"Flipped Classroom" Teaching Model Research: A Case Study of "Innovation and Entrepreneurship Education and Practice (Theory)"

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Abstract

The flipped classroom model differs significantly from the traditional classroom teaching model and offers numerous advantages. This article draws inspiration from the flipped classroom concept, using the "Innovation and Entrepreneurship Education and Practice (Theory)" course as an example to introduce the innovation and characteristics of the flipped classroom model: it is problem-oriented, addressing the "pain points" in teaching, motivating students towards "active learning," and integrating diverse teaching methods. In the conclusion, the article proposed suggestions on the application of this model, encouraging teachers to summarize their teaching experiences, enhance their knowledge base, and foster students' awareness of innovation and entrepreneurship.

Keywords

Flipped Classroom, Teaching Model Research, Innovation and Entrepreneurship Education and Practice, Case

1. Introduction

"Flipped classroom" refers to the reorganization of time usage inside and outside the classroom, shifting the decision-making power of learning from teachers to students [1] [2]. Students typically engage with instructional content, such as lectures or readings, independently outside of class, and then come to class to apply what they've learned, often through active learning, discussions, or problem-solving activities facilitated by the teacher. It mainly utilizes online learning

methods, allowing students to engage in self-study using media such as videos outside of class [3]. Classroom lecture time is replaced with activities like experiments and in-class discussions, maximizing the effectiveness of in-class teaching and achieving the goals of addressing doubts and guiding innovative learning. The flipped classroom model differs significantly from traditional classroom teaching and is primarily divided into three stages: pre-class learning preparation, in-class learning activities, and post-class consolidation of learning [4].

The flipped classroom teaching model has been attracting attention for its positive educational significance [2] [5] [6] [7] [8] [9]. For example, Khan Academy is a renowned online education platform that is built on the flipped classroom model, offering educational videos in subjects like mathematics and science. This example can be used to illustrate how the flipped classroom provides high-quality learning resources, enabling students to study at their own pace and receive personalized feedback. The main advantages of this model are as follows:

First, it can stimulate students' autonomous learning ability. The flipped classroom model provides an interactive and dynamic learning environment for students, which encourage students to participate more activities in classroom during their learning process. Second, it allows for greater flexibility in students' learning time, as they are not restricted by fixed classroom schedules. Students can access lecture videos and read course materials anytime, anywhere. Third, students preview and read relevant materials before class. This approach allows students to focus on discussions and practical engagement during their classroom sessions. It enhances students' abilities in communication, collaboration, and problem-solving, thereby contributing to the cultivation of their innovative and critical thinking skills.

2. Case Introduction

The course "Innovation and Entrepreneurship Education and Practice (Theory)" is a compulsory general education entrepreneurship course offered by Yunnan Normal University for its undergraduate students. The course is taught in a blended format, comprising both online and offline components. The theoretical classroom instruction spans 16 hours. Online coursework primarily involves students' pre-learning through the "Zhihuishu" platform. The offline component is conducted by the instructing teacher in the classroom and covers several aspects, including entrepreneurship and career development, entrepreneurial opportunities, entrepreneurial resources, writing a business plan, organizational forms of enterprises, and self-assessment in innovation and entrepreneurship career planning.

This course draws inspiration from the principles of the flipped classroom and integrates them into the curriculum framework. Its intention is to facilitate a transformation in the roles between instructors and students, fostering students' proactive and enthusiastic engagement in learning. The ultimate goal is to en-

hance the quality of classroom teaching, resulting in mutual benefits for both students and teachers.

With "innovation" as its premise, the course aims to cultivate students' thinking abilities in innovation and entrepreneurship. Through the study of this course, students will come to understand:

The essence of innovation and entrepreneurship lies in problem-solving and value contribution. Entrepreneurship is a practice founded on innovation. Methods to identify and resolve problems while achieving value, encompassing the skills to recognize opportunities, distinguish them, and subsequently seize them. Mastering the concepts and techniques of design thinking and lean entrepreneurship, enhancing their ability to face the uncertainties of the future, establish their own ventures, and strive for success in their endeavors.

