Research on Flipped Teaching Efficiency Improvement: Based on the Case of Tourism College of Zhejiang

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Abstract: This article aims to explore the path of improving teaching efficiency of flipped classroom. In order to make the research result real and reliable, the article takes the current 18 tourism entrepreneurship courses carried out by Tourism college of Zhejiang as an example, of which all apply the flipped teaching method. Based on the real historical data from teaching efficiency evaluation and feedback, the courses that apply flipped classroom do have better teaching results compared to the traditional pure face-to-face method, since the teaching model combining MOOC and SPOC provides massive learning resources which allow students to make the theorical learning before class, and teachers could focus on real case study and working skill practice in the off-line learning stage. On the other hand, the flipped teaching model faces difficulties such as limited concentration of students during the online theorical learning stage, limited real industrial working experience of teachers make the face-to-face skill learning stage inefficient, and teachers' enthusiasm for flipped classroom are limited. Based on the achievements and weakness of the teaching model, the article further puts forward suggestions for optimization to improve the effectiveness of flipped teaching.

1. Foreword

The development of social and economics, as well as the application of new technologies, both require the education system to increase the efficiency of vocational education. However, the traditional face-to-face teaching method can hardly meet the needs of students' well-round development. Thus, improve the lecture delivery efficiency through technologies such as internet has become an inevitable requirement of the current teaching work.

According to the education requirements of the new era and the trend of innovation and entrepreneurship education, tourism vocational colleges should actively give full play to their own advantages in tourism characteristic vocational education, and actively implement the educational concept of cultivating professional application-oriented talents. This paper analysis the real experience of flipped classroom implied by Tourism college of Zhejiang, and aims to explore a copyable path of cultivating innovative talents in tourism area through the teaching management.

2. Research Background of Flipped Classroom Management

Since the 1990s, the flipped classroom mode characterized by independent learning and classroom interaction has attracted continuous attention from the educational circle, and the relevant teaching methods have developed rapidly with the support of Internet technology [1]. So far, the MOOCs teaching model based on the concept of sharing can initially realize interest-driven and flexible learning mode, improve the learning efficiency of students, but also expose the problems of difficulty of learning achievement certification and high course dropout rates [2]. As to such problems, the Zhi Hui Shu MOOCs model based on the actual teaching needs of colleges and universities emerged. This model allows teachers to create their own MOOCs with internet-based teaching resources and share the MOOCs to designated student groups. On the basis of the community-based MOOC courses, this model further allows students to participate in online theoretical learning which can be easily certificated and has higher participation tetes, while teachers can strengthen students' understanding of knowledge through case study and practical exercises in the face-to-face lecture [3].

On the other hand, the current application and research of flipped classroom basically focuses on the method and efficiency of course delivery, while the management of teacher does not play an important rule yet. Due to the requirement of education development in the new era, flipped classroom is expected to further realize a blowout development, which requires the teaching management department to put forward a standardized rule of flipped classroom management [4].

Based on the recent researches, the paper plans to make a comprehensive analysis of the flipped classroom management from the aspects of achievements, experience summary, challenges and improvement recommendations, and make a modest contribution to the improvement and efficiency of related teaching management work.

3. The Achievements of Flipped Classroom Application of Tourism College of Zhejiang

3.1. Flipped Classroom Application Background

In terms of teaching application background, based on the need to give play to its own characteristic tourism professional advantages and the current situation of students being familiar with Internet application. The college encourages teachers to actively use digital tools and use flipped classroom to improve the learning efficiency of students. Until now, the college already has 18 tourism entrepreneurship courses that adopted wisdom tree class model. Teachers can develop their own MOOCs based on teaching demand. Students are required to preview the knowledge through the shared course resources, while the teachers deliver real case study to deepen students' mastery of the course.

3.2. Teaching Objectives and Main Contents of the Entrepreneurship Flipped Classroom Courses of Tourism College of Zhejiang

The basic objective of promoting the flipped classroom is to cultivate talents that have interest in and master the required skills of tourism entrepreneurship.

In order to achieve the goal, the current 18 tourism entrepreneurship courses mainly include innovative entrepreneurial thinking, tourism concept, operation, market research and other related learning content, requiring students to master the relevant knowledge and independently complete the given tasks of tourism and   business planning.

