

A Study on Student Satisfaction of Online and Offline Hybrid Teaching of Entrepreneurship Course in CFE University

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Abstract:

Background: Innovation and entrepreneurship education is an important means to cultivate the innovation spirit and entrepreneurial ability of college students. With the development of the times, in the context of the new era where new technologies such as big data and artificial intelligence have emerged, the teaching of innovation and entrepreneurship education is facing brand new opportunities and challenges. For the teaching of innovation and entrepreneurship courses, the teaching organization mode is single, and the effectiveness of innovation and entrepreneurship education is not reflected. This requires a change in teaching philosophy when teaching innovation and entrepreneurship, and the use of multi-faceted and diverse teaching models and methods to cultivate students' innovation and entrepreneurial skills.

Materials and Methods: The course "Entrepreneurship" is the main course of innovative entrepreneurship education in CFE universities. This study used a quantitative research method with a sample of 7 classes of students (sophomore year) of Business Administration in the class of 2019, totaling 307 students.

Results: Students' overall satisfaction with the use of blended online and offline instruction in Entrepreneurship was high ($M:4.41$, 5-point Likert scale). Satisfaction with online teaching content, satisfaction with offline teaching design, satisfaction with knowledge acquisition and skill mastery, and satisfaction with innovation and entrepreneurial ability enhancement all have significant positive effects on overall satisfaction. Among them, satisfaction with innovation and entrepreneurial ability enhancement had the highest correlation with overall satisfaction ($r=0.826$). The satisfaction with online teaching content had the lowest correlation with overall satisfaction ($r=0.660$).

Conclusion: The overall satisfaction of students with the adoption of online and offline hybrid teaching methods was high. Among them, the satisfaction with online teaching content was the highest and the satisfaction of improvement of innovation and entrepreneurship was the lowest. However, the correlation study showed that the satisfaction with innovation and entrepreneurial ability enhancement had the highest correlation with the overall satisfaction, while the Satisfaction with online teaching content had the lowest correlation with the overall satisfaction. This shows that students are eager to improve their innovation and entrepreneurship abilities, but at the same time, the Entrepreneurship course is not doing enough to improve students' innovation and entrepreneurship abilities. In the future, we need to keep exploring and updating the teaching methods in order to improve the students' satisfaction with the course of Entrepreneurship. Ultimately, students can get better innovation and entrepreneurship education through the study of Entrepreneurship, so that universities can really become the promoter of the development strategy of building an innovative country.

Key Word: Entrepreneurship; Blended Learning; Implementation Effectiveness; Quantitative Analysis.

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I. Introduction

Blended teaching mode is the organic integration of traditional classroom teaching and modern information technology. Online information resources are the key element in the hybrid teaching mode at this stage. Teachers can release teaching resources through Internet information technology and online platforms before entering the classroom, and can also transfer learning resources to students in real time during the classroom teaching process through online information technology (Yang, 2022)¹. That is, combining the advantages of traditional learning styles with online learning. Teachers play their leading role in inspiring and guiding students to learn. Students demonstrate their subjectivity, motivation and creativity in the learning

process (He, 2004)². There are three main forms of hybrid teaching, including "MOOC + classroom teaching", "APP + classroom teaching" and "flipped classroom teaching" (Tian & xi, 2020)³. The "MOOC + classroom teaching" model reconfigures the teaching and learning process of a course by designing and utilizing superior MOOC resources. This approach promotes participatory learning and improves the effectiveness of teaching and learning (He & Cao, 2015)⁴. The "APP + classroom teaching" model realizes the informationization of classroom management through APPs such as Cloud Classroom and Rain Classroom, including attendance assessment, classroom activity release, homework assignment and submission, and learning analysis. It also realizes the informationization of classroom implementation, such as live teaching. The "flipped classroom teaching" model realizes the organic combination of "teacher-led curriculum" and "student-led learning". Students use a variety of learning resources to gain an initial understanding of new knowledge before the class, and teachers design learning activities during the class to achieve deeper learning, application and evaluation. The "flipped classroom" model promotes a hierarchical teaching and learning process that enhances both the depth and height of teaching and learning (Wang et al., 2020)⁵. The Entrepreneurship course in this study mainly adopts the form of "APP + classroom teaching", using Rain Classroom online for attendance assessment, classroom activity release, assignment assignment and submission, etc. Offline, the "flipped classroom teaching" model was actively used.

