*, *Cyperus difformis*, *Paspalum distichum* L, *Cyperus iria*, etc.
- 76 % of farmer households use Tilt super 300 EC (10ml) because: Tilt Super 300EC has high effect on flat seed prevention as well as protection for light and hard seeds and ability to sell drugs at good price. Because flat seed disease is caused by a fungal group and Tilt Super is a drug combined by two active components eliminating diseases, this drug has the broad effect and prevent and eliminate most of fungus causing flat seed disease. Besides, some commercial products are less widely used such as:
  - Only 6% of farmer households use Vista 72,5 WP because: effects of this drug are not high. So, farmers use this drug to spray more at secondary times of rice crops. That is why this drug is not commonly used.

### 3.2.2 Method of using PPDs:

#### a. Dosage

Dosage: As the amount of drug prescribed for a unit of area (hectare, pole, land work, m<sup>3</sup> land) Spraying drugs with proper dosage and concentration will lead to less effect and resistance to drugs in pests. Using drugs with overused dosage and concentration (substance abuse) will be wasteful and harmful. Improper drug spraying would be less effective or even ineffective.

The actual survey obtained the following results:

Number of farmer households mixed drugs according to the recommended dosage (*):	10%
Number of farmer households mixed drugs according to the recommendation of the agents:	70%
Number of farmer households mixed drugs according to their experience:	20%

**(\*) Dosage mixed according to the label information on the packaging**

**(Source: survey of the farmer households, 2014)**

It can be seen that only 5/50 of farmer households surveyed had read manuals and mixing plant protection drugs as recommended by the manufacturers. Up to 70% of farmers mixed drugs under the guidance of agents, and in fact the agents often instruct people to use the amount as twice as the amount specified on the label in order to increase the effectiveness of drugs without caring about the impact of the drug on humans and the environment, for example as follows:

- Fenrin (herbicide): According to the instructions on the y results from drug stores, they recommend the farmers that the dosage of 480g/hectare
- Tilt super (prevent flat seeds): According to the instructions on the packaging, this drug is used with the dosage of 200ml/ha. But according to the survey results from drug stores, they recommend the dosage of 400ml/hectare.

Also, according to the survey results, the drug mixing of farmers does not comply with the right techniques such as:

- Do not weigh or measure the right dosage of the drug.
- Like to increase the dosage and mix many drugs.
- Mixing the drugs in the wrong way: pouring the drugs into the sprayers first and then pouring water.
- Using alum water and salty water in the field to mix drugs will decrease the strength of drugs.

**b.The Number of Spray**

According to Department of Crop Production, Ministry of Agriculture and Rural Development, the reasonable process of rice rice intensification has 6 times of main spray [4]:

**Table 3 The times of spraying drugs and drugs sprayed for rice**

No.	Time	Drug sprayed
1	Before or after seeding	spray molluscicide and herbicides
2	13-15 NSS	spray growth drugs
3	25-30 NSS	spray growth drugs
4	50-55 NSS	spray growth drugs
5	Rice crops ear unevenly 2-3%	spray flat seed drug
6	Rice crops ear evenly	spray flat seed drug

**NSS : day after seeding is the time after sowing**

In 4 right action principle, the principle of "right way" means to spray evenly and focus on areas where there are many pests. The drugs used to spread on land should not be mixed with water for spray. Herbicides should not be sprayed in the duplicate way and must be sprayed at the right time.

**Table 4 The survey of the total number of spraying drugs during the whole period of growing rice crops**

(Source survey of farmer household, 2014)

Number of Spraying Drug	5	6	7	8	9
Number of Households	10	4	20	16	0
Percentage	20%	8%	40%	32%	0%

It can be seen that only 28% of farmer households surveyed sprayed drugs in accordance with the recommendation, 72% had the number of spraying drugs more than recommended, specifically they sprayed at the following times:

- During the tillering stage of rice, up to 19 farmer households sprayed anobium borer and rice leaf folder pesticides to prevent diseases for crops
- During the earing stage, up to 9 farmer households sprayed rice blast disease drug
- During the seed forming stage of rice, up to 8 farmer households mixed and sprayed different growth drugs to stimulate the productivity of the crops.

**c. Time isolation:**

As recommended, after spraying plant protection drugs, the time of isolation for rice is about 7-15 days. After about 7-15 days, farmers can graze cattle or contact with the field [4].

All farmers surveyed know the hazards of pesticides and the need to avoid contact after spraying plant protection drugs, but the results obtained from the investigation are as follows

**Table 5 Survey of the time of isolation after spraying the plant protection drugs (Source survey of farmer household, 2014)**

No.	Days of isolation	Percentage of farmer households complying with the time of isolation (%)
1	2-3	9
2	3-5	23
3	5-7	53
4	7-15	15

It can be seen that 85% of farmer households surveyed did not comply with the time of isolation; this had a substantial impact on the health of farmers and cattle grazed.

#### **d.Labor protection**

As recommended by the branch of Department of Crop Production as well as the notice of the agriculture committee of Nghi Thach commune, before spraying the plant protection drugs, farmers should note as follows [4]:

- +) Test sprayers: if the sprayers leak or diaphragms break
- +) Labor protection during mixing drugs: wear long-sleeved clothing, hats, boots, gloves, masks and goggles

However the actual survey results obtained are as follows:

**Table 6 Survey of the implementation of labor protection when spraying plant protection drugs (Source survey of farmer household, 2014)**

Action	Percentage of compliance of farmer households (%)
Test sprayers	48%
Wear long-sleeved clothing	98%
Wear hats	52%
Wear boots	74%
Wear gloves	30%

Wear mask	100%
Wear goggles	12%

Based on the actual facts from the above table, wearing protective equipment when spraying pesticides is inadequate. Specifically, when spraying PPDs, farmer households realized that they should wear masks and wear long-sleeved clothing (98 %), wear boots (74%). But they did not pay attention to and take actions such as testing sprayers before spraying, wearing hats, gloves and special protective goggles.

#### **4. Conclusion**

With the relatively large area of growing rice in Nghi Thach commune, spraying PPDs is unavoidable. However, according to the survey results, although they have been familiar with using PPDs in the allowable list, the methods of using PPDs by the farmers in Nghi Thach commune have not been technically correct, specifically through the fact that farmers still use dosage higher than recommended by the manufacturers and use improper technique, and increase the number of sprays, do not comply with the time of isolation as recommended and especially they are not equipped with adequate labor protection to protect the health of the own producers.

#### **5. Recommendation:**

Agriculture committee of the commune should open training courses for people on the process use of fertilizers and pesticides in a balanced, reasonable way and in accordance with the specific conditions of local area and must be linked to the environmental protection.

Propaganda to raise the awareness of people about the harmful effects of PPD use.

Tighten the work of plant protection drug use and the agents avoid selling drugs with the wrong price or wrong instructions

And our topic will be further developed to investigate the actual situation of safe storage locations - mishandling techniques for residual PPDs and equipment after use.

#### **6. References:**

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Use of Different Biofilter Materials in Recirculating System  
of Nile Tilapia (*Oreochromis niloticus*) Culture

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Abstract

The purpose of this research was to determine the effect of different biofilter materials in recirculating system of Nile tilapia culture. Tilapia had cultured in 1 X 1 X 1.5 m. concrete recirculating ponds for three months. Four treatments with 3 replications each were carried out. Different filter materials were compared including; Treatment 1 Shading net filter materials; treatment 2 Coir filter materials; Treatment 3 vetiver fiber filter materials; and Treatment 4 nets filter materials. Nile tilapia were stocked at 100 fish/ m<sup>2</sup>, while 30 head lettuce per pond were planted. Average initial weights of fish in treatments 1, 2, 3 and 4 were 25.85±0.16, 25.98±0.27, 25.86±0.54, and 25.62±0.80 grams, respectively. By the end of experiment, the mean fish weight gains in treatments 1, 2, 3 and 4 were 97.72±0.40, 96.47±1.67, 96.05±1.24, and 98.80±1.43 grams, respectively. The tilapia in treatment 4 trended to provide the highest mean weight gain (73.18±1.77 grams), while tilapia in treatments 1, 2, and 3 had the mean weight gain as 71.87±0.48, 70.50±1.77 and 70.20±1.17, grams respectively. The mean length gains were 17.57±0.02, 17.53±0.03, 17.47±0.09, and 17.73±0.11 centimeters, respectively. The average daily gains of tilapia were 0.80±0.01, 0.78±0.02, 0.78±0.01 and 0.81±0.02, g/day, respectively. The highest survival rate was 94.33 % found in treatment 4, while the fish survival rates in treatments 1, 2, and 3 were 94.00 %, 93.67 %, and 93.33 %, respectively. Production of head lettuce at the end of experiment in treatments 1, 2, 3, and 4 were 414.04, 405.09, 409.29, and 409.29 grams, respectively. It was not significantly different (P>0.05) in the temperature, pH, ammonia, phosphorus, and turbidity among treatments. However, the value of DO was significant differences (P<0.05) ranging between 2.99 – 3.13 mg/l. Nitrite in treatment 3 was significant differences (P<0.05) with treatment 1 and 4 but not significantly different (P>0.05) with treatment 2. In conclusion, Shading net and nets were very effective to be used as filter materials for an recirculating system of Nile tilapia culture.

**Keywords:** Biofilter, recirculating system, Tilapia culture

## Introduction

Aquaponics is the combination between fish and soil-less vegetable culture in a recirculating system. The wastes from fish particular urine and feces as well as uneaten feed are able to be transformed to be plant nutrients. Bacteria is one of the most important factors removing these toxic wastes into accessible plant nutrients. The nitrifying bacteria convert the fish wastes entering the system mainly as ammonia nitrogen into nitrate by Nitrification and Denitrification process which is a vegetable fertilizer (Nongnuch, 2001; Tardiff, 1992). To reduce the ammonia on ionized form it needs to oxidize ammonia-nitrogen to be nitrite-nitrogen by *Nitrosomonas* bacteria and then nitrate-ammonia, respectively (Losordo, 1999) in order to prevent toxicity to fish. Many aquaponic systems have failed because too many fish were stocked, effective bacteria was fully developed, and non-suitable water quality. The water circulation and microbial activity in aquaponic system affected directly through water quality and this indirectly influenced to fish health (Surit, 2009). Biofiltration material is required for adhesive nitrifying bacteria to colonize and reproduce. Generally, the smaller and more porous the particles of the media, the higher is the surface available for bacteria to colonize (FAO, 2015, online).

The objectives of this research were to determine suitable filter materials within aquaponics system, investigate the production of Nile tilapia (*Oreochromis niloticus*) combination with vegetable production within aquaponic system, and evaluate water quality condition within aquaponics system.

## Materials and methods

### 1. Experimental design

A *completely randomized design* (CRD) was applied. The 4 treatments with 3 replication each were conducted consisting of Treatment 1 70% shading net, Treatment 2 Coir, Treatment 3 Vetiver glass fiber, and Treatment 4 nets.

### 2. Fish rearing and Data collection

The 1x1x1.5 m. circular 12 cement tanks were prepared for tilapia culture by cleaning, drying, and filling water up to 100 cm. Tilapia were stocked at 100 fish/m<sup>2</sup> in each experimental unit. The system was operated with the combination of tilapia and vegetable culture using circulation water system passing through the different filter materials. Shading net 70% and nets was cut into 1 x 1 inch. square in size. Aeration was provided. Tilapia were fed with commercial pellet feed until satiation twice a day. The 2 circle tanks with 30 cm. in diameter and 50 cm. in height was prepared for purification tanks and connected together using 2 inch PVC pipe. One of them was designed to be a sediment tank and another one was set to be a filter tank containing experimental filter materials in the basket hanged in the middle of tank. The water

pump was used to pump water and circulate from tilapia culture passing through 1<sup>st</sup> and 2<sup>nd</sup> purification tank to vegetable culture and drain back to fish culture again. The system was operated as a closed loop with no water exchange rate; however, the evaporation water was replaced with tap water.

The experiment was run for 3 months. The water quality consisting of pH, DO, temperature, ammonia-nitrogen, nitrite-nitrogen, nitrate-nitrogen, total phosphorus, and turbidity was monitored every two weeks. The tilapia was randomly weighted every 15 days to evaluate growth performances including weight gains, average daily weight gain (ADG), feed conversion ratio (FCR) as following:

Weight gain (g.)

$$= \text{final weight (g.)} - \text{initial weight (g.)}$$

Average daily weight gain (ADG) (g.)

$$= \frac{\text{final weight (g.)} - \text{initial weight (g.)}}{\text{Days}}$$

Survival rate (%)

$$= \frac{\text{number of fish (final)}}{\text{Overall fish}} \times 100$$

Feed conversion ratio (FCR)

$$= \frac{\text{Total feed intake}}{\text{Fish weight gain}}$$

The 12 hydroponics systems were assembled using 3 ways PVC pipe with 2 inches in diameter. Healthy plant seedlings were transplanted to the grow bed, one vegetable seed per 1 PVC pipe. Air pump was used to provide optimum oxygen for fish growth and circulate the water between fish and vegetable culture. Vegetable production was evaluated 45 days after planted.

Height gain (cm)

$$= \text{final height (cm.)} - \text{initial height (cm.)}$$

Average daily height gain (ADG) (cm.)

$$= \frac{\text{final height (cm.)} - \text{initial height (cm.)}}{\text{Days}}$$

### 3. Data analysis

The statistical differences were determined using a one way analysis of variance (ANOVA) followed by a Tukey's comparison test at  $p < 0.05$  with SPSS for windows software version 15.

## Results

### 1. Growth performances and production of tilapia

Table 1 shows the growth, feed conversion ratio, survival, and production of tilapia cultured in aquaponic system under different biofilter materials. The highest mean final weights were found in fish reared in tanks filtering with net filter followed by 70% shading net, coir, and vetiver glass fiber filters but there were non-significant differences ( $P > 0.05$ ) (Table 1). In addition, mean weight gain, mean final length, mean length gain, average daily weight gain (ADG), survival rate, and feed conversion ratio (FCR) were also not significant differences ( $P > 0.05$ ). FCR of tilapia-based aquaponics were 1.94 – 1.99 which were quite high.

**Table 1** Growth performances of Nile tilapia culture in aquaponics system for 90 days

Parameter	Filter materials			
	70% Shading net	Coir	Vetiver glass	nets
Initial weight (g.)	25.85±0.16 <sup>a</sup>	25.98±0.27 <sup>a</sup>	25.86±0.54 <sup>a</sup>	25.62±0.80 <sup>a</sup>
Final weight (g.)	97.72±0.40 <sup>a</sup>	96.47±1.67 <sup>a</sup>	96.05±1.24 <sup>a</sup>	98.80±1.43 <sup>a</sup>
Weight gain (g.)	71.87±0.48 <sup>a</sup>	70.50±1.77 <sup>a</sup>	70.20±1.17 <sup>a</sup>	73.18±1.77 <sup>a</sup>
Initial length (cm.)	11.19±0.08 <sup>a</sup>	11.27±0.09 <sup>a</sup>	11.28±0.16 <sup>a</sup>	11.18±0.13 <sup>a</sup>
Final length (cm.)	17.57±0.02 <sup>ab</sup>	17.53±0.03 <sup>a</sup>	17.47±0.09 <sup>a</sup>	17.73±0.11 <sup>b</sup>
Length (cm.)	6.37±0.08 <sup>a</sup>	6.25±0.11 <sup>a</sup>	6.19±0.22 <sup>a</sup>	6.55±0.16 <sup>a</sup>
Growth rate (g./day)	0.80±0.01 <sup>a</sup>	0.78±0.09 <sup>a</sup>	0.78±0.01 <sup>a</sup>	0.81±0.12 <sup>a</sup>
Survival rate (%)	94.00±3.00 <sup>a</sup>	93.67±3.05 <sup>a</sup>	93.33±1.52 <sup>a</sup>	94.33±2.08 <sup>a</sup>
FCR	1.96±0.03 <sup>a</sup>	1.97±0.09 <sup>a</sup>	1.99±0.04 <sup>a</sup>	1.94±0.05 <sup>a</sup>
Product (kg.)	9.17±0.31 <sup>a</sup>	9.03±0.24 <sup>a</sup>	8.97±0.11 <sup>a</sup>	9.36±0.31 <sup>a</sup>

Remark: Means with different superscript letters show significant differences ( $p < 0.05$ ) (n=10).

## 2. Vegetable production

The highest mean final height of lettuce was found in tanks with nets used as filter materials followed by 70% shading net, coir, and vetiver glass (Table 2). The heights of vegetables cultured in water treated from nets and 70% shading net were significantly higher than the ones from coir, and vetiver glass ( $P < 0.05$ ). However, the production of vegetable was no significant ( $P > 0.05$ ).

**Table 2** Production of vegetable cultured in aquaponics system with different filter materials

Parameter	Filter materials			
	Shading net 70%	Coir	Vetiver glass	nets
Initial height (cm.)	5.64±0.08 <sup>a</sup>	5.58±0.03 <sup>a</sup>	5.56±0.09 <sup>a</sup>	5.55±0.05 <sup>a</sup>
Final height (cm.)	24.44±0.57 <sup>ab</sup>	23.37±0.21 <sup>a</sup>	23.61±0.68 <sup>a</sup>	25.22±0.79 <sup>b</sup>
Height gain (cm.)	18.81±0.64 <sup>ab</sup>	17.79±0.23 <sup>a</sup>	18.06±0.59 <sup>a</sup>	18.72±0.55 <sup>b</sup>
Production (g.)	414.04±12.69 <sup>a</sup>	405.09±7.39 <sup>a</sup>	409.29±10.69 <sup>a</sup>	410.07±11.04 <sup>a</sup>

Remark : 1. Data included 1 crop (45 days)  
2. Means with different superscript letters show significant differences ( $p < 0.05$ ) ( $n = 10$ )

## 3. Water quality in circulation water closed-system.

There were non-significant differences among water temperature, pH, ammonia, total phosphorus and turbidity ( $P > 0.05$ ) except DO which was significantly higher ( $P < 0.05$ ) in the water filtered through nets (Table 3). Moreover, the highest nitrite-nitrogen was significant ( $P < 0.05$ ) in the water filtered through vetiver glass filter material. In contrast, the highest nitrate-nitrogen was significant ( $P < 0.05$ ) by in the water filtered through nets filter material.

**Table 3** Water quality in tilapia culture pond within aquaponics system with different filter material

	Filter material			
	Shading net 70%	Coir	Vetiver glass	nets
Water temperature (°C)	28.58±0.58 <sup>a</sup>	28.34±0.67 <sup>a</sup>	28.21±0.53 <sup>a</sup>	28.19±0.52 <sup>a</sup>
pH	7.80±0.80 <sup>a</sup>	7.76±0.13 <sup>a</sup>	7.78±0.12 <sup>a</sup>	7.75±0.14 <sup>a</sup>
Dissolved oxygen (mg/l)	3.13±0.86 <sup>ab</sup>	2.99±0.02 <sup>a</sup>	3.00±0.08 <sup>a</sup>	3.13±0.22 <sup>b</sup>

Ammonia nitrogen (mg/l)	0.706±0.3.09 <sup>a</sup>	0.710±0.287 <sup>a</sup>	0.711±0.280 <sup>a</sup>	0.705±0.293 <sup>a</sup>
Nitrite nitrogen (mg/l)	1.233±0.640 <sup>a</sup>	1.261±0.783 <sub>ab</sub>	1.348±0.285 <sup>b</sup>	1.238±0.810 <sup>a</sup>
Nitrate nitrogen (mg/l)	0.840±0.244 <sup>ab</sup>	0.800±0.409 <sub>a</sub>	0.790±0.384 <sup>a</sup>	0.865±0.044 <sup>b</sup>
Total Phosphorus(mg/l)	0.58±0.07 <sup>a</sup>	0.57±0.14 <sup>a</sup>	0.58±0.14 <sup>a</sup>	0.58±0.15 <sup>a</sup>
Turbidity (NTU)	20.21±1.4 <sup>a</sup>	20.16±1.32 <sup>a</sup>	20.19±1.46 <sup>a</sup>	20.27±1.41 <sup>a</sup>

Remark: Means with different superscript letters show significant differences ( $p < 0.05$ ) (n=10)

### Discussions and conclusions

Both aquaponics successfully achieved simultaneous production of tilapia and vegetables. There were not significant differences in average daily weight gain (ADG), feed conversion ratio (FCR) and survival rate of tilapia cultured in the water filtered through different filter materials. The stocking density of fish as well as the selection of fish and vegetable species might be further investigated. Pathomponget. al. (2014) stated that stocking density of tilapia raised in aquaponics system was not significantly affected on the growth performances while Ridha and Cruz (2001) found the different biofilter did not influence on body weight, average daily weight gain (ADG), feed conversion ratio (FCR), and survival rate of tilapia raised in a re-circulation water system but it affected on a suitable water quality maintenance for tilapia growth. Moreover, Tardiff (1992) suggested that the biofilter was useful for nutrient removal in fish tank by providing a suitable habitat for microorganisms transforming toxic form of nitrogen to be nontoxic form.