3.3. The Main Mode of Flipped Classroom Courses of Tourism College of Zhejiang

The 18 innovative and entrepreneurship courses which apply flipped classroom method in Tourism college of Zhejiang mainly follow the popular MOOC&SPOC mode. By constructing small-class based online courses that meet the teachers' needs, the course well-connected online and offline teaching link and improve the students' learning efficiency.

To be specific, first step, teachers search and choose the need resources in MOOCs sharing platform and further build their personalized SPOC courses. Second, teachers release the SPOC course link to students and ask them to preview the theoretical knowledge online, so as to reduce the proportion of theoretical learning in the offline face-to-face teaching link. Third, teachers carry out quizzes about the online preview content and then conducts a simple theoretical study, and later enter the actual case study. Fourth, teachers use the wisdom tree platform to establish flipped classroom and conduct interactive classroom teaching with students, such as asking students to express their opinions, vote, initiate projects, etc. Finally, the teachers assign homework matching with the learning content through the wisdom tree platform, so as to realize the theoretical and practical integration teaching of "pre-class learning plus classroom research". Teachers can also design group assignment as the main assessment content of the course, such as assigning the "Fire Festival" entrepreneurship task, asking students to conduct simulated entrepreneurship cooperation in offline classes, requiring students to transform the learning content into application results, and strengthen the cultivation of skilled talents.

3.4. Overview of the Flipped Classroom Teaching Links of Tourism College of Zhejiang

In a whole view, the 18 entrepreneurial courses that applied flipped teaching method in Tourism college of Zhejiang mainly include online preview, face-to-face interactive learning and after-class consolidation. On the basis of comprehensive course design, the teachers carry out comprehensive performance assessment, urging students to earnestly carry out learning and ensure the implementation of the course objectives. To state in detail:

3.4.1. Online Preview of the Knowledge

Teachers can access the MOOC courses through the Wisdom Tree website [2], and build personalized SPOC courses according to teaching needs, including online learning materials, online question banks, industry trends, etc. Every week before the lecture delivery date, the teachers release the course theme to students and require them to conduct online learning in advance. Since the students can have a brief understanding of the theoretical knowledge in online preview step, the learning efficiency of face-to-face learning can be improved.

3.4.2. Face to Face Study

In the flipped classroom mode, the pure theoretical learning of the teaching material content is completed in the preview stage, therefore the face-to-face learning stage will focus more on the interaction between teachers and students and the simulated entrepreneurial practice, so as to promote students to deepen their understanding of the theory in the practical application scenarios of knowledge. For example, when conducting rural tourism planning and operation management courses, students are required to carry out cooperative simulation entrepreneurial practices which includes work team up, assignment requirement defining, planning and road show.

3.4.3. Consolidation after Class

Teachers regularly assign homework through the wisdom tree platform, so as to encourage students to consolidate and practice the knowledge learned. Meanwhile, in order to urge students to complete the knowledge consolidation in time, teachers should set a deadline for the homework assigned. If students fail to complete the homework within the deadline, they will be regarded as unfinished homework, and the relevant results will directly affect their final course result.

3.4.4. Comprehensive Course Assessment

The flipped classroom involves two learning links which take place pre and after class, thus an appropriate assessment method can play a decisive role in the course learning effect. In terms of assessment weight design, considering that theoretical learning and team practice are mainly carried out in extracurricular time, it is necessary for a high assessment weight to be set to ensure that students carry out learning tasks. Therefore, the overall course assessment weight can be described as 30% of online study and 70% of face-to-face interaction and team simulation entrepreneurship practice. The detailed rule can be show as below: online theoretical learning and quizzes account for 30% of assessment weight, the face-to-face classroom performance accounted for 20%, while group assignment which includes simulation entrepreneurship practice and roadshow accounted for 50%.

