

Original Article

IMPROVING LEARNING IN THE ERA OF DIGITALIZATION: INVESTIGATING BLENDED TEACHING INNOVATIONS FOR COLLEGE STUDENTS

Xiaoli Zhang Qiang Liu

Huazhong University of Science and Technology, Wuhan, Hubei, 430074, China

Abstract: In recent years, Chinese universities have made significant strides in enhancing teaching quality. However, several issues have emerged, including a focus on knowledge transmission over nurturing students' autonomous learning skills and a deficiency in comprehensive student assessment and evaluation. To address these challenges, universities have embarked on a series of reforms to traditional teaching models.

As network technology becomes more pervasive, universities are embracing the concept of blended teaching. This approach does not entirely replace traditional methods with technology but integrates network technology into conventional teaching to leverage complementary strengths. Many institutions are actively exploring and implementing blended teaching, yet numerous aspects of this teaching model warrant further investigation.

This includes the integration of the flipped classroom concept with traditional teaching, the effective design and development of blended courses, and other aspects that offer ample opportunities for in-depth study and exploration.

Keywords: Blended teaching, Flipped classroom, Higher education, Autonomous learning, Teaching reforms

1. Introduction

In recent years, the teaching quality of Chinese universities is constantly improving, but at the same time, some problems also appear. For example, in traditional teaching, teachers only pay attention to the imparting of knowledge while ignoring the cultivation of students' autonomous learning ability, and lack of comprehensive assessment and evaluation of students [1]. In order to solve these problems, various universities have carried out a series of reforms to the traditional teaching model [2]. With the popularization and development of network technology, it is possible for colleges and universities to carry out blended teaching. Hybrid teaching is not a complete combination of traditional teaching methods and network technology, but the addition of network technology on the basis of traditional teaching, so as to realize complementary advantages [3]. At present, many colleges and universities are actively exploring and practicing blended teaching. There are still many issues worth studying and exploring about blended teaching model [4], such as how to combine flipped classroom concept with traditional teaching model, how to effectively design and develop blended courses, etc., all of which are worthy of further study.

2. Feasibility of carrying out flipped classroom education reform

The so-called "mixed teaching" refers to a new teaching mode that combines online and offline learning, and combines in-class and extracurricular learning. This model originated in the United States, developed earlier in China, and achieved good results. In recent years, domestic universities have increasingly applied "hybrid teaching" to their teaching practices, achieving good teaching results to a certain extent. However, there are still many shortcomings, such as the relative lack of teaching resources, the lag in the construction of online learning

Original Article

platforms, insufficient interaction between teachers and students, and uneven quality of online courses [5]. Therefore, it is necessary to deeply analyze the current situation and characteristics of mixed teaching in China's universities, and draw on the mature experience of "mixed teaching" at home and abroad to introduce the concept of "flipped classroom" into the teaching reform in China's universities, in order to solve the problems existing in the traditional single classroom teaching mode in China's universities. This new teaching model, which focuses on "teaching" to "learning", focuses on knowledge impartation to knowledge internalization, and focuses on classroom learning to autonomous learning, has a positive significance in promoting college students' knowledge construction, ability development, and emotional experience. Therefore, it is necessary for us to reform the mixed teaching mode based on the theoretical research and practical exploration of flipped classroom.

Flipped classroom is a brand new teaching model, which realizes the internalization of knowledge through students' self-learning before class. The core of this model is that students use after-school time to complete pre-class knowledge learning and internalize knowledge in class [6]. Compared with traditional teaching mode, flipped classroom has the following advantages in knowledge internalization: First, it is beneficial to stimulate students' interest in learning. Changing the teaching link in the traditional teaching process into the pre-class learning stage can enable students to learn independently and solve problems. Second, it is beneficial to improve students' autonomous learning ability. Leaving classroom time to students allows them to internalize knowledge after class. Third, it is conducive to improving teachers' teaching level. Teachers can learn about students' learning situation through various ways before class, and give different guidance according to different situations in class, so as to improve the teaching level. Leaving classroom time in traditional teaching mode to students' independent learning enables students to complete the internalization of knowledge through after-class time and have more communication and interaction with teachers in class. Therefore, the application of flipped classroom, a new teaching model, to college teaching can effectively improve the internalization effect of college students' knowledge and improve the teaching quality.

