Research on Online-Offline Hybrid Teaching of Applied Undergraduate Course "Design Thinking and Method"

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Abstract: This paper is an exploration and summary of experience on the online-offline hybrid teaching for the course of Design Thinking and Methods at Shanghai Lida University to provide a certain practical and theoretical basis for the relevant research of the peers. This paper gives a detailed introduction on the current situation of the course; teaching goals exploration; course research and development process; online and offline course content design centered on the teaching goals; and the experience of online and offline course implementation centered on the teaching goals.

1 The Development Status and Teaching Goals of the Course of Design Thinking and Methods in Our School

1.1 Development Status of the Course

This course is a basic professional course for art and design majors in our school, spanning three undergraduate majors. It is a very important basic course on design that combines theory and practice in the discipline of art design.

1.2 The Current Status of Online-offline Hybrid Teaching of the Course

Currently, 18 video lessons has been recorded for this course and broadcasted in our school, and online live broadcast lessons have been successfully carried out, realizing the online-offline hybrid teaching preliminarily.

2 Research Strategies for Online-offline Hybrid Teaching Centered on Curriculum Goals

2.1 Focus on the Process, Research Iteratively

During the process of course simulation, we draw on the advantages of the "Taba Model" and focus on iterative deliberation and problem solving in the teaching process. According to the research status, the curriculum objectives were formulated, and the curriculum was organized, implemented, and evaluated. This is an iterative cycle, and the research process will be repeated again in new round of courses. Only by iterative simulations in the teaching process can we develop a curriculum suitable for the school's learning conditions(Figure 1).
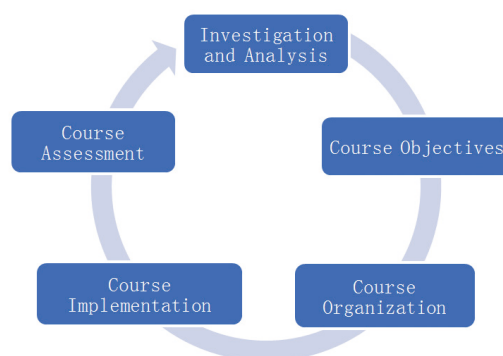

Figure 1. The curriculum objectives were formulated, and the curriculum was organized, implemented, and evaluated.

2.2 Collective Review

Drawing lessons from the advantages of the "Schwab model" in curriculum development, focus

was given to the synergy of the four elements of students, teachers, subject content, and environment. Attention is given to the positioning of the school and subject training goals of the applied undergraduate courses of the school; the leading role of teachers in curriculum development; the main role of students, the learning habits and preferences of the students; the current situation of industries and course content; and employment requirements etc. Only by fully considering many factors and incorporating them into the research scope of the course teaching, can it be possible to create a "golden course" according to local conditions.

2.2.1 Learning Induction + Teacher Discussions

The experience of other schools was studied and summarized; the teachers participating in the course of this school will enrich and polish the course with the experience of others by engaging in discussions.

2.2.2 Adapting Measures to Local Conditions and Have a Deep Understanding of the Learning Conditions

This school is an application-oriented undergraduate college, which trains designers who can undertake design projects in the design market and cultivates application-oriented talents; the strengths of our students are inclined towards the practical aspects. Therefore, the organization of our course content always focuses on the connection between theoretical knowledge and practice. The course content incorporates the study on a large number of specific design works.

3 In-depth Exploration of the Teaching Objectives of Courses as Important Direction of Course Building

3.1 Goal 1: Creating a Knowledge Structure of "International Design Thinking + Chinese Innovation"

International schooling is a uniqueness of our school, so the curriculum emphasizes on international perspective, allowing students to understand the international cutting-edge thinking required for innovative design, while not neglecting the integration of Chinese culture and spirit, achieving an in-depth integration of innovation and tradition, and nurturing designing talents who can realize the goal of "Created in China".

3.2 Goal 2: Establishing Content Structure of "Broad Knowledge + Small Modules"

Students not only need to learn the broad knowledge of creative design in multiple professional directions of art design to acquire broad design ideas and vision, which is known as "broad knowledge"; they must also conduct special projects on creative designs in their own professional direction to learn and become proficient in their own professional direction, which is called the "small module".