Andreas and Ranka (2008) showed the nutrients from drainage waste water from aquaculture can be used in hydroponic. In this study, the productions of vegetable were not significant differences. However, lettuce yields in aquaponic should be compared with hydroponic or soil cultivation.

This study demonstrated that the tilapia and lettuce aquaponics was somewhat effective in fish waste treatment and also water conserved. Shading net and nets were the most suitable filter materials in this system. Water quality remained acceptable. Munsin and Pripan (1995) described the suitable temperature for tropical aquatic animals should be 25 – 32 degree celcius and the pH should be around 6.5 – 9. Nutrient uptake rates in vegetables are regulated by age of vegetables, growth rate, temperature, and nutrient needs of each vegetable. Furthermore, feeding practices should be further studied in order to reduce FCR while increase both fish and plant production and lessen the accumulation of nitrogen in water. These findings are worthwhile and practical in the development of aquaponics and fish waste reuse.

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## Association Rule Mining in EPC Global Networks

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### Abstract

The widely use of Electronic Product Code Global Network (EPCglobal Network) supporting the use of Radio Frequency Identification (RFID) creates a huge data in EPCIS. The most important knowledge implicit in Electronic Product Code Information Service (EPCIS) database is the relationship amongst locations that products moved through such as number of products shipped between locations in an interval. The discovered knowledge is useful for supporting supplier selection and logistic improvement. Mining such knowledge is therefore very necessary in business. This paper proposed a new method for mining association rules from an EPCIS repository. Firstly, this paper defined new concepts of support and confidence of a rule. Secondly, the association rule was defined as the relationships of EPCs between two locations in a supply chain network regardless of the movement method. The EPC Association Rule Mining (EPCARM) algorithm was then proposed to discover all of the association rules satisfied the given thresholds. Finally, the experiment was executed to clarify the performance of the proposed algorithms.

**Keywords:** Association rule mining, EPCGlobal Network, RFID.

### 1. Background and Objectives

EPCglobal Network is a standard of the world business enabling Electronic Product Code using Radio Frequent Identification (RFID) through the network of computers and devices around the world. RFID is a method of identifying objects using radio waves. The basic components of the RFID technology are the RFID tag and reader. Typically, an RFID tag is attached to a product and communicates wirelessly with an RFID reader when the product comes within range of the reader. As soon as a reader detects a tag, it sends the information contained in the tag to an RFID data management system (Ko, Kwak, Cho, & Kim, 2011). In the supply chain domain, a tag usually contains Electronic Product Code (EPC) (Inc., 2005) containing information on an individual product such as the manufacturer, product type, and serial number. Normally, since a tag comes within range of RFID reader, information of the

location where the reader is placed is recorded with the EPC. This information is then stored in a service system named EPCIS (EPC Information Service) (Inc., 2005).

In today's modern information technology, RFID is widely used in supply chain management. In the supply chain, each product may pass through a number of suppliers and distributors before arriving at the end-user. In the context of global supply chain, information about product delivery is contained in the Electronic Product Code Information Service (EPCIS) server in the form of events to enable a supply chain based on the EPCglobal network (Holmstrom, R., K., & E., 2009; Munoz-Gea, J., P., & J.C., 2010; Shi, Y., W., & D., 2012). This creates a huge of data in the systems of EPCIS. The useful knowledge contained in the big database of EPCIS can be discovered by using data mining. Mining relationship amongst EPC, location, and time interval is an important task of data mining in EPCglobal network. It provides useful knowledge for supplier selection, supporting and leveraging to enhance logistics in supplier management. Therefore, proposing a methodology for mining association rule from EPCIS is desirable for improving supply chain management.

Association rule mining, which has been developed for more than two decades, is the major technique in data mining. It was first introduced by Agrawal et al. (T. Agrawal, T., & A.N., 1993). The authors later proposed the Apriori algorithm, a great improvement in the history of association rule mining (R. Agrawal & R., 1994). This algorithm was then extended in many algorithms such as FP-Tree, FP-growth (Han, J., & Y., 2000), RARM (Bocca, M., & C., 2001), HCARM (Chen & Lan G.-C., 2013), and CAR-Miner (Nguyen, B., T.-P., & H.C., 2013). Huang et al. (Huang, X., & H., 2011) introduced an association rule mining-based approach to discover the ordered correlations between items in an event log. Kokpinar et al. (Çokpinar & T.I., 2012) proposed an efficient and secure solution to discover positive and negative association rule computations on XML data streams in a database-as-a-service concept. Recently, association rule mining has been applied in spatial-temporal databases. Spatial-temporal association rule mining extracts an implication between space and time that is implicit in spatial-temporal databases. In spatial association rules, spatial objects are related to each other using spatial predicates and connectors (Ke, Y., X., & M., 2013; Lee, Lee, D.J., Hwang, & Ry, 2009; Shaheena, M., & A., 2013).

This paper proposes a new approach to adopt association rule mining into EPCIS. To conduct the proposal, this paper starts by transforming EPCIS data into the format of (tagID, location, time-in, and time-out). Then, the user's target historical time period is divided into discrete intervals such as days, weeks, months, quarters, or years. Next, this paper proposes the EPC Association Rule Mining (EPCARM) algorithm. The EPCARM algorithm begins by extracting all of the EPCs and categorizing them into a set of locations and intervals. The algorithm then discovers all of the interesting association rules satisfying given minimum

support and confidence thresholds. Finally, this paper analyzes the experiment in order to proof the effectiveness of the proposed method.

## 2. Research Methodology

### 2.1 Association rules in EPCIS data

Let  $S_k$  and  $S_h$  denote the start time, and  $E_k$  and  $E_h$  denote the end time in the locations  $L_i$  and  $L_j$ , respectively. The definition of an EPC association rule (EAR) is presented as Definition 1.

**Definition 1:** (EAR) *An association rule discovered from event data of EPCIS, denoted by EAR, is an implication that items in location  $L_i$  in the interval  $[S_k, E_k]$  move to  $L_j$  in the interval  $[S_h, E_h]$  if  $E_k < S_h$  and is presented as  $L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])$ .*

The value of each rule is measured by the support and confidence of the rule, which are defined as Definitions 2, 3, and 4.

**Definition 2:** (Support of a location) *Let  $\Phi(L_i, [S_k, E_k])$  be the set of items appearing in  $L_i$  in the interval between  $S_k$  and  $E_k$ . The support of a location  $L_i$  in the interval between  $S_k$  and  $E_k$  is the number of items appearing in  $L_i$  in the interval between  $S_k$  and  $E_k$ , denoted by  $\alpha(L_i([S_k, E_k]))$ , namely*

$$\alpha(L_i([S_k, E_k])) = |\Phi(L_i([S_k, E_k]))| \quad (1)$$

**Definition 3:** (Support of EAR) *The support of an EAR is the number of items remaining in  $L_i$  in the interval between  $S_k$  and  $E_k$  that move to  $L_j$  in the interval between  $S_h$  and  $E_h$ , namely*

$$\alpha(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])) = |\Phi(L_i, [S_k, E_k]) \cap \Phi(L_j, [S_h, E_h])| \quad (2)$$

A location is called *considerable* if its support is greater than a given minimum support threshold, denoted by  $\sigma$ .

**Definition 4:** (Confidence of EAR) *The confidence of EAR  $L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])$  is the support of the rule divided by the support of location  $L_i$  in the interval  $[S_k, E_k]$ , namely*

$$\begin{aligned} \beta(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])) &= \\ &= \frac{\alpha(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h]))}{\alpha(L_i([S_k, E_k]))} \quad (3) \end{aligned}$$

The support of an association rule shows the number of items that move between two locations.

## 2.2 The EPCARM algorithm

To extract all of the interesting rules from an EPCIS dataset, Algorithm 1 was proposed, relying on two phases.

*Phase 1:* In this phase, a set of intervals  $\mathcal{I} = \{[S_1, E_1], [S_2, E_2], \dots, [S_n, E_n]\}$  is given by the user, where the time is continuous from  $time-in^1$  to  $time-out^n$  and no intervals overlap. An item (EPC,  $L$ ,  $time-in$ ,  $time-out$ ) will remain in a location  $L_i$  in the interval  $[S_k, E_k]$  if " $L = L_i$  and  $S_k \leq time-in \leq E_k$ " will be added into  $\Phi(L_i, [S_k, E_k])$ . The support of each location is then specified.

*Phase 2:* Association rules between the locations satisfying the time condition are generated in this phase. For each pair of a specified location and time,  $(L_i, [S_k, E_k])$  and  $(L_j, [S_h, E_h])$ , if  $E_k$  is less than  $S_h$ , then the rule  $L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])$  is specified.

The details of this algorithm are presented below:

### Algorithm 1: The EPCARM algorithm

*Input:* EPCIS transformed dataset,  $\sigma$ ,  $\delta$ ; the interval of event time.

*Output:* Set of association rules  $R$ ;

*Method:*

Let  $\mathcal{L} = \{\text{set of locations}\}$ ;

Let  $\mathcal{I} = \{\text{set of intervals}\}$ ;

*Step1:* For each tuple (EPC,  $L$ ,  $time-in$ ,  $time-out$ ),

compute  $\Phi(L_i, [S_k, E_k]) = \Phi(L_i, [S_k, E_k]) \cup \{\text{EPC}\}$ ;

*Step 2:* For each  $L_i \in \mathcal{L}$  and  $[S_k, E_k] \in \mathcal{I}$  compute  $\alpha(L_i([S_k, E_k])) = |\Phi(L_i, [S_k, E_k])|$ ;

*Step 3:* For each pair of  $(L_i, [S_k, E_k])$  and  $(L_j, [S_h, E_h])$  compute:

$\alpha(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])) = |\Phi(L_i, [S_k, E_k]) \cap \Phi(L_j, [S_h, E_h])|$ ;

$$\beta(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])) = \frac{\alpha(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h]))}{\alpha(L_i([S_k, E_k]))} \quad (4)$$

If  $\alpha(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])) \geq \sigma$  and  $\beta(L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])) \geq \delta$

Then  $R = R \cup \{L_i([S_k, E_k]) \rightarrow L_j([S_h, E_h])\}$ ;

### 3. Results, Conclusions, and Discussion

#### 3.1 Results

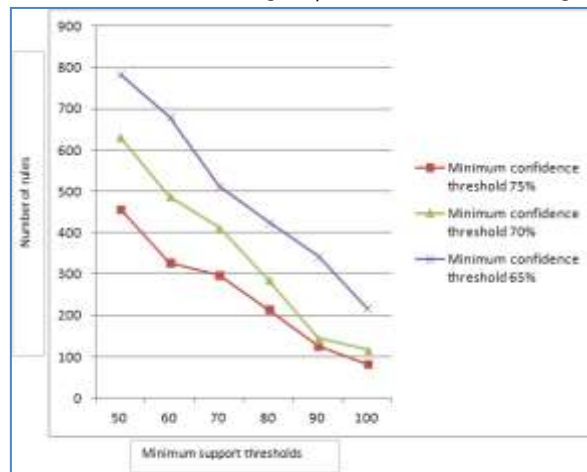
The experiment was executed to demonstrate the applicability of the proposed method. It was run on laptop with CPU Intel Core i5, 4Gb RAM, and Windows 7 Professional environment.

The generated dataset contained 20,000 records, approximately 600 EPCs, and 17 locations. It was assumed to be collected from 01/01/2014 to 01/01/2015. This dataset was presented in the preprocessed format. Each record is in the format {Record ID, EPC, location, time-in, time-out}, as presented in Table 1.

**Table 1. The dataset for the experiment**

RecID	EPC	Locat-ion	Time-in	Time-out
1	357	1	01/01/2014	01/01/2014
2	145	5	01/01/2014	01/01/2014
3	102	3	03/01/2014	10/5/2014
4	5	15	05/02/2014	15/6/2014
5	450	5	10/05/2014	20/10/2014
6	247	14	25/05/2015	03/07/2014
...	...	...	...	...

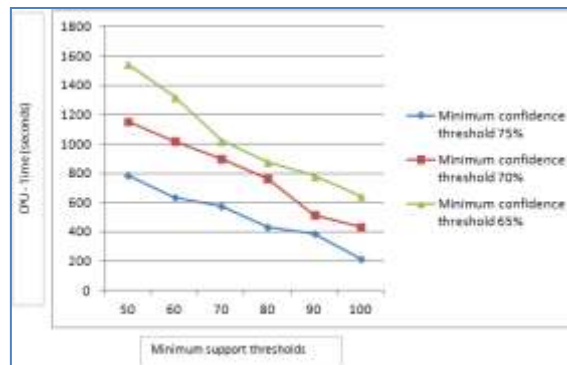
The results of association rule mining is presented in the Figure 2 and Figure 3.



**Figure 2. Number of rules mined by the proposed algorithm**

Figure 2 shows the performance of the proposed algorithm when increasing minimum support threshold from 50 to 100 items correlating the minimum confidence thresholds at 65%, 70%, and 75%. Accordingly, increase of minimum thresholds brings about decrease the number of rules. The graph illustrates that when the minimum support threshold is 50 (8.33%) the algorithm discovered 460 rules at 75%, greater than 630 rules at 70%, and approximate 800 rules at 65% of minimum confidence threshold. Those numbers are decreased when minimum support threshold at 100 items (16.66%).

Figure 3 illustrates the CPU-Time required for running the experiment at minimum support range 50 – 100 items and minimum confidence thresholds at 65%, 70%, and 75%.



**Figure 3. CPU-Time consuming by the proposed algorithm**

The graph shows that the algorithm required about 1,570 seconds to discover nearly 800 rules at lowest minimum support threshold (50 items) and minimum confidence threshold (65%). This consuming time evidences the application of the proposed algorithm in the real world of EPCglobal network.

### 6.1 Discussions

This paper proposes the basic concepts of association rules, support, and confidence of a rule in EPCglobal Network. By discovering the correlations between locations, items, and intervals, this paper provides useful knowledge to enterprise managers for enhancing supply chain management. The specific contents about association rule mining and its application in EPCglobal Network will be presented in an extended version of this paper. The authors hope that this paper can motivate more researches in data mining from EPCglobal Network for supporting the development of supply chain management in countries of ASEAN.

### 6.2 Conclusions

Recently, the EPCglobal network has been used to connect all sectors of the supply chain where their data are shared and stored in a system of EPCIS. However, the big data of EPCIS always contains useful knowledge to support the supplier management. This paper adopts the association rule mining technique into EPCIS to discover association rules satisfying given thresholds to provide correlations between the EPCs, locations, and times of data stored in EPCIS.

The EPCARM algorithm was proposed to extract all of the available association rules implicit in the database. The proposed algorithms were tested on a generated dataset. The results have demonstrated that the proposed approach can be applied in the reality of supplier management.

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## USER EXPERIENCE ASSESSMENT FOR HOTEL BOOKING WEBSITE

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### Abstract

At present, a large number of hotel booking websites are publicly provided with comparably relevant procedures; for example, searching, search result display, room detail display, and room booking. However, website visit statistics are different probably depending on user experience in aspects of Aesthetic, Usability, and Content. When a user has unpleasant experience after visiting a website, this may cause the user to leave the website and then visit another website instead. Therefore, this study was to assess user experience on prominent hotel booking websites: Agoda.com, Booking.com, and Expedia.co.th by monitoring good part of user interface design aimed to respond to searching, search result display, room detail display, and room booking. In this study, a hypothesis was proposed that user will have a better user experience if good parts of user interface design of those websites are combined. After experiment was executed with sample group of 46 people, it was found that a new website including good parts of user interface design from each website was able to create a better user experience but not every procedure was completely effective after assessing. In procedure of searching in aspects of aesthetics and content, its average value decreased when it was a component of the new website. In sample user's opinion toward those two aspects, excessive quantity of content influenced on decreased aesthetics. For usability aspect, average value of searching procedure decreased; similar to room booking procedure, its average value also decreased due to limitation of study that an actual payment was not completed.

**Keywords:** User Experience Assessment, User Experience Assessment for Hotel Booking Website.

## 1. Introduction

Hotel booking website is currently in a large number. However, those websites implement relevant procedures: searching, content selecting, checking price, and room booking. Showing website visit statistics, a website <http://www.similarweb.com/> is generally used to view website access statistics. After viewing statistics, it was found that website access statistics of hotel booking websites was different, even though those websites had the same objective which is to provide hotel room booking service, similar target group, alike detail provided, and functions with close affinity. A main observation is that number of users is considerably different and time spent on website is also different. It is hypothesized about causes of different number of website accesses that possibly are website pattern, website content, easiness and difficulty in using, and experience in website using. This is related to research of Aneta Bartuskova and Ondrej Krejcar (2013) stated that aesthetics of website considerably influenced user access to website. In addition, factors concerning usability and content were other important factors. Those factors cause user to select for accessing to more familiar website or effect on different time spent on website. Another research by Idyawati H, Murni Mahmud and Abu Osaman Md Tarp (2010) found that design attributes of website did not definitely conform to usability standard and design concept, therefore user experience was full of difficulty on using until end of procedure. Anyway, users tried to use the website in order to obtain promotional price; they still believed that it was because of their own carelessness and some thought it was due to design attributes leading them to error to make booking. Additionally, a research conducted by Tapanee (2010) was stated that number of links on website, architectural designs, graphics, and fonts all critically affected on usability. From satisfaction survey, it was found that 11-20 favorite links of users on each page and 2 or 3 font sizes were the most favorite for users.

In this study, it aims to assess user experience on prominent hotel booking websites by monitoring good parts of user interface design to respond to searching, selecting content, checking price, and booking procedures. The 3 popular websites in Thailand chosen to study were Agoda.com, Booking.com, and Expedia.co.th. It is expected that good parts of user interface design of each website can be combined to develop a new website in order to create better user experience.

## 2. Criteria and Indicators of User Experience

User Experience or UX is user satisfaction on system which is different from User Interface Design and Usability Design, namely the user is satisfied and has interaction with website (9). There is an actual experience when the product is used and UX attributes like aesthetics is concerned, therefore product design is a part of creating a good experience (2). A goal of UX is user practice and liability (5). Result of UX assessed relating to product usage is happiness and satisfaction on pragmatic goal achievement and liability. As figure 1 shown a research of

Nigel Bevan (2008), it shows indicators of system and good experience depending on product attributes supporting user experience. A column of quality characteristic is overall necessary information and related products will lead to user experience.

Quality	UX	Functionality	User	Learnability	Accessibility	Safety
Product	Aesthetic	Appropriate	Good UI	Learnability	Technical	Safe and
UX	To be effective and efficient					
UX	Stimulation, identification and evocation					
UX: actual	Visceral	Experience of interaction				
Usability ( = performan	Effectiveness and Productivity in use: effective task completion and			Learnability in use: effective	Accessibility in use: effective	Safety in use: occurrence
Measures of UX	Satisfaction in use:					
	Pleasure	Likability and Comfort				Trust

Figure 1 Illustrating Indicators of System and Good Experience (Bevan, 2008)

Satisfaction of user can be assessed by extent that user has pragmatic goal achievement and liability and ISO/IEC CD 25010.2 (7) shows types of indicators.

*Indicators of System*

- Accuracy and Completeness
- System Resources and Instant Usage Instructions
- Satisfaction on Fulfilling User Requirement
- Flexible and Easy-to-Use System

**Indicators of Satisfaction**

- User Satisfaction on Achievement in Pragmatic Goal Awareness and Acceptable Result of Usage Awareness and Usage Effect
- User Satisfaction on Achievement in Goal Awareness of Likability Stimulation
- User Satisfaction on Achievement in Physical Convenience and Active Work

*Indicators of Safety and Risk*

- Simple Safety Measurement

Assessment of user experience on online hotel booking website is categorized into 3 aspects to cohere with ISO/IEC CD 25010.2 (7) as questions as below.