In the design of the final assessment, the personal assessment of students is carried out by combining team performance with personal contribution to avoid the unbalanced division of labor within the team. Secondly, when a team is playing the road show, members of other teams are required to play a role as third party investors, by doing so, students must focus on all team's work presentation and have a greater chance to make an independent thought. In detail, this group assignment is a simulated entrepreneurial project. Students in each group should submit the roadshow plan and take the stage. The team result is weighted according to the teachers scoring 80% and other students voting 20%, and the team score accounts for 70% of the individual's final assessment results. In addition, each team should score each other's participation and contribution in a back-to-back form, and the teacher calculates the individual contribution score of 30% weight by interval interpolation method based on the mutual evaluation results of the members. For example, in the creative home stay course, students are asked to conduct a home stay entrepreneurship project roadshow through the simulated CEO of recruiting a co-founder team. If the teacher scores 92 for a team, and the them get the first in the student vote stage, and a member makes the greatest contribution in the group, the final assessment result of the student can be 97.

To sum up, the assessment method of the course can be formulated as following: Student individual result=30% of online study result+20% of classroom attendance and interactive learning result+50% group assignment result, of which 70% is the team result and 30% is individual contribution score that is calculated by the teacher according to the interval interpolation method under the percentage system.

The assessment mode fully considers the needs of online and offline learning stage of the flipped classroom method, students 'knowledge practical operation needs, students' teamwork and contribution training, and is more reasonable in the setting of the assessment system.

4. Achievements and Advanced Experience of Innovation and Entrepreneurship Flipped Classroom in Tourism College of Zhejiang

4.1. Main Achievements of Flipped Classroom of Innovation and Entrepreneurship in Tourism College of Zhejiang

Since the use of flipped classroom in entrepreneurship courses, the teaching efficiency of related courses in the traditional offline face-to-face courses has been greatly improved.

First, the offline interaction between teachers and students in the flipped classroom gets improved. Since theoretical knowledge learning is mainly completed in the preview stage before class, teachers in class face-to-face link mainly focus on simulated entrepreneurial practice and student interaction, so compared with the traditional offline teaching mode, interaction of flipped classroom between teachers and students will be naturally tighter, and implies more conducive to students in the process of communication interaction, deepen the understanding of the learning content. According to the data of Wisdom Tree platform, the average interaction rate between teachers and students of 18 entrepreneurship courses is 65%, which is higher than that of courses without flipped classroom methods.

Second, the entrepreneurial learning effect of vocational college students is better than that of the traditional teaching level [5]. According to the classroom feedback data in 2022, 18 innovation and entrepreneurship courses using flipped classroom are more accepted by students than entrepreneurship courses using traditional teaching mode. The reason is that under the traditional teaching mode, students are mainly the listeners who passively receive knowledge and lack enough energy and time to think in the process of knowledge acceptance. Whether students consciously carry out review and preview have a great impact on the learning effect. While in the flipped class mode, the compulsory assessment of online learning naturally urge students to carry out review, preview and knowledge practice, which not only strengthens the mastery level of theoretical knowledge, but also further improves the understanding and experience of entrepreneurship through practical operation and interaction.

Third, students who accept flipped classroom generally have better performance in competition, employment and entrepreneurship. Because the face-to-face teaching and assessment content of flipped classroom is more focused on case analysis and practical application than the traditional mode, students will spend a lot of time learning practical methods and thinking to solve real world problems, which ensures their better performance in competition, employment and entrepreneurship.

4.2. Advanced Experience of Flipped Classroom of Innovation and Entrepreneurship in Tourism College of Zhejiang

In the process of offering innovation and entrepreneurship courses, the teaching management department and relevant teachers summed up some experiences and practices that can strengthen teaching efficiency:

First, combine theoretical learning online with offline entrepreneurial operation simulation. The development of vocational education in the new period and innovation entrepreneurship requires vocational schools pay more attention to the students' skills and practice ability of cultivation. The flipped classroom transferring theoretical knowledge learning to the line after class indeed creates more time for case study and could better satisfy the real need of vocational education, compare with the traditional teaching mode.

Second, through the wisdom tree platform to achieve real-time feedback of students 'pre-class theoretical learning progress, to assist teachers to understand students' knowledge mastery. The flipped classroom mode based on internet technology allows teachers to efficiently release and correct

quizzes and homework, and helps teachers to grasp the students' learning situation in real time, check and carry out necessary adjustment, which is conducive to improving the learning effect of courses.

Third, to make the students' practical results into reversible teaching resources, and continue to enrich the MOOCs teaching materials. Compared with the teaching resources obtained by teachers through MOOC community sharing, the local teaching resources based on students 'practice results are closer to the students in terms of knowledge mastery level and emotion, which is not only conducive to strengthening their learning effect, but also can stimulate students' enthusiasm for learning by displaying the results of excellent students.

