Construction and Application of Micro Technology Platform in Applied Technology Universities under the Background of Internet Plus

Chunsen Hu¹ and Yishu Liu¹

¹Hubei Business College

*Corresponding author e-mail: 2893207180@qq.com

Abstract. With the rapid development of information technology and Internet technology, people have developed a new teaching tool, micro class, and widely used it in the field of education. With its unique characteristics and advantages, micro course has become a common teaching method in higher vocational colleges. The purpose of this paper is to explore the construction and application of micro technology platform in Applied Technology Universities under the background of "Internet plus". The background of the "Internet plus" era, the emergence of micro class platform and the theory of micro learning are expounded. This paper discusses the development of Applied Technology Education in Colleges and Universities Based on micro course teaching. Based on the investigation and analysis of the practical application of micro course in a application-oriented university, the experimental results show that only 4.2% of the teachers think it is unnecessary to use micro course in classroom teaching, and more than 80.5% of the teachers think it is necessary to apply micro course to traditional classroom teaching; meanwhile, the data also shows that only 18% of the teachers often use micro course to teach, Nearly half of teachers do not use micro class for daily teaching.

Keywords: Internet Plus, Applied Technology Oriented University, Micro Lesson Platform, Application Situation, Education And Teaching

1. Introduction

With the Internet plus penetration into the education field, the level of information technology in China is getting higher and higher with the rapid development of information industrialization. The integration degree of Higher Vocational Technology and information technology is higher, reaching the height of the latter. In recent years, with the promotion of MOOC, open class, Khan college and other teaching modes, remarkable teaching results have been achieved. The educational institutions of applied technology universities also adopt flipped classroom, micro class and other new teaching methods. The setting of micro courses in applied technology universities not only takes teachers and students as objects, but also promotes the central concept of "human oriented" education. Micro curriculum breaks the traditional education concept, promotes the original education methods of colleges and universities, and injects fresh blood into the education reform of colleges and universities.
In addition, for vocational education, the application of micro courses in technical colleges and universities is also very popular in the field of domestic education. Micro classroom with its outstanding theme, specific content, simplified results, diversified communication, timely feedback and strong pertinence, combined with the unprecedented development of educational information, shows its unique value in classroom teaching. In practical education, it promotes the further development of teachers' professionalism, improves the efficiency of classroom teaching, enriches the educational resources of information foundation, plays an increasingly important role, and provides difficult solutions for higher education and educational application.

David Gañán proposed an innovative e-learning platform ICT-FLAG, which provides a general formative assessment service with learning analysis and game function for e-assessment tools. This paper reports the platform technology development driven by open distributed processing software method reference model, which guides the platform construction, including analysis and design steps. ICT-FLAG platform is tested by integrating into a real electronic evaluation tool. The experimental results are positive in both functional and non functional aspects, and users' satisfaction with usability and emotional state is also positive, thus verifying the role of the platform as a valuable educational tool [1]. Grigoris Tziallas introduced the implementation of e-learning platform in the Department of electronics, Lamia Institute of technology. E-learning platform uses the information in the department database to automatically register courses for students and assign teachers as course tutors. It enables students to access information such as degrees from past exams, courses passed and their current situation. It also enables teachers to obtain statistical data on student performance [2].

This study is more timely. The development of micro courses in China is facing a bottleneck period. Based on the existing research results of teaching theories related to micro courses, combined with the on-the-spot investigation and understanding of a college, the development problems of micro courses in this area are mainly manifested in the following aspects: the lack of a relatively complete micro course teaching resource system, and the inability of many teachers to effectively apply micro courses to traditional teaching classes. Based on this, this paper puts forward that while cooperating with all parties to increase the construction of micro course resources, it also needs to put forward higher requirements for teachers' professional ability, so as to improve the teaching quality of Application-oriented Universities and promote the new development of education curriculum reform as a whole.

2. Proposed Method

2.1 Internet Plus Era
In the field of education, network technology also changes quietly [3]. Internet forms such as search engine, video, image and text, new media, portal website and small program have greatly enriched teaching forms and students' learning ways. With its remarkable characteristics of high efficiency, convenience and easy to spread, the Internet is used reasonably in teaching, which not only helps students broaden their horizons and increase their knowledge, but also helps them form good research habits and stimulate their curiosity and initiative. Thus, Internet information technology has become an ideal assistant for teachers and students [4, 5].