**1. Usability:** Questions regarding usage focus on easiness and difficulty as follows.

Searching

1. Selecting Province Name by Typing
2. Selecting Check-In Date by Typing

3. Selecting Check-In Date on Calendar Provided
4. Selecting Number of Nights to Stay
5. Selecting Number of Guests
6. Ending Procedure by Pressing Enter Button on Keyboard
7. Ending Procedure by Clicking on Search Button

#### Search Result Display

1. Complete Room Detail Displayed
2. Clear Facilities Detail Displayed
3. Complete Expense for Stay Displayed
4. Organized and Easy-to-Read Arrangement Pattern
5. Clear Room Picture Displayed

#### Detail Display

1. Expense Detail in Distinctive Position
2. Clear Room Detail Displayed
3. Easily Selecting to View Other Details
4. Room Picture in Distinctive Position
5. Gadget in Displaying Detail Provided

#### Booking

1. Filling Out User Detail in Easy Way
2. Filling Out Payment Detail in Easy Way
3. Safe Payment Detail
4. Complete Payment Detail Displayed

## 2. **Aesthetics:** Questions regarding aesthetics are as follows.

#### Searching

1. Combo Box for Selecting Province
2. Calendar Pattern
3. Pattern for Selecting Number of Nights to Stay
4. Pattern for Selecting Number of Guests
5. Font Color
6. Background Color
7. Button Style

#### Search Result Display

1. Arrangement Pattern
2. Font Color and Style
3. Picture Display Pattern

#### Detail Display

1. Arrangement Pattern
2. Font Color and Style
3. Picture Display Pattern
4. Additional Function such as zoom-in and zoom-out function for picture when having mouse over on the picture
5. Gadget in Displaying Detail Provided

#### Booking

1. Arrangement Pattern
2. Font Color and Style
3. Picture Display Pattern

### 3. **Content:** Questions focus on completeness of content as follows.

#### Searching

1. Detailed Conditions for Searching

#### Search Result Display

1. Room Detail
2. Facilities Detail
3. Expense Detail

#### Detail Display

1. Room Detail
2. Facilities Detail
3. Expense Detail

#### Booking

1. Explanation on Filling Out Personal Detail
2. Explanation on Filling Out Payment Detail
3. Clear and Easily Understood Expense Detail

### 3. Methodology

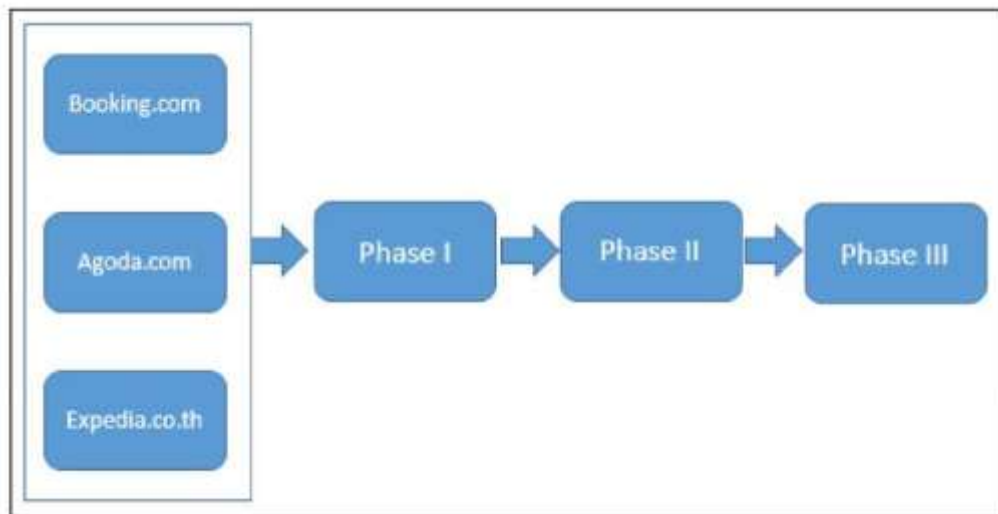


Figure 2 Demonstrating Research Methodology

Research methodology was divided into 3 phases. Each phase was implemented as the following.

**Phase I:** Initially, user accessed to those 3 prominent websites which were Booking.com, Agoda.com, and Expedia.co.th and then followed 4 procedures: searching (P1), search result display (P2), Room Detail Display (P3), and Booking (P4), all including simulation. Then, assessment was executed for user experience by employing questions for 3 aspects in item 2 and comparison between user experiences in each procedure on each website was done in order to select good parts from assessment to develop the new website.

**Phase II:** After selecting, good parts creating good user experience were used to implement new website. Next, unselected sample users in Phase 1 had to use the new website and do the existing assessment of user experience to assess if those good parts combined in the new website could create better user experience.

**Phase III:** Analysis of assessment on user experience by comparing between average values in Phase I and Phase II was made in order to see if the new website could create better user experience.

### 4. Result

Results obtained after comparison between average values in 4 procedures of 3 aspects in 3 websites and their average values calculated were shown in table 1.

Table 1 Assessment of Average Values Comparison between 3 Websites

		Agoda.com	Booking.com	Expedia.co.th	Average
Aesthetics	P1	4.13	4.09	4.00	4.07
	P2	4.11	4.18	3.99	4.09
	P3	4.07	4.14	3.98	4.06
	P4	4.13	4.13	3.96	4.07
Content	P1	3.96	4.11	3.98	4.02
	P2	4.10	4.05	3.95	4.04
	P3	4.11	4.02	3.96	4.03
	P4	4.18	3.94	3.94	4.02
Usability	P1	4.03	4.07	3.90	4.00
	P2	4.03	4.16	3.92	4.03
	P3	3.99	4.25	3.88	4.04
	P4	4.23	4.13	3.96	4.11

From table 1, assessment stated that Agoda.com in the aspect of aesthetics in searching or P1 had average value at 4.13 and booking or P4 with average value at 4.13. Booking.com in the aspect of aesthetics in search result display or P2 had average value at 4.18 and room detail display or P3 with average value at 4.14. For content aspect, Booking.com in searching procedure or P1 had average value at 4.11; Agoda.com in search result display or P2 with average value at 4.10, room detail display or P3 with average value at 4.11, and booking or P4 with average value at 4.18. In aspect of usability, Booking.com in searching or P1 had average value at 4.07, search result display or P2 with average value at 4.16, and room detail display or P3 with average value at 4.25; Agoda.com in booking or P4 had average value at 4.23.

## 5. Website Development and Assessment

After analyzing result, good parts creating good user experience in aspect of usability in procedures of searching or P1, search result display or P2, and room detail display or P3 were mostly obtained from Booking.com. Procedure of booking or P4 was a part of Agoda.com. In aspect of aesthetics, procedure of searching or P1 was obtained from Agoda.com and other procedures of search result display or P2, room detail display or P3, and booking or P4 were mainly parts of Booking.com. For content aspect, all procedures were mainly parts of Agoda.com.

Table 2 Comparison between Average Values from 3 Websites and New Website

		Best Value	New Web
Aesthetics	P1	4.07	3.87
	P2	4.09	4.27
	P3	4.06	4.58
	P4	4.07	4.03
Content	P1	4.02	4.00
	P2	4.04	4.23
	P3	4.03	4.50
	P4	4.02	4.33
Usability	P1	4.00	3.96
	P2	4.03	4.08
	P3	4.04	4.64
	P4	4.11	3.63

After assessing good parts creating good user experience, those parts were used to develop new website and unselected 10 sample users in Phase 1 tried to use the new website. The average values from result analysis were brought to compare with initial average values and it was found that aesthetics aspects in procedures of searching or P1 and booking or P4 had average values of new website less than initial average values. In content aspect, searching procedure or P1 of new website had average values less than initial average values. Also for usability aspect, procedures of searching or P1 and booking or P4 had average values of new website less than initial average values.

## 6. Conclusion

In conclusion, the new website including good parts of each website was able to create better user experience. Unfortunately, not all procedures were completely effective after assessment was executed. In aspects of aesthetics and content, procedure of searching had decreased average value when combining in the new website. From sample user's opinion toward those two aspects, excessive content quantity influenced on decreased aesthetics. For usability aspect, average value of searching procedure decreased; similar to room booking procedure, its average value also decreased due to limitation of study that an actual payment was not completed. Therefore, the user did not use this part to complete an actual booking procedure. After assessment, although some procedures were not able to create better user experience, average values were not significantly



different and they were only a few parts. In contrast, most of them were able to create better user experience. Since data used in assessment are sufficient, those who are interested in this study may increase number of sample group for experiment in the future.

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## Synthesis and structure determination of 2,3,4,6-Tetra-*O*-acetyl- $\alpha/\beta$ -D-glucopyranosyl Thiol

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### Abstract

2,3,4,6-Tetra-*O*-acetyl- $\alpha/\beta$ -D-glucopyranosyl thiol have been known as important intermediates of the synthesis of  $\alpha/\beta$ -glucosinolates (GLs). This study has shown success in the synthesis and structure analysis of 2,3,4,6-Tetra-*O*-acetyl- $\alpha/\beta$ -D-glucopyranosyl thiol by the convenient methods and in high yields.

**Keywords:** Tetra-*O*-acetyl-D-glucopyranosyl thiol, Glucosinolates, Brassica, Thioglucose.

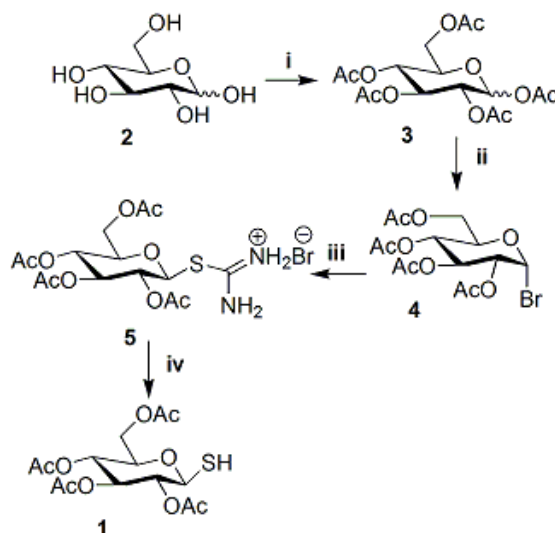
### 1. Introduction

Glucosinolates (GLs) are  $\beta$ -thioglucoside *N*-hydroxysulfates with a side chain (R) and a sulfur-linked  $\beta$ -D-glucopyranose moiety. These are natural compounds, which are found in a large number of *Brassica* species such as cabbage, broccoli and canola<sup>2</sup>. Because of the potential biological activity and medicinal uses<sup>5</sup>, the synthesis and the analysis of structure and bio-activities of GLs have been paid much attention.<sup>11</sup> One of important steps to create GLs is the synthesis of 2,3,4,6-tetra-*O*-acetyl- $\alpha/\beta$ -D-glucopyranosyl thiol. The synthesis of the  $\alpha$  and  $\beta$  thiols have been studied and achieved some important results.<sup>1,3,4,7-9</sup> However, the study to find the most convenient pathway to synthesize the  $\alpha$  and  $\beta$  thiol has not been fully investigated. Thus, here we report the success in the synthesis and structure analysis of 2,3,4,6-tetra-*O*-acetyl- $\alpha/\beta$ -D-glucopyranosyl thiol by effective and convenient methods in high yields.

## 2. Results and Discussion

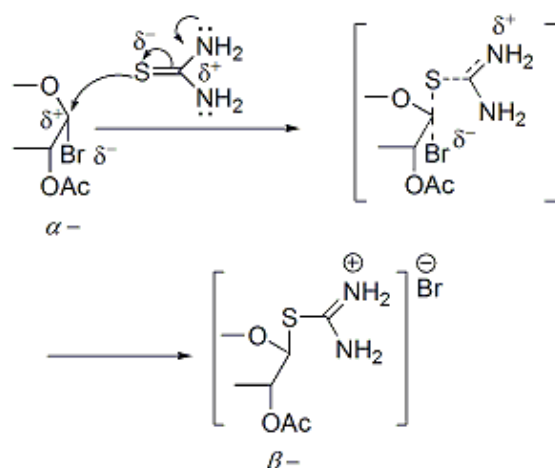
### 2.1. Synthesis of 2,3,4,6-Tetra-O-acetyl- $\beta$ -D-glucopyranosyl Thiol

2,3,4,6-Tetra-O-acetyl- $\beta$ -D-glucopyranosyl thiol **1** was obtained in four steps from D-glucose (Scheme 1).<sup>17,6</sup>



**Scheme 1: Synthesis of thioglucose 1.** Reagents and conditions: i) Ac<sub>2</sub>O, Pyridine, DMAP, 6 h; ii) HBr/HOAc, DCM, 1 h; iii) SC(NH<sub>2</sub>)<sub>2</sub>, acetone, 4Å molecular sieves, reflux, 2.5 h; iv) Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub>, DCM:H<sub>2</sub>O (2:1), 1h.

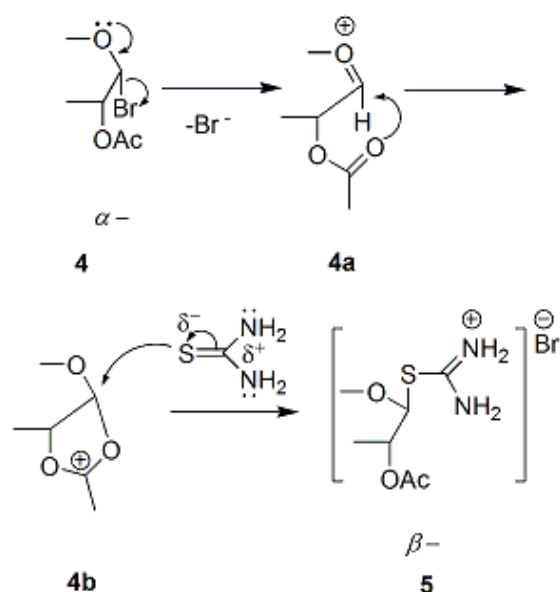
D-Glucose **2** was peracetylated with acetic anhydride in pyridine in the presence of *N,N*-dimethylaminopyridine (DMAP) as catalyst to yield **3**, which was able to undergo selective displacement of the acetate group at the anomeric position to yield, stereospecifically, 1- $\alpha$ -bromo-2,3,4,6-tetra-O-acetyl-D-glucopyranose **4**. The  $\alpha$ -bromide was then treated with thiourea to afford the  $\beta$ -isothiuronium salt **5**, followed by mild hydrolysis with sodium metabisulfite to yield, stereospecifically, 2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl thiol **1** in an excellent yield (78%) from glucose over four steps.



Scheme 2: A mechanism of conversion from  $\alpha$ -bromide **4** to  $\beta$ -isothiuronium salt **5**.

The configuration of the thiol **1** is determined by the mechanism of the reaction in the third step. It is indicated that the  $\beta$ -isothiuronium salt forms following an  $S_N2$ -type reaction involving, exclusively, the nucleophilic S-atom of the thiourea (Scheme 2).<sup>12</sup> This results in the inversion of configuration of the  $\alpha$ -anomer in the reactant to the  $\beta$ -anomer in the product.

However, the reaction can occur by another mechanism (Scheme 3). The carbocation **4a** is formed by the elimination of bromide. Under the influence of neighboring group and anomeric effects, the nucleophilic S-atom of the thiourea can only attack the C-1 carbon of **4b** from the beta face. As a result, the product **5** has the opposite  $\beta$ -configuration.

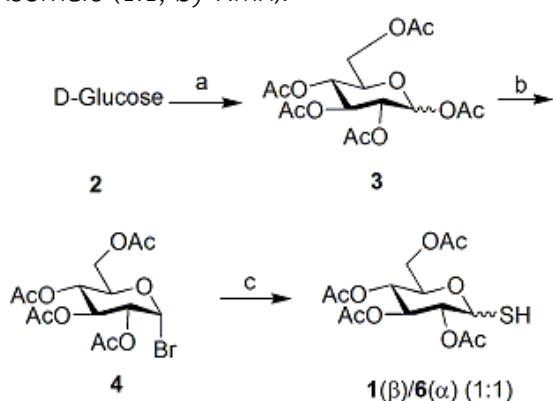


Scheme 3: A mechanism of conversion from  $\alpha$ -bromide **4** to  $\beta$ -isothiuronium salt **5**.

## 2.2. Synthesis of 2,3,4,6-Tetra-*O*-acetyl- $\alpha$ -D-glucopyranosyl thiol

From previous studies, 2,3,4,6-tetra-*O*-acetyl- $\alpha$ -D-glucopyranosyl **6** could be synthesized by three pathways.<sup>1,3,4,7</sup> Dere's group reported the acid-catalyzed reaction of 2,3,4,6-tetra-*O*-acetyl- $\alpha$ -D-glucopyranosyl-trichloroacetimidate with bis-trimethylsilyl sulfide ((Me<sub>3</sub>Si)<sub>2</sub>S) in the presence of trimethylsilyl trifluoromethanesulfonate (TMSOTf) to yield a mixture of  $\alpha/\beta$ -isomers in 65% yield.<sup>4</sup> However, the limitations of this approach were the low  $\alpha$ -isomer yield and difficulties in purification. Therefore, it was decided to synthesize the thiol **6** by Blanc-Muesser's pathway,<sup>1</sup> and Fujihira's pathway.<sup>7-9</sup>

Initially, the thiol **6** was synthesized by Fujihira's pathway (Scheme 4).<sup>7,9</sup> The acetylation of D-glucose was achieved with acetic anhydride in pyridine and catalyzed by DMAP to form **3** in 90% yield. Compound **3** was then treated with HBr/HOAc in DCM to yield the  $\alpha$ -bromide **4**, which was used directly for the next steps. From a previous study,<sup>7</sup> the reaction of **4** with *N,N*-dimethylthioformamide was carried out in the presence of 0.2% water at 100 °C for 5 minutes, and then cooled to rt and methanolysed by MeOH to yield a mixture of **1**( $\beta$ )/**6**( $\alpha$ )-isomers (1:1, by NMR).



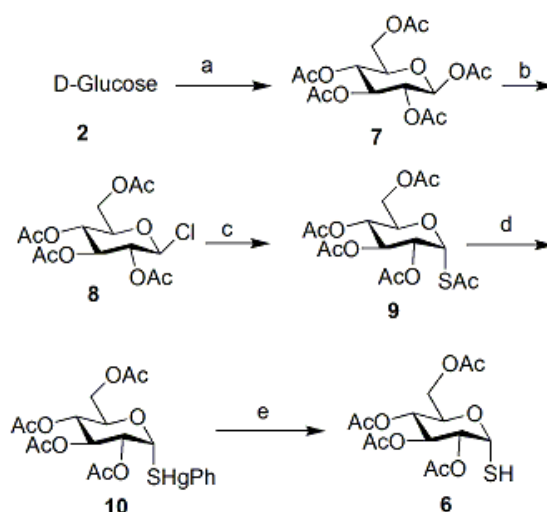
Scheme 4: Synthesis of the thiols **1** and **6** following Fujihira's pathway.<sup>5</sup> Reagents and conditions: a) Ac<sub>2</sub>O, Pyridine, DMAP, 6 h; b) HBr/HOAc, DCM, 1 h; c) *N,N*-dimethylthioformamide, MeOH

However, attempts to purify the  $\alpha$ -isomer from the mixture of  $\alpha/\beta$ -isomers by column chromatography as described in the literature,<sup>7</sup> or by HPLC were unsuccessful. The results suggest that the thiol **6** should be synthesized by more selective pathways.

Therefore, the original method to synthesize the 2,3,4,6-tetra-*O*-acetyl- $\alpha$ -D-glucopyranosyl thiol was used (Blanc-Muesser's pathway, Scheme 5).<sup>1,6</sup>

The 2,3,4,6-tetra-*O*-acetyl- $\beta$ -D-glucopyranose **6** was easily synthesized in 98% yield.<sup>10</sup> The pentaacetate was then used directly in the next step which, involved treatment with phosphorus pentachloride in the presence of BF<sub>3</sub>.Et<sub>2</sub>O in DCM in an argon atmosphere at rt

to yield  $\beta$ -glucopyranosyl chloride **7** in 90% yield. It was found that the chloride was not stable in the presence of silica gel, thus purification by re-crystallization from diethyl ether/hexane was employed. The *S*-acetylation, which employed treatment with potassium thioacetate in DMPU in an atmosphere of argon for around 3 days, was not easy because of the low yield and side products.<sup>1</sup> Thus, the reaction temperature was controlled under 0-5 °C to reduce side products and improve the yield. After work-up and purification by silica gel column chromatography eluting with hexane/ethyl acetate, the compound **8** was obtained in 63% yield. Compound **8** was then reacted with phenylmercuric (II) acetate in absolute EtOH for 2 h at reflux temperature to yield the phenylmercury (II) thio derivative **9** in 51% yield. The thiol **6** was obtained in 92% yield, at the last step, by bubbling hydrogen sulfide into a solution of **9** in EtOH at 60 °C. As a result, the compound **6** was formed stereospecifically in 26% overall yield over 5 steps.



