

Research on the construction of high-quality course "AutoCAD Software Application" in secondary vocational schools

Yongliang Li

Yangchun Secondary Vocational and Technical School, Yangjiang Guangdong, 529600

Abstract: The construction of high-quality courses is an important part of China's "Guangdong Province Secondary Vocational Education Quality Project", and is the key to improve teaching quality, update teaching concepts and improve the quality of talent training. This paper analyzes the current teaching situation of the course "AutoCAD Software Application", puts forward the idea of course construction, and probes into the construction goal, construction content and characteristics.

Key words: secondary vocational school; AutoCAD software application; high-quality courses;

Introduction

High-quality courses are one of the effective means to share high-quality teaching resources, and the key to improve teaching quality, teaching reform project and talent training quality in vocational schools. It is of great significance to explore the scientific methods of constructing quality courses to ensure the smooth completion of quality engineering.

The networking construction of high-quality courses and the sharing of teaching resources have broken through the space-time constraints of traditional course learning. So that the exemplary role of high-quality courses can be truly reflected. In combination with the school's orientation, talent training objectives and student sources, the high-quality curriculum design focuses on "cultivating enterprises with high skills and sustainable development ability facing market demand", attaches importance to the formation of students' professional ability, emphasizes the connection between the course content and actual work in the network resource curriculum, introduces real cases in the teaching process and teaching situation, and emphasizes teaching in doing, learning in doing. The combination of teaching and practice can achieve the goal of working at zero distance.

References:

- [1] Honghong Liu Analysis of contemporary freehand oil painting in China [j]Chinese artist, 2019 (11): 1+28
- [2] Jiming Zhang On the characteristics and problems of Chinese freehand oil painting [j]Tomorrow fashion, 2019 (04): 57
- [3] Zixin Xu How Chinese contemporary freehand oil painting inherits and develops the "artistic conception" of Chinese painting [j]Grand View of art, 2021 (03): 47-48
- [4] Yanmei Li The internal spiritual character expression of "writing" and "meaning" in the creation of Chinese freehand oil painting [j]Journal of Heihe University, 2021,12 (01): 155-157
- [5] Xinglong Zheng Chinese freehand oil painting and its artistic expression characteristics [j]Grand View of art, 2021 (21): 36-37
- [6] Shanghong Yu Explore the artistic expression of lines in Chinese freehand oil painting [j]Culture monthly, 2021 (07): 178-179
- [7] Bin Wu On the artistic conception of Chinese freehand oil painting from the perspective of integration of China and the West [j]Journal of Qiqihar University (PHILOSOPHY AND SOCIAL SCIENCES EDITION), 2021 (09): 164-166
- [8] Bo Li On the triple realm of Chinese freehand oil painting [j]Chinese oil painting, 2018 (06): 77
- [9] Fenghai Yu Research on the expression of artistic conception beauty of freehand oil painting [j]Art review, 2018 (27): 78-79
- [10] Kai Luo Color ink artistic conception -- exploring the freehand oil painting with Chinese flavor [j]Art observation, 2019 (07): 140-141
- [11] Shengxuan Wang Analysis of Chinese freehand oil painting [j]Art observation, 2018 (10): 134-135
- [12] Lifang Liu Analysis of the role of artistic conception and expression language in oil painting [j]Tomorrow fashion, 2018 (17): 128
- [13] Xiaowen Yang On the characteristics and problems of Chinese freehand oil painting [j]Journal of Shanxi Datong University (SOCIAL SCIENCE EDITION), 2018,32 (04): 110-112
- [14] Wenyong Luo Analysis of lines in Chinese freehand oil painting [j]Chinese artist, 2018 (06): 84
- [15] Shihua Wu On the pursuit of artistic conception in oil painting [j]Art review, 2017 (02): 188

About the author: Wang Rong, (February, 1999), female, Han nationality, Qingdao, Shandong Province, master's degree, comparison and creation of freehand brushwork in traditional Chinese and Western painting.