II. Material And Methods

This study was conducted from September 2020 to January 2021 among sophomore business administration students of CFE University, Chongqing, China, in the class of 2019. A total of 307 college students participated in this study.

Study Design: Quantitative research

Study Location: This is a study of the effectiveness of blended online and offline teaching of the Entrepreneurship course, conducted at the Faculty of Wealth Management of CFE University in Chongqing, China.

Study Duration: November 2020 to January 2021.

Sample size: 307 undergraduates.

Sample size calculation: In this study, purposive sampling in non-random sampling was used. All classes that were taking the Entrepreneurship course in the first semester of the academic year 2020-2021 were selected. It was mainly 307 students in 7 classes in the Faculty of Wealth Management of CFE University.

Subjects & selection method: The study population was drawn from all students who were taking the Entrepreneurship course from September 2020 to January 2021. The course instructional activities lasted 16 weeks, of which the first 15 weeks were study weeks. One offline face-to-face learning session per week and several fragmented online learning sessions are scheduled. In the 16th week, the course is assessed. A questionnaire was administered to the 307 students at the end of the course. The questionnaire was used to begin quantitative analysis.

Teaching Model Design:

The teaching mode design of Entrepreneurship is oriented to cultivate students' innovation ability, practice ability and professionalism. The teaching content reflects the design idea of "target pointing to content, content guiding to form", including online teaching which is based on theoretical learning and offline teaching which is based on application and analysis. The goal of online teaching is to achieve students' memory and understanding of entrepreneurship knowledge. The understanding of important and difficult knowledge needs to be consolidated by offline classroom lectures. The specific online and offline class time allocation is shown in Table 1. The specific teaching arrangement is shown in Figure 2. In addition to the teaching process of "Entrepreneurship", the assessment method of "Entrepreneurship" also adopts both online and offline assessment, as shown in Table 3.

Table 1: Allocation of learning hours

Teaching format	Online learning(h)	Offline flipped classroom(h)	Traditional offline lectures(h)
Number of learning hours	11	20	12

Table 2: Teaching Arrangement

Week	Teaching content	Teaching format	Learning hour (h)
1	Introduction	Classroom lecture Interactive discussions	2
2	1. What is entrepreneurship 2. The elements and types of entrepreneurship	Online independent learning	0.5
2	1. "Better to start a business" or "better to be employed" - flipped classroom 2. On-line key knowledge review 3. Guided case	Classroom lectures Practical teaching Interactive discussions	2
3	Entrepreneurship Case Study - Flipping the Classroom	Practical teaching, Interactive discussions	2
4	1. The role of the business plan; 2. The content of the business plan; 3. The structure of the business plan; 4. Study the business idea; 5. Analysis of the problems and difficulties that may be encountered in business; 6. Turn the business idea into a written plan; 7. How to write a high quality business plan.	Online independent learning	2
4	Decoding the business plan - flipping the classroom	Classroom lectures Practical teaching Interactive discussions	2
5	1. What is an entrepreneur ; 2. Qualities of an entrepreneur; 3. Capabilities of an entrepreneur	Online independent learning	1
5	1. Review of important knowledge points on line. 2. Classic case studies of entrepreneurs. 3. Analysis of yourself from the perspective of an entrepreneur - flipped classroom.	Classroom lectures Practical teaching Interactive discussions	2
6	1. What is an entrepreneurial team. 2. How to create an entrepreneurial team. 3. How to manage an entrepreneurial team.	Online independent learning	1
6	1. online review of important knowledge points. 2. Formation of entrepreneurial team - flipped classroom. 3. Managing entrepreneurial teams. 4. Entrepreneurial plan-entrepreneurial team .	Classroom lectures Practical teaching Interactive discussions	2
7	1. What are the forms of organization of enterprises. 2. how to choose the legal form of organization for a newly created enterprise. 3. The main processes and matters of creating a new enterprise.	Online independent learning	1
7	1. Online key knowledge review. 2. Creative sharing research - flipped classroom.	Classroom lectures Practical teaching Interactive discussions	2
8	Business Creativity Adele - Flipped Classroom	Practical teaching Interactive discussions	2
9	1. Entrepreneurial opportunities and business opportunities. 2. How to identify entrepreneurial opportunities.	Online independent learning	1
9	1. Review of online key knowledge. 2. Can you find business opportunities? --flipped classroom. 3. Identify your entrepreneurial opportunities.	Classroom lectures Practical teaching Interactive discussions	2
10	How to avoid the risk of starting a business	Online independent learning	0.5
10	Market Analysis	Classroom lectures Practical teaching Interactive discussions	2
11	1. How to avoid entrepreneurial risks. 2. Review of key knowledge on line. 3. Risk-taking attitude and tolerance test. 4. Risk throwing game - flipping classroom. 5. Risk analysis - flipping classroom	Classroom lectures Practical teaching Interactive discussions	2
12	1. Overview of the business model. 2. The recommended framework of business model. 3. How the business model system is implemented. 4. Classic case analysis of business model.	Online independent learning	2.0
12	1. On-line key knowledge review. 2. Analysis of typical business models - flipped classroom. 3. Business canvas analysis - flipped classroom.	Classroom lectures Practical teaching Interactive discussions	2
Week	Teaching content	Teaching format	Learning hour (h)
13	1. Overview of entrepreneurial resources. 2. Categories of entrepreneurial resources.	Online independent learning	2