**Scheme 5: Synthesis of 6 following the Blanc-Muesser's pathway.** Reagents and conditions: a)  $\text{Ac}_2\text{O}$ , NaOAc, reflux, 20 min; b)  $\text{PCl}_5$ ,  $\text{BF}_3 \cdot \text{Et}_2\text{O}$ , DCM, 10 min; c) KSac, DMPU, 0-5 °C, 3 d; d)  $\text{AcOHgPh}$ , EtOH, reflux, 2 h; e)  $\text{H}_2\text{S}$ , EtOH, 50-60 °C, 30 min;

The NMR, optical rotation and melting point data confirmed the difference between the  $\beta$ - and  $\alpha$ -isomers (Figure 1). The  $^1\text{H-NMR}$  data of H1 and SH signals in the  $\beta$ -thiol **1** are  $\delta$  4.51 (t,  $J_{1,2} = J_{1,\text{SH}} = 9.9$  Hz) and 2.29 (d,  $J_{1,\text{SH}} = 9.9$  Hz),<sup>13</sup> respectively while those of the  $\alpha$ -thiol **6** are  $\delta$  5.82 (t,  $J_{1,2} = J_{1,\text{SH}} = 5.7$  Hz) and 1.90 (d,  $J_{1,\text{SH}} = 5.7$  Hz), respectively.

Furthermore, the  $[\alpha]_{\text{D}}^{20}$  of  $\alpha$ -thiol **6** is +169.5 ( $c = 1.0$ ,  $\text{CHCl}_3$ ), whereas that of the  $\beta$ -thiol is +10.5 ( $c = 1.0$ ,  $\text{CHCl}_3$ ). Moreover, the melting point of the  $\alpha$ -thiol is 94-95 °C, compared with 114-115 °C for the  $\beta$ -thiol.<sup>13</sup>

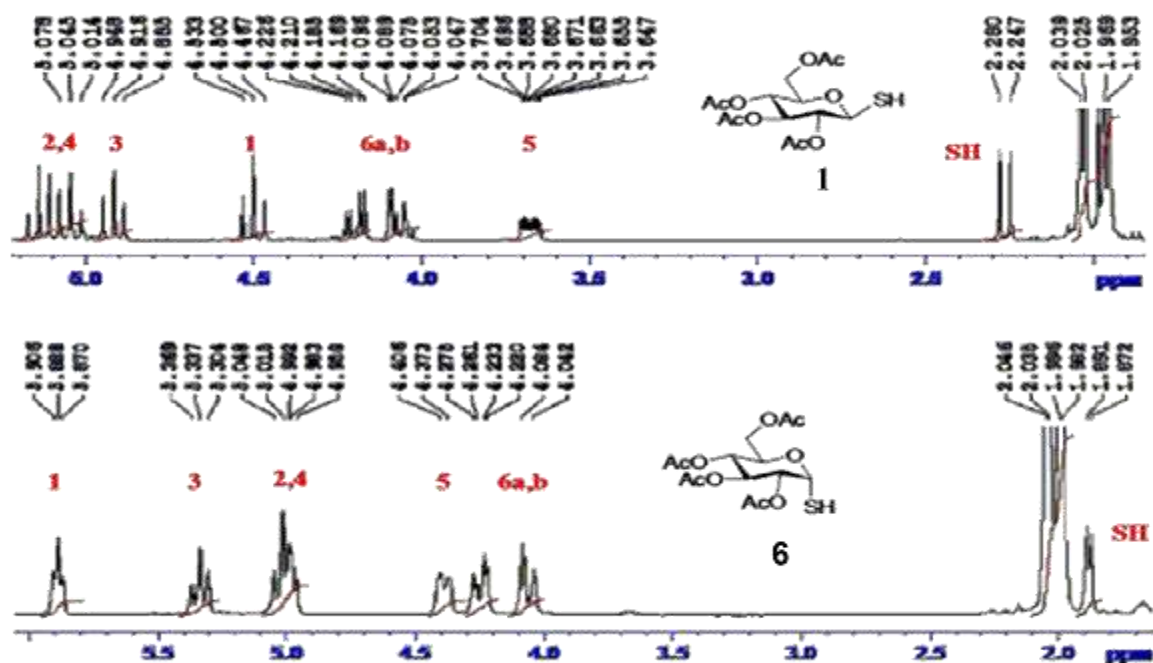


Figure 1: The <sup>1</sup>H-NMR spectra of the thiols 1 and 6.

### 3. Conclusion

Three important pathways to synthesize 2,3,4,6-tetra-*O*-acetyl- $\alpha$ -D-glucopyranosyl thiol have been investigated. The study has shown that the Blanc-Muesser's pathway is the most convenient method to create the  $\alpha$ -thiol in a high overall yield. The results have also shown the differentiation between  $\alpha$  and  $\beta$ -tetra-*O*-acetyl-D-glucopyranosyl thiol via <sup>1</sup>H-NMR. The 2,3,4,6-tetra-*O*-acetyl- $\alpha/\beta$ -D-glucopyranosyl thiol have used to synthesized  $\alpha/\beta$ -GLs and obtained the positive results.<sup>14-16</sup>

### 4. Experimental

#### 4.1. General procedures.

Melting points (mp) were recorded on a Reichert 'thermopan' hot stage apparatus and are uncorrected. Optical rotations were measured at the stated temperatures in the stated solvent on a Perkin Elmer 141 polarimeter at the sodium d-line (589 nm); [ $\alpha$ ]<sub>D</sub> values are given in 10<sup>-1</sup> deg cm<sup>2</sup> g<sup>-1</sup>. Infrared spectra ( $\nu_{\max}$ ) were recorded on a Bruker Vector 22 Fourier-Transform Spectrometer or a Perkin Elmer 1720-X FT-IR Spectrometer. Samples were analyzed using KBr Diffuse Reflectance Fourier Transform (DRIFT) spectra (for solids) or as thin films on NaCl plates (for liquids/oils). Unless otherwise specified, proton (<sup>1</sup>H) and carbon (<sup>13</sup>C) NMR spectra were recorded on a Bruker Avance 300 MHz spectrometer operating at 300 MHz for proton and 75 MHz for carbon nuclei. Chemical shifts are recorded as  $\delta$  values in parts per million (ppm). Spectra were acquired in deuterated chloroform (CDCl<sub>3</sub>) at 300 K unless

otherwise stated. For  $^1\text{H}$  NMR spectra were recorded in  $\text{CDCl}_3$  and the peak due to residual  $\text{CHCl}_3$  ( $\delta_{\text{H}}$  7.24) was used as the internal reference, while the central peak ( $\delta_{\text{C}}$  77.0) of the  $\text{CDCl}_3$  triplet was used as the reference for proton-decoupled  $^{13}\text{C}$  NMR spectra. Low-resolution mass spectra were measured on a Brüker Daltonics Esquire 6000 mass spectrometer at 300 °C and scan rate of 5500  $m/z$ /second using either water/methanol/acetic acid in a ratio of 0/99/1 or 50/50/1 as a mobile phase. Accurate mass measurement was by mass spectrometry utilising a LTQ Orbitrap Velos instrument (Thermo Scientific, Waltham, MA, USA; Bremen, Germany) with a heated electrospray ionisation (HESI) source. The mass spectrometer was operated with full scan (50-1000 amu) in positive or negative FT mode (at a resolution of 100,000). The analyte was dissolved in water/methanol/acetic acid in a ratio of 0/99/1 or 50/50/1 and infused via syringe pump at a rate of 5  $\mu\text{L}/\text{min}$ . The heated capillary was maintained at 320 °C with a source heater temperature of 350 °C and the sheath, auxiliary and sweep gases were at 40, 15 and 8 units, respectively. Source voltage was set to 4.2 kV. Solvents were dried over standard drying agents and freshly distilled before use. Ethyl acetate and hexane used for chromatography were distilled prior to use. All solvents were purified by distillation. Reactions were monitored by TLC on silica gel 60 F254 plates with detection by UV fluorescence or charring with a basic potassium permanganate stain. Flash column chromatography was performed on silica gel 60 particle size 0.040-0.063  $\mu\text{m}$  (230–400 mesh).

#### 4.2.2,3,4,6-Tetra-O-acetyl- $\beta$ -D-glucopyranosyl thiol (1)

To a solution of D-glucose **2** (3.00 g, 16.6 mmol) in dry pyridine (33 mL) at 0 °C under a nitrogen atmosphere was slowly added acetic anhydride (31.5 mL, 333 mmol). The reaction mixture was stirred at 0 °C for 1 h before a catalytic amount of DMAP (200 mg, 1.67 mmol) was added. As the reaction mixture was allowed to reach rt, it becomes slightly exothermic. After 6 h, the clear yellow mixture was slowly poured into rapidly stirred ice-water (125 mL), giving a sticky solid. After EtOAc extraction (3  $\times$  45 mL), evaporation of the solvent and co-evaporations with dry toluene (3  $\times$  20 mL), peracetylated glucose **3** was obtained as a yellow solid (5.84 g, 90%). A solution of pentaacetyl-D-glucopyranose **3** (2.00 g, 5.1 mmol) in DCM (20 mL) was stirred in an ice bath while HBr/HOAc (6 mL, 45 wt%) was added drop-wise. After an hour, the solution was washed with ice-water and cold saturated  $\text{NaHCO}_3$  solution, dried over  $\text{MgSO}_4$  and concentrated to leave the glucosyl bromide **4** as a pale yellow oil (1.83 g). The oil **4** was dissolved in dry acetone (20 mL), and the solution was added to freshly activated 4Å molecular sieves (2 g) and thiourea (500 mg, 6.6 mmol). The mixture was maintained at reflux temperature (60 °C) under a nitrogen atmosphere for 2.5 h, cooled and filtered through Celite. Solvent removal and trituration of the syrupy residue with hexane (3



× 20 mL) gave the isothiuronium bromide **5** as a colorless amorphous powder. The crude product was dissolved in DCM (20 mL), a solution of Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub> (2.00 g) in water (20 mL) was added, and the mixture was maintained at reflux under a nitrogen atmosphere for an hour. After cooling, the organic layer was separated and washed with water, saturated NaCl solution, dried over Na<sub>2</sub>SO<sub>4</sub>, filtered and concentrated under reduced pressure to give a residue. Pure **1** was obtained by flash column chromatography on silica gel eluting with 0-3% MeOH/DCM as a solid (1.60 g, 86%). R<sub>f</sub> = 0.3 in 50% hexane/EtOAc; mp = 114–115 °C (Lit. 113–114 °C)<sup>7</sup>; [α]<sub>D</sub><sup>20</sup> = +10.5 (c = 1.0, CHCl<sub>3</sub>) (Lit. +11)<sup>7</sup>; <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) (300 K) δ 5.02–5.18 (m, 2H, H3 and H4), 4.93 (dd, J<sub>1,2</sub> = 9.6 Hz, J<sub>2,3</sub> = 9.3 Hz, 1H, H2), 4.51 (dd, J<sub>1,2</sub> = 9.6 Hz, J<sub>1,SH</sub> = 9.9 Hz, 1H, H1), 4.23 (dd, J<sub>5,6b</sub> = 4.8 Hz, J<sub>6a,6b</sub> = 12.3 Hz, 1H, H6b), 4.11 (dd, J<sub>5,6a</sub> = 2.4 Hz, J<sub>6a,6b</sub> = 12.3 Hz, 1H, H6a), 3.66–3.17 (m, 1H, H5), 2.29 (d, J<sub>1,SH</sub> = 9.9 Hz, 1H, SH), 1.96–2.08 (4 × br s, 12H, CH<sub>3</sub>COO); <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) (300 K) δ 170.2, 169.7, 169.2, 168.9 (4 × CH<sub>3</sub>COO), 87.3 (C-1), 75.9 (C-3), 73.2 (C-2, C-3), 67.7 (C-4), 61.6 (C-6), 20.6, 20.3(2), 20.2 (4 × CH<sub>3</sub>COO); HRMS (ESI) *m/z* for C<sub>14</sub>H<sub>19</sub>O<sub>9</sub>S [M-H]<sup>-</sup>, calcd 363.0755, found 363.0746.

#### 4.3.2,3,4,6-Tetra-O-acetyl- $\alpha$ -D-glucopyranosyl thiol (**6**).

##### 4.3.1. Fujihira's pathway<sup>7</sup>

To a solution of D-glucose **2** (3.00 g, 16.6 mmol) in dry pyridine (33 mL) at 0 °C under a nitrogen atmosphere was slowly added acetic anhydride (31.5 mL, 333 mmol). The reaction mixture was stirred at 0 °C for 1 h before a catalytic amount of DMAP (200 mg, 1.67 mmol) was added. As the reaction mixture was allowed to reach rt, it became slightly exothermic. After 6 h, the clear yellow mixture was slowly poured into rapidly stirred ice-water (125 mL), giving a sticky solid. After EtOAc extraction (3 × 45 mL), evaporation of the solvent and co-evaporations with dry toluene (3 × 20 mL), peracetylated glucose was obtained as a yellow solid (5.84 g, 90%). A solution of pentaacetyl-D-glucopyranose **3** (1.12 g, 2.9 mmol) in DCM (20 mL) was stirred in an ice bath while HBr/HOAc (6 mL, 45 wt%) was added drop-wise. After an hour, the solution was washed with ice-water and cold saturated NaHCO<sub>3</sub> solution, dried over MgSO<sub>4</sub> and concentrated to leave the glucosyl bromide **4** as a pale yellow oil (1.03 g). The freshly prepared **4** (1.03 g, 2.5 mmol) and *N,N*-dimethylthioformamide (230 mg, 2.6 mmol) in the presence of 0.2 wt% H<sub>2</sub>O were stirred under an argon stream at 100 °C for 5 minutes. Dry MeOH (20 mL) was added after cooling to rt, and the mixture was stirred for about 10 minutes (until the solid dissolved). The solvent was evaporated under reduced pressure, and the precipitated product was separated and purified by flash column chromatography on silica gel eluting with 66% hexane/EtOAc and then hexane:DCM:MeOH

(25:24:1). The products were 2,3,4,6-tetra-*O*-acetyl- $\beta/\alpha$ -D-glucopyranosyl thiols (650 mg, 72%), ratio  $\beta$  (6): $\alpha$  (1) = 1:1 (by NMR) as a colourless syrup.

#### 4.3.2. Blanc-Muesser's pathway<sup>1</sup>

NaOAc (1.58 g, 19.27 mmol) was suspended in Ac<sub>2</sub>O (21 mL, 222 mol) and the resulting mixture was heated to reflux for 20 min. The heating bath was removed and D-glucose **2** (3.17 g, 17.55 mmol) was added in small portions, keeping the reaction mixture just at reflux temperature. Subsequently, the mixture was stirred for an additional 15 min under heating and, after cooling to rt, it was poured onto crushed ice (80 mL). After keeping mixture in the refrigerator at 4 °C for 3 h, the resulting precipitate was filtered and washed with ice-water (125 mL) and cold EtOH (10 mL). After drying under reduced pressure, the crude product was recrystallised from EtOH (20 mL) to yield 1,2,3,4,6-penta-*O*-acetyl- $\beta$ -D-glucopyranoside **7** (6.71 g, 98%). To pentaacetyl- $\beta$ -D-glucopyranose **7** (6.71 g, 17.2 mmol) and phosphorus pentachloride (3.89 g, 18.92 mmol) in DCM (50 mL) in an atmosphere of argon was added BF<sub>3</sub>·Et<sub>2</sub>O (25  $\mu$ L). The reaction was stirring for 30 minutes at rt in an atmosphere of argon (monitoring by TLC), and then was partitioned between DCM (50 mL) and H<sub>2</sub>O (100 mL). The aqueous phase was re-extracted with DCM (2 × 40 mL). The combined organics were washed with sodium hydrogen carbonate (100 mL), brine (100 mL), dried over MgSO<sub>4</sub>, filtered and concentrated *in vacuo*. The resulting solid was co-evaporated with toluene, triturated under cyclohexane and crystallized from diethyl ether/petrol to afford 2,3,4,6-tetra-*O*-acetyl- $\beta$ -D-glucopyranosyl chloride **8** (5.67 g, 90 %) as a white crystalline solid. To a solution of 2,3,4,6-tetra-*O*-acetyl- $\beta$ -D-glucopyranosyl chloride **8** (5.67 g, 15.48 mmol) in DMPU (15 mL) at 0 °C under an atmosphere of argon was added potassium thioacetate (2.32 g, 17.05 mmol). The reaction mixture was stirring for 3 days under an atmosphere of argon at 0 °C (monitoring by TLC) and then was partitioned between ethyl acetate (50 mL) and H<sub>2</sub>O (50 mL). After extraction with EtOAc (3 × 50 mL), the organic layers were washed with brine, dried over MgSO<sub>4</sub>, filtered and concentrated *in vacuo*. The resulting residue was purified by silica gel chromatography eluting with 70% hexane/EtOAc to afford 1-*S*-acetyl-2,3,4,6-tetra-*O*-acetyl-1-thio- $\alpha$ -D-glucopyranoside **9** (3.96 g, 63%) as a peach-colored solid. A mixture of **9** (3.96 g, 9.76 mmol) and phenylmercuric acetate (3.48 g, 10.24 mmol) in absolute ethanol (40 mL) was boiled under reflux for 2 h. The resulting black precipitate was filtered off (Celite). The filtrate was evaporated to dryness on a rotary evaporator and the resulting syrup was purified by column chromatography eluting with 60% hexane/EtOAc to yield **10** (3.19 g, 51%) as a solid foam. Hydrogen sulfide was bubbled for 20 minutes into a solution of 2,3,4,6-tetra-*O*-acetyl-1-phenylmercury(II)-thio- $\alpha$ -D-glucopyranose **10** (3.19 g, 4.98 mmol) in EtOH at 55 °C.

The resulting precipitate was removed by filtration and the filtrate was purified by column chromatography eluting with 60% hexane/EtOAc. The compound **6** was obtained as a white solid (1.67 g, 92% (26% overall yield)).  $R_f = 0.45$  in 60% hexane/EtOAc; mp = 94–95 °C (Lit. 92–93 °C)<sup>3</sup>;  $[\alpha]_D^{20} = +169.5$  ( $c = 1.0$ , CHCl<sub>3</sub>), (Lit. +168)<sup>3</sup>; <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) (300 K)  $\delta$  5.82 (t,  $J_{1,2} = J_{1,SH} = 5.7$  Hz, 1H, H1), 5.27 (t,  $J_{3,4} = J_{2,3} = 9.9$  Hz, 1H, H3), 4.97 (dd,  $J_{3,4} = 9.9$  Hz,  $J_{4,5} = 10.2$  Hz, 1H, H4), 4.92 (dd,  $J_{1,2} = 5.7$  Hz,  $J_{2,3} = 9.9$  Hz, 1H, H2), 4.35–4.29 (m, 1H, H5), 4.22 (dd,  $J_{5,6b} = 4.2$  Hz,  $J_{6a,6b} = 12.3$  Hz, 1H, H6b), 4.01 (dd,  $J_{5,6a} = 2.1$  Hz,  $J_{6a,6b} = 12.3$  Hz, 1H, H6a), 1.97–1.93 (4 × br s, 12H, 4 × CH<sub>3</sub>COO), 1.90 (d,  $J_{1,SH} = 5.7$  Hz, 1H, SH); <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) (300 K)  $\delta$  170.2, 169.8, 169.2, 168.9 (4 × CH<sub>3</sub>COO), 76.7 (C-1), 69.8 (C-5), 69.4 (C-2), 67.9 (C-3, C-4), 61.6 (C-6), 20.4, 20.2(2), 20.1 (4 × CH<sub>3</sub>COO); HRMS (ESI)  $m/z$  for C<sub>14</sub>H<sub>20</sub>NaO<sub>9</sub>S [M+Na]<sup>+</sup>, calcd 387.0726, found 387.0721.

### Abbreviations

DCM, dichloromethane; DMAP, *N,N*-dimethylaminopyridine; DME, 1,2-dimethoxyethane; DMF, *N,N*-dimethylformamide; DMPU, 1,3-Dimethyl-3,4,5,6-tetrahydro-2(1*H*)-pyrimidinone; ESI, electrospray ionization; FTMS, Fourier transform mass spectrometry; GLs, Glucosinolates; HESI, heated electrospray ionization; HRMS, high resolution mass spectrometry; IR, infra-red; MS, mass spectrometry; NMR, nuclear magnetic resonance; rt, room temperature; THF, tetrahydrofuran; TLC, thin layer chromatography; UV, ultra-violet.

