International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 5: September-October 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities

Weilin Gui[1], and Prasert Ruannakarn[2]
Faculty of Education, Mahasarakham University, Thailand.
[1]E-mail: guiweilin@gxnun.edu.cn, ORCID ID: https://orcid.org/0009-0007-6085-8294
[2]E-mail: prasert.rua@msu.ac.th, ORCID ID: https://orcid.org/0009-0006-7897-7198
Received 30/03/2024 Revised 19/04/2024 Accepted 23/05/2024

Abstract

Background and Aim: In today's highly competitive and evolving academic environment, academic performance and learning attitude are considered two crucial aspects that shape students' academic performance and personal development. Academic performance not only reflects a person's learning outcomes in a specific subject area but is also closely related to his or her learning attitude. The traditional teaching mode can't meet the teaching demand of the "Basics of Computer Application" course, and the blended learning model is more suitable for the development of education information. This study aimed: (1) To study the development of students' academic performance by the flipped classroom teaching mode based on MOOC. (2) To study the development of students' learning attitudes by the flipped classroom teaching mode based on MOOC.

Materials and Methods: The research sample is a total of 60 students in two classes of the first grade of preschool education at Guangxi Normal University for Nationalities, there are 30 students in both classes, and they are divided into two groups based on the class: Class 1 is used as the control group to teach in the traditional classroom teaching mode, and class 2 as the experimental group is taught in the flipped classroom teaching mode based on MOOC. The data of this research comes from test papers and questionnaires. Input the test data into SPSS for descriptive statistics and data analysis; input the questionnaire data into SPSS for data analysis.

Results: (1) The academic performance after learning with the flipped classroom teaching model based on MOOC is significantly higher than the traditional teaching model($P<0.01$). (2) The attitude after learning with the flipped classroom teaching model based on MOOC is significantly higher than the traditional teaching model($P<0.01$).

Conclusion: (1) In the "Basics of Computer Application" Course, flipped classroom teaching based on MOOC can improve students' academic performance more than traditional classroom teaching. (2) In the "Basics of Computer Application" Course, flipped classroom teaching based on MOOC can improve students' learning attitude more than traditional classroom teaching.

Keywords: Blended learning; Flipped classroom; MOOC; Academic performance; Learning attitude

Introduction

The 21st century is an information age with the rapid development of the Internet, with the development of modern network information technology, traditional classroom teaching can no longer meet people's learning needs, and blended learning methods are gradually being valued. The emergence of the blended learning model is an important supplement to the traditional education model. In the traditional classroom mode, students' learning mainly depends on teachers' teaching in the classroom, which often ignores students' differences and the diversity of learning needs. At the same time, with the popularization of digital technology, students can more easily access a large number of learning resources, but they also face challenges such as information overload and uneven quality. In 2015, the "Opinions on Strengthening the Construction and Management of Online Open Courses in Colleges and Universities" was issued. The document emphasizes the promotion of the deep integration of information technology and education and realizes the application and sharing of courses and platforms in various forms (Shen, 2016). The proposed Blended Learning model is precisely to solve these problems, enabling students to better develop their learning ability and comprehensive quality while enjoying the convenience brought by science and technology.

Blended learning is to combine the advantages of traditional learning methods with the advantages of online learning. In other words, it must not only play the leading role of teachers in guiding, inspiring, and monitoring the teaching process but also fully reflect the initiative of students as the subject of the learning

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 5: September-October 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

process, positivity, and creativity(He, 2005). Blended learning is the theory and practice of rationally selecting and combining learning elements for students to optimize the learning effect and the cost of the learning project. The use of blended learning can expand learners' opportunities to participate in learning, improve learning efficiency, correct learning interests, and optimize learning effects.

In the traditional teaching model, the teacher often takes the initiative to choose the knowledge to be imparted to the students, while the students passively accept the knowledge chosen by the teacher, which does not reflect the student's dominant position. A flipped classroom leaves more time for students, allowing students to give full play to their active learning abilities both in and out of class. It provides students with many opportunities for teamwork and communication and enhances students' initiative. It makes up for the shortcomings of the traditional teaching model. Combining MOOC with flipped classrooms can provide students with a more open and self-protective learning environment, more learning resources, and learning opportunities. Students can learn without being restricted by time and space, and this promotes personalized learning and independent learning. develop.

