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The Application Prospect of Virtual Training in Sergeant Vocational Education

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ABSTRACT

In order to solve the problems that the trainees can't see clearly and the trainees' operation practice can't be seen, virtual technology is integrated into the teaching practice of sergeant vocational education. This paper analyzes the application of virtual technology in modern vocational education and its advantages to the teaching practice of NCOS vocational education and the improvement of NCOS professional skill level. The concrete measures of virtual training are put forward to help the modern information development of the vocational education of sergeant.

KEYWORDS

Virtual Technology; Vocational Education; Teaching Means.

1. INTRODUCTION

In the military vocational education of non-commissioned officer colleges, the teaching practice needs to be close to the requirements of the "trinity" military personnel training system [1], in line with the specific practice of army informatization and military struggle preparation. Grasp the main body of the sergeant, define the education and teaching objectives, training programs, courses and content [2], based on the existing equipment, meet the basic requirements of the sergeant's skill learning and growth, and cultivate the "craftsman spirit" of the sergeant [3]. In the vocational education of NCO in our army, the student-centered and battle-oriented educational practice has achieved remarkable results [4]. However, in the process of actual installation demonstration, due to the large number of students and limited equipment, there is often a problem of not seeing and not learning. The teaching mode of virtual training has long been common in local vocational education [5]. Through virtual simulation operation, students can have a clear understanding of the operation standard process and lay a good foundation for students to master the operation skills. Since military vocational education has clear orientation in training direction and applicability in educational content, virtual training is an effective way to give full play to the advantages of modern teaching means and teaching resources, flexibly use various teaching means and improve teaching effect and efficiency under the premise of limited learning ability and teaching practice time of students.

2. ADVANTAGES OF VIRTUAL TRAINING

Virtual reality technology (VR technology) is a three-dimensional image generated by the computer, with real-time dynamic effect, through the sensor can simulate the environment, perception, natural skills, personnel operation of the VR process computer and the corresponding sensor will give all people in the virtual environment with the perception. Natural skills refer to human head rotation and body movements, which are designed by the computer to adapt to the participant's action data,

respond in real time according to the user's action data collected by the sensor, and feed back to the user's senses to complete the human-computer interaction function.

Although the traditional theoretical teaching of the military academy combines the educational level of the students and formulates the talent training program, it does not change the traditional teaching mode with "teaching" as the center. With the development of vocational education information platform in recent years, learning resources have achieved certain results in the short term [2]. However, for some practical group training courses close to the actual training of troops, such as the practical training of loading weapons on vehicles, the traditional practical teaching cannot meet the needs of multiple trainees at the same time. In military vocational education, teaching design needs to follow the era of integration of information technology development and teaching means. Although some information technology means have been added to vocational education practice courses, such as electronic blackboard and camera equipment, which have achieved certain results in the concrete demonstration operation of instructors' actual installation, it appears that the teaching mode is integrated for the sake of integration. The phenomenon of innovation for the sake of innovation cannot solve the blind spot of teaching in which students practice more operators and less equipment.

From a practical point of view, the learning discipline carried out on the basis of modern information network platform is changing with each passing day. Virtual training is a kind of "ubiquitous learning" with the help of VR technology and the use of network platform with purpose, plan, organization and assessment [1]. The introduction of VR technology into virtual training and teaching has realized the combination of virtual and real, and the integration of science and reality. It can help students to start from the professional theoretical knowledge and practical skills they have mastered, reasonably choose the teaching content, teaching methods and teaching means, concretify the abstract problems or principles, and lay a good foundation for the practical training of the army.

3. SPECIFIC MEASURES OF VIRTUAL TRAINING

(1) Establish a professional teaching base for virtual training

In order to improve students' practical operation ability, expand teaching means, and make the training of NCOS in military vocational education and practical training complement each other, the construction of virtual training and teaching base is the only way to move towards the modernization of vocational education. The core elements of building virtual training and teaching base are not only reflected in hardware equipment and software platform, but also good course design and corresponding teacher training.

Among them, the hardware equipment includes virtual reality head-mounted display, interactive touch screen, motion capture equipment, etc. At the same time, attention should be paid to the overall layout of the equipment installation site, and the characteristics of teacher-student interaction and human-computer interaction of the teaching course should be fully considered to ensure the course benefits of practical teaching. The software platform is not only suitable for the teaching needs of various professional fields, but also meets the course assessment requirements of the new teaching mode and the acquisition of students' learning resources on the premise of ensuring data security and software and hardware stability.

(2) Reasonable design of virtual training teaching plan

The design of virtual training course should be combined with the specific subjects of the trainees' actual training, so as to design a variety of virtual simulation training courses. Teacher training should be completed at the beginning of the teaching plan design, and relevant virtual simulation equipment and software should be provided for teachers to flexibly use simulation technology for teaching. It is necessary to combine the function of hardware equipment and software platform, give full play to the advantages of information technology, solve the practical difficulties of traditional practical course

teacher demonstration, students can not see clearly, and realize the visualization of students' practical operation.

In the preparation of teaching, we should pay attention to the layout of virtual training teaching base, prepare both theoretical courses and virtual practical training courses, and also take into account class management and timely deal with students' problem behaviors. In the classroom design, we can make use of the interaction of screen sharing, use a variety of teaching methods to explain the difficulties of virtual training courses, complete the students' group training and martial arts learning, stimulate the students' learning motivation, and ensure that the students can see, practice frequently and learn well.

(3) Improve the virtual course assessment system

In combination with students' autonomous learning ability and practical operation ability cultivated under the course teaching plan, we can refer to the practical training course of equipment, focusing on the assessment system of students' operation in the virtual environment. The assessment system revolves around three aspects. First of all, it is necessary to clarify the assessment objectives. In the course teaching tasks, the assessment objectives of students are mainly based on operational skills, which is basically consistent with the overall objectives of the course teaching plan. Secondly, according to the software platform of the virtual training base, online assessment tests, project assignments, simulation operations and other methods are set up to evaluate students' theoretical knowledge and practical skills, and the scoring standards are rationalized to ensure the scientific evaluation of teaching effects.

4. CONCLUSION

To sum up, the integration of virtual technology into the teaching practice of sergeant vocational education is an effective way to improve the teaching quality. With the help of modern network information platform to enrich teaching methods, develop virtual training software based on practical operation courses, support special VR equipment, build professional virtual training classrooms, train a team of teachers with excellent professional quality, and formulate teaching plans from the war and military training to improve students' skills. It is in line with the war-oriented and applicable needs of military vocational education, and has broad application prospects in the military vocational education of sergeants.

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