3.3 Goal 3: Realizing the Integrated Training Model of "Theory + Practice" Abilities

Based on the positioning of applied undergraduate course, theory and practice must be closely integrated, combining basic design knowledge with design practice and the demand factors in design market, to systematically and comprehensively carry out teaching and effectively improve students' innovative design capabilities.

4 Online-offline Hybrid Teaching Content Design Centered on Curriculum Goals

4.1 Online-offline Hybrid Teaching Content for Goal 1

4.1.1 Course Content of the Online Teaching Section

In addition to supporting recorded and live webcasts, the online teaching content also comes with a great amount of online resources. We will recommend excellent design websites, both domestic and foreign, professional WeChat public accounts and other online academic resources to allow students to expand their professional knowledge. While horning their international vision, students can also pay attention to many design concepts and works based on Chinese traditional culture. It is an effective supplement to the basic theoretical knowledge in the classroom.

4.1.2 Course Content of the Offline Teaching Section

Offline lecture content is an extension of its online counterpart. Online theoretical knowledge is explored and expanded in offline lectures. It not only incorporates the classic works of famous Chinese and Western designers, but also discusses the current cases of international brands, and allows students to express their opinions. The teacher finally made a guided conclusion. Students can further think deeply in this process.

4.2 Online-offline Hybrid Teaching Content for Goal 2

4.2.1 Course Content of the Online Teaching Section

Online teaching is mainly responsible for the content of "broad knowledge", which is the overall explanation of design thinking and methods of the art design major.

4.2.2 Course Content of the Offline Teaching Section

Offline teaching mainly undertakes the content of the "small modules". Teachers and students return to the classroom to discuss in-depth on specific knowledge and cases according to the characteristics of their specific professional direction. For example, product design major will research, discuss and appreciate the design ideas of product design itself. The visual transmission major will discuss more about the works of visual transmission.

At the same time, the teaching content of the "small module" needs to be selected based on students' practice topics and distinguish the direction for selecting the major project.

4.3 Online-offline Hybrid Teaching Content for Goal 3

4.3.1 Course Content of the Online Teaching Section

Online live streaming or recording was mainly focused on the teaching of theories. Through practice, it was found that online teaching is more suitable for the teaching of the theoretical part. See Table 01 for details.

4.3.2 Course Content of Offline Teaching Section

Deepen the learning of important theories offline, explore knowledge points in offline lectures, expand knowledge points, and carry out flipped classrooms, allowing students to share and communicate in the classroom based on the knowledge points of the video lessons and the completed preparatory assignments. This effectively ensures that the development of offline lectures as the basic guarantee for transforming theory into practical teaching.

At the same time, the teaching of the practical part is mainly conducted offline, as offline face-to-face tutorial is convenient while teaching of the practical part solely online was found to be not effective. See Table 01 for details.

5 Development of Online-offline Hybrid Teaching Centered on Course Objectives

5.1 Survey on the Experience of Online and Offline Teaching

Due to the epidemic in the first half of this year, we have tried live online teaching. The live broadcast includes a theoretical part and a part of practical tutorial. After the subsequent resumption of offline lectures, some offline practical tutorials were added back. For the part of online teaching, a survey was conducted on the students and teachers (Table 1).

Table 1. A survey was conducted on the students and teachers

	Students (130)	Teachers (10)
In Support of Online Teaching for Theories	90%	80%
In Support of Online Teaching of Practicals	35%	10%

I surveyed 130 students in 4 classes: 90% of the students think that the theoretical part of the online lecture is almost the same as in offline lecture, but the online lecture is more convenient to attend; 65% of the students think that the online learning of the practical part is inferior to offline face-to-face tutoring.