The "Basics of Computer Application" course at Guangxi Normal University for Nationalities is a required course. Through the study of this course, students can master the basic theory and basic operating skills of computers. Students not only need to obtain theoretical knowledge from teachers but also need to be familiar with operating skills. However, in recent years, the hours of this course have gradually been compressed, and it is not easy to complete the teaching of theoretical knowledge. It is even more difficult to allow students to have time to practice operating computers in class. Due to the rush-type classroom lectures and very little time for computer operations, students gradually do not pay attention to the "Basics of Computer Application" course. Students cannot understand in class, do not have enough time to practice operating computers, and do not have the knowledge, ability, and autonomy to review after class, forming a vicious circle, and their academic performance and learning attitude are lower than expected. In China, a considerable number of college students have the same dilemma in different schools and different courses. After going through the brutal college entrance examination and entering university, I became relaxed about my studies. I lost my study attitude and efforts to prepare for the college entrance examination and became bored with the traditional teaching model, which greatly affected my academic performance and learning attitude.

Objectives

1. To study the academic performance between flipped classrooms based on the MOOC teaching model and the traditional teaching model.

2. To study the attitude after learning in a flipped classroom based on the MOOC teaching model and traditional teaching model.

Literature review

1. "Basics of Computer Application" Course

The "Basics of Computer Application" course is a public basic course offered by Guangxi Normal University for Nationalities. Through this course, students can master basic theoretical knowledge and basic operation skills of computers and have certain computer application abilities. Lay a foundation for future study and development. According to the report of the United States President's Information Technology Advisory Council (PITAC), the most scientifically important and economically promising frontier research in the 21st century is likely to be solved through advanced computer technology and computer science (Diver & Martinez, 2015).

2. Teaching Method Consisting of Two Methods

Method 1: Traditional classroom teaching

Traditional classroom teaching refers to a teacher-centered approach where the teacher gives lectures and students take notes without much expression and communication in classroom interactions (Bhavsar et al., 2022). The course "Basic Computer Application", refers to the teaching method in that the teacher explains and operates the textbook knowledge systematically, so that the students can master a lot of knowledge, and the students imitate the teacher and achieve the purpose of learning through repeated exercises. This teacher-centered, book-centered, and classroom-centered teaching mode pays too much attention to the transfer of knowledge and neglects the participation, creativity, and initiative of students.

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 5: September-October 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Method 2: Flipped classroom teaching based on MOOC

Flipped classroom teaching based on MOOC is the combination of a MOOC-an international, high-quality program with a flipped classroom that is conducive to the dissemination of quality programs, improved teaching quality, and the development of forward-looking content and student-centered teaching goals (Clemens et al., 2013). Students watch the teacher's teaching video through the MOOC platform before or after class to complete the imparting of knowledge, in the classroom, the teacher is the instructor, and the students are the masters of the classroom, personalized learning, the teaching process in which teachers answer students' questions, cooperate in exploration, and complete their studies to achieve better educational effects.

3. Academic Performance and Learning Attitude of Students

Academic performance refers to the knowledge and ability learned through Bloom's six cognitive behaviors, which are remembered, understood, applied, analyzed, evaluated, and created (Bloom et al., 1956). Components include test scores, homework quality, participation in classroom activities, and classroom learning attitude. Academic performance is an indicator of learning success, the basis for future development, and academic competitiveness. Academic performance is directly related to whether students can achieve academic success in school. By working hard to improve academic performance, students can develop critical thinking, problem-solving abilities, and independent learning skills, promote all-round personal development, and make greater contributions to society in the future. Contribute and participate in the process of solving social problems and promoting social progress. Academic performance is mainly evaluated in several aspects: acquisition of knowledge, participation in class activities, and attitude during the learning process.

Learning attitude refers to the emotion or emotional experience of students accompanied by cognition, learning attitude is a student's attitude and mentality towards learning, involving interest in learning, motivation, self-confidence, and how to deal with difficulties. Its components include learning motivation, learning goal setting, learning interest, learning persistence, etc. Learning attitude directly affects students' learning motivation. A positive learning attitude helps to increase students' interest and investment in learning. A good learning attitude promotes cognitive development, making students more willing to actively explore and accept new knowledge and cultivate positive learning habits. A good learning attitude has a positive impact on students' emotional health and psychological well-being, reducing academic stress and anxiety. Learning attitude is an important predictor of academic achievement. A positive learning attitude helps overcome learning difficulties and improve learning results. A good learning attitude cultivates students' self-management abilities, allowing them to better formulate study plans, maintain learning motivation, and cope with learning challenges. A positive learning attitude helps form positive social relationships, making students more willing to cooperate with classmates and teachers to learn and share experiences. By understanding students' interests and motivations, teachers can adjust teaching strategies to better meet students' learning needs, personalized learning plans can better meet students' needs, and understanding students' learning attitudes can help counselors and educational institutions provide more effective Targeted academic counseling to understand students' learning attitudes can help create a positive learning environment, encourage students to be more willing to participate in academic activities and improve their learning motivation. The assessment of learning attitude is to examine students' learning motivation, interest, goal setting, and attitude toward learning challenges from multiple dimensions to comprehensively understand their psychological and emotional state in the academic environment.