	3. The acquisition of entrepreneurial resources. 4. The reasons for the difficulty of entrepreneurial financing and the financing process. 5. The measurement of entrepreneurial capital. 6. Channels of entrepreneurial financing. 7. Entrepreneurial financing strategies. 8. The classification and development of entrepreneurial resources.		
13	1. Online key knowledge review; 2. Entrepreneurial resources sharing - flipped classroom; 3. Complete the business plan.	Classroom lectures Practical teaching Interactive discussions	2
14	1. Online key knowledge review; 2. Design of a financing plan - flipped classroom; 3. Complete the business plan.	Classroom lectures Practical teaching Interactive discussions	2
15	1. The four principles of start-up management; 2. Start-up management; 3. Sustainable development of start-ups.	Online independent learning	2
15	1. Online key knowledge review; 2. Classic case study; 3. Business management game; 4. Complete the business plan	Classroom lectures Practical teaching Interactive discussions	2
16	End-of-Course Report	Practical teaching	2

Table 3: Appraisal method

Assessment Type	Examination session	Percentage (%)
Online Learning Achievement	Online Video Learning	12%
	Module Testing	12%
	Discussion Questions	6%
Off-line Learning Achievement	Attendance	14%
	Classroom Performance	7%
	Assignments	14%
Offline Exam Achievement	PPT presentation	10.5%
	Business Plan	14%
	Live defense	10.5%

Statistical analysis

Data were analyzed using SPSS 22. Since the Kolmogorove-Smirnov test p-value for the variables was 0, i.e., the variable data were not normally distributed. Therefore, Kendall's and Spearman's methods were used in this study to analyze the correlations between variables.

III. Result

The evaluation of students' overall satisfaction with the Entrepreneurship course consists of four aspects: satisfaction with online teaching content, satisfaction with offline teaching design, satisfaction with knowledge acquisition and skill mastery, and satisfaction with innovation and entrepreneurial ability enhancement. A total of 307 questionnaires were distributed to students, and 267 questionnaires were collected. The average answer time is 1 minute, excluding the short answer time (less than 30 seconds), the actual recovery of 220 valid questionnaires, the recovery rate of 72%. The questionnaire used a 5-point Likert scale to investigate the students' evaluation of the course implementation. The results of students' satisfaction with the Entrepreneurship course are shown in Table 4. It can be seen from Table 4 that students' overall satisfaction with the adoption of blended mode of teaching and learning in Entrepreneurship is high (M: 4.41, SD:0.780). Among them, students' satisfaction with the online instructional content of Entrepreneurship was the highest (M: 4.50, SD:0.669). Students' satisfaction with the offline teaching design of Entrepreneurship was the second highest (M: 4.48, SD:0.743). Satisfaction with innovation and entrepreneurial ability enhancement was the lowest (M: 4.31, SD:0.814). Students' satisfaction with the adoption of blended teaching in Entrepreneurship on knowledge acquisition and skills mastery was also low (M: 4.34, SD:0.831). This shows that there are differences in students' evaluation of the four dimensions of the course, but the overall satisfaction is high.

