KỶ YẾU HỘI THẢO

DẠY HỌC PHÁT TRIỂN NĂNG LỰC CHO SINH VIÊN TRƯỜNG ĐẠI HỌC VINH ĐÁP ỨNG CHUẨN ĐẦU RA CHƯƠNG TRÌNH ĐÀO TẠO

NGHỆ AN, THÁNG 5 NĂM 2024

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MỤC LỤC

APPLYING THE FLIPPED CLASSROOM MODEL IN BLENDED LEARNING AT COLLEGE OF ECONOMICS - VINH UNIVERSITY

MA. LUONG THI QUYNH MAI
College of Economics, Vinh University
Email: mailtq@vinhuni.edu.vn

ABSTRACT: *This article examines the implementation of the flipped classroom model within a blended learning approach at the College of Economics, Vinh University. The flipped classroom model involves a reversal of traditional teaching methods, where students engage with course content outside of class through pre-recorded lectures, readings, or other materials, and then participate in interactive activities, discussions, and problem-solving exercises during class time. The study evaluates the effectiveness of this pedagogical approach in enhancing student engagement, learning outcomes, and overall satisfaction with the learning experience. It also explores the challenges encountered and strategies employed in implementing the flipped classroom model in the context of a blended learning environment. The research article designs a common process and a specific process for designing a lesson plan applying the flipped classroom model in blended teaching at College of Economics, Vinh University.*

Keywords: *flipped classroom, blended learning, economics*

INTRODUCTION

At the end of April 2021, Vietnam experienced a total of four waves of Covid-19 since the beginning of 2020. This has caused significant damage across all sectors, particularly in education. Specifically, schools from primary to tertiary levels in Vietnam have been forced to switch to online learning and continually adapt to the current situation. With the impact of the pandemic, online learning has become a necessary solution when students cannot attend school. This learning method is still relatively new and poses significant challenges for both teachers and students. Looking from a different perspective, the early months of 2020 were an opportune time to adopt online teaching and learning methods in line with the trends of the 4.0 era. As the situation gradually stabilized in mid-2020, schools began to return to classroom learning environments, albeit with limitations on time and space to comply with social distancing regulations recommended by the government. While this form of learning may meet immediate needs, it still does not adequately focus on developing high-level skills and thinking for students. The question for educators arises: "How to teach and learn within limited time in the classroom while remaining adaptable to crises and focusing on developing high-level thinking for students?" Teaching according to the flipped classroom model can address these requirements.

Teaching according to the flipped classroom model is one of the modern methods that meets the requirements of innovative teaching methods. The principle of this teaching method is that students independently explore lesson content at home, using various sources such as textbooks or the internet. Then, students interact with teachers and classmates in the classroom to reinforce the knowledge gained through self-discovery, exploration, and experiential learning at home. This learning model helps students become more interested in learning and provides opportunities for them to develop their abilities.

RESULTS

2.1. Blended learning

2.1.1. Concept of blended learning

Blended learning is "a formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace, and at least in part at a

supervised brick-and-mortar location away from home" (Heather Staker & Michael B. Horn, 2012). The blended learning model combines in-class/direct learning activities (including lesson plans, discussions, exercises, instructional materials, related subject materials, laboratories) and online learning activities (including online surveys, e-learning, online discussions, online forums, multimedia, online documents, self-assessment, learning software).

2.1.2. Blended learning models

The combination of direct and online learning allows for greater personalization, flexibility, and effectiveness. Meeting the diverse needs of each student is always a challenge for teachers. After researching and implementing practical case studies from various schools (mainly in the United States and some international surveys), Heather Staker and Michael B. Horn (2012) classified and summarized the following blended learning models:

a. Teacher-led direct model: Teachers lead the learning process with the support of technological devices. This model is most effective for diverse classrooms where students operate at different levels of ability and proficiency. Students who excel in class can progress at a faster pace.

b. Flex model: This model relies mainly on online instructional guidance, where teachers not only provide instructions but also directly guide students. The entire curriculum is accessible to students through online software.

c. Online lab model: This model allows students to participate in full-time online schooling throughout the learning process. Students will not have teacher guidance but will be trained through supervision by assistants or aides.

d. Self-blend model: In this model, students still attend traditional classes but can enroll in additional courses or conduct their own research and study.

e. Online driver model: In this model, students learn remotely and receive instructional guidance through online platforms.

