

Research on Blended Teaching Mode of Weaving Course

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ABSTRACT

Through the reform of informatization teaching mode, the blended teaching mode combining “online teaching” learning and “offline teaching” in classroom teaching is very important for the construction of weaving science. Blended teaching mode gives full play to the classroom teaching function of the online network teaching platform, while increasing the learning function of offline students, and also provides a platform for offline teacher-student exchanges. Continuously improving the integration of the network teaching platform and the blended teaching system will be of great significance to the theoretical study of the weaving course, professional construction and the training of textile engineering professionals. It has important promotion value in the construction of weaving courses and the construction of other textile engineering courses.

1. Introduction

Weaving course is one of the core professional courses in textile engineering, and it is also one of the subjects for textile engineering students to take the postgraduate entrance examination. Although knitting majors have emerged with the development of the textile industry, the proportion of woven fabrics in fabrics still accounts for the main proportion. If you want to build a textile engineering major, the curriculum construction of weaving cannot be ignored. Because as the core course of the textile engineering major, it is the theoretical basis of other main courses such as “Textile Design” and “Textile Design”, and plays an important role in the whole course setting. As an engineering major, textile engineering needs to embody the combination of theory and practice. From the perspective of curriculum standards, learning through weaving courses: mainly cultivate students to have the

knowledge goal of a solid weaving process; cultivate students’ ability to apply what they have learned, integrate theory with practice, analyze and solve problems, as well as active learning and independent thinking. Weaving is a course that mainly introduces the technological process, working principle and equipment from yarn to woven fabric. It is a synthesis of textile professional knowledge and knowledge of mechanical principles, mechanics, and textile materials. The characteristics of this course are strong theoretical, abstract, comprehensive and engineering. Most of the theoretical introduction is related to the operation principle of actual production equipment and needs to be presented by means of video, animation, video and other means. The use of information technology and the integration of curriculum teaching has played a significant role in curriculum construction and talent training. Through informatization teaching reform, “online teaching” learning by means of informatization (mainly

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reflected in the use of online teaching platforms) is comparable to classroom teaching informatization “offline teaching” (mainly reflected in the application of information tools such as videos) The combined mixed teaching mode is of great significance to the construction of such a core engineering course as weaving. The research on the informatization reform of blended learning is a very comprehensive process. It is not only a manifestation of the construction of an online teaching platform, but also requires rethinking of teaching resources, teaching methods, teaching goals, teaching methods, and assessment methods. In addition, information-based teaching realizes teacher-student interaction through the internet, can also mobilize students’ initiative in learning, and strengthen the interaction between teachers and students.

2. Analysis of Research Status at Home and Abroad

2.1 Research Status Abroad

Internationally, research on blended learning has been conducted from the beginning of the 21st century. The focus of the research work is mainly on the theoretical basis of blended learning, the teaching mode of blended learning, blended learning content and elements, blended learning curriculum design, the influencing factors of blended learning. Blended learning has been successfully applied to corporate in training and distance education, and very significant results have been achieved. At present, the applied research of blended learning in foreign countries mainly focuses on two points: corporate training and the teaching of courses in colleges and universities.

2.2 Research State in China

Although domestic textile colleges have not clearly put forward the concept of weaving mixed teaching, many textile colleges have repeatedly mentioned the teaching reform of weaving courses with the help of network teaching platforms. Zhu Sukang (2006) proposed the use of electronic teaching plans, multimedia courseware, and course videos to prepare and review woven textbooks with the help of campus network. Students can deepen their understanding of relevant knowledge through a large number of multimedia teaching materials and video materials on the Internet^[1]. Li Hong (2008) proposed reforming the curriculum system and teaching content, applying three-dimensional high-quality textbooks, adopting modern teaching methods and strengthening practical teaching reforms^[2]. Liu Xiaoxia (2012) proposed that it was necessary to make full use of modern teaching meth-

ods, develop multimedia teaching courseware, and use modern teaching methods to display flowcharts and examples in major construction. Links, animations, example videos and other teaching materials can be inserted at any time during the lecture to facilitate students’ learning and improve learning efficiency^[3]. They subsequently (2014) proposed to make full use of modern teaching methods, develop multimedia teaching courseware, actively adopt example teaching and heuristic teaching, and establish course websites and teaching files^[4]. Wang Kun (2016) proposed to apply micro-classes to course teaching, using micro-teaching videos as the main carrier. Micro-classes means that teachers can focus on certain subject knowledge points (such as key points, difficulties, doubts, test points, etc.) or teaching. A new type of online video course designed and developed for contextualization and supporting multiple learning methods based on links (such as learning activities, themes, experiments, tasks, etc.). Zheng Yuansheng puts forward that micro-culture refers to a new cultural form and way of disseminating information or knowledge based on mobile internet technology, using WeChat, Weibo, micro-video, micro-movie and other channels. Wang Jiang (2017) proposed the application of computer-aided design (CAD) technology to construct a virtual environment teaching for the problems that are not conducive to the practical operation of undergraduates, such as numerous weaving equipment, complex mechanisms, difficult to understand, and large volume^[5]. Textile scholars often use the videos in the online teaching platform for the display of teaching knowledge, the learning of teaching materials, and the improvement of teaching methods. However, in addition to the construction of teaching resources with the help of network multimedia, our school’s blended learning informatization teaching reform also focuses on the combination of online and offline learning, teacher-student interaction, online testing, etc., so that teachers’ teaching and students’ learning is more flexible. In addition, the teaching mode of blended learning exerts the spirit of students’ self-expression and teamwork at a large extent, which is more conducive to the improvement of students’ comprehensive quality. From the perspective of the construction of the textile engineering discipline, it is very necessary to carry out the blended teaching reform of weaving.^[6-8]