5. Challenges and Recommendations for Flipped Classroom Applications

5.1. Difficulties and Challenges Faced by the Innovation and Entrepreneurship Course Applied Flipped Classroom

Although Tourism college of Zhejiang has made certain achievements during the process of applying the flipped classroom in carrying out entrepreneurship courses and summarized some advanced experience, it also explores the common difficulties and challenges that relevant teaching modes may face:

First, students' concentration and learning efficiency in online theoretical learning link are limited. Under the flipped classroom mode, students 'learning of theoretical knowledge is mainly carried out in the form of extracurricular online self-study, and the lack of real-time interaction in related learning forms easily leads to the failure of maintaining listeners' attention for a long time and affects the efficiency of theoretical learning.

Second, teachers do not understand enough about the absorption level and mastery of students' online learning. Although flipped teaching can release quizzes to help the teacher understand students' mastery of online theory learning. But due to the limitation of class time, the quizzes cannot be designed for long and it is difficult to fully cover knowledge involved by the course, leading to teachers' misunderstanding of students' mastery of knowledge, and further affect the efficiency of necessary teaching adjustment.

Third, some teachers are used to offline theoretical teaching and lack of real market working experience, which affects the interactive teaching results. A large number of teachers lack practical experience, the teaching design focuses on theoretical narration, and some courses are difficult to use offline interactive teaching links to carry out instructive case analysis and practice with students.

Fourth, teachers' enthusiasm for flipped classroom is limited. On one hand, the age group of teachers can be widely distributed, and make great differences in the acceptance and use skills of Internet applications. Some older teachers have been accustomed to offline face-to-face teaching methods for a long time, and have little acceptance of online and offline interactive flipped classroom. On the other hand, compared with the traditional teaching mode, flipped classroom has higher requirements on curriculum design and material preparation. Under the premise of the existing face-to-face teaching mode, some teachers lack the motivation to carry out a new teaching method.

5.2. Recommendations on Improving the Effectiveness of Flipped Classroom

In view of the difficulties and challenges faced by flipped classroom, combined with the development trend of innovation and entrepreneurship vocational education, relevant improve suggestions are presented here:

First, teachers are required to enhance the process management of online learning links, and increase the assessment weight of online theoretical learning and test feedback content. In order to implement the original intention of online theoretical learning and practical offline learning of flipped

classroom, attention should be paid to the effectiveness of students' online learning in the process of promoting relevant courses. In this regard, teachers can increase the assessment weight of online theoretical learning and classroom quiz. For students who fail to reach the standard for the settled times, their course result could be judged as fail. By doing so, teachers could urge students to carry out online learning seriously through institutional constraints [6].

Second, maintain a link with industry experts and training enterprises, carrying out the training of teachers' usage of flipped classroom and teaching ability. Through industry practice and industry teacher training, teachers should strengthen their understanding of the most recent practice of the industry and market and improve their ability to solve practical business problems, and thus lay a foundation for the improvement of the efficiency of the offline interactive links of flipped classroom.

Third, it is suggested to the human resources management department to strengthen the assessment weight of teachers' application of flipped classroom for innovation and entrepreneurship. Meanwhile, considering the greatly diversified distribution of teachers' age, acceptance and skill of digital tools, the relevant personnel assessment mechanism should follow the "reward guide" guidance. Teachers actively develop the flipped classroom should receive a good assessment result to encourage the implement of the advanced teaching method, while those who do not adapt the flipped classroom should not be punished. By doing so, the fairness of assessment could be kept and older teachers' who do not accept flipped classroom can receive the necessary response, while the teachers as a whole could still upgrade the teaching method in a manner of peace and efficiency.

Fourth, make fund management play a guiding role, giving a certain preference to the level of project fund approval to the teachers of flipped classroom methods [7].

6. Conclusions

Taking the 18 innovative and entrepreneurship courses using flipped classroom mode developed by Tourism college of Zhejiang as an example, the paper explore the teaching mode, its advantages and disadvantages of related teaching applications and put forward related recommendations to explore a new path to improve the effect of flipped classroom from the dimension of teacher management.

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