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## Watering Control System for Agriculture on Android Smartphones Case Study : Orchid Farms in Samut Sakhon

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### Abstract

A natural water source is one of the significant factors for cropping. Farmers whose plantations are far from the government plumbing and irrigation system must seek out and store natural water for their own use. In order to access this, most farmers build their own artesian wells to supply for not only their consumption but also their agriculture. However, one of the problems is the level of artesian water in the wells is quite low and limited. They have to confine the amount of water usage especially, watering in their farms according to the quantity of water pumped from the artesian wells. Thus this research proposes the development of watering control system for agriculture on android smartphones and microcontrollers for solving this problem. Generally, a mobile phone on an android operating system is rather cheap, easy to buy and most popularly used for many people including farmers. This research demonstrated that the watering control system on android smartphones could be used to help and facilitate farmers to control the amount of water pumping and watering in their farms. The system together with application software were user friendly, particularly, how to automatically set time and schedule. In addition, an evaluation of system performance from the two selective groups of expert users and target farmers were carried out in this study. The research results showed that the rating scale of the performance of the watering control system on android smartphones was very good and efficient.

**Keywords:** Smartphone, Android, Watering control, Microcontroller.

### 1. Introduction

Fresh water is one of the main factors that have a high impact for cultivation besides of soil and sunlight. Farmers utilize fresh water from natural sources such as rivers, canals and reservoirs for both agriculture and consumption due to the place they live are far away from the water supply system. Some farmers build their own artesian wells in their land for

ease of use and also in case of drought, water poisoning and pollution in the natural water sources on the ground.

Samut Sakhon is one of the provinces, which is in the central part of Thailand and also located near the Thai Gulf. Farmers in Samut Sakhon grow various types of fruits and flowers including orchids. Nonetheless, watering in the orchid farms are unlike other crop farms because orchids prefer fresh water whereas natural water sources in this area are often mixed with the sea water and causing a problem for orchid farms. Thus one way to access fresh water, most farmers plump water from their own artesian wells. By the way, the level of artesian water in the wells is quite low and limited. Farmers have to confine the amount of water usage especially, watering in their farms due to the quantity of water pumped from the artesian wells.

Therefore, this research proposes the development of watering control system for agriculture on android smartphones and microcontrollers for solving the problem above. Generally, a mobile phone on an android operating system is rather cheap, easy to buy and most popularly used for many people including farmers. Moreover, this research also responds to the policy of the vision of using information and communications technology. Thailand has set the policy of information and communications technology during the period of B.E. 2554–2563 (National ICT Policy Framework 2011-2020: ICT 2020), for encouraging people to use ICT and get the knowledge and wisdom (ICT Ministry, 2011), including the Eleventh National Economic and Social Development Plan B.E. 2555 – 2559 (Office of the National Economic and Social Development Council, 2011), that focus on the development of the quality of Thai people and society, as well as create economic opportunities in knowledge-based innovation and creativity on the basis of production and consumption that are friendly to the environment and necessary for living in the 21st century.

## **2. Method**

The processes for development of the watering control system for agriculture on android smartphones; case study orchid farms at Nong Nok Kai in Samut Sakhon are as follows.

- Arranging the meeting for making an understanding about participating in this research and workshops.
- Analyzing the participation of local people, local government and the private sector in the area.
- Creating a framework of the watering control system on android smartphones for orchid farms.
- Analyzing and designing all the work processes of the system.

- Creating the circuit devices controlled by a microcontroller and a relay switch connecting to the wireless router.
- Developing the application software on android operating system running on smartphones or tablets.
- Testing the usability, particularly, time setting and schedule, and the performance of the system.
- Evaluating the performance of the system by the two selective groups of expert users and target farmers.
- Producing the user manuals for the watering control system for agriculture on android smartphones.
- Disseminating and training to the local communities and participated organizations.

### 3. Result

The evaluation of the system performance were collected from the questionnaires that consisted of 4 parts; functional requirement, system functionality, usability and security. Firstly, a part of functional requirement is about how the system is accurate and efficient meets the needs of users such as the ability to control the on - off power switch on a smartphone, the ability to control the time setting and schedule, and the ability to monitor the status of work. Secondly, a part of system functionality is about how the system is accurate and efficient in its functionality, for instance, the accuracy of transmission data and commands between devices, the accuracy of recording or editing data on smartphones and the accuracy of work under a preset time. Thirdly, a part of usability is about how the system is capable of use e.g. a processing speed, an ease of use and the layout of the screen display. Finally, a part of security is about how safe to access the system, for example, login account, wireless network authentication and user authorization. In order to analyze the performance of this system, the data were collected from the expert users and farmers. The results of the evaluation of the system performance have been calculated with a statistical method as shown in table 1.

Evaluation	Mean ( $\bar{x}$ )	S.D.
Functional Requirement	4.55	0.65
System Functionality	4.52	0.45
Usability	4.68	0.63
Security	4.51	0.56
Average	4.57	0.57

### Table 1 Evaluation of the system performance

Noticeably, the mean values of all four parts of the system performance are over 4.50 as well as the average value of all means. According to the Likert assessment, there are five levels measurement for both of quantitative and qualitative for rating scale. As a result, it can be stated that rating scale of overall and every parts of the system performance are very good (4.51-5.00).

#### 4. Conclusion

The research results showed that the rating scale of the performance of the watering control system for agriculture on android smartphones was very good and efficient with overall mean ( $\bar{x}$ ) 4.57 and standard deviation (S.D.) 0.57.

#### 5. Discussion

This study is a prototype system that can be applied to other plants and can also be adapted to make the system more efficient. Furthermore, it can be modified the system to connect to the internet via mobile networks on 3G or 4G.

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## Effects of Cyanobacteria *Nostoc calcicola* extract on lifetime and fecundity of cowpea aphid (*Aphis craccivora* Koch)

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### Abstract

The main objective of this work was to study the influences of strain *Nostoc calcicola* HN9 separately collected in log phase and death phase on lifetime and fecundity of cowpea aphid (*Aphis craccivora* Koch) rearing on soybean plant [*Glycine max* (L.) Merr.]. Except for extract of 0.01% *N. calcicola* in log phase, others formulae of cyanobacterial concentrations significantly reduced the quality of reproduction and shortened lifetime of *A. craccivora*. *N. calcicola* extract was likely to affect directly to herbivores via the bioactive substances that repel cowpea aphid through toxicity or by reducing infestation. Parallel the extract also stimulated plant growth, raised quality of the physiological processes, therefore, indirectly improved the soybean defensive mechanisms against cowpea aphid.

**Keywords:** Cowpea aphid, *Aphis craccivora*, Cyanobacteria, *Nostoc calcicola*, lifetime, fecundity.

### 1. Introduction

Cowpea aphid (*Aphis craccivora* Koch) is polyphagous, but it seems to have a preference to feed on members of the Fabaceae family (Capinera, 2001). When feeding, *A. craccivora* directly causes damage to plants by stunting and distorting growth or transmitting a number of viruses (Sorensen, 2003). Over 30 viruses are transmitted in the non-circulative or stylet-borne manner, in which aphid probes the epidermis of infected plants with its piercing-sucking mouthparts and the viral capsules attach to the anterior part of the alimentary tract of the aphid. Parallel, aphid stylets penetrate through cells by symplast puncture and cause wounding to plant tissues (Tjallingii and Hogen Esch, 1993).

In the four-phase static culture, Cyanobacteria in logarithm phase (log phase) has been known to produce a great number of bioactive compounds such as hormones, enzymes, antifungal, antibacterial and antiviral substances, etc... Cyanobacteria die in the

death phase, and their biomass often contains several toxic decomposing productions such as ethanol, organic acids... Those compounds raise plant growth and productivity as well as stimulate plant defense system (Molina et al., 2003) or exhibit various biological inhibitory effects which are cytotoxic or function as bio-control agents to insect herbivores (Etchegaray et al., 2004; Berry et al., 2008). Cyanobacteria not only contributed to improve growth of the healthy crops but also suppressed insect populations below the economic injury level. It is necessary to sufficiently study and reliably confirm the important role of Cyanobacteria as a safer pest control solution and expand its application in agriculture. The aim of study is to exam the different effects of cyanobacteria *Nostoc calcicola* extract, whose biomass collected in log phase and death phase, to lifetime and fecundity of cowpea aphid (*A. craccivora*), therefore, we can suggest a solution of using cyanobacteria as a natural aphid control in soybean [*Glycine max* (L.) Merr.] production.

## 2. Materials and Methods

### 2.1. Materials

#### 2.1.1. Aphid

The aphid species is cowpea aphid (*Aphis craccivora* Koch), which is cultured and supported by Department of Applied Entomology (Vietnam Academy of Science and Technology). Virus free individuals reared on host, *Glycine max* (L.) Merr. in the phytotron with controlled environmental factors were used for bioassay.

#### 2.1.2. Plant

Experiments were carried out on seedlings of soybean [*Glycine max* (L.) Merr. “Nam Dan”] in V3 stage (fully developed leaf at second trifoliate node, third trifoliate leaf unrolled). Soybean seeds were provided by Nghe An seed center (Vietnam).

## 2.2. Cyanobacteria culture and extraction

The cyanobacterium strain, *Nostoc calcicola* HN9 (voucher specimen is deposited at herbarium of the microbiology laboratory, Faculty of Biology, Vinh University), was collected from rice field in Hung Nguyen district (Nghe An province, Vietnam) and isolated by the streak plate method. *Nostoc* cells were cultured in BG11 medium, pH 6.5 at ambient temperature ( $32 \pm 3^\circ\text{C}$ ), under daylight fluorescent lamps, light period of 14 light/10 dark.

The cyanobacteria biomass were harvested in the log phase (15 days after culture) and death phase (35 days after culture) and then centrifuged at 5.000xg for 20 min and subsequently dried at 50°C for 72 h. The dried cells were ground to powder and extracted with 80% methanol for 24 hours. The solution was centrifuged by 10.000xg in 15 min to collect supernatant. The residue was extracted twice and the supernatant was combined

with the first one. The supernatant was evaporated in a rotary evaporator to obtain a crude brown gum.

### 2.3. Experiment

The cyanobacterial gum was dissolved in water containing 0.1% dimethyl sulfoxide (DMSO) at 0.01%, 0.03% and 0.05%. The water containing 0.1% DMSO was used as a control.

Soybean seeds were surface-sterilized by HgCl<sub>2</sub> 0.01% 10 minutes and then imbibition in the incubator at 22-23°C for 48 hours. Germinating seeds were cultured in 20-cm-diameter plastic pots containing Hoagland medium placed in the phytotron with temperature of 23-25°C, humidity related 70-75%, light intensity of 110-130  $\mu\text{M photons.m}^{-2}.\text{s}^{-1}$  and light period 14 light /10 dark hours. As soybean cv. "Nam Dan" grew to V3 stage, these solutions were separately sprayed in leaves of 30 plants. After spraying the cyanobacterial extract 24 hours, the aphid-treated experiments were carried out. Each soybean plant was treated by 20 wingless females of *A. craccivora*. Aphid individuals were carefully transferred to soybean leaves with a fine paintbrush. All variants were separately put in glass boxes (50cm × 50cm × 50cm) covered by nylon gauze and placed in the phytotron. The environmental factors such as temperature, relative humidity, light intensity and period were closely controlled in whole the experimental time.

### 2.4. Assessment

The parameters assessed in bioassay were pre-reproduction, reproduction, post-reproduction, longevity and fecundity of *A. craccivora*.

- Pre-reproduction was the length of 4-instar stages of cowpea aphid.
- Reproduction was a period of time by which a female adult can give birth to nymphs.
- Post-reproduction was the lifetime of a female adult after having birth to die.
- Longevity was lifetime of each individual: from stage of 1<sup>st</sup> instars to death.
- Fecundity was calculated as number of nymphs born by each female adult.

### 2.5. Data analysis

All experiments were performed in three replicates. Significance tests and comparing treatments with control for each experiment were evaluated by a one-way Analysis of Variance (ANOVA) at the 5% level. Data shown in the tables are means and standard errors (SE) for each variant.

### 3. Results

#### 3.1. Effects of *Nostoc calcicola* on lifetime of *Aphis craccivora*

In pro-reproduction, the first stage of *A. craccivora* life, treating by *N. calcicola* in log phase lasted this period time (table 1). The most effect recorded in the formulae of 0.05% extract of cyanobacteria collected in the log phase was 7.50 days, having by 119.05% longer than control (6.30 days). Contrary, *N. calcicola* in death phase caused to shorten the pro-reproductive stage. The level of reduced time was correlated with concentrations of the cyanobacterial extract. The shortest time was 3.65 days obtained in the formulae of 0.05%, having by 57.94% in comparing with control. Only extract of 0.01% *N. calcicola* in log phase did not showed the different from control.

**Table 1. Effects of *Nostoc calcicola* on lifetime of *Aphis craccivora* on *Glycine max*.**

Data are expressed by mean±SE of the three different replicates. In each column, if the symbol letters a, b, c... are similar, there is no statistical difference at the  $p < 0.05$  level.

Parameters Formulae		Pro- reproduction (days)	Reproduction (days)	Post- reproduction (days)	Lifetime (days)
Control		6.30 ± 0.48 <sup>b</sup>	15.30 ± 1.95 <sup>a</sup>	3.80 ± 0.94 <sup>a</sup>	25.40 ± 1.86 <sup>a</sup>
<i>N.</i> <i>calcicola</i> in log phase	0.01%	6.57 ± 0.21 <sup>b</sup>	15.00 ± 2.79 <sup>a</sup>	2.69 ± 1.07 <sup>b</sup>	24.26 ± 0.84 <sup>a</sup>
	0.03%	7.20 ± 0.92 <sup>a</sup>	8.40 ± 0.66 <sup>b</sup>	2.68 ± 1.35 <sup>b</sup>	18.28 ± 1.51 <sup>b</sup>
	0.05%	7.50 ± 0.75 <sup>a</sup>	8.33 ± 1.77 <sup>b</sup>	2.47 ± 0.71 <sup>b</sup>	18.30 ± 1.49 <sup>b</sup>
<i>N.</i> <i>calcicola</i> in death phase	0.01%	5.26 ± 0.17 <sup>c</sup>	6.42 ± 0.82 <sup>c</sup>	1.52 ± 0.15 <sup>c</sup>	13.20 ± 0.73 <sup>c</sup>
	0.03%	5.37 ± 0.89 <sup>c</sup>	6.03 ± 0.19 <sup>d</sup>	1.63 ± 0.08 <sup>c</sup>	11.42 ± 1.39 <sup>c</sup>
	0.05%	3.65 ± 0.32 <sup>d</sup>	5.21 ± 0.41 <sup>e</sup>	1.19 ± 0.12 <sup>d</sup>	10.05 ± 1.12 <sup>c</sup>

Lasting or shortening the pro-reproductive stage would negatively affect to reproduction of cowpea aphid. Almost formulae of *N. calcicola* extracted treatment, the reproductive stage of *A. craccivora* was significantly shorter than that in control, except for the extracted solution of 0.01% *N. calcicola* in log phase (table 1). The reduced time was closely correlated with concentrations of the cyanobacterial extract. For example, the shortest time of reproduction was 5.21 days obtained in the 0.05% solution of *N. calcicola* in death phase, only having by 34.05% that in control (15.30 days). The significant difference was not recorded on effect of *A. calcicola* in log phase, concentration of 0.01% as the reproductive time lasted until 15.00 days, having by 98.04% comparing with control.

Moreover, the post-reproductive stage in lifetime of cowpea aphid was also shortened; cowpea aphid fast died after reproduction (table 1). The negative effect of *N. calcicola* in death phase was more massive than that of log phase; and the tested concentrations was closely correlated with the time reduction. The longest time was 2.69 days recorded in extract of 0.01% *A. calcicola* in log phase, and the shortest time of post-reproduction was only 1.19 days obtained in the 0.05% solution of *N. calcicola* in death phase.

The total effect of *N. calcicola* in death and log phases both reduced lifetime of *A. craccivora*, except for extract of 0.01% cyanobacteria in log phase. The higher concentration of extracted solution denoted the higher effect. For example under impact of *N. calcicola* in death phase, shortest lifetime of cowpea aphid was only 10.05 days obtained in extract of 0.05%, whereas, the longer lifetime was 11.42 and 13.20 days recorded in the cyanobacteria treating formulae of 0.03% and 0.01%, respectively. The similar correlation was also observed in treatments by the different concentrations of *N. calcicola* in log phase.

*N. calcicola* extract not only shortened lifetime but also strongly reduced quality of fecundity of *A. craccivora* (table 2). In soybean as control, each female adult averagely gave birth of 98.30 nymphs in her lifetime, whereas in the formulae of treating by the cyanobacterial extract, number of nymphs was significantly lower than in control. The minimum was 35.66 nymphs per female obtained in 0.05% *N. calcicola* in death phase, having by only 36.28% in comparing with control.

It should be stressed that, although extract of 0.01% *N. calcicola* in log phase did not expressed the negative effect on lifetime of *A. craccivora*, fecundity of aphid in this formula was significant lower than in control. The number of nymphs per female adult was 71.67 having by 83.08% in comparing with control.

**Table 2. Effects of *Nostoc calcicola* on fecundity of *Aphis craccivora* on *Glycine max***  
Data are expressed by mean  $\pm$  SE of the three different replicates; In column, if the symbol letters a, b, c... are similar, there is no statistical difference at the  $p < 0.05$  level.

Parameter		Number of nymphs born per female adult
Formulae		
Control		98.30 $\pm$ 13.89 <sup>a</sup>
<i>N. calcicola</i> in log phase	0.01%	81.67 $\pm$ 10.28 <sup>b</sup>
	0.03%	58.75 $\pm$ 14.58 <sup>c</sup>
	0.05%	52.33 $\pm$ 8.93 <sup>d</sup>
<i>N. calcicola</i> in death phase	0.01%	57.10 $\pm$ 12.24 <sup>c</sup>
	0.03%	39.85 $\pm$ 8.11 <sup>e</sup>
	0.05%	35.66 $\pm$ 6.26 <sup>f</sup>

#### 4. Discussions

Many Cyanobacteria are known to release various kinds of biologically active substances such as proteins, vitamins, carbohydrates, amino acids, polysaccharides and hormones that function as elicitor molecules to promote plant growth and/or defense mechanisms and help them to cope with abiotic and biotic stress, including insects (Singh, 2014).

The way by which Cyanobacteria directly affect to herbivores included their function as producers of secondary metabolites with toxic properties. According to study of Nassar et al. (1999), an acute lethal toxicity of Cyanobacteria was expressed to housefly (*Musca domestica*), mosquito (*Culex pipiens*), Egyptian cottonworm (*Spodoptera littoralis*) and black cutworm (*Agrotis ipsilon*). They markedly affected to the larval, pupal and adult time of durations as well as suppressed the oviposition of the survivor adults. The dry biomass of some cyanobacterial strains of *Anabaena* and *Nostoc* was evaluated in *in vitro* assay as a biopesticides against instars of black cutworm (Abdel-Rahim and Mohamed, 2013). Cyanobacteria are safe and promising agent for insect control (Nassar et al., 1999).

Cyanobacteria are well known for their production of a multitude of highly toxic and/or allelopathic compounds. In this phylum, genus *Nostoc* was regarded as a good candidate for producing biologically active secondary metabolites which has the insect suppressing potential. The number of bioactive compounds isolated or produced from *Nostoc* species is increasing continuously. Nostocine A with inhibited activity (Hirata et al., 2003), cryptophycins as anticancer agents (Eggen and Georg, 2002), nostocyclamide M as allelopathic agent (Juttner et al., 2001) etc... have been known as cyanotoxins from *Nostoc* with lethal effects that repel insect. Although not much is known about the mechanism of *Nostoc* extract, *Nostoc* species were suggested as a source of natural pesticides. Our results agreed with the above studies as the extract of *N. calcicola* biomass collected in log phase and death phase caused to shorten lifetime and fecundity of *A. craccivora* rearing in soybean plants. *N. calcicola* extract may contain chemical substances that negatively affected on cowpea aphid through direct toxicity or by reducing the digestibility of soybean leaves.

