



044 7556 2019  
044 7556 2118

MINISTRY OF CULTURE, SPORTS AND TOURISM  
BAC NINH SPORT UNIVERSITY

# PROCEEDINGS

## INTERNATIONAL SCIENTIFIC CONFERENCE

### SPORTS IN THE CONTEXT OF THE INDUSTRIAL REVOLUTION 4.0



VIETNAM NATIONAL UNIVERSITY PRESS, HANOI



MINISTRY OF CULTURE, SPORTS AND TOURISM  
BAC NINH SPORT UNIVERSITY

# PROCEEDINGS

## INTERNATIONAL SCIENTIFIC CONFERENCE

### SPORTS IN THE CONTEXT OF THE INDUSTRIAL REVOLUTION 4.0



 VIETNAM NATIONAL UNIVERSITY, HANOI PUBLISHER

### BAC NINH SPORT UNIVERSITY

Add: Trang Ha ward, Tu Son town, Bac Ninh province

\*Tel: +84 2223 831609 \*Fax: +84 2223 832 550

\*Email: vietnam.bsu@gmail.com \*Website: upes1.edu.vn

ISBN: 978-604-9887-50-5



Not-for-sale books

**104. TRUONG VAN LOI**

Status and solutions to improve physical education quality for Dong Thap University students

**110. NGUYEN VAN PHUC, DO VAN SON**

Assess the actual situation of the factors affecting the military sports training of first-year combined army students, Army Officer College No. 1

**115. DAU ANH TUAN, VU QUANG HUY**

Actual situation of human resources and mechanism, policy for sports tourism service in Lam Dong Province

**120. HOANG CONG DAN, BUI NGOC, DANG HOAI AN, LE THI THANH THUY**

Solutions for sustainable physical education and mass sports development in rural area of Vietnam

**124. TRAN QUOC HUNG, NGUYEN THI KHANH HOA**

SWOT analysis on the potential of developing mass sports in Lam Dong province

**128. PHUNG KIM GIANG**

Actual situation of the mass sports training of the students at the Army Officer College No.1

**133. PHAM ANH TUAN, NGO THI THU, NGUYEN DINH CHUNG, BUI DOAN THAO**

Actual situation of the Physical Education work of the University of Labour and Social Affairs

**136. DO HUU TRUONG, MAI THI BICH NGOC**

Characteristics of exercising habit of people doing exercises regularly in southern mountainous areas

**139. NGUYEN MANH HUNG**

Application of reverse teaching model in teaching physical education with the support of information technology

**143. DAM QUOC CHINH**

Application model of information system in Vietnam Sports Administration's activities

**147. DANG HOANG ANH**

Reality of badminton movement among workers and employees in Son La city

**150. NGUYEN THANH GIANG**

Solutions to improve the effectiveness of Physical Education for students at the University of Technology and Education – The University of Danang

**153. PHUNG CHI NINH, LUONG THI HA**

Current situation of Mass Physical Training and Sport activities and criteria for Physical Training and Sport activities of people in Hanoi City

**156. NGO THINH HUONG**

Situation evaluation of the article posted on the Vietnamese sports e-newspaper in 2017

**160. NGUYEN THI HONG LIEN**

Effectiveness evaluation of physical training and sport activity for everyone under the influence of physical training and sport development policies

**163. NGUYEN NHU QUYNH, NGUYEN MINH TUNG**

The factors that affects the Physical Training and Sport movement in Dong Anh district, Hanoi

**167. PHAM TUAN HIEP, DUONG HOANG ANH**

The operational situation of Student's Badminton Club of at Hung Vuong University, Phu Tho

**171. NGUYEN THI XUAN PHUONG; DAO THI THANH HA, TRAN HUYNH ANH THU**

Situation of Mass Physical Training and Sport in urban areas of Vietnam

# APPLICATION OF REVERSE TEACHING MODEL IN TEACHING PHYSICAL EDUCATION WITH THE SUPPORT OF INFORMATION TECHNOLOGY

Nguyen Manh Hung<sup>(1)</sup>

## Abstract:

By the method of analysis, synthesis of documents and practical research, the author analyzes the characteristics of physical education, reverse teaching model and how to apply the reverse teaching model in teaching physical education. From there, put forward scientific arguments to promote the application of reverse teaching model, improve the quality and effectiveness of teaching physical education in schools.

