

Research on teaching model innovation under the background of digital education

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Abstract: In the background of digital education, the construction of a new teaching model to become the only way to education and teaching, each stage of teaching should pay attention to promoting teaching reform work, the introduction of modern technology into the teaching process, the construction of intelligent teaching classroom, to promote the improvement of teaching efficiency and quality. For middle and higher vocational education, its teaching goal is to cultivate application-oriented talents, teachers should pay attention to the penetration of digital education technology in teaching, accelerate the construction of teaching information, enrich students' learning experience, and promote the efficient and institutionalized development of digital education. Based on this, this paper studies the innovative strategies of teaching mode in middle and higher vocational schools under the background of digital education, in order to provide references for educators.

Key words: digital education; Teaching mode; Innovation; Vocational education; Fundamentals of Computer Application

Introduction: In the new era environment, teachers should pay attention to the setting of digital teaching, the application of modern information technology to promote teaching, the effective integration of textbook content and complement knowledge, so as to enrich the teaching content and improve the teaching quality. In order to effectively promote teaching innovation, teachers should pay attention to the application of modern information technology to break through the limitations of traditional teaching, create a good teaching environment, and enhance students' grasp of curriculum knowledge by building teaching platforms, introducing flipped classrooms, setting up virtual practical training and other ways. In this process, teachers should explore the integration path of modern technology and traditional teaching, and promote the application of advanced teaching technology in the classroom, so as to build a new teaching pattern.

1. The necessity of promoting the innovation of teaching mode under the background of digital education

In the new era, it is necessary to promote the innovation of teaching mode according to digital education, which is mainly reflected in the following aspects: First, it can meet the actual requirements of talent training. Digital education can empower education and teaching, and promote the effective implementation of vocational education goals. In recent years, China has paid more attention to secondary and higher vocational education, from the implementation of the "double high plan" to the issue of the "Action Plan for Improving the quality of vocational Education (2020-2023)" and other issues, which clearly emphasized the talent training goal of vocational education. Digital education, as the combination of modern technology and education and teaching, can provide rich course resources for education and teaching, make the teaching content keep up with the enterprises' demand for high-quality and technical talents, and promote the reform and upgrading of education and teaching. With the support of digital technology, vocational education can accelerate the pace of development, effectively reduce the distance between talent training and social needs, and then cultivate new talents in line with the development needs of The Times. Second, it can achieve the goal of teaching students according to their aptitude. Compared with traditional teaching, digital education emphasizes the dominant position of students. It enables teachers to comprehensively analyze students' learning situation with modern technology and set targeted teaching plans on this basis. At the same time, modern tools are applied in the implementation of teaching to detect students' learning dynamics and understand students' learning progress, so as to constantly adjust teaching and promote the realization of teaching goals based on students' aptitude.

2. The innovative practice strategy of teaching mode under the background of digital education

1. Set up flipped classroom teaching to mobilize students' enthusiasm for learning (Fundamentals of Computer Application in Higher Vocational Colleges)

Flipped classroom is an embodiment of digital education, which can turn classroom teaching and pre-class links over, promote students to master knowledge in advance, and help mobilize students' enthusiasm for learning. In practical application, teachers should reasonably arrange teaching activities before, during and after class so as to bring new learning experience to students. Taking fundamentals of computer application teaching in higher vocational schools as an example, it mainly includes the following links:

First, the pre-class link. Pre-class is an important link to lay a solid foundation for students. Teachers use advanced technology to build an independent learning environment for students, so as to promote students to obtain quality learning experience. In this link, teachers need to do the following: introduce rich learning resources, including online courses, live courses, etc., and require students to learn relevant knowledge points before class; Guide students to make learning plans for themselves, let students analyze their shortcomings in fundamentals of computer application learning, and make learning plans according to their own pace and preferences; Encourage students to apply the mobile learning platform for independent learning to meet their individual development needs.

The second is the in-class link. Class is the key to flipped classroom teaching, but also an important link to break through the traditional

teaching. With the support of digital technology, all kinds of traditional classroom teaching activities can be transferred to the online platform, including attendance, asking questions, teacher and student evaluation, etc. For example, in the teaching of courses such as office software operation, Windows operating system and computer network concept knowledge, teachers can use Internet technology to group students, guide students to sign in and punch in the online operating platform, and take advantage of the platform functions to randomly call names and evaluate students, so as to improve teaching efficiency. For another example, teachers can first lead students to watch videos and learn basic computer knowledge, and then organize students to carry out learning and communication on learning tasks in a cooperative way. For example, when explaining word operation skills, teachers set the learning task of “complete magazine layout design and content layout”, guide each group to complete project tasks, and use operation skills in the form of division of labor. And work together to complete the learning task. Group cooperation and participation can produce the collision of thinking, and then gather group wisdom, promote the project results to be more perfect, and promote the progress and development of students’ computer learning.

Third, the after-school link. After class is an effective extension of classroom teaching and an important link to enhance students’ learning effect. Teachers should pay attention to the use of digital technology to provide students with rich learning resources, meet the diversified development needs of students, and effectively enhance the teaching effect. In terms of teaching resource library, teachers should pay attention to detailing teaching knowledge points, help students overcome learning problems with the help of digital resources, make students interested in computer knowledge, and deepen learning experience. The resource library can abandon the traditional way of explaining knowledge and set up modes such as “going through the customs” and “competition” to effectively mobilize students’ enthusiasm for learning. In terms of after-class exercises, teachers should pay attention to the development of diversified homework modes, such as guiding students to make pictures by themselves, shooting videos related to the course, etc., to reflect the interest of homework. Internet technology can narrow the distance between teachers and students, so that teachers can respond to students’ needs at any time, answer students’ doubts, and promote students to obtain new ideas for learning and achieve good development.