2.2 Micro Lesson
The main teaching medium of "micro class" is teaching video. Compared with the traditional classroom resources, the teaching resources of "micro class" are more targeted and rich in content, so as to guide the teaching process. In the short course of 10 minutes' explanation, the purpose of teaching is to guide students to find, analyze and finally solve problems [6]. At present, with the deepening of "micro course" teaching, the classification of "micro course" is more detailed and systematic. According to the content elements of the course, it can be divided into "review class micro course before class", "new class introduction class micro course", "knowledge understanding class
micro course" and "practice class micro course after class", "summary and expansion class micro course" and other multiple types. According to the nature of the course elements, there are mainly lecture class, class meeting class, practice class, activity class and other rich "micro class" forms [7, 8]. These rich and diverse forms of "micro class" enrich and enrich the school's classroom teaching.

2.3 Microlearning Theory
Micro learning theory can be effectively applied to the teaching activities of micro courses [9]. On the one hand, micro class itself has the characteristics of "short time, concise content, flexible and diverse". Under the guidance of micro learning theory, micro class teaching can make full use of students' short and effective attention, stimulate students' interest in learning, make them master the knowledge and skills effectively in a short time, and improve the teaching quality as a whole; on the other hand, After class, students can also use scattered time to arrange their own learning process, so as to maximize the development of individualized optimization.

2.4 Applied Technology Education in Colleges and Universities Based on Micro Course Teaching
(1) The dual acquisition of skill and emotion
In the process of filming and making micro lessons, teachers can fully use the power of students to encourage students to actively participate in the shooting process of micro lessons, so that students themselves become an important role in the teaching video [10]. Through the experience of simulating the actual work scene, the students will unconsciously put in their true feelings, truly feel the actual environment of their profession, and then promote the cultivation of professional emotions, so as to lay a good foundation for the real work in the future.

(2) Breaking through the traditional thinking of teaching and learning
As a new teaching resource to assist classroom teaching and improve teaching efficiency, micro class can not only help students to learn in the formal classroom, but also be an important way for students to improve their extracurricular knowledge. Therefore, teachers can focus on designing some key and difficult knowledge into vivid, interesting and easy to understand video materials through micro class, and store them in the video library [11]. To some extent, it not only changes the dilemma of single problem-solving model, but also cultivates the thinking and ability of students' autonomous learning.

(3) Enrich classroom teaching mode
At present, most of the classroom teaching models are single, the teaching content is lack of individuality and innovation, and it is not attractive to students, making it difficult to maintain an efficient learning state, which makes the traditional classroom teaching effect generally not high. Therefore, one of the important prerequisites for changing the current situation is to constantly reform the education model and stimulate students' interest in learning [12]. Micro class is a new learning resource that can teach video, audio, animation and text line. It is flexible and diverse, short and concise, which can improve learning efficiency.

3. Experiments

3.1 Respondents
College a is a public Applied Technology University. At present, the university has 10 departments, 5 departments, 12 categories and nearly 50 majors. Including computer information engineering department, mechanical and electrical engineering department, media art department, animal husbandry and veterinary department, art design department, business technology department, etc. The disciplines and specialties are set up in an all-round way, and the quality of running schools in all aspects is relatively balanced. Therefore, its development situation has certain reference significance for university applications in other regions.

3.2 Questionnaire Design
The questionnaire is conducted by sampling, according to different professional categories and some key questions. The questionnaire is divided into teacher's volume and student's volume. The teacher volume design is mainly aimed at the teachers in school, and 100 paper questionnaires are distributed, 98 of which are effectively recovered, with a recovery rate of 98%; the student volume is mainly composed of paper and online questionnaires, with a total of 300 copies distributed, 286 of which are effectively recovered, with a recovery rate of 95.3%. The core content of the questionnaire mainly includes two aspects: one is the application of micro courses in daily teaching; the other is the investigation of students, which mainly focuses on students' understanding of teachers' application in micro course teaching, and whether micro courses can effectively improve students' learning efficiency. In short, the main purpose of the overall questionnaire research is to have a deeper understanding of teachers and students' understanding of the application of micro courses in traditional teaching, and then to roughly grasp the current application of micro courses in the field of applied technology-based higher education.