**Keywords:** Capability, Reverse model, Physical education

## INTRODUCTION

Reverse classroom model has been widely applied in schools with the support of information technology equipment [1]. A reverse classroom is a form of mixed model in which traditional learning activities that took place within the classroom are now taken outside. This model is divided into two parts, one is interactive learning activities in the classroom and the other is computer-based activities outside the classroom [2]. The reverse classroom model is a type of learning based on videos, photos that students have been provided by the teacher in advance at home, the time in the classroom is only used to solve the emerged problems, as well as discussions, questions and answers, and other activities [2, 3]. The general principle of this model is that students will learn the content of home lessons online, then in the classroom, they will interact with teachers and other students to consolidate the content. [4].

Physical education is a teaching process that requires learners to acquire many complex knowledge and movement skills; therefore, the reverse teaching model is one of the appropriate methods that can be used to improve the effectiveness of teaching physical education to students. However, for a successful application, it is necessary to conduct research on the characteristics of physical education, identify the strengths and necessity of the reverse teaching

model for teaching physical education, and at the same time conduct research to determine how to apply the reverse model in teaching physical education.

## RESEARCH METHODS

The research process mainly uses methods of analyzing and synthesizing documents, combined with direct interviews with experts and professionals.

## RESULTS AND DISCUSSION

**1. Features of the physical education subject and the necessity to apply the reverse model in teaching this course**

**1.1. Features of the physical education subject**

Physical education is a compulsory subject that is carried out continuously in the school curriculum from grade 1 to grade 12.

The content of physical education is divided into two stages: Basic education and career orientation education.

– Basic education stage: Physical education helps teach the students how to take care of their health and body hygiene; form a habit of exercising to improve their health; through sports and exercises, helps them form basic movement skills and develop physical qualities.

– Career orientation education stage: Physical education is conducted through the form of sports clubs. Students can choose sports activities that suit their aspirations as well as the

(1) PhD, Department of Physical Education Vinh University

school's ability to answer their demands, and continue to develop their skills in taking care of their health and body hygiene, and at the same time develop their sports cognition and aptitude in the future.

Physical education is a type of education whose specific content is the teaching of movements and the deliberate development of human movement qualities.

- Teaching movement is the basic content of physical education; it is the process of transmitting and acquiring systematically ways to control human movement properly, thereby forming the basic movements necessary in life, as well as related knowledge, techniques in sports, basic daily activities: walking, running, jumping, climbing..., skills and techniques in tourism, entertainment...

- The nature of the second content in physical education is a reasonable impact on the development of movement skills, ensuring the development of movement competence. In the education system, that particular content of physical education is associated with education, morality, fine arts, and labor education.

### 1.2. The necessity of applying the reverse teaching model

The reversed classroom model is a pedagogical approach, in which the individual learning space is on a computer at home, and a group workspace is an interactive classroom, a proactive, positive and creative environment. Now the teacher's only role is as an instructor [5]. This helps students grasp the required content of knowledge before entering class. Based on the characteristics of physical education, we can see that this model is suitable, necessary and important for this subject because one of the most important principles of physical education is the visual principle - building symbols of movement.

On the other hand, the strong development of society, as well as science and technology requires teachers to innovate the teaching methods, change their way of thinking about teaching. And teaching in a reverse model is one of the appropriate options. Bergmann and Sams (2012) emphasize that reversal is the language

of students nowadays [1], which means that this model is suitable to be included in the students' school hours. According to a survey in the US, about 40% of students use online videos to assist them in the learning process [7].