2.2. Flipped classroom model

The flipped classroom, "flip" meaning "reversal" and "classroom" referring to the learning environment, gained traction notably from Eric MaZur - who developed the peer instruction method in the 20s of the 20th century. He realized that using computers in teaching allowed him to guide students rather than lecture them. Starting in the fall of 2000, the University of Wisconsin-Madison used software to replace traditional lectures in the Information Technology field with instructional videos accompanied by slides. In 2011, two centers, the Wisconsin Collaboratory for Enhanced Learning, were established to focus on flipped classroom models.

The flipped classroom model is where the steps of teaching and learning in traditional classrooms are reversed - meaning lecture content is delivered at home through online videos, practice, applications, assignments, question answering, and in-depth discussions are conducted in class.

The contrast between the flipped classroom model and traditional classrooms can be seen as follows: In traditional classrooms, students attend lectures by teachers, which specialists call low-level thinking. Then, students go home to do assignments, and the assignment process becomes challenging if students do not understand the material. In practice, for traditional teaching methods, teachers do not have enough time to both deliver new knowledge and help students solve all assignments related to that knowledge unit, let alone have time to closely supervise all students. The flipped classroom model addresses these challenges by "flipping" the process of traditional teaching and learning.

Thus, the task of delivering new knowledge belongs to the teacher, and according to Bloom's taxonomy, this task only exists at the low level ("remembering" and "understanding"). Conversely, the task of students is to apply the knowledge acquired, which belongs to the high level of Bloom's taxonomy (including

"applying", "analyzing","evaluating" and "creating"). The obstacle is that tasks at the high level are solved by students themselves.

With the flipped classroom model, understanding knowledge is guided by the teacher (through e-learning textbooks prepared by teachers beforehand and information searched by students themselves), and the task of students is to self-study this new knowledge and do low-level assignments at home. Then, in class, students engage in activities organized by the teacher to interact and share with each other. High-level assignments are also performed in class with the support of the teacher and classmates. This learning method requires students to engage in more brain activities, hence it is called high-level thinking. Thus, high-level tasks in Bloom's taxonomy are carried out by both teachers and students. This is the difference between the traditional classroom model and the flipped classroom model.
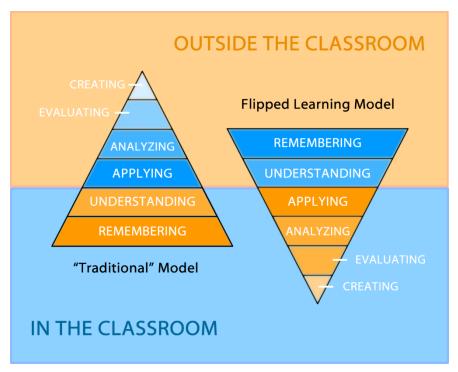

Figure 1: Flipped learning in Bloom's taxonomy

2.3. Flipped classroom model in blended learning

2.3.1. Concept of the flipped classroom model in blended learning

The flipped classroom model emerged in the United States in the 1990s and has been widely adopted across many educational institutions, from elementary schools to universities, overturning the traditional classroom teaching approach.

In the flipped classroom, all teaching and learning activities are "flipped" compared to the traditional classroom setup. The "flip" here refers to a shift in pedagogical approaches and strategies in deploying content, learning objectives, and other teaching activities compared to the traditional methods employed by teachers and students.

In the flipped classroom, students learn the lecture material provided by the teacher at home, engaging in self-study to achieve certain prerequisite knowledge and understanding. During class time, students collaborate with the teacher to discuss and delve deeper into the topic/lesson. This model completely reverses the traditional learning model: Teachers prepare lecture materials beforehand, while students prepare homework assignments at home before class, and new lessons are taught by the teacher during class time, with some class hours dedicated to practicing assignments.

What's unique about the flipped classroom is the integration of both in-person and online learning, combining the use of online training platforms and familiar traditional classroom methods.

2.3.2. Advantages of the flipped classroom model in blended learning

The flipped classroom places the learner at the center of the teaching process, not only allowing them to leverage their existing capabilities but also aiding in their development and accumulation of new skills

Students have complete control over their self-study, where and when they study, according to their own learning pace.

It expands opportunities for exchange and discussion, enabling students to learn more from their peers and teachers.

It addresses common difficulties such as students being unable to attend class due to illness or other uncontrollable health reasons.

The variety and diversity of lesson content and assignments are enriched.

Learning materials can be reused, and learners can review them multiple times until they understand the material fully.

