Pisco Med Publishing

Original Research Article

Application Research of SHOT Printing Simulator in the Course Teaching of Printing Specialty

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Abstract: There are many disadvantages in the traditional teaching of printing specialty. Under the traditional education mode, teachers are in the leading position in teaching, and students passively accept the indoctrination of knowledge, which affects the development of students' knowledge system and restricts the development of students' thinking ability and innovation ability. SHOTS(Sheeteed Offset Training Simulator) is an important attempt in the teaching of printing course, which plays an important role in the improvement of theoretical teaching and practical teaching.
Keywords: Printing; Shots; Instructional applications

Fund Project: 2020 Shanghai University of technology teacher teaching development research project (Project No.: CFTD202004).

The Ministry of Education attaches great importance to the training of printing talents in our country. There are two colleges and universities specializing in the training of printing talents all over the country, namely the Beijing Printing College and the Vocational School, but involves the printing technology specialized and the printing packing specialized university nearly 30. Printing experiment teaching is an important part of the training plan, but the cost of printing experiment teaching is relatively high. SHOTS(Sheeteed Offset Training Simulator) is a practical and printing experimental teaching of the very excellent software, just to solve this problem.

1. The analysis of the current teaching situation of printing major in colleges and universities

At present, the main problem of the course system of printing specialty is that it overemphasizes the cultivation of students' theoretical knowledge system and lacks the cultivation of experimental skills. With the rapid development of the printing industry, the production line needs workers who know theory and technical operation, and the lack of skills of graduates from universities and colleges leads to the talents and enterprises can not be well connected, there are many graduates every year, but enterprises can not recruit talents, and thus the employment rate of the printing profession, the proportion of counterpart employment is even less.

2. The feasibility analysis of the application of SHOTS simulation system

With the development of computer technology, simulation system has gradually entered various fields and played a vital role in the development of various fields. Now, there are simulators for the printing industry, too. SHOTS (Sheetfed Offset Training Simulator) , also known as SHOTS, is a 15-year-old development by Sinapse of France. Using SHOTS (Sheeteed Offset Training Simulator) software to assist teaching, after running the software, the printed sample sheets are analyzed, which is helpful for students to understand the professional terms and basic concepts of printing, strengthen the combination of theory and practice. To improve the efficiency and quality of teaching by using the software will be a trend in the future.[1]

The system is divided into four modules, each module contains 100 items. During the course of the training, the students will be able to, by printing the response of the problem to judge the equipment failure and give solutions, realistic scenes, can really play to help students training purposes. The second is "SHOTS Trainer" , which helps teachers to ask more specific questions. Teachers can also use this function to solve the problem of individual students' learning ability. The third is Shots aomatched session Analysis (Asa) Local. Through this function, students can understand the trajectory of the problem, a better grasp of teaching difficulties.

3. The analysis of the function of SHOTS simulation system in the course teaching of printing specialty

3.1 SHOTS simulation system arouses students' interest in learning

Printing technology course terms are many, the concept is also very abstract, do not refer to the object, students understand it is difficult, over time, it is easy to lose interest in this course. For example, the participation of software in theoretical classes is an improvement on the traditional teaching mode of rote learning. In the teaching process, the teacher creates the teaching situation through the SHOTS software. With the Guidance and inspiration of the teacher, the students spontaneously begin to discuss the

doi: 10.18282/l-e.v10i3.2446

problems they encounter and use the simulation software to verify the problems. Ask Questions, discuss questions, verify questions. This is a virtuous circle, students do not understand the professional terms, concepts can be discussed together, and at the end of the test, do not understand the backlog of questions, and in the process of problem-solving, students bring a sense of joy and achievement, in the process of learning, give full play to the enthusiasm and initiative of students. Active learning is the best test of whether students are interested in a course, passive acceptance is a burden, not only the quality of teaching can not be guaranteed, but also easy to make students lose confidence in learning. The new mode of software participation in teaching, vivid examples, enlivened the atmosphere of the class, strengthened the self-confidence of the students, which is of great importance to the teaching of printing technology.[2]

3.2 SHOTS simulation system contributes to the overall balanced development of students

The printing industry is an important indicator of a local economic development level. The economic level of each city in our country is different. The economic development in the Pearl River Delta is quite good, and the printing industry is also developing vigorously, people here are not unfamiliar with the concept of Printing. They even took part-time jobs before entering university. But students in some cities have hardly heard of printing and don't know what it is, like Qinghai, Xinjiang and other places, but the university enrollment is facing the whole country, because the economic development is not balanced and the resources distribution is not equal question, has caused the student source quality difference. Each student's understanding of the same thing is different, the ability to understand the good students, for printing terms, concepts, principles to master faster, to be able to follow the teacher's progress, to ensure the quality of their learning. There are also differences between the whole. Some students may be a little worse in understanding this aspect. They can not fully digest the inner classmates in the teacher's lecture in a short time, and then it will affect the effect of the following lecture, this in turn affects the pace of learning, and if it continues, it can cause students to drop out of the course and may also undermine their self-confidence in learning.

Shots printing simulation software contains more than 500 titles, more than 600 printing failure, according to the ease of printing failure is divided into 11 different levels, so teachers can according to the different learning ability of students to choose the topic, in this way, through software intervention, gradually reduce the overall difference in each class hour teaching, over time to achieve students on the printing professional terminology, concepts, original and process understanding level of balanced development.

3.3 SHOTS simulation system strengthenes the interaction between students and teachers

Visually, moving objects are more attractive to the eye. An experiment has shown that, in terms of effectiveness, three-dimensional dynamic advertising than static flat advertising better than 2 times. The introduction of simulation software into theory-teaching classes will attract students'attention, increase their interest in learning and stimulate their innovative thinking. In the teaching practice, the teacher chooses the abstract and difficult teaching content as the demonstration content, which solves the difficulties of the teacher's teaching and simplifies the difficulties of the students' learning. In the process of software demonstration, students and teachers can constantly ask questions and explore solutions together, so that students from passive acceptance to active participation, enliven the learning atmosphere in the classroom, it also strengthens students' memory of key knowledge and understanding of difficult problems.[3]

After class, the teacher can assign some thinking questions, summarize the class did not think of other problems, targeted to collect relevant information; at the same time assign the next class preview, cultivate the ability of self-study. Students can be divided into several groups. After class, they can sum up, discuss and share the learning in class, and exchange experiences with each other. In class, each group can discuss and learn from each other. Through practice, students' awareness of cooperation with each other has been raised, it also enhances students ' learning autonomy.

4. Conclusion

From the teaching point of view, the teaching efficiency and the teaching effect have been improved. In the process of teacher demonstration, the participation of SHOTS software increases the amount of information and reduces the difficulty of teaching. Taking part in classroom teaching with software SHOTS can not only grasp the key points of teaching, but also make the difficult points of teaching easier to be broken through, and strengthen the visual teaching, so that students can use the knowledge faster and better. Teaching software has greatly reduced the cost of teaching, and environmental protection, reducing the use of machine teaching with the discharge of waste. From the teaching environment, the software teaching noise is small, easy for students to concentrate on listening, and the order of teaching to a certain extent can be guaranteed. The application of the software to the printing process teaching plays a specific inspiration and guidance role for the teaching of professional courses, and also lays a foundation for the further study of the elective courses of printing experiments.

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