Application Analysis of SPPC Online and Offline Mixed Teaching Mode in Text Design Courses

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Abstract: With the rapid development of computer, multimedia, network, communication and Internet of Things technologies, the 21st century has formed a knowledge-based economy era characterized by informatization. All walks of life are experiencing changes and development driven by "Internet +". Similarly, revolutionary changes have taken place in the teaching methods of domestic character design courses. This paper applies the SPOC teaching model to the text design course, and various online text learning platforms emerge as the times require. Combined with the traditional offline text design learning model, an online and offline hybrid learning model is formed. The main research purpose of this paper is to reveal the online and offline blended teaching method to promote the learning of SPOC text design teaching mode and other aspects, and to explore the relevant data of the online and offline blended teaching method in college text design teaching. First of all, the text design should be distinguished from the surrounding environment, giving a clear and lively visual impression, so as to avoid external "interference", and strive to be concise and lively, giving a simple soothing and breathable freshness, so as to be more intuitive to convey the emotional color contained in the text. The final results of the study show that the average learning time of video one is 24 minutes and 29.23 minutes respectively, and the average learning time of each video has exceeded the original time, indicating that most students have the behavior of watching videos repeatedly. Self-directed learning gives students a lot of autonomy.

Keywords: Online and Offline; Blended Teaching; Graphic Language; Text Design

1. Introduction

With the development of human society, character design came into being in the practice of production and life, and then it began to gradually develop, mature and enrich in the development and progress of human civilization [1]. Later, due to the popularization of computers and the increase in the frequency of mobile phone use, people's writing methods have undergone tremendous changes. The traditional writing methods based on pen and paper have been replaced by keyboards and input methods, resulting in more and more people's impression of Chinese characters. The more obscure, and designing a curriculum for words is what makes up for where words are currently overlooked. Therefore, the research on the application of SPOC online and offline mixed teaching mode to the application of text design courses has certain practical significance.

In recent years, many researchers have conducted research on the application and analysis of SPOC online and offline mixed teaching mode in text design courses, and achieved good results. For example, Allen believes that character design is actually the so-called "font design", and each independent Chinese character represents its own meaning [2]. Antonio Victor believes that just like the relationship between a person's external image and internal self-cultivation, the external shape of a character also clearly expresses the internal meaning of the character [3]. At present, scholars at home and abroad have carried out a lot of research on the SPOC online and offline hybrid teaching model, and these previous theoretical and experimental results provide a theoretical basis for the research of this paper.

Based on the theoretical basis of SPOC online and offline mixed teaching mode, combined with the application analysis in text design courses, and through a series of experiments to verify the feasibility of the application of SPOC online and offline mixed teaching mode in text design courses, the experiments The data shows that the average learning time of the first video is 24 minutes and 29.23 minutes respectively, and the average learning time of each video has exceeded the original time, indicating that most students have the behavior of repeatedly watching the video, online self-learning Gives students a lot of autonomy.

2. Related Theoretical Overview and Research

2.1 Analysis of the Modeling Method of Character Design Form

The choice of modeling tool determines the shape and outline of the text, especially the way it expresses the feel and meaning of the text. Through writing, drawing, engraving, printing or typesetting methods such as light, heavy, slow, urgent, etc., the text is no longer boring and boring, but becomes more affectionate and meaningful. Therefore, choosing an appropriate modeling method can effectively help the text design form achieve the ideal presentation state, so as to fully demonstrate the unique charm of the text [4-5]. The content of this paper will mainly expound and analyze the role and effect of modeling methods and expression skills in the text design form, as well as the influence of control factors in the modeling process.