3. Specific Research Content and Research Objectives

3.1 Specific Research Content

(1) Improve the construction of network teaching platform resources. In terms of teaching content: further sort

out and refine the teaching resources and teaching links of the course, so that students can understand the course structure and knowledge framework at a glance. Provide rich and practical online teaching resources to facilitate students' self-study. Through the construction of the network teaching platform, further improve the design of teaching plan and the design of teaching objectives. Teaching guidance: In order to ensure that the blended learning mode can be fully applied in the later teaching of the weaving course, it is necessary to revise the course syllabus, experimental syllabus, experimental guide book, assessment syllabus, teaching plan, and teaching plan.

(2) Improve the functional construction of the network teaching platform. It is reflected in completing students' online assessment, online interactive communication, publishing teaching information, publishing homework and completing online corrections, online Q&A, learning guidance and other teaching activities. Make the assessment method more detailed, and the student's performance evaluation is more reasonable.

(3) Improve the construction of mixed classroom teaching organization. Classroom group discussion, carry out teaching method reforms such as blended, flipped, inquiry, and group assistance.

(4) Improve the construction of practical teaching. Through the construction of micro-classes and other projects, students' understanding of practice will be enhanced, which is conducive to the weaving experiment in the practice of weaving.

(5) Use the Internet to improve students' pre-class learning, after-class learning, teaching reflection, questionnaires and teaching reflection activities.

3.2 Research Objectives

The research objectives of the reform of the mixed teaching model are mainly aimed at the characteristics of the weaving course, which are rich in content, theories, techniques, and mechanical principles, and focus on the close combination of theory and practice, and the abstraction of principles is difficult to master in a short time.

(1) Achieve the goal of enriching the teaching content in class (classroom teaching): Use modern teaching methods to display flowcharts and examples in subject construction, deepen students' understanding and understanding, and enable students to receive more information in a limited time. Through hyperlinks, teaching materials such as animations and example videos can be inserted at any time during lectures to ensure the integrity of the entire teaching courseware.

(2) To achieve the goal of facilitating students' off-class learning (network-assisted teaching): Through the display

of electronic resources (multimedia, video, animation) in the network teaching platform, students can learn through the network teaching platform in free time after class. Electronic resources can mobilize students' senses such as vision and hearing to participate in learning at the same time, enhance students' interest in learning, and improve the efficiency of learning.

(3) To achieve the goal of strengthening the combination of theoretical teaching and practical teaching (online teaching): As a theoretical course derived from production, weaving has the characteristics of being closely integrated with the production process and equipment operation. Students are accepting classroom theory after knowledge, it is difficult to connect with practice, and theoretical teaching is seriously out of touch with practice. To solve these problems, it is necessary to combine modern multimedia teaching methods, students combine the completion of the practical links set by the network, strengthen the experimental links, and realize the organic combination of theory and practice.

(4) Achieve the goal of improving the organizational form of classroom teaching—mixed teaching mode (classroom teaching): Actively adopt example teaching and heuristic teaching to allow students to participate in subject construction projects. Some examples in textile production and subject construction are used to link theory with practice and stimulate students' interest. The teacher-centered teaching model will be transformed into a student-centered teaching model, and teaching will be transformed from instillation to interactive and discussion, allowing students to actively participate in learning and discussion during the teaching process.

(5) Achieve enhanced teaching interaction between students and teachers, teaching testing, teaching evaluation and teaching reflection (network-assisted teaching). Mainly through students logging on to the network teaching platform after class, completing teaching assignments, teaching tests, asking teaching questions, completing teaching evaluation and other processes. Through the teaching activities under these classes, the limited classroom teaching has been supplemented.

4. Conclusion

The blended teaching program is oriented to the application of the weaving course of all textile engineering majors. It emphasizes the practicality of the course on the basis of ensuring the basic and professional nature of the course. The hybrid teaching gives full play to the classroom teaching function of the online network teaching platform, and at the same time develops a hybrid teaching model. At the same time, it increases the learning function

of offline students, and also provides a platform for offline teacher-student exchanges. Committed to cultivating comprehensive quality textile professional compound talents with both solid theoretical knowledge of textiles, professional information close to the forefront of the times, and strong hands-on ability. Continuously improving the integration of the network teaching platform and the blended teaching system will be of great significance to the theoretical study of the weaving course, professional construction and the training of textile engineering professionals. It has important promotion value in the construction of weaving courses and the construction of other textile engineering courses.

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