3. Classroom Innovation and Characteristics

3.1. Problem-Oriented-Addressing Teaching "Pain Points"

Breaking through the limitations of traditional teaching models.

In the context of modern educational technology, traditional teaching concepts no longer meet the demand for cultivating applied and innovative talents. The traditional teaching model of "blackboard + PPT + textbook + one-way lecturing" overly emphasizes "learning through listening."

This teaching model faces two main issues: On one hand, it fails to provide students with sufficient time for independent thinking and autonomous learning space, neglects the depth of students' understanding of course content, resulting in passive and mechanistic learning, and a lack of the ability to apply knowledge creatively. On the other hand, due to the constraints of classroom teaching hours, students' practical skills, proactive learning abilities, and innovative capabilities are not effectively nurtured. This hinders the fulfillment of requirements and goals for cultivating innovative talents for practical applications.

Boosting students' learning motivation.

The flipped classroom disrupts traditional teaching methods. By incorporating both online and offline learning approaches, students engage in pre-class preparation, in-class exploration, and post-class consolidation. Classroom learning primarily involves activities like questioning, group discussions, presentations, group debates, and teacher-student interactions, all of which accelerate the transmission of knowledge and deepen its absorption. In practice, the once silent atmosphere of traditional classrooms often transforms into lively discussions. Students are deeply involved throughout, leading to a more thorough grasp of knowledge, an enhanced enjoyment of the learning process, and a sense of ownership over their learning journey.

The role of the teacher transitions from being the "main actor" on the stage to becoming the "director" in the classroom.

Teachers guide students in self-learning, self-assessment, and self-reflection. Prior to class, Students study the knowledge points specified by the teacher

through online video platforms such as "Zhihuishu" platform before class. During class, teachers no longer act as a verbose presenter, they step down and become the organizers of the classroom. They are guides, facilitators, and answerers of learning. The teacher's role shifts from the "main actor" on the stage to a "director" by the students' side. Teachers focus on exploring students' individualized development, so that teaching can truly achieve the principle of "teaching people how to fish."

3.2. Student-Centered "Active Learning"

The flipped classroom teaching model positions teachers as the organizers. They organize the in-class activities such as questioning, group discussions, and presentations, they encourage students to participate in those activities during their learning process. Students take on the role of the protagonist in the teaching activities. Meanwhile, students take on the role of protagonists in their learning journey.

For instance, in a classroom activity, students might be required to introduce a familiar friend to their classmates and strive to make the friend memorable to others. Through this game, the presenter hones their ability to summarize character traits and enhance public speaking skills. Meanwhile, other students develop their information capture skills as they listen to the introductions.

In learning groups, students collaborate, discuss, and help each other, fostering their problem-solving abilities and teamwork skills. Students are no longer solely reliant on teachers and textbooks to acquire knowledge. The new teaching approach increases students' interest in learning, boosts their enthusiasm, and strengthens their desire for self-exploration, creating a lively and proactive learning atmosphere. After class, teachers summarize and review the key points, sharing and interacting with students, which provide students the possibilities for "active learning".

3.3. Various Forms of Teaching and Studying

In terms of course design, the course "Innovation and Entrepreneurship Education and Practice (Theory)" revolves around the fundamental process of entrepreneurship. It employs methods such as case-based teaching, video instruction, and game-based learning. Students engage in practical training in small groups. Through steps like case analysis, group discussions, business plan writing, entrepreneurial project presentations, and business plan roadshows, the course simulates the authentic process of entrepreneurship. This approach aims to stimulate students' teamwork spirit, train their innovative thinking, enhance practical skills, and cultivate their entrepreneurial qualities.

