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Integration of Footwear Specialty Plantar Pressure Technology into Traditional Teaching Model

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Abstract

Through reconstructing the teaching mode of footwear professional technical practice course, the problem of students' adaptation from school to enterprise is solved.The main purpose of the research is to improve students' knowledge transfer ability.The traditional teaching mode of cultivating talents has been unable to meet the needs of the development of footwear major. It is of great practical significance to cultivate high-quality applied footwear professionals in line with economic development according to the market demand.Based on the literature survey, the classroom observation method is adopted to analyze the current teaching and learning situation of teachers and students with students and teachers as the objects, find the existing problems and causes in teaching, and reconstruct the existing teaching mode.It is found that the reconstructed three-stage teaching mode is conducive to stratified teaching of students, improves classroom learning efficiency, increases students' hands-on practical ability, and can quickly transform knowledge into ability.Different from the existing studies, this paper does not simply reform the traditional teaching model, but integrates footwear specialty plantar pressure technology with the traditional teaching model, so as to reconstruct the teaching model.The integration of footwear specialty plantar pressure technology and traditional teaching mode can change the current teaching situation of this course, solve the practical problems in classroom teaching, improve the classroom teaching effect, comprehensively improve the comprehensive quality of students, so that students can quickly transform the knowledge into the application ability.

Keywords

Footwear specialty; Plantar pressure technique; Traditional teaching mode.

1. INTRODUCTION

Footwear design, as one of the traditional industries, occupies a large proportion in national life. With the improvement of people's living standards, the healthy demand for footwear products is gradually increasing. School education should lead the development of the industry and enhance the competitiveness of traditional industries through the integration of new technologies. Foot pressure technology through human foot pressure test, collect and analyze foot pressure data, provide technical reference for shoe design. In order to maximize the cultivation of students' innovation ability, what mode should be adopted in the teaching of new technology in the class of technology practice, which can quickly transform the learned knowledge?

With the improvement of people's living standards, footwear products have become one of the necessities of People's Daily life. The health demand for footwear products is gradually increasing, and the appearance, technology, comfort and other aspects of footwear products are

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widely concerned. According to relevant data, in 2021, the online market size of China's shoe industry was 19.1 billion dollars, with a year-on-year growth of 13%; The offline market scale of China's shoe industry is $50.8 billion, with a year-on-year growth of 8.8%. Students in higher vocational colleges are generally in a state of passive learning. Wang Yuxing et al. (2021) pointed out that in order to cultivate students' innovation awareness and improve their comprehensive application ability, the current human resource market demands for talents on the one hand, specialization; On the other hand, from the higher vocational education and local economic enterprises post requirements, according to the characteristics of higher vocational footwear design, from the course teaching target positioning, curriculum teaching content design and assessment of these factors, the paper discusses the vocational footwear design suitable for the construction of innovation and entrepreneurship system. Wang Yuxing (2020) said that in the journey of China's shoe industry from a big country to a strong country, facing the new normal of economy, it is necessary to enhance the connotation of innovation-driven, further expand opening-up, and improve the level of internationalization and marketization. Chen Yao (2020) said that in the face of the development, transformation and upgrading of the industry, education and talent training of the shoe industry are needed to adapt to and provide strong support, because talents are the key, especially innovative design talents, among which high-quality design talents with international level and market ability are more scarce. Liu Tianyao et al. (2020) pointed out that this requires us to carefully review the current situation and level of shoe design talent training and shoe industry education in China, explore how to cultivate innovative design talents, and how to improve the internationalization level and market ability of shoe design talents. Li Yunhe (2019) pointed out that footwear education should cultivate applied talents, and footwear design education should cultivate high-quality designers needed by the industry. Ren Xiaobo (2021) points out that it is necessary to take leading the development of the industry as the goal, and take stimulating students' professional interest, activating students' innovation consciousness and cultivating students' practical ability as the guidance. According to the characteristics and requirements of the regional industry, in the aspect of application-oriented talent training, the shoe design specialty is set and positioned accurately, achieving the basic goal of the development of professional education. Xie Wanrong et al. (2020) pointed out that the cultivation and transportation of high-quality digital footwear talents is an important guarantee for the sustainable development of China's smart footwear manufacturing. Nie Zhichao et al. (2018) pointed out that gait recognition, as a new type of biometric identification technology, identifies individuals through the collection and analysis of human walking and other activity data, and is effective in rehabilitation exercise research from accurate positioning of individuals or medical diagnosis.