Besides that, Cyanobacteria produce a wide array of compounds with biological activity including hormones, such as auxin (Prasanna et al., 2010), gibberellins or gibberellic-like substances (Rodriguez et al., 2006), cytokinins (Stick et al., 2002). These bioactive compounds stimulated plants growth and raised the quality of the physiological processes. In other our study (*unpublished data*), extract from *N. calcicola* in log phase was convinced recorded to improve the germination rate and growth of radicles, promoted leaf area index, raised content of pigments and improved the photosynthetic intensity in comparing to control (soybean without treatment by Cyanobacteria). Through promoting the processes of growth and physiology, plants themselves actually improved the biological control mechanisms

such as tolerance or elimination of plant enemies including insects (Lugtenberg et al., 1991). We, therefore, suggested that Cyanobacteria extract could indirectly prevent aphid from infestation, reduce the quality of reproduction and longevity.

## 5. Conclusion

Extract of Cyanobacteria *N. calcicola* directly and indirectly affected to lifetime and fecundity of cowpea aphid (*A. craccivora*) rearing on soybean (*Glycine max*). Most of concentrations of *N. calcicola*, which were made from biomass collected in log and death phases, significantly reduced the quality of reproduction and obviously shortened lifetime of *A. craccivora*, except for extract of 0.01% *N. calcicola* in log phase. Cyanobacteria extract was likely to affect directly to herbivores by the bioactive substances that repel cowpea aphid through toxicity or by reducing infestation. Parallel the *N. calcicola* extract also stimulated plant growth, raised quality of the physiological processes, therefore, indirectly improved the soybean defensive mechanisms against cowpea aphid.

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## How to improve the quality of sports competition for students at The Da Nang University

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### Abstract

Sport training is one of the most effective ways to improve a man's health. Actually, Da Nang University has been paying more attention to improve the quality of sports education and competition in order to help students to be more interested in sport subjects and reduce the risk of physical injuries. With the assistance of questionnaires and personal interviews, the researchers conducted research on 164 students and 24 trainers who have suggested some methods to improve the quality of sports competition such as increasing the training time, employing technical experts, suitable diets and life style, limbs and head protection gears, punishments to those who injure others.

**Keywords:** Sport, physical activity, physical education. Sport injuries, questionnaires

### 1. Introduction

The healthy ones have hundreds of wishes why the unhealthy only have one: health (Organization, 2000). Health is the most important factor in life and playing sports is one of the most necessary things to do to improve human's health (Haskell et al., 2007). Universities in Vietnam have been focusing on sports education recently so that students can improve their health and life as well. The research "How to

### 2. Research objects and research methods

Objects: a survey was conducted with the participation of 164 students and 24 trainers from different sports teams of The University of Danang. The respondents did the questionnaire voluntarily, which made their responses clear and objective.

Research methods: researching documents; questionnaires; using test Zung to measure students' anxiety (during sports competitions)

### 3. Results and discussion

#### 3.1. Students' anxiety when competing:

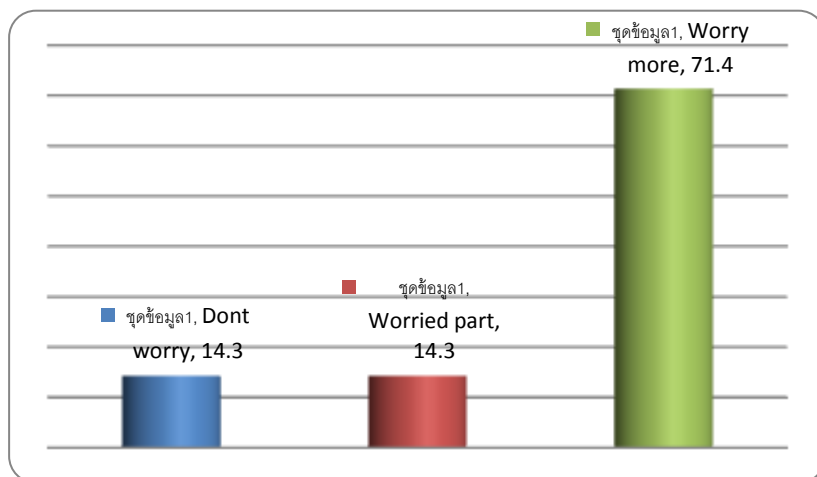


Figure 1: Anxiety of student

The result from anxiety measurement test Zung shows that 71.4% of students feel really anxiety when competing in sports. The portions of those who have no anxiety and those who are only partly

anxious are the same (14.3%). From these statistics, it can be concluded that most students have negative mental status before entering a sport tournament. 93.2% of the students who participate in this research feel that they are anxious about the upcoming competitions. The other 6.8% have no anxiety because they know that they can't have any achievement. Basing on the question about the relation between anxiety and competition results, the students think that negative emotions will affect the results when competing.

#### 3.2. Signs of anxiety (physiology, behaviors, awareness, emotions) when competing in sports.

Results about physiologic signs are the most clearly with the average point of 2.31/4, followed by the signs of awareness, behaviors and emotions. Negative physiologic signs include headaches, exhaust (Average point= 2.29), shaking limbs (AP= 2.09), fast heart beat (AP=2.19), insomnia (AP=2.12); low appetite (AP=1.89). Awareness signs include disappointment from what happened (AP=2.11), thinking too much about the past (AP=1.86), concentration difficulty, being pessimistic about the future, imagining bad things, bad memory, academic performance decline...

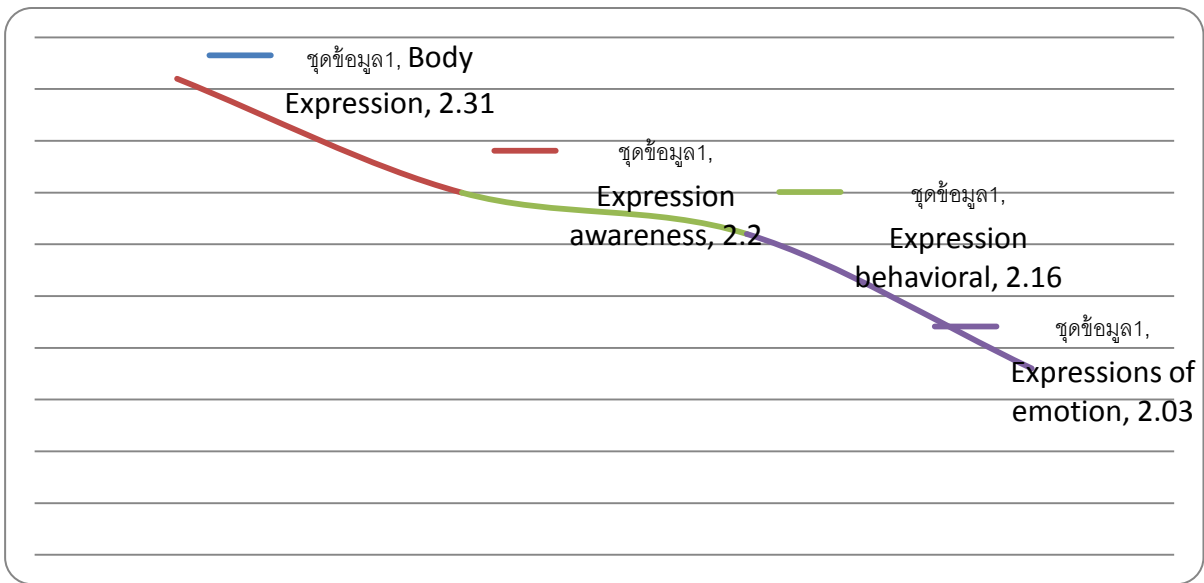


Figure 2: Signs of anxiety (physiology, behaviors, awareness, emotions) of student

### 3.3. Signs of pressure during sports competition.

The results of the chart above show that the most popular cause of pressure to the students is the responsibility when competing for their schools or classes with the AP of 2.58. After that is the idea of achieving the best position with the AP of 2.39 and feeling of sadness when achieving nothing since sports competition means something in life (AP=2.26). Because of these negative feelings, the students has no expectation for a good result in a competition (AP= 2.35), no interest in training (AP= 2.61) and no willingness to spend time due to having to study a lot at the schools (AP=2.15).

N	Statements	Mean	Standard Deviation
4.	The obligation to have achievement	1,58	,410
5.	Responsibility toward the schools or classes	2,58	,511
6.	Proving oneself	1,18	,328
7.	Good results mean pride	2,13	,321
8.	Embarrassment due to having no good performance	2,21	,378
9.	Having to play good for the sake of honor	1,90	,271
10.	Participation for recognition (certificates, money...)	2,19	,374
11.	Having more friends through competition	1,72	,431
12.	Job opportunity	1,63	,452

13.	Luck in love	1,68	,472
14.	Participating in sports activities is meaningful	2,26	,483
15.	The best position	2,39	,438

**Table 1: Signs of pressure during sport competition**

**Students' concerns**

N	Concerns	Mea n	Standard Deviation
●	Having no expectation for good results even before competing	2.35	.357
●	No interest in training	2.61	.435
●	Feeling tense when thinking about tournaments	2.15	.362
●	Being afraid of humiliation	1.93	.361
●	Time consumption due to training and study.	2.15	.328
●	No satisfaction with the schools' support	2.18	.352
●	Unsuitable evaluation from schools and friends	2.36	4.21

**Table 2: Students' concern**

**4. Methods to improve sports competition for students**

The researchers were able to collect the students and trainers' opinions about methods to improve sports competition for students.

These methods include: more training for athletes, comfortable feelings before entering a competition, guidance form trainers, protection gears, financial aids for students.

	Contents	AP	
		Students	Trainers
1.	More training for athletes	2.93	3.04
2.	Good mental preparation before a competition	2.98	3.08
3.	Guidance from technical experts	2.86	2.91
4.	More financial aids from schools for their athletes	3.07	3.04
5.	Better recognition from schools (articles on newspapers or schools' websites)	3.00	2.87

6.	Sponsors	3.12	3.08
7.	More care for athletes' health (diets, head and limbs protection gears)	2.79	2.92

**Table 3: Methods for competition quality improvement**

There are differences in the students and trainers' opinions regarding the methods. The trainer think that students need more training (AP=3.04), more guidance from trainers (AP=2.91) as well as other forms of protection (AP=2.92). The students, on the other hand, are more interested in methods such as more financial aids (AP=3.06) and more sponsors (AP=3.12).

There is a wide variety of methods from the trainers while the students' suggestions only focus on their financial aids when entering sports tournaments.

## 5. Conclusion

The results when researching about factors regarding quality improvement of sports competition show that the students' anxiety rate is 71.4%.

Signs of anxiety show the most through biological means such as insomnia, headaches, exhaust, tension, shaking limbs

Signs of pressure include feeling tense when having no achievement in a competition due to the need for a certificate when entering one... because of these concerns, students often feel tense, think about bad results (no achievement when competing, injuries, humiliation...) and have no satisfaction with the schools' financial support.

From the above results, we were able to come up with the below methods to improve the quality of sports competition for students:

For students: more individual financial support when entering a tournament as well as more forms of recognition (certificates, acknowledgement, articles as good examples in competition...), more suitable training, more protection gears as well as other forms of health protection, more guidance from experts.

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DETERMINING PHYSICAL, CHEMICAL NORMS AND BIOLOGICAL ACTIVITIES OF CHE DAY  
(*AMPELOPSIS CANTONIENSIS* PLANCH) IN HOA BAC - DANANG AND PRODUCING CHE DAY  
PLANT IN LABORATORY

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### Abstract

“Che day” (*Ampelopsis Cantoniensis* Planch) popularly growing in the highland of Danang city, was known as medicinal plant by local people to treat diseases related to stomach and digestion. For helping local people to bring che day product into market, we determine physical, chemical norms and biological activities of “che day” product. The results show that the total sugar content in “che day” product was 99.19mg/g that make “che day” product having the sweet taste. The total flavonoid content was from 66% to 71% contributing the antioxidant and anti bacterial characters. In this research, we also conduct a process to grow and produce a good quality “che day” product in the condition of Biotechnology Lab – Danang University of Science and Technology for large batch production.

**Keywords:** Che day, *Ampelopsis Cantoniensis* Planch, sugar content, flavonoid content, free radical, antioxidant capacity, antibacterial capacity.

### 1. Introduction

Che day or Khau ra (Tay language) or Thau ra (Nung language) is used to brew for daily beverage. Che day does not only play an important role in folklore but also is a rare medicine to detoxify and to boost antioxidant capacity as che day contains a high content of tannins, flavonoids and polyphenols. [1]

Today, Che day appears mainly in Hoa Bac village - Hoa Cuong, Danang. However, this product is mostly used by the local, not introduced as local speciality to the market. Also, there is no investigation into Che day in Hoa Bac, Hoa Cuong, Danang. For those reasons, we would like to do a research on determining physical, chemical norms and bioactivities of Che day product, qualitative and quantitative study on flavonoid content, antibacterial capacity of this product against *E.coli*, *Staphyococcus*, and antioxidant capacity via free radical DPPH<sup>•</sup> [5,6].

After gathered, fresh Che day is cleaned, cut into pieces, dried to be ready to serve. From the observation on Che day product, there are little white spots on it which is bioactive during production. According to customers, Che day product with white spots is sweeter and less acid than that without spots. Therefore, in this paper, we compare the differences in component and property between Che day with white spots and Che day without white spots.

Besides, Che day wildy grow on the side of mountains of Hoa Cuong District, Danang City. To collect Che Day, the local need to move forwards the dangerous mountainous area. To help the local in seeking the ingredients, we set up growing and producing Che day in Biotechnology Laboratory, University of Science and Technology - The University of Danang. The products from the laboratory are compared to the products of Hoa Bac. This finding is a foundation for the production of Che day with high quality in delta in the future.

## 2. Materials and methods

**2.1. Materials:** Materials include the sample of fresh Che day from Hoa Bac, the sample of Che day with white spots and Che day without spots from Hoa Bac, the sample of Che day produced from Biotechnology Laboratory, University of Science and Technology - The University of Danang. Samples are packed and preserved at 4°C in Biotechnology Laboratory.

### 2.2. Research methods:

2.2.1. *Method to determine moisture, ash content and dissolved ash content.*

2.2.2. *Method Bertrand to determine sugar content and invert sugar in the sample [8].*

2.2.3. *Quantitative method for flavonoid in Che day*

To prepare extraction, weigh 1 gram Che day, add 10ml ethanol 99.7%, and use bain-marie in 10 minutes at 70°C. This filtered liquid is transferred to quantitative phase.

- Reaction with amoniac: Flavonoid changes colour when contacting NH<sub>3</sub>. Colour changing can be observed by naked eyes or under ultraviolet light.

- Reaction with NaOH: Add NaOH 10% to 1ml Che day extraction to appear dark yellow.

- Reaction cyanidin: test is condensed HCl and Magie.

- Reaction with Sibata và condensed H<sub>2</sub>SO<sub>4</sub>: Add condensed H<sub>2</sub>SO<sub>4</sub> to 1ml Che day extraction, add 0.1g Mg and isoamylic, and heat to turn from pink to red-orange and red-purple.

- Reaction with FeCl<sub>3</sub> 5%: Add FeCl<sub>3</sub> 5% add extraction, shake slightly to appear black-purple.

2.2.4. *Quantitative method for flavonoid:*

The sample of Che day is ground into powder, determining the moisture. Beside flavonoid, Che day contains tannin and clorophyl, so quantitative phase eliminates clorophyl by ete kerosene và tannin by gelatin 1%. Weigh an exact amount of fine Che day and extract ete kerosene in soxhlet to eliminate clorophyl. Then, take the pack to standard temperature to evaporate solven to extract flavonoid by ethanol 70% in the flask. Let's cool, eliminate tannin

by gelatin 1% until no precipitate. Extract flavonoid by ethylacetat, evaporate solven, then dry the sediment and weigh. The content of flavonoid in the sample is based on the formula:

$$X(\%) = b/a * 100$$

a: Amount of dried product; b: Amount of sediment

2.2.5. *Method to examine antioxidant by free radical DPPH\**: Weigh 20g fresh or dried Che day, grind and shake in 50ml methanol at standard temperature in 20 minutes. Filter the liquid and condense it at 50°C, 1 atm. Preserve the sample at 4°C.

The sample against oxidants bases on the mechanism of stopping free radical DPPH (1,1 diphenyl-2-picrylhydrazyl). Use 0.5ml the sample (concentration 10µg/ml, 25µg/ml, 50µg/ml, 100µg/ml in methanol). Add the amount like that of DPPH (concentration 100µg/ml in methanol). Shake the mixture and place it at standard temperature. Measure the level of colour absorption with the absorption maximum wavelength of 517nm.

2.2.6. *Method to examine antibacterials*: Examine antibacterials by the extract using agar diffusion method on *E.coli* and *Staphylococcus*. Drop the sample into holes of the agar with those microorganisms. Active element from the sample diffusing to the agar prevents the development of microorganisms to create inhibitory zone.

### 3. Results and discussion

#### 3.1. Results of determining physical norms

Research materials include fresh Che day, Che day with white spots and Che day without white spots from Hoa Bac - Hoa Cuong. Materials are investigated into the initial physical norms, including moisture, ash content and dissolved ash content. The result is shown in the table below.

Table 1: Results of determining physical norms of Che day

Sample	Ash content (%)	Dissolved ash content (%)	Moisture (%)
Fresh Che day	4.363	1.98	69.395
Dried Che day without white spots	4.415	1.454	11.273
Dried Che day with white spots	4.525	1.45	10.884



### 3.2. Results of determining chemical norms

The materials continue to be determined on sugar content and invert sugar by Bertrand method.

Table 2: Results of determining chemical norms

Sample	Sugar content (%)	Sugar content (mg/g)	Invert sugar (%)	Invert sugar (mg/g)
Fresh Che day	2.728	27.28	0.873	8.73
Dried Che day without white spots	4.583	45.83	3.6	36
Dried Che day with white spots	8.306	83.06	6.632	66.32

From the results, sugar content and invert sugar increase during the process of heating from fresh to the product of Che day. Sugar content fluctuates from 2.728 to 8.306 % and invert sugar from 0.873 to 6.632 %. In addition, sugar content and invert sugar in Che day with white spots are twice as high amount as Che day without white spots. It is explained why customers claim that Che day with white spots is sweeter than those without white spots.

### 3.3. Results of determining bioactivities of Che day

#### 3.3.1. Quantitative and qualitative results of Flavonoid content in Che day

To recognize the typical compound of flavonoid in Che day, we gather the Che day extraction from heating extraction method. The sample is ground into powder, heating in distilled water at 98°C within 3 hours and cool it.

Based on the common chemical reaction of the different compounds of flavonoid with cyanidin, condensed H<sub>2</sub>SO<sub>4</sub>, NH<sub>3</sub>, FeCl<sub>3</sub>, NaOH, we find out the presence of the compounds of flavonoid in the samples. The result is shown in the table below.

Table 3: Quantitative results of Flavonoid

Reaction	Cyanidin	H <sub>2</sub> SO <sub>4</sub> đặc	NH <sub>3</sub>	FeCl <sub>3</sub>	NaOH
Sample					
Fresh Che day	++	++	++	++	++
Dried Che day without white spots	++	++	++	++	++
Dried Che day with white spots	++	++	++	++	++
Colour	Crimson	Red-orange or black-purple	Dark yellow	Black-blue	Dark yellow

It is clear from Table 3 that the reactions to flavonoid appear crimson to clarify the presence of flavon and flavanol in the sample, condensed  $H_2SO_4$  to recognize auron, chancel, similar to  $NH_3$ ,  $FeCl_3$  và  $NaOH$ . In conclusion, the examined Che day contains the popular flavonoid. To determine the flavonoid content in Che day, we examine the percentage of total flavonoid by quantitative method.

*Table 4: Results of determining the percentage of total flavonoid in Che day*

Parameter	Dried Che day without white spots	Dried Che day with white spots	Fresh Che day
W(%)	0,1789	1,0597	4,5787
$M_0$ (g)	2,1145	1,7939	5,7334
M(g)	1,28	0,5	0,41
X(%)	66,13	68,10	35,50

W: moisture of Che day;  $M_0$ : the amount of sample; M: the received amount; X: content of the percentage of total flavonoid in the sample

The results indicate that the total flavonoid content in Che day with or without white spots is high, from 66% to 68% and is twice as high amount as fresh Che day.

### *3.3.2. Results of the investigation into free radical DPPH\**

To determine antioxidant capacity of Che day, we use the free radical DPPH\* method and compare the antioxidant capacity between examined Che day and Vitamin C.