This review first introduces the background and importance of the "Basics of Computer Application" course, pointing out that through this course, students can master basic theoretical knowledge and operational skills of computers, laying a foundation for future study and development. It then compares two teaching methods: traditional classroom teaching and flipped classroom teaching based on MOOC. Traditional teaching is teacher-centered, focusing on teacher explanation and student practice, while flipped classroom teaching emphasizes student autonomy and personalized learning, utilizing online videos for learning assistance and engaging students in problem-solving and cooperative discussions in class. Finally, it discusses the importance of academic performance and learning attitude, as well as assessment methods. Academic performance is not only an important indicator of learning success and future development but also directly affects students' academic achievement and competitiveness in school. Learning attitude involves students' attitudes and mentalities towards learning, including motivation, goal setting, interest, and persistence, significantly influencing their learning motivation and emotional well-being. The

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 5: September-October 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

comprehensive assessment of learning attitude is emphasized to understand students' psychological and emotional states comprehensively through multidimensional evaluation methods.

Conceptual Framework

The conceptual framework of this paper is illustrated in Figure 1.

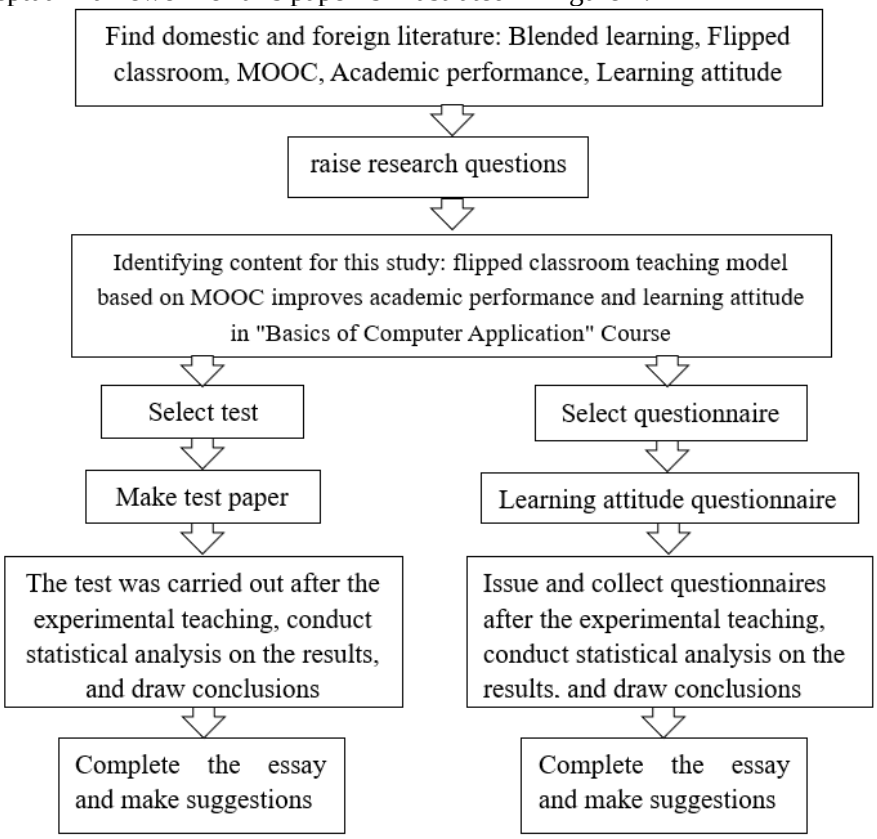

Figure 1. Conceptual Framework
Note: Constructed by the author

Methodology

This paper studies flipped classrooms based on MOOC to enhance academic performance and attitude in the Basics of Computer Application Course, the experiment is carried out from the following aspects.