3. Reform implementation path

The hybrid teaching reform based on the concept of flipped classroom is a new teaching model that focuses on students, organically combines teachers and students, knowledge and abilities, and online and offline. It transforms the passive learning mode of "teachers teach and students accept" in traditional classrooms into an active learning mode of "students centered and teachers guide", thereby promoting the transformation of teaching methods, learning methods, and evaluation methods.

In order to guarantee the implementation effect, we should pay attention to the following aspects: (1) fully understand the significance and function of the teaching reform in colleges and universities, correctly understand the concept and connotation of the teaching reform; (2) Establish correct educational values; (3) Student-centered design of teaching model and teaching process; (4) Make preparations before implementation; (5) Effectively integrate flipped classroom with traditional classroom; (6) Online and offline learning activities should be organically combined; (7) Intensify research on blended teaching reform projects and personnel training programs. Through continuous improvement, a student-centered hybrid teaching model featuring the organic combination of online and offline, two-way interaction between teachers and students, and equal cultivation of knowledge and ability is constructed. Specific measures will be described in detail below.

3.1 Building a hybrid curriculum system

The hybrid teaching reform based on the concept of flipped classroom can effectively improve the teaching quality of university courses, thereby meeting the personalized learning needs of college students, and providing them with personalized development space. Therefore, when carrying out mixed teaching reform, it is necessary to construct a mixed curriculum system based on the concept of flipped classroom. Firstly, by constructing a hybrid curriculum system, universities can combine flipped classrooms with traditional teaching methods, integrate traditional in-class teaching with online instruction, break the limitations of time and space, and provide more

Original Article

flexible learning modes, thereby establishing a multimodal, multi-platform hybrid curriculum system. Secondly, it is necessary to develop and improve online learning platforms that offer high-quality teaching resources and learning support tools such as instructional videos, online discussion forums, etc., to meet the diverse learning needs of students. Thirdly, teachers should be encouraged and supported to adopt diversified teaching methods and strategies, such as cooperative group learning, case analysis, problem-solving, etc., to promote students' active participation and autonomous learning. At the same time, it is important to closely integrate the three stages of pre-class, in-class, and post-class, ensuring that each stage maximizes its impact. Fourthly, leveraging online platforms to optimize and improve the courses is essential to ensure a variety of course content and formats. Additionally, it is crucial to strengthen the evaluation and assessment of students' learning outcomes, as well as the update and optimization of teaching resources, emphasizing the importance of interactivity and feedback mechanisms, providing timely learning feedback and personalized guidance to help students monitor and improve their learning outcomes. Finally, it is important to enhance training and support for teachers and students, improving their abilities and willingness to utilize the hybrid teaching model, ensuring the smooth implementation and effective operation of the hybrid curriculum system.

3.2 Strengthen the construction of teachers' team

In the process of blended teaching reform, teachers are the key players. Only by giving full play to the subjective initiative of teachers can we promote the smooth progress of teaching reform. Therefore, we should pay attention to the construction of teachers in the process of carrying out blended teaching reform in colleges and universities. Firstly, it is necessary to strengthen the online teaching ability training of university teachers, integrate the concept of flipped classroom into teaching activities, so that teachers can better understand how to use the online course platform to carry out mixed teaching activities; Secondly, it is necessary to strengthen the flipped classroom training for college teachers, through thematic training, observation and communication, online communication, and other methods, so that teachers have a clear understanding and operational method in the use of the online course platform; Third, it is necessary to strengthen the assessment and evaluation of college teachers' online teaching abilities, establish a complete online teaching evaluation mechanism, and on this basis, carry out online teaching competitions and excellent online course selection activities to stimulate the enthusiasm of college teachers to participate in online teaching activities; Fourth, we should strengthen the construction of the teaching staff in colleges and universities, and give full play to the exemplary effect of famous teachers by establishing a double qualified teaching staff and establishing famous teacher studios.