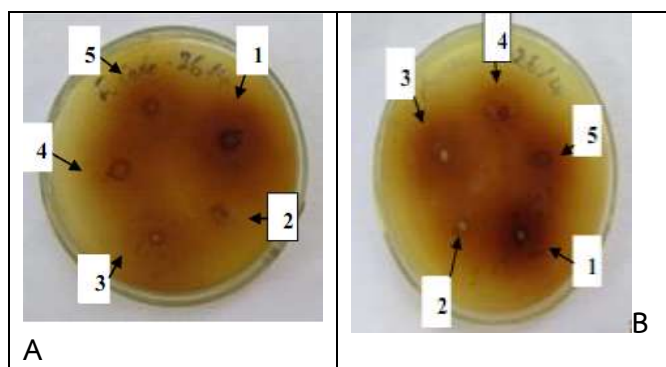
Table 5: Results of the antioxidant capacity between Che day and Vitamin C

Concentration	SC %				SC <sub>50</sub> (µg/ml)
	10 µg/ml	25 µg/ml	50 µg/ml	100 µg/ml	
Sample					
Vitamin C	2.98	5.2	35.62	92.34	63.18
Fresh Che day	5.928	15.16	34.597	73.47	69.597
Dried Che day without white spots	7.23	13.57	73.24	85.84	40.26
Dried Che day with white spots	7.37	30.72	79.96	82.04	34.91

In this research, the lower SC<sub>50</sub> (µg/ml) of the sample is, the stronger antioxidant capacity is. From the result, compared to antioxidant capacity of Vitamin C (63.18µg/ml), the value of SC<sub>50</sub> in fresh Che day is higher (69.597µg/ml) while Che day with or without white spots show the lower value of SC<sub>50</sub>, 40.26µg/ml and 34.91µg/ml respectively. It is apparent that Che day has the high antioxidant capacity, especially in those with white spots.

### 3.3.3. Results determine antibacterials of wire tea with *Staphylococcus* and *E.coli*

To determine not only the precious value of wired tea but also its ability to inhibit wire as enteric bacteria, we carry out determining the antibacterials of tea samples with two bacteria cord characterized by intestinal - microbiota *E.coli* and *Staphylococcus*.



Picture 1: Round antibacterials of wire tea's extract

A: With *E.coli*

B: With the bacteria *Staphylococcus*

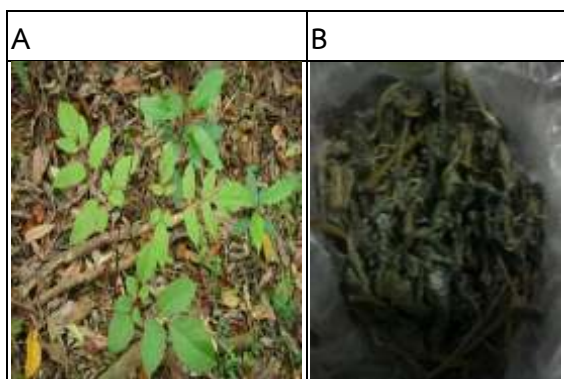
- 1: *The extract of Che day with white spots*
- 2: *The tea extract Che day without white spots*
- 3: *The extract of fresh Che day*
- 4: *Che day extract produced in the laboratory (without white spots)*
- 5: *Che day extract produced in the laboratory (with white spots)*

**Results** identifying antibacterial round of different Che day patterns to two types of intestinal bacteria showed that five samples of tea extracts all appeared round antibacterials, in which tea extracts produced including white dots or not are all generating round antibacterials for both microorganisms tested. This result contributes to confirm precious antibacterial pharmaceuticals of Che day.

#### *3.4. Results of tea products tested Biotechnology Laboratory, University of Science and Technology - The University of Danang.*

With a view to growing wild tea belt in the mountains in the delta, it will help people actively use material resources as well as for the purpose of producing afterwards, we have conducted trials of tea belt Biotechnology Laboratory, University of Science and Technology - The University of Danang.

Tea belt after growing and successfully developed in the laboratory, we carry out collecting fresh tea and conducting Che day production process of as it has been used in Hoa Bac - Da Nang.



Picture 2: Fresh Tea (A) and Che day (B) produced in the laboratory

Tea chopped into strings, is brought to change into gold color at high temperature, turning several times so that the tea does not fire until the tea turns yellow, then stopped bringing water flooding down brothels. Tea brewed in anaerobic conditions over a day and brought back again at higher temperature will quickly be dry tea and flavored much higher than with conventional sun. Then the tea is cooled, packed, stored in a dry place normally to use as materials for the next experiments.

*3.5. Results of determining physical, chemical norms and bioactivities of Che day product from the laboratory.*

Che day grown and produced in the laboratory is determined physical, chemical norms and bioactivities. The result is shown in the table below.

*Table 6: Results of determining physical, chemical norms and bioactivities of Che day*

Parameter	The sample of Che day produced in the laboratory
Ash content (%)	7.63
Dissolved ash content (%)	1.4195
Moisture (%)	11.38
Sugar content (mg/g)	83.06
Invert sugar content (mg/g)	66.32
Flavonoid content (%)	71.54
Antioxidant SC <sub>50</sub> (µg/ml)	41.41

The results showed that the testing Che day from Biotechnology Laboratory, University of Science and Technology - The University of Danang with the targets of moisture, ash content and dissolved ash content similar to the product of Che day in Hoa Bac.

When comparing the total sugar content and invert sugar content as well as the flavonoids in testing laboratory gives a higher value compared to the sample tea in Hoa Bac.

For testing the antioxidant activity, the value of SC<sub>50</sub> reached 41.41 (g/l) lower than the standard vitamin C is 63.18 (g/ml), which suggests that the antioxidant capacity of this testing product stronger than vitamin C.

#### 4. Conclusion:

The results of study indicate that Che day has physical-chemical norms and biological activities, containing flavonoid with the high content. In the fresh Che day, the content of flavonoid accounts for 35% and that of dried Che day takes up from 66 to 68%.

With the presence of the content of total flavonoids as well as the components of tannin and other Chlorophyll contribute to Che day with greater antioxidant capacity than antioxidant capacity standard of quality vitamin C, It has been capable of antimicrobial strongly with two strains of microorganisms are *E. coli* and *Staphylococcus* testing.

The study results also showed that Che day with white spots has some superior characteristics than Che day without white spots is a total sugar content and higher reducing sugar resulting to taste sweet in the throat, the better antibacterial capacity, the bigger inhibitory zone.

When conducting trials of Che day in the laboratory for the purpose of viewing the adaptability of crops in the plains, the tree still shows potential of normal growth and its products planted in laboratory testing remained rare features like Che day in Hoa Bac. These results help to guide the farmers in Hoa Bac be proactive for raw materials, planting Che day in their garden for huge production.

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## Trainers' perceptions of the relation between stress and sport competition activities among students at the University of Danang

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### Abstract

One of the most important activities of sports education in Vietnamese University is annual tournaments for students. This kind of activity also aims at improving a student's health. Each college or university can send one team for each sport such as soccer, badminton, volleyball.... to compete in tournaments. Before these big activities, many students show anxiety and uncertainty which later affect their performance in competitions. With the support of interviews, questionnaires and Zung anxiety measurement test, the research objects of 164 students and 24 trainers show that anxiety before tournaments really decrease the competing spirit.

**Keywords:** students, trainers, competition, anxiety, sport.

### 1. Introduction

In Vietnam, only a few researches about sport activities have ever been conducted while researches about sports' positive effects on human's life have been an attractive topic all around the world for a long time. Researches about how to improve performance in competitions with relation to diets, trainings, protection gears have also been conducted at many places all around the world (Kaynak, 2003; Mohr, Krstrup, & Bangsbo, 2003; Rodriguez, DiMarco, & Langley, 2009; Thompson & Trattner Sherman, 1999).

Our research focuses on trainers, their opinions concerning their students and the quality of sports competition to suggest ways to reduce students' anxiety.

### 2. Research objects and research methods

This research is conducted with anxiety measurement test Zung, questionnaires (Shafer, 2006) and statistics processing with SPSS software.

The objects for this research are 164 students and 24 trainers.



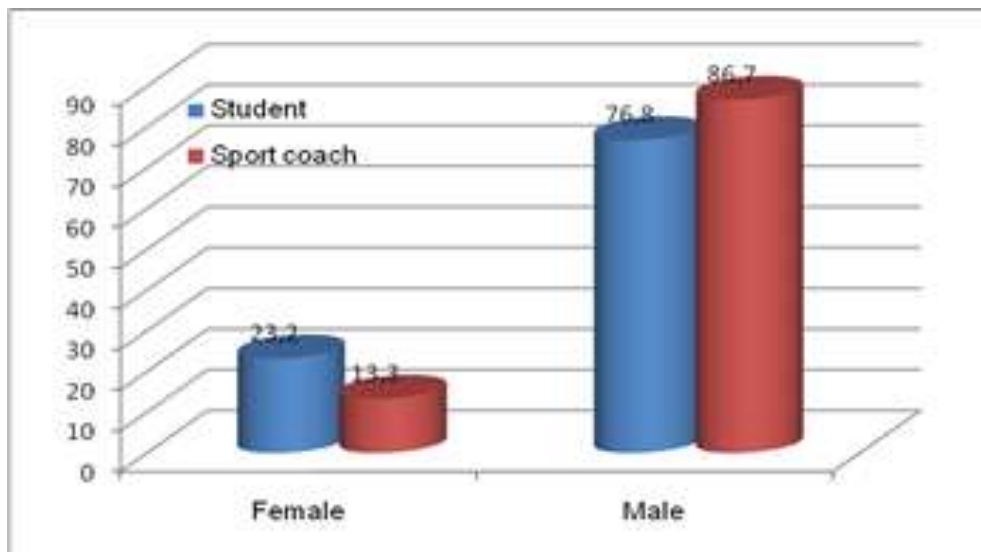


Figure 1: Number of research objects

### 3. Results

#### 3.1. Students' anxiety when competing:

The research shows that there is a correlation between students and trainers' opinions about students' anxiety. 71.4% of students think that they are very anxious while trainers think that the portion of students who are greatly anxious is 76.2%. This means that trainers are really the ones who understand their students' states.

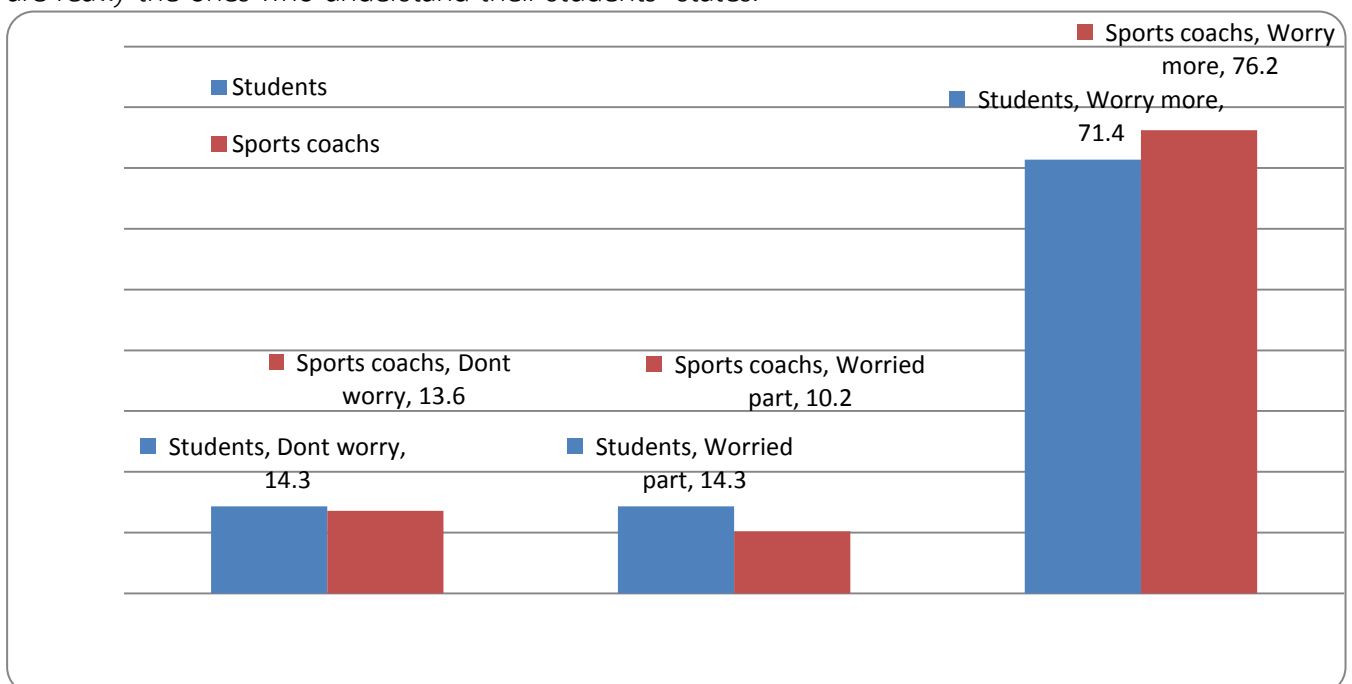


Figure 2: Anxiety of student

### 3.2. Signs of anxiety (physiology, behaviors, awareness, emotions) when competing in sports.

Students' sign of anxiety pointed out and evaluated by trainers and students themselves are shown in the table below. There are similarities among opinions about body signs (headaches, exhaust, shaking limbs...) shown through the average point of 2.2/4. Behavioral signs also receive the same evaluation from both students and trainers with the AP of 2.1/4

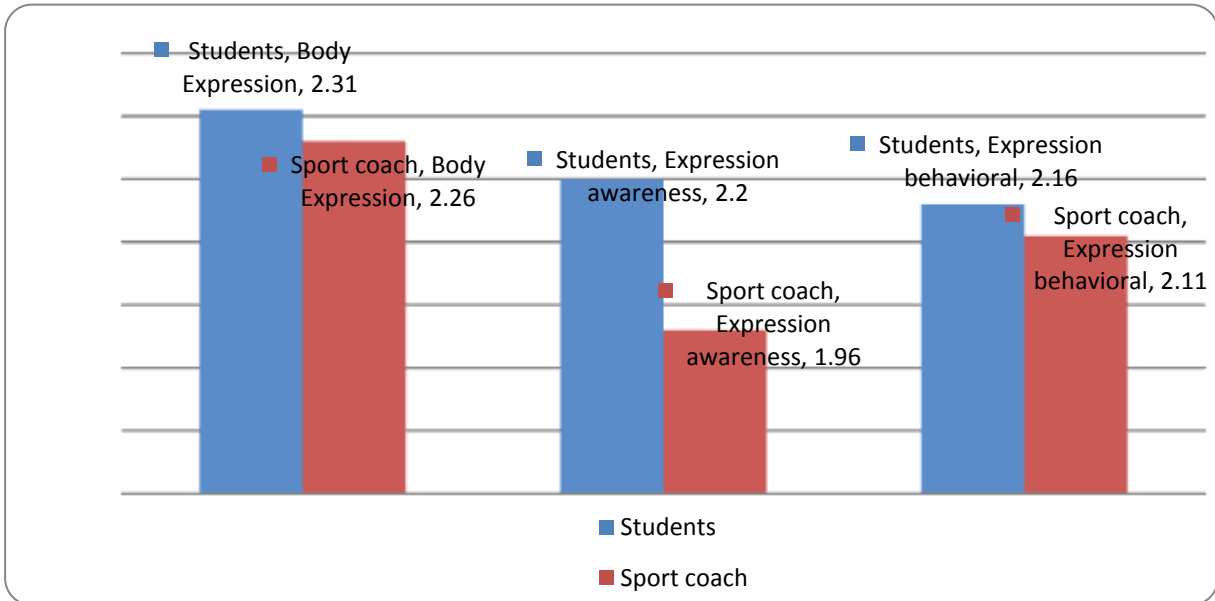


Figure 3: Signs of anxiety (physiology, behaviors, awareness, emotions) of student

### 15.3. The effects of anxiety on performance

The effects of students' anxiety on their performance are stated as below:

To students: Students think that they are one of the reasons why the teams cannot achieve good results. The feeling of guilt receives the AP of 1.85 while the unwillingness to listen to the trainers has the AP of 2.13 and repeated mistakes during training has the AP of 2.16

For trainers: The students' anxiety affect their attitudes, making them uninterested, unenthusiastic and unhappy in training (AP=2.19). There are also signs of sadness and shyness (AP=2.16) and their worries about bad things happening (lack of strength (2.11), being anxious about no achievement (2.21), injuries, time consumption).

	N	Statements	Average point	Standard Deviation
Trainers	1.	Feeling of being the hindrance	2.25	.391
	2.	Feeling of being the one at fault	1.85	.491
	3.	No concentration when listening to trainers	2.13	.382
	4.	Repeated mistakes during training	2.16	.312
	5.	Unwillingness to take training	2.21	.358
	6.	The desire to quit	1.90	.251
Students	7.	Students having signs of anxiety	2.19	.354
	8.	Being late for training	2.22	.411
	9.	Worrying about their lack of strength	2.11	.432
	10.	Telling trainers about not having any prize	2.21	.452
	11.	Fear of injuries when competing	2.26	.463
	12.	Fear of time consumption for training	2.39	.418

**Table 1: The effects of anxiety on performance**

Student Nguyen Ving T said: “I’m really anxious and I don’t want to compete in volleyball anymore. I’m really scared after seeing my friend falling”. Student Tran Khanh C said: “I do enjoy playing sport because I feel really healthy and comfortable when doing so. However, I’m not really interested in playing for the school this time. I think that I missed too many classes because of training”.

Mrs Le Thi Ngoc H, badminton trainer stated: “From my observation, there are about 3 to five students with signs of anxiety in a team. They are only a small portion but the teams’ spirit will decrease if the best players show no passion. As a result, I believe that it is necessary to make students feel comfortable during training and tournaments.”. Mr Tran Dinh L, a football coach stated: “Football requires teamwork and good cooperation so it is easy to lose if some members of the team are not passionate and make the whole team play separately. The whole team will be affected if some students are afraid of injuries or get injured. Sometimes, they get stomachache or family businesses which confuse the other team members and make the team change the tactic”.

## 7. Discussion and Suggestions

Sport activities are necessary because people can improve their health and life quality through them (Haskell et al., 2007). In schools, promoting sport activities means helping a group of young people achieve good health (General et al., 1996).

Psychological researches in sports have been conducted in other countries (Athletes' mentality, trainers' mentality, and factors affecting the quality of competition...) yet there is no research about these subjects in Vietnam.

Our research about athletes' (students) anxiety during competitions in their school (The University of Da Nang) shows that:

- In reality, 70% of the students who participate in this research are really anxious (about their life in general and the competitions in particular)
- Their anxiety is expressed through: body (headaches, stomachache, shaking limb, insomnia.....); awareness (negative thoughts, negative expectations....); behaviors (being late for training, quitting training, making technical flaws....); emotions (sadness, sense of failure....)
- Trainers think that anxiety decreases athletes' performance, team spirit and individual strength. This is because they are not competing because they want to but because of their duty, responsibility for their schools/ departments.

Basing on the above results, we suggested a few ways to reduce the students' anxiety. We discussed the causes and drew out solutions related to recognition of the participating students (certificates, degrees, financial aids...); health protection activities improvement (body protection, diets, therapy...) and more expert technical guidance.

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TRAINING THE SELF-LEARNING SKILL  
IN TEACHING PHYSICAL EXERCISES  
FOR HIGH SCHOOL STUDENTS

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**Abstract**

Innovation of the student-oriented self-learning method, strengthening the self-learning role of the student requires creating a rich reference resource, so that students cannot only rely on knowledge from the teachers and textbooks as before. Self-learning skill is the ability to use the learning style impacting on teaching contents or the ability to perform a specific learning activity. This skill has the psychological nature, but the physical form of behavior or action. The skill is the expression of capacity. Thus, in order to determine the system of self-learning skill, firstly, it is necessary to determine the system of learning tasks. This article would like to introduce the self-learning skill in teaching physical exercises for high school students.

**Keyword:** Self-learning, self-learning skill, training self-learning skill, teaching physical exercises, high School.

**1. Introduction**

The students' self-learning includes basic activities such as searching, accumulating, storing information and data needed for the learning, evaluation, selection and handling of the material collected into their own knowledge mine; then application of those knowledge and skills to solve the perceptual problems.

Communication and social relation in learning is expressed through the following activities: presenting, protecting ideas, own point of view and receiving, assessing opinions, views of others; participating in working and cooperating in small group, large group to share information and consult each other in learning; exploring and explaining the issues, social and psychological events in the learning process; making dialogue or having the other handling actions to resolve disputes or conflicts in the learning process.