1. Samples

For the experiment, two classes were chosen through cluster random sampling. All students from Class 1 and Class 2 in the preschool education majors of the 2022 grade were selected. Using random assignment, class 1 served as the control group using the traditional teaching model, with 30 students, while class 2 served as the experimental group using a blended learning model with a flipped classroom based on MOOC, with 30 students. A total of 60 students participated in the experiment. The experimental group and control group received instruction for 4 weeks, a total of 12 class hours.

2. Research Instruments

2.1 Teaching Process Design

Two teaching models are used in this study, the blended learning model with flipped classroom based on MOOC, and the traditional teaching model.

(Under the premise of controlling other teaching conditions, the teaching situation of the experimental class and the control class are compared.)

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 5: September-October 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Table 1 Teaching process design of the traditional teaching model and blended learning model with flipped classroom based on MOOC, outlines the respective procedures.

Traditional teaching model	Blended learning model with flipped classroom based on MOOC
1. Make PPT according to the teaching content before class 2. Teach the content in class 3. Classroom exercises 4. Class Summary 5. Assign homework	1. Release learning tasks in advance so that students can learn knowledge in advance 2. Collect information about students' study before class 3. Answer questions for students in class and organize collaborative discussions among students 4. Consolidate knowledge after class 5. Evaluate feedback

2.2 A Test of Academic Performance

To understand the students' mastery of knowledge, test papers were developed and an assessment test was conducted in the last week of the experiment. The test involves 6 units of the office-word module, with a total score of 100 and a time of 60 minutes. Due to the school's teaching management, the academic test papers were not tryout. Although the trial was not possible, the importance of tryouts was still recognized. Students' performance will be closely monitored and prepared to respond flexibly to issues that may arise. The content of the test paper is mainly extracted from the test papers and question banks of previous years. The three experts are experts in the computer course at Guangxi Normal University for Nationalities. Given this, this test paper is used without tryout.

2.3 A Questionnaire on Students' Learning Attitudes

To understand the students' learning attitude after experimental teaching, a questionnaire was constructed, which contained 20 questions. According to the Likert scale, the questionnaire is divided into 5 levels. Regarding the content of the questionnaire, experts mainly put forward several suggestions: clarify the question, simplify the pronunciation, and avoid double negatives. Modify according to the suggestions put forward by the experts. After the modification is completed, it will be sent to the experts for review. After the experts confirm that it is correct, the content of the questionnaire will be completed.

2.4 Data Analysis

Test whether each group of data follows the normal distribution, and choose the appropriate data analysis method. The independent sample T-test was used to analyze the academic performance of the experimental group and the control group, which included the mean value of academic performance and standard deviation. To assess students' learning attitudes, descriptive statistics were used to analyze the results of the learning attitudes questionnaire, which included the mean and standard deviation values obtained on a 5-point Likert scale. The researchers conducted two independent sample T-tests and descriptive statistics of two independent samples, to determine whether the difference is statistically significant at a significance level of $P<0.05$.

Results

The study aims to achieve the objectives: (1) To study the academic performance between flipped classrooms based on the MOOC teaching model and traditional teaching model, (2) To study the attitude after learning in flipped classrooms based on the MOOC teaching model and traditional teaching model.

1. Data analysis of student’s academic performance after learning

The learning achievement test results of the experimental group and the control group were sorted out, and SPSS 23.0 was used to detect whether the two groups of data obeyed normal distribution. Through detection, both groups of data are subject to normal distribution (see Table 2). Through T-test, Test whether there is a significant difference between two groups (independent samples). The average score of the control group was 78.103, and the average score of the experimental group was 87.963, the results of the independent sample T-test showed that the p-value was less than 0.05, indicating that there was a significant difference in the scores of the two classes after the experiment (see table 3).

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 5: September-October 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Table 2 Normality test: The results of normal distribution testing of academic performance from Method 1(traditional teaching model) and Method 2(Flipped classroom model based on MOOC) by using the Shapiro-Wilk test

Groups	statistic	df	Sig.
control group	0.958	30	0.280
experimental group	0.979	30	0.796

Since the p-values of the two groups of data are greater than 0.05, the two teaching models obey the normal distribution at the significance level of 0.05.

Table 3 The Result of the comparison of academic performance from Method 1(traditional teaching model) and Method 2 (Flipped classroom model based on MOOC)

Group	N	$\bar{X}$	SD	df	t	p-value (1-tailed test)
Control group	30	78.103	7.996	58		
Experimental group	30	87.963	5.638	52.119	-5.520	0.000<0.05

It can be concluded from Table 3 that the p-value (1-tailed test) of the experimental group and control group is 0.000, less than 0.05. It can be concluded that the academic performance of the experimental group after learning is significantly higher than that of the control group.