3.3 Improving the curriculum evaluation system

Firstly, to improve the curriculum evaluation system, we should adhere to the principles of combining qualitative and quantitative, stage and finality, and development and motivation. The establishment of evaluation indicators should focus on the cultivation of students' autonomous learning ability, while strengthening the investigation of students' learning effectiveness. Secondly, when evaluating students, it is necessary to establish a diversified evaluation system that focuses on process evaluation, supplemented by summative evaluation, and pay attention to assessing students' learning attitudes and learning outcomes, so as to provide accurate and impartial reference for teachers. Thirdly, when conducting curriculum evaluation, attention should be paid to the changes and dynamic development of students' learning process, avoiding the traditional single teaching method of evaluating students. Finally, when evaluating teachers, we should focus on results evaluation, supplemented by process and behavior evaluation, and strengthen the assessment of teacher teaching quality to improve the level of teacher curriculum construction. Under the flipped classroom teaching model, in order to fully mobilize students' enthusiasm for learning and cultivate their independent learning ability and innovative thinking ability, teachers can try to use diversified evaluation methods to assess the learning situation of college students. In terms of assessment methods, disadvantages brought by single assessment methods should be avoided. Firstly, in the traditional assessment methods, final examination is usually taken as the main body of assessment, while in the

Original Article

mixed teaching mode, autonomous learning ability at the beginning of the semester should prevail. Secondly, the traditional assessment method takes the final examination results as the main measurement standard, while the mixed teaching mode should take the usual results, students' discussion and homework as the measurement standard. Finally, the final exam is combined with the usual grades.

In summary, in order to achieve the desired results, it is necessary to improve the implementation of safeguards. Firstly, it is necessary to carry out reasonable planning at the organizational level, give full play to the role of various departments in universities, integrate multiple forces, and formulate detailed and feasible implementation plans to ensure the smooth implementation of the hybrid teaching reform. Secondly, it is necessary to increase investment in technology, which can be supported by various technical means under the mixed teaching mode. Finally, it is necessary to formulate sound incentive measures to encourage and reward teachers. For example, giving teachers certain teaching incentives includes both material and spiritual aspects. Teachers engaged in flipped classroom teaching reform can be encouraged by providing a certain amount of performance rewards, participating in training and learning, and communicating and discussing. Students can also be encouraged by establishing corresponding scholarships and grants. In addition, when implementing the flipped classroom reform, it is also necessary to pay attention to reasonable guidance for students, develop a correct assessment and evaluation mechanism, and fully mobilize students' learning enthusiasm.

4. Conclusion

Under the background of the development of social economy and science and technology, blended teaching model is gradually recognized by more and more people. Through the introduction of blended teaching based on flipped classroom concept and its effective application, it can effectively promote the level of university education and promote the development of higher education in our country. Therefore, colleges and universities should actively implement the hybrid teaching model based on the concept of flipped classroom, and constantly innovate teaching methods, strengthen the construction of teachers and improve the curriculum evaluation system, so as to further promote the development of Chinese higher education and cultivate more outstanding talents for our socialist modernization construction.

Acknowledgement

2021 Higher Education Science Research Project of Shaanxi Higher Education Association (Project No.:XGH21283).

References

- Zhu Yanning, He Hongli, Xie Jing. *A Study on the Construction of a Hybrid Teaching Model Based on Flipped Classroom: A Case Study of College English Audiovisual and Oral Courses [J]. Educational Informatization Forum*, 2021(2):10-12.
- Gong Maoqiang, Xu Shengjun, Guo Guixian. *Exploration on the Blended Teaching Reform of Career Planning for College Students Based on Flipped Classroom [J]. The Science Education Article Collects*, 2021(20):66-68.
- Zhang Jiehua, Wei Li. *Research on the Application of Hybrid Teaching Model of Physical Education Teaching Method Based on Flipped Classroom[J]. Modern Sports*, 2021(31):0061-0062.
- Zhang Cuizhen. *Research on the Reform of Mixed Teaching in College English under the Background of Flipped Classroom [J]. Reading the World (Comprehensive)*, 2021, 000(004):P. 1-2. [5] Zhang Limin, Xie Fei, Jin Biao. *Exploration of Hybrid Teaching Reform Based on Flipped Classroom—Taking the Course*

Original Article

"Application of GIS in Urban and Rural Planning" as an Example [J]. Cities and Towns Construction in Guangxi, 2021, 000(012):144-147.

Lu Yanli. Research on Mixed Teaching of Tourism Resource Planning and Development based on the Concept of Flipped Classroom [J]. Journal of Jilin Business and Technology College, 2021, 37(1): 126-128.