In the situation of domestic troubles and foreign invasions, how to find the new bright spot of manufacturing industry? Bu Yuebin (2019) pointed out that shoes are indispensable products in human's modern life. With the development and progress of society, human beings, especially women, not only attach importance to the beauty of shoes, but also pursue the comfort of shoes. As China's aging population increases, the incidence of foot diseases is increasing, such as diabetic foot ulcers flat foot high arches and knee osteoarthritis. Dunsiri et al. (2019) pointed out that gait rehabilitation caused by stroke has been a concern. Monitoring the changes of plantar pressure and analyzing the distribution characteristics of plantar mechanics can reveal the rule of human gait and predict and evaluate the health condition of feet. Jin Hua (2018) pointed out that the application of craftsman spirit to application-oriented personnel training of school-enterprise cooperation is conducive to the innovative development of higher education. Zhao Suilang et al. (2018) pointed out that customization economy is the product of historical development. With the development of customization economy, the customization mode of footwear products is no longer limited to high-end customization. Enterprises can provide multi-level and multi-types of customized products and services

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according to consumers' different needs and degrees of participation in design. Li Wenyan (2018) believes that cross-major courses play a strong supporting role in improving vocational students' professional quality and thus their ability to change careers. Dong Jianshe (2017) pointed out that at present, the contradiction between personalized customization and mass production in footwear customization production continues to exist and cannot be effectively solved. Shi Lixia et al. (2015) pointed out that the classroom teaching reform of competency-oriented footwear production cognition course promoted the improvement of teaching quality and practical teaching concepts. Teaching methods and teaching evaluation improve students' learning enthusiasm and change from passive to active. Peng Piao Lin and Wang Hong (2014) pointed out that, on the basis of the professional curriculum system, five core professional courses were determined according to regional industry characteristics and the core competence of target positions, so as to realize the school-running philosophy of promoting employment as the orientation, taking ability as the standard and taking social needs as the goal.

For the school education of footwear professionals, the training mode of footwear professionals is particularly important. School education has the talent reserve and scientific and technological foundation to support and lead the development of footwear industry. School education should give full play to the advantages of traditional teaching mode, integrate various resources and conditions of traditional teaching, and enhance the competitiveness of footwear industry by integrating new footwear technology. Cultivate more outstanding talents for footwear industry. In the process of footwear design and production, plantal pressure measurement technology is an important content of shoe design, mainly studies the shoe interface pressure distribution under the condition of wearing shoes, and has a direct correlation with biomechanics and clinical medicine and other technologies, for people to wear shoes to make a scientific basis and guidance. Human foot has load-bearing support and cushioning vibration and other functions, and is closely related to human physiology, often referred to as the second heart. The feet of the human body bear the pressure of the whole body, reflecting the body's posture control and other conditions. Therefore, the plantar pressure test technology is the most important part of the compulsory course system for footwear professional technical students. In order to maximize the innovation ability of students, in the traditional footwear professional technical class, the cutting-edge plantar pressure measurement technology is adopted, combined with the latest research content, and the knowledge is taught in a teaching mode combining theory with practice. According to literature search, footwear design majors in higher vocational colleges have realized the existing problems, the cultivation of innovative talents is imminent, and the market demand for personalized comfortable footwear products is also increasing. How to effectively connect the market demand with the education of higher vocational colleges and how to integrate the new technology into the classroom teaching of traditional industries has become an important research direction. This research is aimed at this problem, through the combination of market research and classroom analysis, to explore the effective mode of integrating new technology into classroom teaching.

The reference theory of this study is the transfer theory of learning. It is believed that learning process is the process of functional training. Through strict training, the functional memory can be improved and then applied to later learning, thus resulting in learning transfer. Learning transfer theory refers to a learning method that applies the experience acquired in the previous learning process to solve the problems encountered later. This method can help individuals overcome the time emergency and resource limitation in the constantly changing environment. Transfer theory holds that the purpose of learning is to activate knowledge and apply previous learning experiences to new learning situations.