2. Data analysis of the learning attitude survey questionnaire

After the completion of the course learning and achievement tests, the experimental group and the control group were given a questionnaire with 20 questions. On-site issuance, all students are required to complete within the specified time, on-site recovery, and response rate of 100%.

Table 4 Normality test: Normality test: The results of normal distribution testing of learning attitude from Method 1(traditional teaching model) and Method 2(Flipped classroom model based on MOOC) by using the Shapiro-Wilk test

Groups	statistic	df	Sig.
control group	0.944	20	0.281
experimental group	0.961	20	0.570

Since the p-values of the two groups of data are greater than 0.05, the two teaching models obey the normal distribution at the significance level of 0.05.

Table 5 The Result of comparison learning attitude from Method 1(traditional teaching model) and Method 2(Flipped classroom model based on MOOC)

Group	N	$\bar{X}$	SD	df	t	p-value (1-tailed test)
Control group	20	3.6355	0.71946	38	-5.003	0.000<0.05
Experimental group	20	4.4570	0.14690	20.582		

It can be concluded from Table 5 that the p-value (1-tailed test) of the experimental group and control group is 0.000, less than 0.05. It can be concluded that the learning attitude of the experimental group is significantly higher than that of the control group. So there is a significant difference in the attitude between the experimental group and the control group.

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 5: September-October 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Discussion

In this study, two different teaching modes flipped classroom teaching based on MOOC and traditional classroom teaching, are applied to the course "Basics of Computer Application" for first-year university students. Two classes of the same major learn the same content through these two different methods. Teaching mode, the experiment proves that the academic performance and learning attitude of students based on flipped classroom teaching based on MOOC are better than those of traditional classroom teaching.

1. The flipped classroom transfers the part of imparting knowledge from classroom to extracurricular, emphasizing that students can learn independently, students can arrange their learning progress according to their own time, and pay attention to students acquiring new knowledge according to their preferences. Teachers should constantly refine the classroom teaching mode that suits their students. After all, the appropriate one is the best. Research by Strelan et al., (2020) also indicated that as long as it is used properly, even a classroom with a limited degree of flipping will have a significantly better effect on teaching in a traditional classroom. The flipped classroom teaching based on MOOC emphasizes the combination of online and offline, allowing students to have enough time to learn independently before class and to internalize knowledge during class. 100 students from two classes of Kinesiology major in Mudanjiang College in 2022 as the experimental subjects, online and offline combined teaching methods are used for teaching, pre-class preview, and after-class review are completed online, face-to-face learning is completed in offline classrooms, and students' grades have been greatly improved; Zhong (2021) taking 61 students from 2 classes of L University as the research object, one class adopts the flipped classroom teaching method based on MOOC, and the other class as the control group adopts the traditional classroom teaching mode, after 16 weeks of study, the final academic performance of the experimental class was higher than that of the control class, and the students' autonomous learning ability was also improved.

2. The learning attitude of students in flipped classroom teaching based on MOOC is more positive than that in traditional classroom teaching. The flipped classroom based on MOOC makes the classroom atmosphere more active, the relationship between teachers and students is more harmonious, learning problems can be answered in time, students are more interested in learning, and students have a more positive learning attitude. Gonzalez(2014) Modifying the Flipped Classroom: The “In-Class” Version Teachers who used the flipped classroom saw "higher student achievement, greater student engagement, and better attitudes toward learning and school". Shen(2016) said that the flipped classroom based on MOOC makes the classroom more active, students are more interested in learning, teaching happiness is enhanced, and teaching enthusiasm is improved; Cao (2020) said that the flipped classroom based on MOOC can be flexibly adjusted according to the differences between students and the learning progress during the teaching process, which can meet the individual needs of students to the greatest extent, stimulate students' enthusiasm for learning, and make the whole teaching process more reasonable, Scientific, improve the teaching efficiency.

In flipped classroom teaching based on MOOC, teachers must consider the school's hardware and software support, whether students can use the network and network equipment smoothly, and whether the difficulty of teaching video content is appropriate. A flipped classroom teaching model based on MOOC can organize more learning activities in the classroom so that students have more opportunities to master deep knowledge and realize knowledge internalization. Search for more relevant knowledge on the MOOC platform and expand your cognitive field.

