



Reform and Practice of Constructing Undergraduate Practice Teaching System Based on "Virtual Simulation Technology"

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Abstract: The in-depth implementation of the reform of higher education has made people pay more and more attention to the improvement of students' application ability, so how to construct a practical teaching system that meets the educational goals according to the specific development of the school has become a key solution for many colleges and universities. The problem. This article starts with the main factors that hinder the establishment of practical training teaching systems in colleges and universities, looking for specific ways to introduce virtual simulation technology into construction work, hoping to play a certain reference.

Keywords: Teaching system; higher education; practical exploration; virtual simulation technology

The continuous change of science and technology has led various information-based teaching technologies to be introduced into teaching activities by educators, and through the construction of digital classrooms, it is hoped that students will be able to protect the order of learning enthusiasm in a more novel learning environment. The rise can also achieve the purpose of promoting the high efficiency of the quality of their learning. Therefore, colleges and universities need to combine information technology, through the introduction of virtual simulation technology, combined with the school's educational development prospects, to build a practical training teaching system that meets their own development requirements to help students learn better when participating in learning activities. Knowledge, and in a variety of training platforms, can ensure the high quality of professional technology, and then grow into a talented person who meets the actual standards of social positions.

1. The main factors hindering the establishment of practical training teaching system in colleges and universities

1.1 Difficulties in carrying out practical activities

The development of the times requires colleges and universities to focus on cultivating students' knowledge application ability and professional practice ability in talent cultivation, so that they can grow into highly skilled talents that meet the requirements of economic market development. However, although many majors need a large number of practical classrooms to help students deepen their knowledge, many colleges do not have the conditions to carry out practical activities. On the one hand, due to the limitation of school funds, on the other hand, they are relatively dangerous practical projects. , Can not provide students with complete security guarantees, resulting in many practice

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activities can not be carried out in an orderly manner. Therefore, in this case, students can only focus on learning theoretical knowledge, and cannot exercise their own practical ability. At the same time, they also hinder the smooth progress of the practice process and affect the smoothness of the school's training system. set up.

1.2 Insufficient practical facilities

Many professional practice classrooms need to be equipped with professional practice facilities, especially for science and engineering majors, they also need many large and expensive professional equipment to help students complete practical activities in the course of practical operation. Therefore, many colleges and universities are limited by resources and cannot guarantee the completeness of practice facilities. As a result, when students participate in many practice classrooms, due to lack of facilities, they can only talk on paper under the leadership of teachers. This not only severely inhibits students' enthusiasm for learning, but also prevents students from effectively internalizing and applying the knowledge they have learned in the process of lack of hands-on activities, and will hinder the smooth progress of teaching work to a certain extent, which will lead to overall There has been a serious decrease in teaching effectiveness.

2. The concrete advancement of introducing virtual simulation technology into the establishment of practical training teaching system in colleges and universities

Virtual simulation technology mainly uses Internet technology as the carrier. After using computer processing technology to simulate things, the specific target can be used in the construction of the operating system, and the simulation operation can be performed in the simulated real scene. Strong, rich in content, high in operability and small in capital investment, it is deeply loved by many industries. Therefore, in order to solve the difficulty of carrying out practical activities and the lack of practical facilities, the colleges and universities can use the virtual simulation technology to ensure the smooth implementation of the training and education work.

2.1 Combine the course content to build a training platform

In order to effectively improve the practical training teaching system, colleges and universities need to pay close attention to the current curriculum content and the establishment of practical classrooms, and the virtual simulation technology should be targeted to establish a practical training platform, and the school management personnel should be accordingly Cultivation, so that all the school's work can be smoothly carried out under the guidance of the concept of integration through the establishment of the platform. In addition, the school also needs to integrate the theoretical classroom content with the professional classroom content. Through the statistics of the students' actual learning situation, it is difficult to carry out statistics on various courses that are difficult to carry out practical training activities, so that teachers can combine the actual teaching with the teaching. Lead students in virtual simulation technology, and then practice professional practice training to ensure that students can not only improve professional operation skills in the virtual training platform, but also ensure the professional quality of learning.

2.2 Set up a training base based on the school situation

In order to enable students to ensure the rapid improvement of professional skills in virtual training activities with a more excellent learning environment, the school should start with the actual situation of the school and actively establish a virtual training base that meets the needs of student development to ensure that the school The talents cultivated can become high-quality technical talents that meet the requirements of social development. Therefore, the school needs to allocate a certain amount of construction funds, establish a virtual training base that meets the students' practical requirements, and build a better virtual simulation practice environment for the students through the construction of the workshop, space station, simulation space, and operation room. This not only allows teachers to help students find more suitable training bases according to different teaching needs, but also enables students to participate in practical training activities to fully mobilize the enthusiasm of participating in classroom knowledge learning, thereby ensuring the rapid improvement of practical skills and professional standards .

3. Conclusion

Because colleges and universities need to combine the development background of the times to cultivate application-oriented talents that can promote better development of society, they should start from the actual teaching situation of

the school and find a way to improve the practical training teaching system in order to make education While the reform work is progressing smoothly, students will have a high level of professional skills and practical ability. Therefore, the school needs to use the virtual simulation technology, combined with the actual requirements of the school education system development and the student's overall learning situation, to innovate the practical training teaching system in order to provide students with a practical training platform to promote China Long-term development of higher education.

References

1. Li Haigang, Bai Shuquan, Yang Xiufang, Yu Shuxia, He Guimin. Research on Virtual Simulation Technology in the Teaching of Automotive Sensor Courses[J]. University Education, 2020(07): 82-84.
2. Guan Heng, Xing Yandi. Research on the teaching construction path of college practical training courses under the background of "Internet+"[J]. Heilongjiang Science, 2020,11(11):100-101.
3. Liu Kuilan, Yang Mengqing. "Engineering Practice Innovation" Teaching Mode-A New Way of Practical Training Teaching in Secondary Vocational Schools [J]. Tianjin Vocational College Joint Journal, 2020, 22(05): 53-58.