Technical practice teaching in higher vocational colleges is, to a large extent, the embodiment of learning transfer. The knowledge learned in class is to be able to integrate and apply to similar

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problems in future life. Students' learning of skills related to plantar pressure technology in class can be transferred to students' future jobs and strengthen their ability and level of future work.

It is a brand new teaching idea to integrate the course of shoe sole pressure technology with the traditional classroom, which breaks the barriers of in-class and after-class, and provides theoretical guidance for the spatial integration of teaching. First, this study combines the classroom teaching model with the practice course of "plantar Pressure Technology" to reconstruct classroom teaching, so as to seek the innovative teaching way of practical course teaching in higher vocational colleges. Second, through the teaching practice of classroom teaching mode, enhance the professional quality of teachers, shape the new status of classroom in practical teaching, promote its innovative application and development in practical teaching, and deepen the teaching mode and innovative teaching development concept into the minds of teachers.

At present, there are some problems in classroom teaching, such as "teacher's explanation" and "students' passive acceptance of learning". Especially for boring courses, most teachers in higher vocational schools carry out teaching activities mainly through the traditional teaching of theoretical explanation, computer operation and student practice, without effective preview before class and a certain lack of review after class, resulting in difficult to achieve the expected effect of teaching. Therefore, the research on the integration of classroom and the core course of shoe major planar Pressure Technology can change the actual teaching situation of this course, solve the practical problems in classroom teaching, improve the classroom teaching effect, promote the diversified development of students, and comprehensively improve the comprehensive quality of students. The research on the integration of traditional classroom and the practice course of plantar pressure technology, the reconstruction of traditional classroom and the creation of a new teaching model, can provide a feasible teaching plan and model for the teaching reform of higher vocational courses, and provide specific ideas for the teaching reform of this course.

By analyzing the differences between traditional teaching methods and technical practice teaching methods, this study summarizes the connotation and characteristics of the plantar pressure technology course, and summarizes the characteristics of technical practice classroom teaching. The traditional teaching mode is integrated with the technical practice course, and the original classroom teaching mode is reconstructed to improve the efficiency of classroom teaching, comprehensively improve the class quality, and provide a practical basis for the study of subsequent courses. Foot pressure technology through human foot pressure test, collect and analyze foot pressure data, provide technical reference for shoe design. In order to maximize students' ability to innovate, what model should be adopted in the teaching of new technologies in the traditional industrial classroom? The objectives of the study can be summarized as follows:

(1) To realize stratified teaching and improve students' classroom learning efficiency;

(2) To realize task decomposition and improve the self-learning ability of footwear major students;

(3) To realize the rapid transformation of classroom knowledge into application ability.

2. INTEGRATION OF TECHNICAL PRACTICE COURSE AND TRADITIONAL TEACHING MODE FOR FOOTWEAR SPECIALTY

This paper mainly adopts qualitative research methods, including literature survey and observation.

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By referring to a large number of literature materials about the practical training courses of higher vocational schools under the technical practice classroom, this paper combs and analyzes the existing research, looks for the theoretical basis of this research, determines the topic selection direction, and collects the materials needed for the research from the existing literature.

In recent years, the requirements for technical professionals have become more diversified, and the market has an increasing demand for such professionals. The research on the application of technical practical classroom teaching mode to the classroom teaching of higher vocational colleges can promote technical professionals to find more suitable positions in the future more quickly. In order to show the implementation effect of the teaching design proposed by this subject, students were observed and listened to during the class teaching, and combined with the performance of students in the practical training operation, the classroom observation was recorded in the process, and further optimization strategies were proposed for the current practical teaching.

This research is carried out on the basis of certain theories, summarizes the existing views of many scholars, and tries to carry out this research on the basis of the existing teaching model. This paper takes the shoe sole pressure technology course of higher vocational college as an example and chooses the content of foot pressure test with strong practical ability as the teaching case to carry out practical teaching. Firstly, this paper analyzes the current situation and problems of the traditional talent training mode of foot pressure technology in footwear specialty. Secondly, it explores the integration strategy of shoe major plantar pressure technology and traditional teaching mode. Finally, the actual effect of teaching is summarized and optimized, and the shortcomings still exist in the teaching practice are reflected.