4. Discussion

4.1 Application of Micro Course in Classroom Teaching of Applied Technology-Based Universities

Firstly, the questionnaire investigates the teachers' understanding and use of micro class. We set up two questions respectively: "whether it is necessary to apply micro class to classroom teaching" and "frequency of using micro class". According to the data statistics of the questionnaire, only 4.2% of the teachers think it is unnecessary to use micro class in classroom teaching, and more than 80.5% of the teachers think it is necessary to apply micro class to traditional classroom teaching; at the same time, the data also shows that only 18% of the teachers often use micro class to teach, and nearly half of the teachers do not use micro class for daily teaching.

Table 1. Application of micro courses

| Micro class application and users | 18% frequently used | 35% occasionally | 47% not used |
|----------------------------------|---------------------|-----------------|-------------|
| Young teachers aged              |                     |                 |             |
| 25-35                            |                     |                 |             |
| Willing to accept new things, with certain information technology capabilities |                     |                 |             |
| Take part in the evaluation of course construction and open class |                     |                 |             |
| Senior teachers over 45          |                     |                 |             |
| Lack of enthusiasm for the use of new teaching tools and focus on traditional teaching |                     |                 |             |

Therefore, we can draw a conclusion that most of the teachers think it is necessary to apply micro class to classroom teaching, but most of the teachers do not use micro class frequently in reality, and their understanding of micro class is still in a relatively simple level, and they have not effectively applied this new teaching tool to classroom teaching.

Cause analysis: on the one hand, traditional teaching methods are deeply rooted, many teachers can't deeply realize the importance of micro class in classroom teaching, can't fully and effectively play the advantages of micro class, and improve the quality of teaching; on the other hand, because the design and production of micro class need a certain level of technology, there are some teachers with relatively long teaching experience, There are some difficulties in mastering and using modern technology and information tools. In addition, factors such as slack psychology caused by long-term teaching make the frequency of applying micro courses in actual teaching low.

4.2 Micro Course Teaching Effect

Due to the prominent theme, diverse resources, concise, flexible and convenient features, micro class has been paid more and more attention by the society and schools. However, whether micro class can really improve the classroom teaching effect depends on its application in practice.
According to the survey data, most of the teachers think that the use effect of micro class is not ideal in recent years, and more than 60% of the students also feel that the effect of applying micro class learning knowledge is general, while less than 10% of the teachers and students think that the effect of micro class teaching is good. Through the analysis, it is found that, on the one hand, the use of micro class teaching only improves students' interest in learning to a certain extent, but it is not significant for the other teaching effects that micro class can bring, especially ignoring the improvement it can bring in the construction of a suitable learning atmosphere and the interaction between teachers and students. Generally speaking, compared with the improvement of the traditional classroom teaching effect, it does not play too much role; On the other hand, teachers generally lack of in-depth knowledge and understanding of micro class, and the application mode of micro class teaching is too single. The use of micro lessons is often limited to the classroom, as a simple tool to stimulate students' interest in learning in a short time. However, few teachers use micro lessons in preview and review. In a word, teachers simply use it in the classroom. The application mode is too monotonous and limited, which leads to the micro class can only help to stimulate students' interest in learning. But for improving the teaching efficiency of the whole classroom, the role of promoting students' learning effect is not obvious.

5. Conclusions
Under the background of occupation education, Internet plus education, the state and society pay more and more attention to its micro class platform. The purpose of this paper is to explore how to better apply micro courses to applied technology-based college education. Taking college a as an example, through field research and design and distribution of the questionnaire about "the application of micro courses in the classroom teaching of applied technology-based universities", we have a deeper understanding of the actual situation of its application of micro courses, which provides a real and reliable data source for the analysis of related problems and suggestions. The results show that the traditional teaching methods are deeply rooted, many teachers can not realize the importance of micro class in classroom teaching, can not give full play to the advantages of micro class and improve the quality of teaching.

Acknowledgements
Hubei provincial department of education science and technology research project plan, ”research on the construction and application of micro-course platform in colleges of applied technology under the background of” Internet PLUS", No. B20173777.

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