Computer Multimedia Technology in the Visual Psychology Experimental Teaching of Designing Color

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Abstract. Designing color visual teaching is one of the most fundamental courses for students major in visual communication, and is a crucial course for student to master and control the color in a good way. Computer multimedia technology (CMT) is a prevailing teaching-aided way in recent years. This study is to explore the advantages of CMT in visual psychology experimental teaching of designing color. In this study, 87 teachers in visual communication teaching from 10 universities and colleges in Lanzhou City are selected as research objects, and they are interviewed with the purpose of knowing the current application of CMT in visual psychology experimental teaching of designing color. After interviewing, the summary and analysis on recorded information reveals that CMT can change the traditional teaching mode, enrich the current teaching content, reduce the writing pressure of teachers in blackboard, and enhance the innovation ability on color design of students. In addition, CMT can help students to display a work with current fashion colors, which can meet the market demand better. Finally, it can be concluded that CMT can be applied in visual psychology experimental teaching of designing color good, and even the whole field of education in a good way.

Keywords: Designing Color; Experimental Teaching; Computer Multimedia Technology; Teaching Efficacy

1. Introduction
Designing color (also known as “color design”) is one of the significant fundamental courses of visual communication. It exerts a critical role for students to establish their subjective color perception and design idea [1, 2]. Designing color refers to restore various colors in the nature environment into basic color elements, which are reorganized, so as to improve the aesthetic effect of the students [3]. With the growth of economy in China, the learning methods and design ideas of students change greatly. However, the traditional teaching mode on designing color develops slowly, so that it can’t match to the actual requirements of students. Therefore, it is necessary to improve the traditional teaching mode of designing color. On the other hand, in actual teaching, training the innovation ability of student is extremely significant. However, most students lack creative inspiration and methods in practice, and they only can work by referring the work displayed by teachers. Without innovation ability, how to become a qualified color designer? Therefore, correct guidance on color selection and use in good way has a critical role for students.
With the rapid development of scientific technology and the coming of “Internet +”, the computer technology has been applied in wider and wider fields in recent years, including micro-course online video (MCOV), Mooc, powerpoint (PPT), and application (APP) [4]. CMT is the general name of above means. It has been widely used in many fields, especial the teaching and training in various industries. Multimedia courseware is one of the critical teaching factors, and it creates a new study field. Its application in school teaching can help teachers realizing better teaching efficiency, and is conducive to understanding the knowledge visibly and clearly for students [5]. After searching, it is found that there are lots of studies exploring the CMT in experimental teaching of various disciplines, including Chinese, Mathematics, English, and History. However, there are few studies on its application in teaching of designing color [6].

In summary, the traditional teaching mode and contents in designing color is not updated to meet the demand of students and the development requirements of new internet technology in recent years. On the other hand, CMT has been extensively applied in the teaching of various courses, which is proved to be superior. Therefore, the CMT is adopted in this study to improve the current problems of designing color teaching in schools.

2. Methods

2.1. Interviewing Method
Interviewing method is adopted to know the thinking and understand of some teachers in universities and colleges on CMT in visual psychology experimental teaching of designing color.

2.2. Interviewees
87 teachers in visual communication teaching from 10 universities and colleges in XX City are selected as research objects. The teachers are very busy, so the interview topic is that “how do you think about CMT in visual psychology experimental teaching of designing color?”. Each interviewee takes 3-10 minutes to answer this question. During the interview, all talks are recorded with voice recorder so that they can be easy for collection and summary.

3. Results and discussion

3.1. Overview
The introduction of CMT can help teachers utilizing the designed work actively, which is more attractive for students with the visible video resources. With CMT, teachers can decompose the color or work, and then reconstruct them in this own idea, which is interesting for teachers and new for students. Therefore, CMT can be well acceptable by most students and teachers. After the recorded voices are collected, classified, and summarized, it is found that all teachers think that CMT is beneficial to the visual psychology experimental teaching of designing color and can improve the students’ abilities. The results are illustrated in Figure 1 below.
obviously, can Figure teacher, students Under Multimedia 3.3. fully, teaching growing student class. can contents to teaching. teaching of Traditional 3.2. teachers as teachers, ability discloses reducing the writing pressure in the blackboard; and D represents enhancing the innovation ability of students.

Figure 1 reveals that all interviewed teachers believe that CMT can change the teaching mode (87 teachers, as high as 100%), 85 teachers agree that the CMT can enrich the teaching contents (as high as 98%), 76 cases feel that their writing in the blackboard is reduced (accounting for 87%), and 69 teachers think the CMT can enhance the innovation ability of students (accounting for 79%).