2.1. The present situation and existing problems of the traditional training mode of shoe sole pressure technology

(1) Professional personnel training mode is single

The training mode of shoe design personnel is single. At present, there are not many colleges and universities offering shoe design, and there are few professional training teachers. The footwear specialty students learn issues of footwear design and research which have a wide range of application in the market and science. At present, the main courses of footwear specialty in the school education in our country include sketch, athletic shoe design, sandalwood foundation, basic technology of shoe upper, shoe structure and sample design, effect diagram design of shoe, material science of shoe making and shoe CAD software application. In addition to these basic professional courses, students need to master the scientific design principles, and the results and application of the foot pressure test and other related content are important links of footwear production. It is not enough for students to learn the foot pressure test technology in class, and the completeness of the theoretical system in the school learning process cannot represent its market recognition. Footwear design, research and development, production and other links require the participation and practice of professionals. As an important platform for footwear professional personnel training, the platform for schools to learn footwear professional knowledge is relatively simple. At present, the most widely used practice method is school-enterprise cooperation, in which schools sign talent transfer agreements with enterprises. The number of students who can stay in the enterprise through school-enterprise cooperation internship is limited every year, and many school-enterprise cooperation enterprises cannot offer the salary package proposed by the students. The education and training mode of professional talents of the school needs to be planned and adjusted quickly according to the market demand, otherwise it cannot adapt to the development and changes of The Times.

ISSN: 2472-3703 DOI: 10.6911/WSRJ.202304_9(4).0009

(2) There is a big gap between the traditional curriculum system of footwear specialty and the practical application in the market

The course of footwear specialty has strong applicability and technology, the traditional classroom teaching model can not adapt to the training mode of footwear design talents. The specialized courses of footwear design mainly have problems in knowledge imparting. Since there are many research directions in the course design of footwear major, such as mechanics, biology, bone science, kinematics, medicine, etc., which involve a wide range of disciplines, the knowledge of these disciplines cannot be obtained timely from the market or books, and the market demand does not indicate that these contents are required for footwear major students. The same is true for plantar pressure testing technology, which involves knowledge reserve of ergonomics, human kinesiology, osteology, biomechanics and other relevant disciplines, so as to fully understand the principles and data analysis of plantar pressure testing system. The establishment and improvement of this interdisciplinary knowledge system should be combined with the practical application and development direction of the market. If the skills that students learn are not in line with the market demand. Secondly, in the traditional curriculum system, the knowledge of footwear product design, research and development and production is divided into different courses, leading to the lack of the unity of footwear major. The method of explaining knowledge points one by one in the traditional teaching mode needs to be further improved. For example, in the design of footwear major, attention should be paid to the unity and integrity of the overall footwear product when designing the structure of the upper surface and the structure of the sole. In the design, it is necessary to consider both the comfort of footwear products for human feet and the protection and safety of foot joint muscles by science and technology, which has an important relationship with the market recognition of footwear products. However, classroom teaching can only carry out theoretical study and research, unable to highlight the importance of plantar pressure measurement technology in practical application.

(3) Serious brain drain of footwear profession

Along with the rapid development of shoe technology, the production capacity and design ability of our shoe manufacturing enterprises have increased gradually. However, the core technology and excellent design personnel are less, especially the loss of high-end design talents, which leads to the low industry level, shoe enterprises lack research and development power. Plantar pressure measurement technology is a professional measurement technology for various groups of people. With the increase in the amount of data tested and the summary of related foot pathologies, footwear professionals have a relatively mature grasp of this technology. Many foreign enterprises employ graduates with high and new skills and provide adequate welfare benefits, leading to a serious brain drain of footwear professionals. From another perspective, it can be seen that the cultivation and output of talents mainly rely on the professional "point-to-point" order mode cultivation of footwear colleges and universities, which cannot meet the rapid changes of the ever-changing footwear market. Due to the lack of professional teachers and various factors of student enrollment, many colleges and universities cannot set up their professional courses due to the lack of professional teachers and the lack of social personnel to meet the needs of footwear professionals. As a result, footwear professionals cannot be applied, and many relevant students turn to other industries or professions after graduation. In Europe and the United States and other countries, footwear professionals develop earlier, and their talent training mode adopts a variety of approaches. Moreover, at the level of colleges and universities, design and art related majors have a higher status, there are more professionals, the professional development of designers is more matched with the market, and the treatment in all aspects is relatively high. Young people choose design-related majors more. Footwear and clothing design in Europe has a relatively complete development, with a large number of students from relevant colleges and universities, and mutual assistance

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among footwear and clothing design talents. Its talent development environment and artistic atmosphere are better than those of domestic design industry.