1. Teaching status of AutoCAD Software Application

AutoCAD Software Application is a basic course for computer and electromechanical majors in secondary vocational schools. It mainly trains skilled and application-oriented talents who can engage in computer graphics in machinery, construction, information industry, light industry and other institutions. The basic idea and method of computer graphics are introduced through AutoCAD Software Application, which lays the foundation for the subsequent study of other modeling software courses. However, in practice teaching, teachers still implement traditional teaching methods, teaching methods are single, and students lack the opportunity to practice, resulting in low teaching efficiency of the course "AutoCAD Software Application". There are three main problems in the teaching of the course "AutoCAD Software Application".

1.1 Separation of course teaching from practical operation

With the rapid development of information technology, the demand for computer cartographers in various industries has increased, and new requirements have been put forward at the same time. However, teachers still implement traditional methods of teaching, and the teaching philosophy and teaching mode lag behind. In the course of AutoCAD Software Application, teachers focus on the theory and basic operation explanation, and lack of systematicness, and only let students repeatedly carry out drawing practice and teacher's skill explanation. In the process of work, the systematization and comprehensive application of CAD drawing have higher requirements, and the difficulty also increases. This is obviously different from the teaching difficulty of the school. It is easy to see that students can skillfully use the basic operation of CAD software drawing, can quickly draw drawings and lines, but do not know how to draw assembly drawings, design drawings and engineering drawings completely.

1.2 Single teaching method

In the teaching process of the course "AutoCAD Software Application" in secondary vocational schools, the teaching methods of teachers are relatively simple. For a long time, the teaching in secondary vocational schools is still dominated by teachers' lectures and students' computer operation. In the actual teaching, teachers only pay attention to the explanation of basic theoretical knowledge, ignoring the demonstration and operation of practical cases, while the application skills and knowledge of AutoCAD software are too rich, simple imitation learning, And the teaching method without thinking and flexibility will lead to students' poor ability to analyze and deal with problems in actual work, and it is difficult to meet the requirements of enterprise posts. It makes students lack the ability of practical operation, and the level of students' computer operation is different. This teaching mode does not meet the needs of teaching development and affects the teaching efficiency.

1.3 Backward teaching plan and evaluation

The teaching evaluation of the course "AutoCAD Software Application" in secondary vocational schools is mainly based on the summative evaluation, that is, the final examination is used to evaluate the students' course results. Affected by various factors, the final examination as an evaluation method is not reasonable, which will seriously affect the self-confidence of some students and their enthusiasm for learning the course "AutoCAD Software Application", resulting in students' lack of interest in the course, lack of learning objectives, and difficulty in autonomous learning, affecting the teaching quality [1] [2].

2. Development of online quality courses

The reform of vocational education has put forward new requirements for educational informatization. With the rapid development of modern education technology in China, vocational education has ushered in a unique revolution, making vocational education change from the pursuit of scale expansion to the improvement of quality, and training more high-quality workers and skilled personnel. In the National Vocational Education Reform Implementation Plan issued by the State Council in 2019, it is clearly stated that: adapt to the development needs of "Internet plus vocational education", and use information technology to improve teaching methods. The Action Plan for Improving the Quality of Vocational Education (2020-2023) jointly issued by the Ministry of Education and other nine departments in 2020 proposed to implement the action of vocational education informatization 2.0 construction, promote the deep integration of information technology and education and teaching, and select about 5000 online quality courses at different levels [3] [4] [5] [6].

3. Significance of quality course construction

Under the background of China's vocational education reform, building quality courses is a fast and effective way to improve teaching quality and teaching engineering. Quality courses have advanced teaching concepts, contents, methods and tools, which can effectively promote the development of vocational colleges [[7] 8]. So how to build high-quality course resources suitable for students to learn and use, and facilitate expert evaluation, and at the same time, the course teaching resources can be better applied to teaching practice, and have the demonstration of high-quality courses, has become a problem worthy of our consideration and research.

Build the high-quality course of AutoCAD Software Application, improve the teaching status of the course, improve the students' participation in the course, increase the students' learning time, guide students to actively participate in the course teaching activities, create an active atmosphere in the classroom, and improve students' learning enthusiasm. Improve students' autonomous learning ability. With students as the main body, teachers as the leading role, and with the advantages of online teaching platform, students' learning interests are mobilized, teacher-student exchanges are promoted, students' autonomy in learning is effectively improved, and students' innovative spirit is

cultivated [9] [10]. Enrich online teaching resources, design and build teaching resources suitable for the secondary vocational level through the teacher team, collect and analyze the data and works of students on the online platform, summarize and improve the course resources in combination with the course problems, teaching objectives and teaching conditions, and expand the depth and breadth of learning [11].