2.3.3. Disadvantages of the flipped classroom model in blended learning

Accessing learning materials can be challenging for some students who lack skills in information technology and internet usage. Internet speed may not always be stable, hindering seamless learning and studying.

Designing lesson videos that align with pedagogical concepts, implement appropriate teaching methods, and provide suitable support for self-directed learning can be very difficult. Typically, teachers may use pre-designed videos shared by others, which may not fully align with their teaching style; or if they create their own, it requires a significant amount of time, investment, and meticulous preparation.

Many students may still be passive learners and lack awareness of self-directed learning.

2.3.4. Teaching process in the flipped classroom model in blended learning

The flipped classroom model in blended learning is designed around the following three stages:

Stage 1 - Pre-class: In this stage, instructors design lessons for self-study through E-Learning lectures and relevant learning materials with the support of the Learning Management System (LMS).

Stage 2 - Active learning and xxperiences during class: This stage builds upon stage 1, focusing on active learning and experiential activities in physical classrooms or online classrooms with instructor support, emphasizing interaction between instructor-student and student-student to develop skills.

Stage 3 - Reinforcement and skill enhancement post-class: This stage involves activities to reinforce deep knowledge and enhance skills through assessment, practical exercises, advanced assignments, real-world applications, corresponding to the achievement of high competency levels.

2.4. Illustrating a teaching plan applying the flipped classroom model in blended learning

I have designed and implemented a teaching plan for the "Time series" topic in the "Economic statistics" course. In this article, I illustrate the teaching plan as follows:

LESSON: TIME SERIES

I. Objectives

By the end of the lesson, students will be able to:

Understanding time series

Understanding the method of analyzing time series

Report results of group discussion.

Solve some questions from others.

II. Learning outcomes

CLO1.4: Understand economic indicators

CLO2.2: Apply statistical economic models to economic measurement

CLO3.1: Critical thinking skills

CLO3.2: Effective teamwork organization skills

III. Teaching aids

PowerPoint

E-Learning system

Projector

Computer

Textbook (Economic Statistics)

A0 paper

IV. Teaching process

4.1. Stage 1: Pre - class

Upload the E-learning lecture on time series and time series analysis indicators to the following link: http://elearning.vinhuni.edu.vn/mod/scorm/view.php?id=166187

For the discussion section:

Assign students to calculate time series analysis indicators.

Each group should find and draw one real-life time series on an A0 paper.

4.2. Statge 2: During class

Activity	Aims of activity	Description of activity
Lead - in	Create good atmosphere for students to learn and get them ready for the new lesson. Check the knowledge of the previous lesson.	**Some time series in reality** Show datas Show time series in reality Using some indicators to analyse Give 5 indicators of time series analysis
Multiple - choice questions	Apply the fomula into the reality	Give 5 multiple choice questions for 5 indicators
Discussion & Presentation	Discuss problems and solution Develop teamwork skills Develop presentation skills	Before the lesson, the following requirements were posted on the Class discussion part on the E - learning system: **Find and draw a case study of time series on A0 paper** Ask students to work in groups of 5/6 members in 10 minutes to use indicators for time series analysis. While discussing, ask students to take notes on A0 paper they had.

		Obverse students' group discussion and evaluate each member's contribution and participation. After group working, ask students to choose one representative per group, other members go to see other groups's result. The criteria for group task: Content Format Presentor After galary walk acitivites, each students choose 2 best groups. The group has the most votes will be a winner in strawpoll website by QR code.
Wrap-up	Identify what students have learnt trough the case study.	Ask students what they have learnt through group task. Summarize time series analysis.

4.3. Stage 3: Post - class

Homework: Ask students to work individually and do time series analysis

Post your answers in the Class Discussion part on the E-learning system.

Self - study: Do excercise in textbook 5.6 - 5.10 (page 192 - 193)

Post your answers in the Class Discussion part on the E-learning system.

3. Conclusion

Based on theoretical research on the flipped classroom model in blended learning, I have designed activities and organized teaching "Time series" topic in the "Economic statistics" course to develop students' competencies. Through the learning process and experiences with the flipped classroom model in blended learning, students have learned about time series in reality and how to analyze data, thereby autonomously acquiring knowledge through learning activities and helping students develop various competencies such as self-learning ability, numerical competence, and collaborative skills. This contributes to fostering a passion for scientific research, enhancing interest in learning, and promoting and harnessing autonomy, proactivity, and creativity in both learning and life.

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