2.2. Integration strategy of sole pressure technology and traditional teaching mode for footwear major

(1) Improve the training mode of footwear professionals through multiple channels

Colleges and universities with sole pressure technology for footwear major should widely publicize the advanced nature and scarcity of their talent training mode, use traditional teaching mode to build a nationwide training platform for footwear major students together with other colleges and universities. Relying on the construction and development of talent training bases for footwear major platforms, colleges and universities should cultivate, export and flow talents through more channels. Improve the teaching and training system of footwear; Modern teaching methods, such as AR, VR, MR And other equipment, are used to optimize the content structure of footwear curriculum knowledge, innovate the course practice teaching links, improve students' artistic level of footwear product design, research and development, and cultivate students' sensitivity and creativity to products. In-depth cooperation with footwear enterprises can adopt the form of "one party manufacturing, multiple evaluation", so that students can quickly master the cutting-edge technology and technology of footwear industry.

(2) Integrate footwear talents and actual market demand in many aspects

At present, along with our country's footwear industry as a whole is in an increasing period, the prescription for rapid enhancement from footwear materials to footwear design and production whole process, the type of our footwear production has changed from the quantity to the quality, footwear professional talent and the close combination of the market is bound to affect the development direction and trend of footwear products. In addition to design, research, development and production, footwear talents also need management, coordination, control and trade talents, who belong to the footwear industry but are not professional technical personnel. Many personnel engaged in footwear products have professional background, but cannot engage in design, research and development, etc., after long-term training in traditional teaching mode, It is necessary to solve the blank space part of the connection between professional design and market demand, and ensure the smooth entry of footwear products into the market. At the same time, footwear enterprises can use the internship stage to quickly train relevant students to learn and practice, and give certain remuneration, improve the enthusiasm and motivation of students to continue to stay, and take into account the smooth progress of footwear enterprises' sales and operation. It is necessary to take students out of the classroom and into the practical application market. For example, field tests should be carried out for different groups, practical application research should be carried out for the elderly, teenagers and special groups, etc. Combined with the theoretical knowledge system of the curriculum, shoe products that meet the needs of different groups of people for footwear products should be designed and developed.

(3) Improve the treatment of footwear professionals to create and develop a stable footwear industry

The main reasons for brain drain are internal reasons and external reasons. The internal reasons include the ideological dynamics of the talents themselves, the psychological state and the treatment of the industry development, etc., while the external factors include the influence of the industry status on the individuals, the working environment, family values, etc.. For the development of footwear talents, it is necessary to make a long-term plan. The traditional education model cannot meet the needs of talent development. At this time, teaching objectives, teaching content and teaching model should be changed to adapt to the development of The

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Times and the characteristics of talent flow. The school-enterprise cooperation between the school and excellent footwear enterprises shall include all positions related to footwear products, with certain salary and remuneration, so that students can understand the development status of the market and industry, and promote footwear talents to take root in, develop and serve the enterprises.

3. THE TASK-BASED RECONSTRUCTION OF THE TRADITIONAL TEACHING MODE OF TECHNOLOGY PRACTICE COURSE

Based on the research and analysis of the classroom teaching model, the classroom teaching model of plantar pressure technology is reconstructed based on the traditional teaching model, forming a three-stage teaching structure, including three steps before, during and after class. Each part undertakes different teaching contents, and the three links jointly construct the implementation of integrated classroom in practical teaching. Among them, pre-class includes students' study and work preparation; Class includes group discussion, group cooperation, teacher guidance, consolidation and promotion, teacher summary; After class and after class test and reflection summary, finally from the three-stage teaching structure to extend the formation of integrated teaching paradigm.

The specific process is carried out around the overall teaching scheme, and on the basis of the overall scheme, the specific teaching design of the integrated classroom is carried out. The teaching content is divided into "three courses", different links set different teaching content, reflecting the effect of increasing levels in form. Through the link to break the barriers between different links to achieve the dynamic combination of teaching links.