4. Construction ideas for the high-quality course of AutoCAD Software Application

Improve the teaching resources of AutoCAD Software Application course, constantly update the teaching content, and make the teaching content more reasonable and scientific; We should reform the traditional evaluation method, adopt various methods to evaluate students' knowledge, attitude and skills, and gradually form a comprehensive evaluation plan with informatization. Integrate curriculum resources, build supporting expansion resources, and create a curriculum system conducive to the training of high-skilled talents in computer graphics; The course AutoCAD Software Application will be built into a provincial online high-quality course, and multiple micro-classes and micro-videos will be produced according to the knowledge points to enrich the teaching resources. It will be open to students inside and outside the school through the in-school teaching platform and "smart vocational education" to realize the open sharing of course resources. Let students learn more conveniently.

5. Construction objectives of high-quality course AutoCAD Software Application

Under the background of "Internet plus vocational education", we will construct the high-quality course of AutoCAD Software Application, optimize the teaching strategy of the course, innovate the teaching content, compress theoretical knowledge, highlight theoretical knowledge, and provide students with practical opportunities; Through the high-quality course platform, teaching and learning can interact across time and space to stimulate students' enthusiasm and classroom participation. Teachers can master the learning effect of students, understand the learning situation, optimize teaching methods, improve teaching content, and scientifically assess and evaluate students, so as to comprehensively improve the comprehensive quality and ability level of students.

6. Construction content of high-quality course AutoCAD Software Application

6.1 Course team building

Quality courses require a first-class teaching team. High-level teachers are the core force of quality course teaching. The curriculum team pays attention to the knowledge update of middle-aged teachers and the training of young teachers. Through the training of national and provincial backbone teachers in secondary vocational schools, the combination of production, teaching and research, and other ways to improve the professional practice level of the teaching team and create a "double-qualified" teaching team. Adhere to the principle of high standard, high starting point and high quality to build the teacher team. Encourage team members to participate in the construction of provincial-level online high-quality courses, strengthen the sense of teaching team cooperation, promote the development of secondary vocational computer and electromechanical professional education and teaching, deepen the reform of secondary vocational education and teaching, improve the quality of teaching, and after two years of construction, form an excellent team of curriculum teaching with high academic qualifications, high professional titles, high level, exquisite business and reasonable structure.

6.2 Course resource development

The development of curriculum resources is the core of high-quality curriculum construction. Its content should be innovative, scientific and progressiveness. The course team, through the professional post research of computer draftsmen (CAD designers), and together with industry experts, analyzes the positioning and talent training direction of computer, electromechanical, and architecture majors, highlights the role of courses in talent training, designs course content based on work process, and introduces project-based and task-based teaching content, To meet the needs of enterprise development and the requirements of knowledge, ability and quality required to complete post practice, high-quality course resources can be constructed from the following aspects:

(1) The curriculum construction should be learner-centered, based on the analysis of professional post ability and the enterprise survey results, reconstruct the curriculum teaching system on the basis of existing resources, collect fragmented resources to form a teaching module, and integrate the modules to form a curriculum;

(2) According to the key and difficult points of the course, create micro-class and micro-video, let students master the knowledge of computer graphics by integrating theoretical knowledge into practical projects, and mobilize students' enthusiasm, initiative and learning interest.

(3) Refine the interactive teaching links between teachers and students, regularly update the online teaching tasks, and push the announcement notice of learning content, strengthen the interaction between teachers and students, and cultivate harmonious teaching relationships. Find out the difficulties and problems of students' autonomous learning in time. In order to provide guidance and help, and urge students with weak foundation to actively cooperate with online and offline teaching [12].

6.3 Course teaching implementation

The excellent course construction team of AutoCAD Software Application has designed the teaching process suitable for the excellent course of AutoCAD Software Application through investigation and analysis, highlighting the work process orientation and taking the enterprise case as the carrier design concept; The research and practice of the quality course of AutoCAD Software Application will be constructed, and the overall effect of the quality course teaching practice will be analyzed, mainly including pre-class, in-class and after-

class, such as preview of self-study, learner's classroom performance, after-class homework feedback and learner's performance evaluation analysis, and survey of students' satisfaction with the teaching model. Summarize the teaching practice effect of the high-quality course "AutoCAD Software Application", analyze the effectiveness and summarize the problems that are easy to occur in practice, improve and supplement the research of the high-quality teaching mode of "AutoCAD Software Application" in secondary vocational schools, and improve the teaching status of the computer graphics course. It has mobilized students' learning enthusiasm and promoted the development of students' learning ability.