2. Build an online learning platform to promote students’ independent learning

Secondary vocational school is an important part of the vocational education system, and the mathematics curriculum of secondary vocational school is highly abstract. The introduction of digital education technology into teaching can help promote students’ independent learning and help students reduce the difficulty of learning. In this regard, teachers should pay attention to building a mathematics teaching platform for students, providing students with sufficient online independent learning opportunities, promoting the effective integration of online resources and offline teaching activities, integrating the advantages of traditional classroom and online teaching, and improving the teaching effect. First of all, set up online teaching mode. Mathematics courses are rather difficult, so teachers can integrate rich learning resources for students through online channels, so that students are no longer limited by time and place, can choose their own learning time and learning content, and watch the content they are interested in or don’t understand repeatedly, so as to strengthen students’ grasp of mathematics knowledge and encourage students to supplement their learning content. In this regard, secondary vocational schools can set up corresponding teaching websites, encourage teachers to upload micro-lesson videos and other resources to the platform, guide students to deepen their mastery of knowledge through watching videos and online discussions, and cultivate students’ self-learning habits. Secondly, an online communication platform should be built. In order to mobilize students’ enthusiasm for independent learning, schools can build online communication platforms to guide students to communicate and discuss curriculum problems online. Teachers can find students’ problems in time on the platforms, provide targeted guidance to students, promote teacher-student interaction, and enhance teaching effect. For example, in the teaching of the course “Basic nature of plane”, teachers can integrate teaching resources on the online platform, make corresponding courseware after processing, and deliver it to students through the online platform, guide students to learn the course knowledge independently, discuss with each other on the platform after learning, and think about how to apply mathematical knowledge to solve practical problems. For example, teachers can set questions and guide students to think about how to use a ruler to judge whether the plane is flat, why the bicycle can stand up with a foot support and other issues, so as to make students feel the distance between mathematics and life, and then stimulate the enthusiasm for learning and enhance the learning effect.

3. Strengthening virtual practical teaching and implementing practical teaching objectives (Information Technology)

The application of digital education in practical teaching is analyzed by taking the teaching of information technology in secondary vocational schools as an example. The information technology curriculum has strong practicality, teachers can use digital education technology to promote curriculum construction, and carry out reasonable design of teaching structure and teaching activities. Firstly, teachers should analyze the employment direction of information technology for secondary vocational students, so as to optimize the teaching method. The teaching of information technology courses should be set around the requirements of posts, so that students can have the basic qualities required by posts. In this regard, teachers should strengthen the market research with the help of Internet technology and analyze the requirements of information technology positions for relevant practitioners. For example, for operation courses, students should not only master the basic knowledge of information technology courses, but also have solid practical ability to apply the knowledge to solve practical problems. The teaching of information technology courses emphasizes the combination of theory and practice, and teachers should provide students with practical operation opportunities, so that students can constantly improve their practical skills. Secondly, virtual practice technology should be introduced. In order to effectively meet the practical needs of students, schools should pay attention to improving the hardware facilities of information technology teaching, build virtual practical teaching classrooms for students, introduce real practice projects from enterprises, pay attention to developing virtual practice courses, and provide venues for students to carry out practical virtual training. The practical classroom can provide students with information technology network programming, computer network

and other virtual systems, so that students can apply what they have learned to carry out virtual training and strengthen their mastery of course knowledge. Virtual classroom students deliberately use at any time, through the smart phone into the virtual system, complete the information technology operation in the virtual system, virtual reality system can provide corresponding feedback to students' different operations, so that students understand the different results of different operations, in order to correct the problem of operation errors, and encourage students to constantly improve the operation method. In addition, teachers can also set up teaching projects for the development of students' professional literacy, use virtual space to present the operation process of enterprises, strengthen the cultivation of students' professional values, construct situations such as interviews and pre-job training for students, guide students to acquire skills in the situation, and promote students to establish correct professional values. Finally, practical training programs should be introduced. In order to narrow the distance between teaching and post, teachers should introduce real projects of enterprise information technology, so that students can be familiar with the basic application of information technology and related hardware equipment, etc., and lay a good foundation for their employment and development. Teachers can establish cooperation with information technology-related professionals to obtain job-related project resources and carry out teaching practice projects, so that students can directly contact with the content of the post and improve their practical work ability in project exploration. For example, anti-virus system design projects can be carried out, requiring students to be able to install corresponding hardware products to meet the needs of information technology-related posts; Information technology troubleshooting projects can be set up, so that students can install and configure network terminals and equipment, troubleshoot their existing network failures, take supportive measures to better solve the problem, and improve students' network security management ability.

Concluding Remarks

To sum up, under the background of the Internet era, schools should pay attention to promoting the construction of digital education and set curriculum content reasonably based on the needs of social development. Digital education is the product of the integration of modern technology and education and teaching, which can assist curriculum teaching, integrate more teaching resources for subject teaching, and promote the good development of education. In this regard, teachers should correctly recognize the important value of digital technology to teaching reform, pay attention to the application of modern technology to explore the path of teaching reform, focus on the vocational ability required by the current position and the development needs of students' ability, and reasonably adjust teaching activities, so as to enrich students' learning experience, promote students to have stronger vocational ability and adapt to the development of The Times.

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