Table 4: Student satisfaction survey for the course "Entrepreneurship"

	Satisfaction with online teaching content	Satisfaction with offline instructional design	Satisfaction with knowledge acquisition and skill mastery	Satisfaction with innovation and entrepreneurial ability enhancement	Overall satisfaction
N	220	220	220	220	220
Mean (M)	4.50	4.48	4.34	4.31	4.41

Standard deviation(SD)	0.699	0.743	0.831	0.814	0.780
Cumulative ratio (≥3)	98.6%	97.7%	99.5%	96.4%	97.3%

Students' overall satisfaction with the use of mixed online and offline teaching in Entrepreneurship is high. In order to figure out the degree of influence of different evaluation indicators on students' satisfaction, this study uses students' satisfaction with online teaching content, satisfaction with offline teaching design, satisfaction with knowledge acquisition and skill mastery, and satisfaction with innovation and entrepreneurial ability enhancement as independent variables, and overall satisfaction as dependent variables. Bootstrapping method was used to test the degree of influence of each variable on the dependent variable. The results are shown in Table 5. Data analysis showed that satisfaction with online teaching content, satisfaction with offline teaching design, satisfaction with knowledge acquisition and skill mastery, and satisfaction with innovation and entrepreneurial ability enhancement were significantly and positively correlated with overall satisfaction at the confidence level of 99%. Spearman's Rho correlation coefficients were 0.660, 0.761, 0.787 and 0.826, respectively. It indicates that satisfaction with online teaching content, satisfaction with offline teaching design, satisfaction with knowledge acquisition and skill mastery, and satisfaction with innovation and entrepreneurial ability enhancement all have a significant positive effect on overall satisfaction. Among them, the correlation between satisfaction with innovation and entrepreneurial ability enhancement and overall satisfaction was the highest ($r=0.826$), indicating that students recognized the importance of innovation and entrepreneurship ability, and the future course of Entrepreneurship should pay more attention to the improvement of students' innovation and entrepreneurship ability. Satisfaction with online content had the lowest correlation with overall satisfaction ($r=0.660$), indicating that the focus of students' attention is still not on the online component. In addition, the correlation coefficients of satisfaction with offline instructional design and satisfaction with knowledge acquisition and skill mastery were above 0.7. The greater the absolute value of the correlation coefficient is, the stronger the correlation. The closer the correlation coefficient is to 1 or -1, the stronger the correlation degree while the closer the correlation coefficient is to 0, the weaker the correlation degree is. According to Wu (2019)⁶, when the value of the correlation coefficient is greater than 0.6 and less than 0.8, it means that there is strong correlation between the two. When the value of the correlation coefficient is greater than 0.8, it means that the two are high correlation. Therefore, it can be concluded that satisfaction with innovation and entrepreneurial ability enhancement and overall satisfaction are high correlation. the others are strong correlation.

Table 5: Results of correlation analysis

		Satisfaction with online teaching content	Satisfaction with offline instructional design	Satisfaction with knowledge acquisition and skill mastery	Satisfaction with innovation and entrepreneurial ability enhancement
Kendall's tau, Overall satisfaction	Correlation coefficient	.628**	.729**	.756**	.802**
	Sig.	.000	.000	.000	.000
	N	220	220	220	220
Spearman's Rho, Overall satisfaction	Correlation coefficient	.660**	.761**	.787**	.826**
	Sig.	.000	.000	.000	.000
	N	220	220	220	220

IV. Conclusion

Innovation and entrepreneurship are one of the most dynamic factors and most important driving forces in economic development. The ultimate purpose of colleges and universities as the main body of innovation and entrepreneurship education is not necessarily to make students start their own business, but to stimulate students' innovation consciousness and improve their entrepreneurial ability through innovation and entrepreneurship education, with a view to improving students' overall quality. Through this study it was shown that students' overall satisfaction with the use of hybrid online and offline teaching methods was high. The satisfaction with innovation and entrepreneurial ability enhancement had the highest impact on the overall satisfaction, and satisfaction with online teaching content had the least impact on the overall satisfaction. In the context of innovation and entrepreneurship education, the reform of teaching methods in courses like Entrepreneurship plays an increasingly important role. Only through continuous exploration and continuous updating of teaching methods can students improve their satisfaction with the course of Entrepreneurship. Ultimately, students can get a better innovation and entrepreneurship education through the study of Entrepreneurship, so that universities can really become the promoter of the development strategy of building an innovative country.

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