3.2. Improvement of Teaching Efficacy Based on the Computer Multimedia Technology

Traditional teaching mode requires teachers writing the key points in blackboard, which cause waste of lots of time for both teachers and students in the class. As the rapid development of society, teaching has to keep the pace of rapidness. CMT becomes a useful and application technology in teaching. Teachers can enter the key points of course before the class and search some related images to help students understanding. Thereby, with CMT, there is no need for teachers to write too much contents on the blackboard, and they only write some points to be highlighted. In this case, much time can be saved, so that the teachers can teach more contents and arrange more teaching activity in the class.

On the other hand, the current mainstream teaching method is “taught by teacher – practice by student – evaluation by teacher” [7]. Such inculcation mode is not acceptable by students who are growing in the new digit era. Introduction of CMT in the class can diversify the expression means of teaching content, which can attract the attention of students. Thereby, the time in class can be utilized fully, so that the teaching efficacy is improved greatly.

3.3. Enhancement on Expression and Reconstruction Ability of Color Based on the Computer Multimedia Technology

Under the teaching method of “taught by teacher – practice by student – evaluation by teacher”, most students finish their works by referring or copying what the teacher gives. With great impact from teacher, students are hard to have creative ideas on the patterns, colors, and structures of the works. Figure 2 refers to the images displayed by teacher, and Figure 3 shows an image drawn by a student. It can be observed that the character is changed in the image of student, but the color changes not obviously, which is affected by the display of teacher greatly.
With the growth of digital technology, it is obvious that designing color has to train the emotional creativity of color instead of centering on the color itself only. It requires to combine the emotion with the color design for a work. It is impossible for the traditional teaching mode in visual psychology experimental teaching of designing color to satisfy this demand. As a technical mean, CMT combines the image, music, motion, and play together based on the traditional mode of image + words [8]. Thus, it can provide various feelings of different sense organs. Designing color is to train the color application ability of students, so it is very important to focus on the training of innovation ability, which refers to the effective expression and reconstruction ability of color in practice. With application of various tools under CMT, the static work and simple colors can be decomposed into pieces and then reconstructed, so that they can be vivid with different ideas, feeling, and emotions of individuals. Therefore, combining the CMT in visual psychology experimental teaching of designing color can help students focusing on the abstract of the object to analyzing its modelling element, color relationship, space tension, and structure way, so as to understand the object deeper. Teachers can create some typical new colors and apply them in the image through CMT. Then, the work will be more attracting, as shown in Figure 4.
3.4. Combination of Designing Color Teaching and Current Market Demand Based on the Computer Multimedia Technology

Currently, most teachers concern on the teaching objectives given by the books, so they only think how to teach the course based on the course only, and fails to combine the course system and development status of the whole industry. This is the true in visual psychology experimental teaching of designing color. However, introduction of CMT can solve such problem well. With CMT, teachers can know the current market demand and the prevailing colors easily and better. If such contents can be added in the class teaching to train the color utilization ability of students to match to the leading requirements, students can add some fashion elements and colors in their design, which make the work can be more acceptable and practical. For example, if a student is required to design a pair of beach shoes, there are many different patterns. It is hard for the student to be determine which pattern is the best. But if the student know that the fashion element is tropical fish for this season, he/she can give exact design of beach shoes, which can have a good sales prospect. The designed beach shoes may be similar to below Figure 5.

4. Conclusion

Designing color is one of the core basic courses of vision communication, and its teaching effect affect the color design ability of student greatly. CMT in visual psychology experimental teaching of designing color is a practical way of “internet + teaching in designing color”. By interviewing 87 teachers in this major, the advantages of CMT in visual psychology experimental teaching of designing color are found and summarized. It is revealed that CMT can improve the teaching efficacy and enhance the expression and reconstruction ability of color of students. What’s more, the works of students will be more fashionable with the assistance of CMT in teaching, so that they can be easy to
be accepted by the society. However, there are still some limitations for this study. It only analyzes the advantages of CMT visual psychology experimental teaching of designing color, and its shortcomings will be discussed in future. In addition, the subjects for interview are too less, and more interviewees will be included for further analysis in future. However, this study highlights the advantages of CMT in visual psychology experimental teaching of designing color, and can provide a reliable reference for following study on CMT in teaching in universities and colleges.

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