2.1.1 Image writing notice

When it comes to writing, the easiest modeling tool is the pen. Writing is one of the most primitive and basic ways of expressing glyphs, and it is also one of the most effective ways of expressing glyphs. The life and essence of words can be continued in the process of writing paths [6]. It can be seen from the research content of this work that the glyphs written by different writing tools are different, and the wide and narrow noses corresponding to the thick and thin strokes obviously convey different text emotions. At present, most words are generally abstract symbols, so for words, as one of the important carriers of information, the meaning of symbols is very important. Take Chinese characters as an example. Although Chinese characters are pictographs, with the development of simplified characters, their image awareness has gradually increased. This symbolism is characteristic of Chinese characters. "Using different writing techniques can greatly help him express his full symbolism.

2.1.2 Enhance the visual beauty and resonate with people

Different text designs convey different emotional connotations and give people different feelings of beauty. Thick, hard and tough fonts give people a kind of strength and beauty, masculine beauty, such fonts have outstanding momentum, strong personality, and clear rhythm. It can be used to show strong courage and confidence, and it can also express appeal and centripetal force, bringing a visual impact to people [7-8]. Soft, slender, and elegant fonts will show a delicate emotion. These fonts are gentle and euphemistic, reminiscent of the gentleness and elegance of women, giving people a kind of affinity and narrowing the distance with the viewer. Rigorous, upright, and regular fonts often bring people a sense of trust and explanatory power, and seek changes in rigor. Such fonts can be widely used in brand logos.

2.1.3 Other modeling methods

Besides writing and painting, there are many other types of modeling methods such as engraving and cutting, compression and printing, erasing and erasing, folding and folding, splashing and dripping, flowing and dripping, haloing and painting, placing and photography[9]. The visual features and effects presented by these rich modeling methods vary and are not comparable. Each modeling method has its own unique and incomparable advantages, showing the charm and brilliance of the text in its own unique way. Let us analyze the general types and corresponding performance characteristics of these modeling methods by collecting some classic cases.

2.1.4 The connotation and fundamentals of character design

In graphic design, there is no doubt about the importance of "text". No matter in posters, picture albums, web pages or magazines, those works that need to be designed are inseparable from the expression of words. Words and images are considered to be in the layout of graphic layout most important component. We come into contact with a large number of text designs every day, but there are very few people who really carefully study the external form of text and know how to use the most suitable and appropriate font for text design. Like the relationship, the external shape of the text also clearly expresses

the internal meaning of the text. Therefore, the main function of text design is to use different text design effects to convey the author's creative intentions and thoughts and feelings, so as to better express the design theme and concept. Do not "design for design", forget the original intention of design, and use practicality , convey information, and solve problems.

2.2 Analysis of SPOC Online and Offline Mixed Teaching Function

2.2.1 Preview that traditional teaching is different from pre-class self-study online and offline hybrid teaching

In traditional teaching, teachers will arrange preview before class, but this kind of preview is general, unguided, and may not be related to the content explained by the teacher. In offline blended teaching, teachers carefully prepare learning resources closely related to the subject content before class, and use the online teaching platform to deliver personalized learning tasks (such as content difficulty or learning requirements) for different students. Reread or discuss with classmates and online teachers when they have problems [10-11]. The whole pre-class study, with clear content and clear goals, has laid a solid foundation for the internalization of classroom knowledge.

2.2.2 The teaching structure of online and offline mixed teaching enhances the value of classroom time

Due to sufficient self-study before class, students come to the classroom with questions, not only follow the teacher's guidance, but also the subject-related knowledge reserves allow students to truly participate in classroom discussions; classroom teaching is no longer the focus of teachers' subjective judgments based on experience and textbooks. The difficulty is the problems that students actually discover and feedback in the classroom [12]. Therefore, the learning of students and the teaching of teachers in the classroom are more targeted, more interactive, and the learning atmosphere is more enthusiastic, so that the time and its value of face-to-face teaching can be fully utilized and practiced.

2.2.3 Teaching concept of online and offline mixed teaching

With the transformation of teaching structure, the roles of teachers and students in mixed online and offline teaching have undergone major changes, and this is also accompanied by changes in teaching concepts. Teachers become the designers of teaching activities, and students are no longer passive students, but people who actively accept knowledge and become the protagonists of teaching activities. In the online and offline mixed teaching classroom, the roles of teachers and students will inevitably change with the changes of teachers' teaching concepts and teaching structures. Whether it is students' autonomous learning before class, or the absorption and internalization of classroom knowledge, students are the main body of learning, and teachers become the designers of students' pre-class autonomous learning task list.