Modern education aims to cultivate innovative talents, achieving the holistic development of knowledge, skills, and qualities. Therefore, teaching must closely integrate with information technology, utilizing it to address challenges in education that were previously difficult to resolve and optimizing classroom instruction.

1) Organic Integration of Online and Offline study

Online Teaching Preparation: Teachers consolidate textbooks and relevant materials, creating engaging instructional videos and upload the videos to online video platform. These videos explain entrepreneurial knowledge and analyze business cases, transforming abstract concepts into tangible visuals, aiding students in comprehending key points.

Online Learning: Students watch instructional videos online, pre-studying relevant knowledge points and gaining an understanding of innovation and entrepreneurship concepts. Offline Learning: In the classroom, students engage in discussions and simulation exercises related to entrepreneurship, applying the knowledge they've learned, exercising creative thinking, and honing their innovative entrepreneurial abilities.

2) Optimizing Teaching through Information Technology

Effectively utilizing internet software tools to enhance student collaboration efficiency and optimize various aspects of their entrepreneurship practice, such as: business proposal writing, member voting, internet questionnaire design, progress assignment submission, and group performance evaluation.

4. Course Reflection

Implementing the flipped classroom model for teaching requires teachers to possess innovative thinking and a thorough understanding of the instructional content. Additionally, teachers should be proficient in utilizing internet tools and multimedia technology. In terms of course design, teachers need to transform the knowledge from textbooks into formats and content that students can easily comprehend. They should accurately grasp the key points and challenges of each class, ensuring students genuinely understand the entrepreneurial mindset and process. This also requires teachers to continuously enhance their teaching and research capabilities to improve the development of the course [8]. Furthermore, teachers can also enhance their own research and creative abilities by guiding students to participate in innovation and entrepreneurship competitions. This process can foster the improvement of teaching and research capabilities as well. Innovation and entrepreneurship courses often involve numerous emerging concepts, posing a significant challenge to the teaching experience, knowledge base, and the speed of knowledge updates for instructors. Some teachers may not have prior practical experience in entrepreneurship before teaching this course. As a result, instructors need to actively participate in training related to innovation and entrepreneurship, engage in continuous reflection, and seek opportunities for observation to enhance their teaching and practical capabilities.

There is a need to enhance students' awareness of innovation and entrepreneurship. Many students tend to passively receive knowledge during their studies, lacking proactive thinking, the spirit of innovation, and the courage to venture into new territory. Some students might believe that they lack the ne-

cessary skills and financial foundation for innovation and entrepreneurship, leading to a somewhat negative attitude towards learning. To address this, teachers should emphasize the establishment of both on-campus and off-campus entrepreneurship platforms and strengthen connections with businesses firms. Teachers should make efforts to create opportunities, such as organizing visits to relevant enterprises and guiding students in forming interest groups for simulated entrepreneurial practices. Within the campus environment, activities like market research, business simulations, and management practices can help students experience the role of entrepreneurs, ignite their entrepreneurial intentions, and enhance their organizational and interpersonal skills, as well as a sense of responsibility. These initiatives can ultimately increase the likelihood of students engaging in entrepreneurial pursuits in the future.

Furthermore, to further enhance the flipped classroom model, consideration can be given to improvements in the following areas:

Personalized Learning Paths: Develop personalized learning paths and resources to meet the needs of different students. This may include adaptive learning platforms that adjust learning materials based on students' performance to ensure each student can learn at a level suitable for them.

Interaction and Collaboration: Emphasize interaction and collaboration among students to encourage them to share viewpoints, solve problems, and learn together. This can be achieved through online collaboration tools, virtual team projects, and similar methods.

Practical Projects: Introduce more real-world projects, allowing students to apply the knowledge they've gained to practical scenarios, fostering their practical skills and innovative thinking.

Diverse Resources: Provide a variety of learning resources, including videos, simulations, experiments, interactive courses, and more, to accommodate different learning styles and students' needs. Inspire students' interest in learning and active participation to ensure they make the most of the opportunities presented by the flipped classroom.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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