In today's modern society, people tend to pay more attention to balance their appearance and physical health. This builds in every human being a sense of health knowledge as well as the ability to maintain and strengthen health through daily physical exercise as well as referencing techniques on the internet. For students, it is necessary for them to maintain physical training in order to have a fit and healthy body to study. However, to a certain extent physical education in our country has not been given adequate attention, especially in the teaching of this subject in high schools. In addition, information on physical exercises, sports clubs, and health care services has been increasing on social networks but the source of the information is unknown. Students need to have basic knowledge of physical education as well as movement skills to identify the correct exercises on the internet. Teachers need to take advantage of the internet to upload and provide students with videos, proper guidance and reliable sources of information. This allows students to preview the exercises and thus will have more time practicing in class.

Reverse teaching model helps improve learning motivation: According to Ryan and Deci, improving knowledge of a subject also means improving the learning motivation for that subject [8]. For students who learn physical education in the reverse model, not only do they get to improve their knowledge but also have a stronger motivation in practicing. Watching a video at home about a football shooting technique will provide students with an overview of the technique and help them imagine how to perform this movement gradually. When practicing, they will have better visualization, and with better visualization, the motivation for practice increases. One of the goals of physical education is to create a positive and healthy life. Students who want to achieve this goal need to be thorough with their



**With the support of IT, the teaching of Physical Education subjects in schools is more convenient and more effective**

training and develop and maintain their motivation to practice sustainably.

Reverse teaching model helps strengthen the relationship between teachers and students: The reverse classroom model gives teachers more time to interact with students and more opportunities to understand them [1]. The reason for this is that teachers instead of using traditional teaching methods, actively spend time interacting with students. Typically, teachers who teach physical education in gymnasiums or in stadiums interact more directly with students than other subjects that take place in the classroom. The better the interaction between teachers and students, the higher the learning result [9]. The reversed classroom allows students to participate more in activities than the traditional classroom because there is more time for them to discuss the exercises and each other. [10].

## **2. How to apply the reverse teaching model in physical education**

Reverse teaching model plays an important role in stimulating students' creativity and is being applied in high schools. In physical education, using videos to get students to watch

skills and techniques in advance will inspire and motivate students to practice on the field and have better learning results. However, for the application of the reverse teaching model to be effective, it is necessary to determine the appropriate application method. On the basis of document analysis and consultation with experts, we have identified 2 notable issues when applying the reverse teaching model, specifically as follows:

### **2.1. Identifying the topic to be reversed**

To identify the topics that need to be reversed, teachers need to: Thoroughly understand the program distribution, comprehend each program's content, classify easy and difficult topics, identify additional issues or weak knowledge of students in the previous period... from there determine the topic to reverse.

When there are difficulties in the content that require students to understand and be able to exercise movement skills, the reverse model is then used.

Students cannot simply understand the lesson or immediately implement the movement skills if they only study or practice in the classroom,

especially for difficult content or techniques. Therefore, teachers have to show them the contents at home before going to class. For example, in the physical education curriculum of the new general education program in 2018, there are "long jump technique sit-style" in the 7th grade and "The use of proper diet for a person in exercises" in 8th grade. These two contents are relatively difficult, so to facilitate the acquisition of the lessons' content (theory) and movement techniques (practice), the teacher needs to create or search for videos that illustrate and explain these contents and then send them to the students, students will watch and explore the video content as homework. The teacher and students will then discuss the content of the videos that they watched.

### 3.2. Filming videos

Teachers must proactively record videos by themselves, refer to videos from colleagues or search for them on the internet. The length of each of these videos should be about 10-15 minutes [1]. Teachers should pay attention to the amount of knowledge on a topic to get an appropriate video.