The two teachers of this course and other teachers of similar courses have also conducted discussions on teaching. The feedback from the teachers is basically consistent with the feedback from the students, and it is believed that the language part of online teaching will not be reduced. The richness of teacher-student interaction and student-student interaction has not been reduced. Some students are more active in leaving messages and asking questions on the online platform than offline. Online classes also show many advantages that are not found in offline classes. I think the practical part of tutoring is difficult to do online and the effect is not good. Online teaching can hardly replace the superiority of offline teaching in practice.

The survey found that: online and offline teaching needs to be properly coordinated to maximize their

strengths and avoid their weaknesses. The argument of this paper is also based on the experience data of teachers and students.

5.2 The Grasp of Online Live Broadcast Lectures

5.2.1 The Frequency of Interaction is Crucial

Basically ensure that there must be interaction for every knowledge point. Some important knowledge points require more frequent interactions. On average, there is an interaction every ten minutes.

5.2.2 The Ways of Interactions Can be More Diverse

(1)Using the small tools of the live broadcast teaching platform (answer sheets, questionnaires, raising hands, etc.) allows students to interact with the teacher conveniently while listening to the lecture, and the teacher can quickly see the statistical results and grasp the student's learning situation in time.

(2)Combination of free speech and roll call: For students who do not take the initiative to speak, I will roll call and ask questions, and this is also a way to spot check whether they are attending the lecture. Through practice, it was found that in 80 lecture hours, 3 people were randomly found to have "slipped the number" (been absent). It is better than the problem of "slipping number" (absence) in offline courses.

(3)Designing Interactive Games

Interactive games can make online lectures lively and interesting, allowing students to acquire knowledge, and increasing the communication between teachers and students and among students, and liven up the atmosphere of the classroom.

For example: make the students work together in groups, and then share the works of each group, and organize students to vote for each other to decide on the winning group. Finally, the teacher commented on each group's work. The atmosphere is harmonious and active, and students can learn from each other and experience the joy of learning.

5.2.3 Design Interactive "Code Words"

Due to the inconvenience of typing when students are giving answer, I set some "code words" for certain contents. For example: 1 means "present", "understand", "received instructions" and other positive meanings. 2 stands for the negative meaning of "incomprehensible"…... and so on, so that students can respond quickly, and as simple symbols can be easily recognized by teachers, this can improve the efficiency of interaction.

5.3 The Grasp of Online Recorded Lectures (Micro-lectures)

The important knowledge points of the course are made into a short and concise micro-lecture video for lesson preview and revision. It also serves as a good advertisement for the course[1]. However, it is not suitable for discussing more in-depth professional content.

In short, whether it is live broadcasting or recording, it is necessary to grasp the "four factors"[2]. interactivity, which is the interaction between teachers and students, and among students; exploratory, which means not just simply explaining surface knowledge, but also fostering ability to explore professional problems in-depth; tasking, online classes are not just about the teachers lecturing, but also tasks to drive the initiative of the students; motivating, that is to stimulate students' enthusiasm for learning through various methods.

5.4 The Grasp of Offline Courses

To take hold of the dominant position of offline classrooms. The advantages of offline classes are the ability to communicate face-to-face; to quickly understand the overall situation of the class; and being able to provide hands-on guidance. Therefore, we should make full use of the advantages of offline classes that are not provided by online classes. In-depth discussion of theory, communication and practice should be the main contents of the offline part of teaching.

6 Conclusions

The construction of the "golden course" of this course needs to adapt to local conditions and explore in-depth on its self-positioning. Practice has proved that the teaching of the theoretical part can be carried out well online in the form of recorded and live broadcast lessons; while the teaching of the practical part is difficult to be carried out solely online. Perhaps with the development of technology in the future, online practical teaching will be more convenient. Currently, it is a very good choice to establish online-offline hybrid teaching.

References

[1] Sheng L, Jun XC. Investigation and Analysis of the Online and Offline Learning Status of Students in Newly-built Application-oriented Undergraduate Colleges——Taking the School of Hotel Management of Guilin Institute of Tourism as an Example [J]. Guangxi Quality Supervision Guide Periodical, 2020(5): 82-86.

[2] Yong PT. Basic Features and Implementation Strategies of Hybrid Teaching Mode [J]. Chinese Vocational and Technical Education, 2018(32): 5-9.