Before class

The preparation of students' study and work is an important content before class. According to the course situation of the next class, teachers should prepare the content of the next class before class and preview it to students in advance, so as to prepare for the completion of deeper learning. Work preparation includes pre-class introduction, presentation of theoretical knowledge and preview of relevant new knowledge. Students can prepare for preview according to their own situation.

In class

(1) Group discussion

The integrated classroom emphasizes collective learning and cooperative learning, and the classroom is the best platform for students to carry out group discussion. The atmosphere brought by the classroom can maximize the discussion effect, but also has a strong immediacy, and students can speak freely in the discussion. By making full use of classroom teaching time, students can fully learn knowledge. The group will discuss the important and difficult points before class again, so as to consolidate and improve the knowledge points. In the process of group discussion, the group members can also pool their wisdom and provide one-to-one help, so as to improve the whole group members.

(2) Group cooperation

Group cooperation is carried out on the basis of group discussion, with which a certain knowledge framework is established among students. In this link, students will carry out cooperative learning through the tasks given by teachers to improve the knowledge system and framework. According to the requirements of teachers and under the guidance of task-driven teaching, students can freely form groups and cooperate to jointly complete the teaching content of this class. Further internalize the knowledge learned through the completion of the work.

(3) Teacher guidance

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No matter what kind of teaching model is inseparable from the teacher's guidance. The teacher is the guide of knowledge. Especially, after the completion of the works, the teacher reviews the works submitted by the students, points out the mistakes and shortcomings, makes targeted corrections to the works of the students, and provides students with different correction methods to expand the knowledge points. In the integrated classroom, teachers have higher requirements. Teachers should presuppose the questions raised by students and the points that students may not understand in advance, and think about how to explain the corresponding principles to students in popular language and ways.

(4) consolidate and improve

In the consolidation and promotion stage, after the completion of basic teaching tasks, the teacher assigns relevant assignments to students according to the teaching progress, which are completed by students independently. Students test their mastery of knowledge through self-test. In the link of consolidation and improvement, teachers assign homework in different levels according to students' learning differences. For students with poor foundation, it is enough to assign a small amount of basic homework, while for students with good foundation, the difficulty of homework should be improved to enable students to improve their ability as far as possible in the latest development area. It allows students to improve at all levels without losing interest in learning because of the difficulty of the assignment.

(5) Teacher's summary

The teacher's summary includes the extraction of key contents in class, the induction of knowledge points with a high error rate, the expansion of knowledge, the summary of pre-class preview and other aspects. The teacher connects the teaching content of the whole class in series to summarize what has been learned in this class. The teacher gives conscious guidance, and the students improve their ability to summarize by sorting out the learning methods they are good at. In addition, it also includes the induction and sorting of wrong questions. Teachers correct students' mistakes and put forward suggestions for modification. Students modify and improve their skills under the advice of teachers.

After Class

(1) After class quiz

The purpose of after-school tests is to reinforce this knowledge and to expand it appropriately to enrich the existing knowledge structure. According to the test results, teachers can intuitively understand the learning effect and actual situation of students, and play a guiding role in the teaching focus of the next course. In this way, teachers can communicate with each other through another form, teachers can find the actual application of the classroom in teaching, and adjust the teaching in time according to the deficiencies.

(2) Reflection and summary

Reflective summary is an important supplement to the curriculum. In the reflective summary stage, it includes the assignment of homework and the summary of skills and skills. Both teachers and students are the subject of reflection. At the same time, as the recipient of the course, students can intuitively feel the quality of the teaching model. Therefore, students can also put forward constructive suggestions on the improvement of the class according to their personal intuitive feelings.

4. THE EFFECT OF THE INTEGRATION OF TECHNOLOGY PRACTICE COURSE AND TRADITIONAL TEACHING MODE

Integrate the sole pressure technology and traditional teaching mode of footwear major, deepen and expand the scope of practical practice, and improve the integration degree of footwear professionals to the footwear industry market; Quickly realize the knowledge reserve

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of footwear professional talents to meet and match the actual market demand; There is no need to blindly classify talents quickly. Through the comprehensive inspection and assessment of talents jointly conducted by schools and enterprises, the employment of footwear talents can be promoted and blind employment can be prevented. The traditional classroom teaching of footwear major is assisted by modern technology to help students understand the introduction of footwear technology and research and development means. Comprehensively cultivate footwear talents, integrate with traditional teaching mode, create advanced footwear professional teaching mode, and strive to achieve "stable employment and secure employment" in the footwear industry.