Conclusion

Through the implementation of a flipped classroom teaching model based on MOOC and a traditional teaching model, this study formulated relevant teaching plans and implemented them in preschool education students of Guangxi Normal University for Nationalities. The experimental group adopted a Flipped classroom teaching model based on MOOC and the control group adopted a traditional teaching model through random assignment. The data were collected and analyzed by collecting students' test results and attitude questionnaire results. Studies have shown that the flipped classroom teaching model based on MOOC is better than the traditional teaching model in improving students' academic performance and learning attitudes.

In the process of implementing the Flipped classroom teaching model based on MOOC, students also show high enthusiasm for learning initiative, so teachers can make use of the advantages of this teaching mode, develop appropriate teaching strategies, and provide students with a more flexible and efficient

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598

learning experience. In actual teaching, teachers can try a variety of teaching methods to improve students' ability to communicate and cooperative learning, which is good for students' development and conducive to improving teachers' teaching levels.

Recommendation

This research aims to study the academic performance and learning attitude between the flipped classroom teaching model based on MOOC and the traditional teaching model in Guangxi Normal University for Nationalities. The results show that the flipped classroom teaching model based on MOOC is better than the traditional teaching model in enhancing students' academic performance and learning attitude. Therefore, based on research results, the following recommendations are made:

1. Suggestions for practice

(1) Before class, teachers should make teaching videos and teaching materials in line with students' learning levels, supervise students' learning, and communicate with students promptly.

(2) In the classroom, teachers play a leading role, take students as the center, organize classroom activities reasonably, encourage students to participate in them, speak actively, and give full play to the advantages of collaborative learning

(3) After class, teachers should urge students to do a good job in knowledge management, teaching reflection, continuous improvement and optimization of classroom teaching, and preparation for the next class.

2. Suggestion for further research

(1) The flipped classroom teaching model based on MOOC can cultivate students' abilities in other fields, such as hands-on ability, language expression ability, and communication ability

(2) The flipped classroom teaching model based on MOOC can be applied to primary and secondary school teaching.

(3) The flipped classroom teaching model based on MOOC can try to combine more types of educational technologies, give full play to the advantages of MOOC and flipped classrooms, and continuously optimize teaching methods.

References

Bhavsar, M.H., Javia, H.N., Mehta, S.J., Bhavsar, M., & Mehta, S. (2022). Flipped classroom versus traditional didactic classroom in medical teaching: a comparative study. Cureus, 14(3), e23657. doi:10.7759/cureus.23657

Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain.* Longman New York.

Cao, M. (2020). *Research on the application of flipped classrooms based on MOOC in the teaching of sports skills.* Qufu Normal University.

Clemens, B.M., Nivargi, C., Jan, A., Lu, Y., Schneider, E., & Manning, J. (2013). Adventures with a flipped classroom and a materials science and engineering MOOC: "Fools Go Where Angels Fear to Tread." *MRS Online Proceedings Library, 1583, 1–6.*

Diver, P., & Martinez, I. (2015). MOOCs as a massive research laboratory: Opportunities and challenges. *Distance Education,* 36(1), 5–25.

Gonzalez, J. (2014). *Modifying the flipped classroom: The "in-class" version.* Retrieved from: Https://Www. Edutopia. Org/Blog/Flipped-Classroom-in-Class-Version-Jennifer-Gonzalez.

He, K. (2005). The New development of educational technology theory is viewed from Blending Learning. *Journal of the National Academy of Educational Administration,* 9(37), 8-10.

Shen, J. (2016). *Research on the application of flipped classroom teaching mode based on MOOC resources.* Yunnan University.

Strelan, P., Osborn, A., & Palmer, E. (2020). Student satisfaction with courses and instructors in a flipped classroom: A meta-analysis. *Journal of Computer Assisted Learning,* 36(3), 295–314.

Zhong, L. (2021). *Research on the application of MOOC-based flipped classroom teaching mode in English for Specific Purposes of teaching.* Qufu Normal University.

Citation
Gui, W., & Ruannakarn, P. (2024). The Development of a Blended Learning Model with a Flipped Classroom Based on MOOC to Enhance Academic Performance and Attitude in the "Basics of Computer Application" Course at Guangxi Normal University for Nationalities. International Journal of Sociologies and Anthropologies Science Reviews, 4 (5), 285-292; DOI: https://doi.org/10.60027/ijsasr.2024.4598