3. Experiment and Research

3.1 Experimental Method

To further characterize the effect of contextual factors on application time, we calculated the relative information gain for each factor by measuring the reduction in entropy given to the prediction results. The information gain of each context factor can be used to guide the design of the predictive model, and the calculation process is:

$$H(Y) = \sum_i P[Y = y_i] \log \frac{1}{p[Y = y_i]} \tag{1}$$

$$G(Y, F) = H(Y) - \sum_{f \in F} \frac{|Y_f|}{Y} H(Y_f) \tag{2}$$

where p[Y=y] is the probability of Y=y. The information gain G(X) of a particular factor F with state $f \in F$ is calculated as the difference between the total entropy of the original system and the sum of the entropy of each factor grouping. For comparison, relative information gain was calculated and the entropy difference was normalized by dividing the result by the total entropy H(Y) of the system, typically a p-value less than 0.05 indicates a high level of subgroup independence, and a p-value less than 0.1 indicates weak independence.

3.2 Experimental Requirements

This experiment is mainly aimed at the research on the application integration development of SPOC online and offline mixed teaching mode and text design courses. The experiment collects statistics on the average learning time of videos, and also reflects the level of students' learning input. The test results of the four courses of text application and texture expression are used to compare and analyze the experimental group and the control group, and systematically analyze the collected data.

4. Analysis and Discussion

4.1 Online Learning Video Learning Data Analysis

The average learning time of the video also reflects the level of students' learning input. In the video settings of this course, students are allowed to drag the video progress bar, and there is a warning against screen cutting. The learning time of the video is the actual viewing time. The experimental data is as follows.

As can be seen from Figure 1 and Table 1, the average learning time of video one is 24 minutes and 29.23 minutes, the average learning time of video two is 36 minutes and 45.26 minutes, and the average learning time of video three is At 40 minutes and 50.66 minutes, the average learning time of each video for students has exceeded the original time, indicating that most students watch videos repeatedly. Online self-learning gives students a lot of autonomy. In traditional classrooms, factors such as the overall progress of the class and the self-esteem of students need to be considered. Students can adjust their learning progress according to their own learning conditions to maximize personalized teaching.

Table 1: Online learning video learning data analysis table

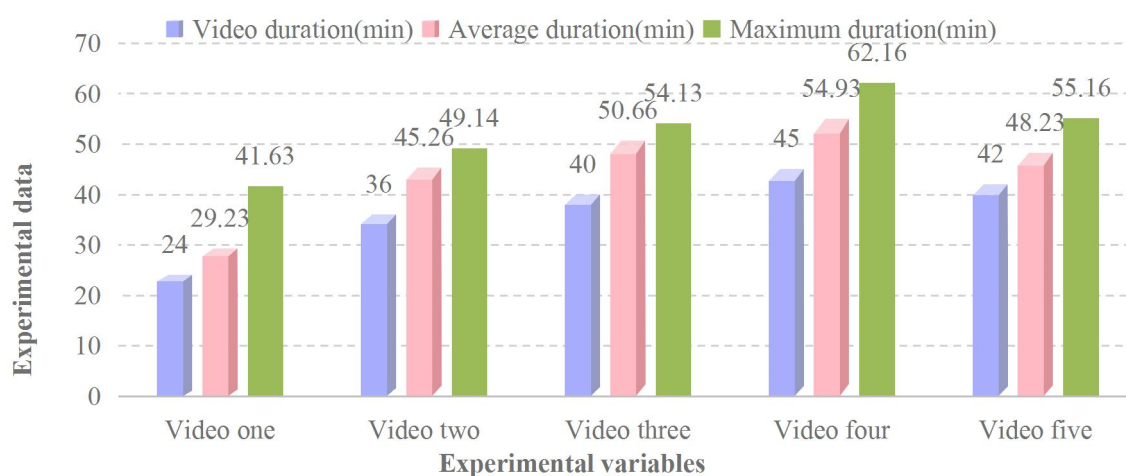| Learning video	Video duration(min)	Average duration(min)	Maximum duration(min)
Video one	24	29.23	41.63
Video two	36	45.26	49.14
Video three	40	50.66	54.13
Video four	45	54.93	62.16
Video five	42	48.23	55.16