### CONCLUSION

Reverse teaching model is one of the teaching models that have many preeminent effects with the application of information technology, using videos and images to help students gain knowledge, understand lesson content before going to class. These characteristics are very consistent with physical education subjects. Therefore, it is necessary to promote the application of the reverse teaching model in teaching physical education. However, in order for the application to be effective, it is important to identify the topics that need to be reversed, as well as build videos and images suitable to the content and curriculum.

### REFERENCES

1. Bergman, J. and A. Sams, *Flip your classroom: Reach every student in every class everyday*, International Society for Technology in Education, 2012.
2. Bishop, J.L. and M.A. Verlager, *The Flipped Classroom: A Survey of the Research*,

*120th ASEF Annual Conference & Exposition*, American Society for Engineering Education, 2013.

3. Shimamoto, D. (2012), *Implementing a Flipped Classroom: An Instructional Module. Technology, Colleges, and Community Worldwide Online Conference*.
4. Le Thi Phuong and Bui Phuong Anh, *Teaching in the reverse classroom model to develop self-study capacity for students*, Journal of Education Management, 2017. 9(10): p. 1-8.
5. Flipped Learning Network, *Definition of Flipped Learning*, <https://flippedlearning.org/definition-of-flipped-learning/>, 2014.
6. Ministry of Education and Training (2019), *Instruction on teaching according to the new general education curriculum for Physical Education*.
7. Project Tomorrow & Flipped Learning Network (FLN) (2015), *Speak Up 2014 National Research Project Findings: Flipped Learning continues to trend for third year*, Paper presented at the School Superintendents Association's National Conference on Education.
8. Ryan, R.M. and E.L. Deci, *Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions*, Contemporary Educational Psychology, 2000. 25(1): p. 45-67.
9. Hattie, J., *Visible learning: a synthesis of over 800-meta analyses relating to achievement*, London: Routledge, 2009.
10. Berg, A., et al, *Flipping over the Flipped Classroom*, Contemporary Issues in Communication Science and Disorders, 2015. 42: p. 16-25.

(Received 30/8/2019, Reviewed 20/9/2019)

Accepted 25/11/2019)

**VIETNAM NATIONAL UNIVERSITY PRESS, HANOI**

No. 16 Hang Chuoi - Hai Ba Trung - Hanoi

Telephone: Editorial Board: (024) 39714896;

Publish Manager: (024) 39728806; Executive editor: (024) 39715011

Fax: (024) 39729436

**Responsibility of publishing**

**Director – Executive Editor:**

**Dr. PHAM THI TRAM**

**Columnist: NGO THI PHUONG THAO - BUI HUONG GIANG - NGO BICH VAN**

**Publishing editor: PHAN HAI NHU**

**Article checker: MAI THI BICH NGOC - NGUYEN THI THU QUYET - LE THI TUYET THUONG**

**Engraver: MAI THI BICH NGOC - NGUYEN THI THU QUYET - LE THI TUYET THUONG**

**Cover designer: STARBOOKS - NGUYEN THI THU QUYET**



Tri Viet Culture and Media Company Limited

28 Thinh Quang Ward, Dong Da District, Ha Noi City, Viet Nam

Tel: (84) 243 56 26 332 – (84) 243 35626332

---

**Proceedings International Scientific conference: Sports in the context  
of the industrial revolution 4.0**

---

Codename: 2L - 216DH2019.

Printed 300 pieces, size 19x27cm at Hop Phat Print and communication JSC.,

Address: Apt. 807, N2D tower Trung Hoa – Nhan Chinh Residential Zone, Nhan Chinh Ward, Thanh Xuan dist., Hanoi

Publishing license no. 4824-2019/CXBIPH/10-341/DHQGHN, issued in 26/11/2019.

Publishing decision no. 1478 LK-XH/QĐ - NXB ĐHQGHN, dated in 29/11/2019.

ISBN code: 978-604-9887-50-5.

Printed and submitted copyright deposit in December 2019.