Organizing, managing individual learning with the main activities as follows: management of plan, especially time, objectives and learning outcomes; management of

behavior, style, learning intensity; management of vehicle, learning environment; management learning demand and attitude.

## 2. Methods

Starting from the characteristics of self-learning activity that is a special cognitive activity and from the identification of basic learning tasks, it can be listed that the self-learning skill system of students includes the skill groups as follows:

### 2.1. Self-learning cognitive skill group

- Skill for searching, exploiting sources of information includes: reading skill; skill for observing, investigating and gathering facts by experiment, practice, charts, graphs; skill for accessing, exploiting and using information online; Skill for memorizing information.

- Skill for handling, organizing and evaluating information and learning content includes the following component skills: Skill for reviewing materials and generalizing learning content; skill for making questions, stating assumptions, judgments; skill for detecting problem, identifying tasks and making decisions about how to solve the problem; skill for systemizing events, topics, formulas, theories, models, logos, signs, values and norms; skill for combining and using actions and different thinking manipulates to understand, apply and develop the oriented learning content.

- Skill for applying, changing, developing cognitive results to explain the technical phenomenon and daily life practice includes: skill for test/examination preparation, performance and conducting; skill for applying cognitive results to organize experiments, proven practice and extend events; skill for changing and applying the cognitive results to form knowledge and new professional and interdisciplinary skill.

### 2.2. Communication skill and academic relation group

- Skill for presenting communicative language in writing, words with peers, with teachers about academic matters includes: skill for writing and presenting personal learning report; skill for developing and protecting opinions in front of people; skill for participating, debating, exchanging academic ideas in the form of group discussion and practice; skill for making dialogue, negotiating and settling disagreements, conflicts of views and learning behavior; skill for expressing in nonverbal behavior and language, etc.

- Skill for communication and learning through interactive form includes: skill for expressing friendliness and kindness with other people in the learning process; skill for criticizing and self-criticizing in learning and performing the learning tasks; skill for working together in group according to each assigned task; skill for organizing and participating in collective activities for learning.

- Communicative skill thanks to the support of information technology and telecommunications in learning includes: presentation skill, skill for using and participating in online learning forum; skill for exploiting learning resources or online learning.

### **2.3. Learning management skill group**

- Skill for organizing individual learning environment includes: skill for preparing and organizing the learning means and tools, organizing, arranging workplace and learning conditions; skill for preserving, maintaining means; skill for preserving, storing personal learning records (tests, exams, transcripts, certificates and records of discipline); skill for preparing and organizing outdoor learning environment.

- Skill for planning learning process and learning activities includes: skill for managing time and relaxing in learning; skill for making reviewing and personal practicing plan, skill for making independent and advanced plan; skill for making plan on examination learning and plan implementation; skill for determining the objectives and individual learning methods in accordance with the purposes intended; skill for making training plan and developing learning style that is appropriate with learning task.

- Skill for testing, evaluating the process and outcomes of learning includes: skill for reviewing the test results and analyzing, evaluating strengths and weaknesses and shortcomings; skill for regularly assessing the own individual learning behavior and of other people; skill for regularly checking the own learning capacity through various forms of testing; skill for assessing and comparing learning outcomes between subjects, between periods, between self and other students, etc.

## **3. Results**

In order to achieve good results in self-learning, self-learners need to master the skills and should train to form their skills. So as to train students to have self-learning skill system, in the process of teaching, the teacher must organize the training right from the class hours and pay first attention to help students use their brains effectively, planning self-learning, listening and recording the lessons in class, reviewing, practicing the reading skill and how to take notes via thinking diagrams:

### **3.1. Training skill for students to use their brains effectively in self-learning**

The neurons link creates each person's intelligence. Human intelligence can be trained and anyone can become smarter by creating neurons links. The unique way to make the students more intelligent is doing the things that make your brain feel very "difficult, very tough." Each day, students should find something difficult that they must brainstorm to understand or to be skilled. This is the secret to help students become more intelligent.

### **3.2. Training skill for planning the self-learning**

This skill needs to comply with the following principles: Ensuring the self-learning time in compliance with the information of the subject; reasonably alternating between self-learning forms, between subjects, between the hours of self-learning and hours of relaxing; strictly implementing the self-learning plan such as knowing how to work independently, self-examine and self-evaluate.

### **3.3. Training skill for listening and taking notes in class.**

The lecture-listening process includes the stages such as revising old lesson, being acquainted with following lesson and imagining the questions for the new lesson. When listening to the lecture, it is necessary to focus on tracking the guidance of teachers, contact with knowledge being listened, obtained knowledge with questions imagined before. It should be noted about how to take notes when listening to the lecture such as selectively recording, using particular signs, recording both the subject and the antithesis, recording the own questions.

### **3.4. Training skill for reviewing**

Reviewing skill is a significant activity in occupying knowledge of the teacher's lectures. It is the activity of rediscovering lecture as reviewing the whole record, the relationship between the fragments, supplementing the record with information researched in other documents, identifying structure of each part and the whole of lesson. The reproduction of lecture based on the symbols, concepts, judgments recorded from teacher's lectures, from activity of rediscovering lecture, reconstructing the teacher's lecture by the own language, which are the logical connections that may include both old and new knowledge.

The training skill is effective in forming the corresponding skills with the learned knowledge. From solving the teacher's homework to self-designing types of exercises and solving them; from the exercises consolidating knowledge to the exercises codifying lessons, units as well as the exercises applying knowledge to the life.

### **3.5. Training the effective reading method**

Must clearly define the purpose of reading; select an appropriate reading way as studying the general content of the book, try reading some passages, skim but with key words, read carefully with analysis, comments, evaluation. When reading, it is necessary to pay attention, positively think and write.

Reading method enables students to learn reading method to get the information. Before noting, learning by heart or revising lesson, the first thing to do is always to read



textbook and course materials to capture the necessary, important information. Some effective reading skills that can be applied immediately are using a pencil as reading guide tool, studying the main ideas and marking key words, expanding the reading vision so that a phrase of 5-7 words can be read at the same time, reading the summary at the end of each chapter at first because at the end of each chapter, there are always several paragraphs summarizing main ideas, or in many cases, there are questions checking content of that chapter.

### **3.6. Training for students to use thinking chart**

Thinking chart is a tool for thinking organization, is a method to convey information to the brain and then take out of the brain. It is an innovative and very effective mean of recording according to its effectiveness, "Sorting" thoughts of each person. It can consider that the thinking chart "is a tool of platform thinking organization, is a recording form using color, keywords and images in order to expand and deepen the ideas". In teaching, the thinking chart helps the learners systematize problems easily, develop generalizing skill and promote creativity.

The typical advantages of thinking chart are as: - Easy to grasp the core of the problem, avoiding waste of time for recording compared to the old recording style; - Improving creativity and memory, grasping opportunities to discover and study; - Completing the brain, absorbing flexibly and effectively; - Helping learners become more confident in their abilities; - Creating excitement for students, then students can understand and remember the problems better; - Teacher can save time to make lesson plans, be more active in lessons; - In particular, the thinking chart can help to develop thinking capacity for the learners in effective way. Because the characteristics of the thinking chart is systematic, so it plays an effective role in the development of thinking capacities as systematic thinking, generalization thinking, logical thinking, synthetic thinking.

## **4. Discussion**

Pursuant to the standard outcome of Physics teacher training bachelor, some Physics Teacher Training Facilities of Vietnam, based on the standard of high school teacher issued by the Ministry of Education and Training of Vietnam in 2009, based on the order of tasks that the teachers of Physics must perform to accomplish a specific lesson, based on the theoretical teaching function of physical exercises; We determine the exercise teaching skill includes:

#### **4.1. Skill for solving physics homework.**

- Skill for studying the assignment

Reading the assignment carefully, studying the meaning of important terms, determining which the unknown is and which the fact is.

Using the notation to summarize what the assignment gives out? What it asks? Using drawings to describe situation and illustration if necessary.

- Skill for analyzing phenomena

Getting to know the facts given in the assignment related to which knowledge, concepts, phenomena, rules and laws in physics.

Determining the evolution stage of the phenomena mentioned in the assignment, each stage is dominated by which properties and laws. Only when doing like that, the students can understand the nature of the phenomenon and avoiding the mechanical and formula application.

- Skill for building arguments and selecting solutions

The essence of this step is to find the relationship between the unknowns and the data given. Comparing the data given and what needing to look for in order to know their contact and through which formula and laws to establish the relationship. Establishing the equations if necessary with the note that the number of unknowns is equal to the number of equations.

Selecting appropriate solutions in solving the physical exercises is an important stage. If selecting an appropriate solution will simplify the picky operations, avoid walking around to obtain the final result in the most accurate and fastest way.

- Skill for checking, certifying the results and arguing

Analyzing the final results to eliminate the results that are inconsistent with the assignment conditions or unsuitable with reality. This argument is also a way to check the correctness of the argument process. Sometimes, thanks to this argument, students can discover the mistakes of the argument process, because the absurdity of the results obtained.

#### **4.2. Skill for analyzing didactics function of physical exercises.**

Currently in the high schools, teaching physics performs three main functions:

- Reformatory function: it is the main decisive function of the subject. When performing this function, the students can get knowledge on the basis of physics, gain skills and habits of physical knowledge application into practice.

- Development function: it requires students to develop in cognitive capacity, innovative capacity and improve their skills and constantly self-learning habits to enrich their knowledge and capacity.

- Education function: it is an indispensable component of teaching physics.

#### **4.3. Skill for building system of questions guiding students to solve exercises.**

The questions must stimulate thinking, require students to process their memories and apply knowledge, avoid questions answering by “yes/no? right/wrong? If yes, please explain reason.”

The question must have purpose, directly relate to the exercise and be put in the right place and the right time in the assignment in order to emphasize key points.

Teachers ask questions to the whole class, hear thoughts, designate for students to answer. When certain student completes his answer, it is necessary to ask other students to comment and supplement the answer (correct, incorrect, surpluses or deficits, needing a better expression) to stimulate attention and stimulate general activity of the whole class.

About the problem of calling students, the teachers should avoid calling some students repeatedly and leave the other ones behind. The questions must be suitable with the learners' proficiency. The teacher should prepare both easy and difficult questions and should take the difficult questions for gifted students.

#### **4.4. Skill for using exercises in typical teaching situations**

Based on the popular/typical teaching situations in the practice of teaching physical exercises, we propose the following 7 lessons for training the exercise teaching skill:

- Using exercises to strengthen the initial knowledge, creating problematic situations: In order to strengthen old/learned knowledge and make a basis for acquiring new knowledge

+ Getting students involved in problematic situations, creating excited motivation, needs to explore new knowledge

+ Helping students find the new knowledge, new methods of operation

- Using exercises to strengthen and apply new knowledge: In order to getting students involved in new situations to train the possibility of flexible and creative use, consolidate and expand, deepen knowledge

- Using sample exercises to form a new method: In order to train skill for applying the certain knowledge to solve the exercises.

+ Students solve new exercises under the programmed general guidance of the teachers;

+ Students generalize solution method under the guidance of teachers.

- Training the exercises solving skill under the known method and fully developing the method: Applying in familiar situations, practicing in the form to train the basic skills and memory

- Using exercises to review: In order to help students better understand what they have learned, practice skills, techniques of applying knowledge to practical life, production

- Using laboratory exercises in teaching physics: In order to improve empirical capacity, clarify the relationship between theory and practice.

- The teachers manipulate the tools, equipment that are new to students

- Students conduct experiments to collect information, process information collected

- Using the evaluation test exercises in teaching physics: in order to examine and evaluate subject knowledge of students.

The teaching skills should be developed as samples. We will introduce the content details on the other occasion.

## 5. Conclusion

Self-learning is the determinant of the learning and training quality. It is the optimal way for early taking our education profession and economy to catch up with other countries in the region and around the world. The student's learning is essentially self-learning, no one can learn for someone else is, therefore, in teaching, the teachers need to pay attention to teach the students how to learn by themselves. As such, they can learn efficiently and form lifelong self-learning capability right from the time they still are students.

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## Online Portfolio Management System for Lecturers

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### Abstract

The purpose of this research was to make the online Portfolio Management System for Lecturers which supported the lecturers to easily keep their contributions, which were research, papers, journals, books and competition rewards. Moreover, this research made the lecturers observe their progress by themselves, and also the directors could see the overview of university. This research made in the form of web application which was presented by graphic display (bar chart). Its privilege was divided into two type, those were general user and administrator. For the data which were kept were basic staff information, staff works, laboratory and researcher. The result of the evaluation showed the overall average was 4.46 from 5 score. This score was quite good, but it should improve the search system and attractiveness.

**Keywords:** Portfolio, Online, Lecturer

### 1. Introduction

The portfolio recording is a way to record experiences and works of recorder which is benefit for job application. Reardon and others [1] had created portfolio system for university student, which in that system had more than 25,000 students within 5 years. Campbell and Schmidt [2] had add the part of student performance assessment for helping the faculties and teachers for advice and suggestion. Jun-Ming SU and others [3] had purpose OPASS, which use for assessment online portfolio and diagnosis learning problem of students. The result is that OPASS was useful for teachers and students, which help for developing education.

Developing the education system is an important key factor of developing countries, which needs to develop teaching, research and university management. For Thailand, there are two major standard for controlling and assessment. Those standards encourage the lecturers to continuously develop themselves such as teaching, training, research, papers, journals, books, columns and articles. However, when lecturers has many academic achievement in several years, it is not convenient for searching. For this reason, it needs to have a system for collecting their documents orderly.

In statistics, when data is collected then it is presented with forms of charts, pie charts, bar charts, histogram or line graph, which is an important thing for displaying in the appropriate form and easy to understand and interpret. And also, it will help university's director can use such information to decide easier.

So the researcher has worked on this research, online portfolio management system for the lecturers with graphic form in web application.

## 2. Materials and Methods

The method of this research is developing web application for lecturers who can fill in their data. Then the system will display overview of university.

For web applications, after filling with private information and works of the lecturers, the system will keep them in database which we use MySQL for this purpose. Furthermore, we choose php for coding, which the users will can retrieve a webpage from Apache server. And our web application can divide into two privileges those are general user and administrator.

## 3. Results

Online Portfolio Management System for Lecturers is divided into two privileges those are the general user and administrators. Each page has detail as follow.

### 3.1 General User Privilege

There are four menus for this privilege

#### 1) Main Menu

This menu displays image slider automatically as shown in Figure 1

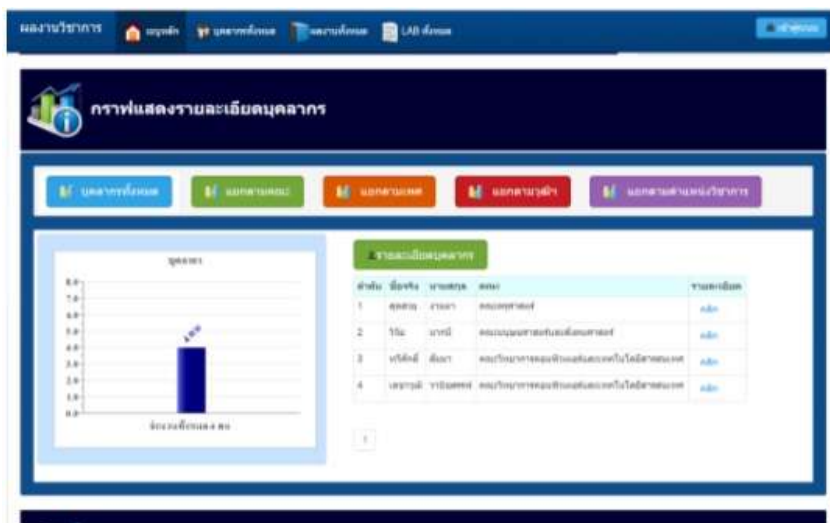


Figure 1 Main Menu

## 2) Staff Menu

Staff Menu has submenus, which show the number of staff divided by faculty, gender, education background and academic position as shown in Figure 2 and number of staff divided by faculty as shown in Figure 3



Figure 2 Staff Menu



Figure 3 Main Menu

## 3) Contribution Menu

Contribution Menu has submenus, which show the number of papers, researches, journals, books, columns and competition rewards as shown in Figure 4

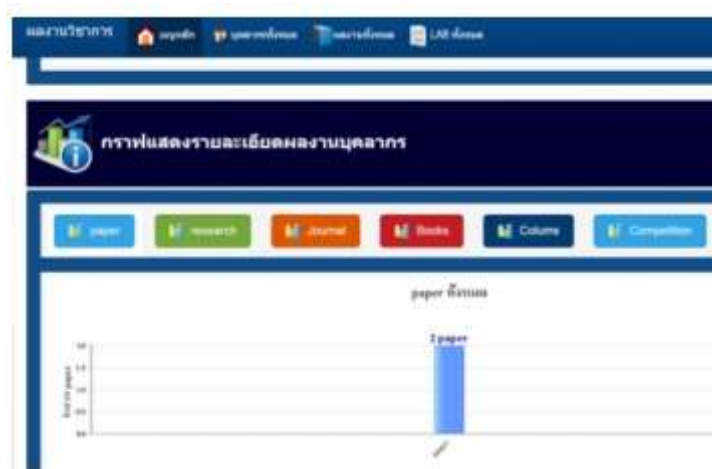


Figure 4 Contribution

#### 4)LAB Menu

LAB, which give detail about LAB  
and can be searched as shown in Figure 4.

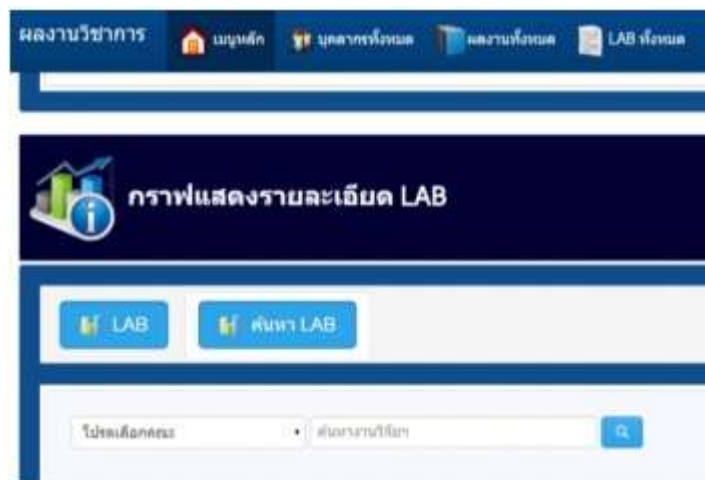


Figure 4LAB Menu

#### 3.2 Administrator Privilege

Administrator can view the following details

1)Research System Management Menu This menu has submenus, which give detail about all researchers, all contributions and all laboratories as showed in

Figure 5



ลำดับ	คำนามหน้า	ชื่อจริง	นามสกุล	คณะ
1	นางสาว	สุดสวย	งามตา	คณะครุศาสตร์
2	นาย	วิชัย	มากมี	คณะมนุษยศาสตร์

Figure 5 Research System Management Menu

## 2) System Setting Menu

This menu has submenus, which can use to manage sliding images and basic system setting as shown in Figure 6

ลำดับ	ชื่อเรื่อง	ชื่อภาพ
1	งานวิจัย2	1376915244.jpeg
2	งานวิจัย1	1376913174.jpeg

Figure 6 System Setting Menu

### 3) System Administrators Management Menu

This menu has submenus, which administrator can edit all user's data, change all user's password and exit from the system as showed in Figure 7.



The screenshot shows a web form for managing system administrators. The form contains the following fields and options:

ตำแหน่ง	นาย
ชื่อจริง	คุณ
นามสกุล	แก้ว
อีเมล	admin
เพศ	ชาย
คณะ	คณะวิทยาการคอมพิวเตอร์
ตำแหน่งทางวิชาการ	อาจารย์
การศึกษา	ปริญญาโท
ตำแหน่งงาน	นักเรียน-นักศึกษา

At the bottom of the form, there are two buttons: a blue "submit" button and a white "clear" button.

Figure 7 System Administrators Management Menu

### 4. Discussions

The result of the evaluation showed the overall average was 4.46 from 5 score. This score was quite good, but it should improve the search system and attractiveness.

### 5. Conclusion

This research, Online Portfolio Management System for Lecturers, allows instructors in educational institutions can keep their various contributions conveniently. However, the system is only available in store, which it makes display and use of information inconveniently and difficultly. To understand presentation more, this application was showed

in a bar chart form. This will help administrators can use such information to make a decision easier.

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