7. Construction features of high-quality course AutoCAD Software Application

This course is student-centered, capability-based, and scientific use of information tools. Through the QR code generated by micro-class, Muke and other network platforms, students can carry out independent learning in combination with their own personality and hobbies, and on this basis, participate in classroom teaching, form deliberative cooperative teaching, promote the process of classroom learning, and carry out personalized communication and thinking collision in combination with personal conditions, so as to gain knowledge through discussion, Acquire knowledge, master knowledge and apply knowledge in research, so as to obtain the pleasure of learning [13] [14].

8. Summary

The high-quality course construction of AutoCAD Software Application is supported by information technology, employment-oriented, and builds an online high-quality course with rich practice cases, diverse materials, flexible and convenient platform use, and sustainable development and update, and builds a personalized, open and independent teaching environment to meet personalized needs, and realize the combination of individuality and commonality [15]. To solve the current problems of students' lack of learning motivation, lack of knowledge, lack of industry skills, etc., is conducive to the enthusiasm of computer and electromechanical students to learn AutoCAD software. Focus on the learning of enterprise cases, highlight the learning of post skills and knowledge and professional quality training, and ensure the practicability of resource construction; The teaching effect has been significantly improved, driving the reform of the teaching system, teaching methods and talent training mode of other majors in the school, significantly improving teachers' information technology and teaching and research capabilities, and promoting the school teaching reform to provide new ideas.

reference

- [1] Liu Changhua. How to use "case+task driven" teaching in AUTOCAD course [J]. Career, 2018 (18): 2
- [2] Yang Xiaomei Discussion on the application of discussion teaching in the chapter of physiological sense organs [J] Introduction to Knowledge, 2017 (21): 11-112
- [3] Liu Yue, Chen Xiangyang Research on the difference of the negative effects of online learning of practical courses for higher vocational students [J] School of Education and Science, Nanjing Normal University, 2021 (27): 120
- [4] Shen Haiqing Application of "cloud class KTS" dual-platform teaching mode in the course of automobile chassis control system [J] Use and maintenance of agricultural machinery, 2021 (8): 110-111
- [5] Xu Jing, Liu Xiaochen Practical English II audiovisual and oral course teaching in higher vocational colleges under the smart classroom environment -- take the professional ability-oriented course design as an example [J] Cultural and educational materials, 2021 (19): 227-229
- [6] Wang Min. Application of project management in the construction of high-quality courses in higher vocational colleges [D]. Qingdao University, 2016, (04)
- [7] Wang Yanmei. Research and practice on network resource construction of quality courses [D] Shanghai Normal University, 2012
- [8] Dai Xia. Application of blended learning in computer basic teaching in secondary vocational schools [J]. Test questions and research: Teaching Forum, 2021 (36): 0192-0194.
- [9] Zhang Jingdan, Jiang Wuhan, Fan Jinping, Wang Le, Guan Mingxiang. Research on the construction of high-quality courses in C language programming [J]. Course Education Research, 2019 (07): 239
- [10] Wang Min Application of project management in the construction of high-quality courses in higher vocational colleges [D] Qingdao University, 2016
- [11] Xu Xin Curriculum design and practice based on blended learning [D] Ningxia University, 2018
- [12] Liao Jiabao Practical exploration of micro-class "flipping" higher vocational English class [J] Occupation, 2015 (26): 38-39
- [13] Chen Shuming Discussion on the mixed teaching mode of Graphics and Image Processing course based on WeChat public platform [J] E-World, 2020 (6): 19-20
- [14] Liu Hong, Li Ang Innovation and research of mixed teaching [J] Heilongjiang Science, 2019, 10 (13): 68-69
- [15] Li Na, Li Xiaodong Construction and application of teaching resource database for printing media technology specialty [J] China Journal of Multimedia and Network Teaching (Electronic Edition), 2020 (2): 220-221