Figure 1: Online learning video learning data analysis diagram

4.2 Independent Test and Analysis of the Course Performance of the Experimental Group and the Control Group

The experimental group designed courses through online and offline mixed teaching, while the control group used traditional classroom teaching to conduct tests in a unified manner. The test data is shown in the figure below.
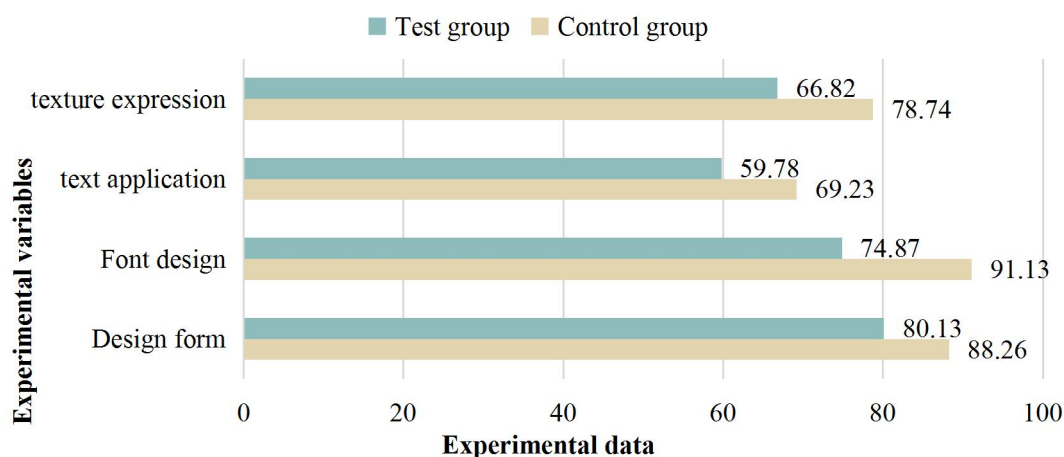

Figure 2: The independent test and analysis diagram of the course performance of the experimental group and the control group

As shown in Figure 2, according to the test results of the four courses of design form, font design, text application and texture expression, the average test scores of the experimental group were 88.26 points, 91.13 points, 69.23 points and 78.74 points, respectively. The average test scores of the groups were 80.13 points, 74.87 points, 59.78 points and 66.82 points respectively. It can be seen that the SPOC online and offline mixed teaching mode has improved the teaching results of the text design course to a certain extent.

5. Conclusion

Based on the theoretical basis of SPOC online and offline mixed teaching mode, combined with the application analysis in text design courses, and through a series of experiments to verify the feasibility of the application of SPOC online and offline mixed teaching mode in text design courses, online and offline It can be seen from the experimental data analysis of the learning video learning data analysis and the independent test and analysis of the course performance of the experimental group and the control group that the average learning time of each video has exceeded the original time, indicating that most of the students have the behavior of watching the video repeatedly. And through the SPOC online and offline mixed teaching mode, the teaching results of the text design course have been improved to a certain extent. The online-offline hybrid teaching mode based on SPOC is different from traditional teaching. It puts forward higher requirements on teachers and also increases the workload of teachers. It seems that teachers get rid of the face-to-face teaching and the evaluation process of objective knowledge in traditional classrooms, but teachers' participation is required from the preparation stage of curriculum design to the design and implementation of online and offline teaching activities to the final evaluation stage.

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