4.1. Through the design of teaching content by links, the teaching content is stratified in form, so as to improve the learning efficiency of students.

The integrated classroom emphasizes collective learning and cooperative learning. The classroom is the best platform for students to carry out group discussion. The atmosphere brought by the classroom can maximize the discussion effect, but also has strong immediacy. Cooperate in learning according to the tasks given by the teacher to improve the knowledge system and framework. According to the requirements of the teacher and under the guidance of task-driven teaching, students can form groups freely to work together to complete the teaching content of this class and further internalize the knowledge they have learned through the completion of the works. According to students' learning differences, teachers assign homework in different levels. For students with poor foundation, it is enough to assign a small amount of basic homework. For students with good foundation, the difficulty of homework assigned should be improved to enable students to improve their ability as far as possible in the latest development area. It allows students to improve at all levels without losing interest in learning because of the difficulty of the assignment.

4.2. Tasks are issued in advance, and students can decompose them independently and preview them in advance to improve their independent learning ability

The preparation of students' study and work is an important content before class. According to the course situation of the next class, teachers should prepare the content of the next class before class and preview it to students in advance, so as to prepare for the completion of deeper learning. Work preparation includes pre-class introduction, presentation of theoretical knowledge and preview of relevant new knowledge. Students can prepare for preview according to their own situation.

4.3. Through students' hands-on practice and test, combined with students' mutual assessment and teachers' comments, knowledge can be quickly transformed into application ability

The purpose of after-school tests is to reinforce this knowledge and to expand it appropriately to enrich the existing knowledge structure. According to the test results, teachers can intuitively understand the learning effect and actual situation of students, and play a guiding role in the teaching focus of the next course. In this way, teachers can communicate with each other through another form, teachers can find the actual application of the classroom in teaching, and adjust the teaching in time according to the deficiencies. Both teachers and students are the subject of reflection. For teachers, it is necessary to make clear which parts of the course are the key contents and which need to be mastered. For students, how to optimize their learning methods and improve the shortcomings in learning, etc. At the same time, as the recipients of the course, students can intuitively feel the quality of the teaching model. Students can also put forward constructive suggestions for the improvement of the class according to their intuitive feelings.

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5. CONCLUSIONS

This paper takes the shoe major plantar pressure technology as a case to carry out practical teaching. Taking students and teachers as objects, this paper analyzes the current situation of teaching and learning between teachers and students, finds out the existing problems and causes in teaching, reconstructs the existing teaching mode, runs the task-oriented teaching method through the whole classroom, and implements it according to the formulated teaching design scheme. Some new teaching methods were tried in this teaching, and the plantar pressure technology of footwear major was integrated with the traditional teaching mode. Finally, the conclusions of this study were summarized as follows:

(1) The reconstruction of classroom teaching model.

This study innovates the traditional teaching mode and reconstructs classroom teaching. According to the three-stage teaching method of "pre-class, in-class and after-class", the traditional classroom teaching is subdivided into four elements before class, five links during class and two steps after class. Different teaching tasks are designed according to students' situations. The teaching resources provided in the course are conducive to students' hierarchical teaching and improve the efficiency of classroom learning; the after-school teaching resources can help students further consolidate their learning and improve their learning effect; the after-school teaching reflection can also promote students' progress.

(2) Realize the role exchange between teachers and students.

The most prominent feature of the integration of traditional teaching model and foot pressure technology of footwear major lies in the exchange of roles between teachers and students in class. In general, through the internal deconstruction of traditional teaching concepts, scientific construction of theoretical development is carried out, and teachers and students can better communicate with each other through classroom interaction and teacher-student interaction. Teachers assume the role of organizer in the overall teaching, carry out overall planning, organization and development of the course, and control the course in general. Teachers assume the role of guide in the class, guide the important and difficult points in the course, and act as the assistant after class, answer questions for students and guide them to conduct teaching reflection. Based on a comprehensive understanding of themselves, students can make efficient learning plans, actively acquire learning resources, and actively arrange learning according to their own learning progress and mastery of knowledge, so as to achieve better collaboration and communication between teachers and students in class. Through the change of roles, teachers and students can connect with each other, grow and improve constantly.

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