

Research on traditional teaching of Ideological and political course and AR technology teaching in China

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Abstract: with the continuous progress and development of the whole society, the competition between countries has intensified, and the talent competition has become increasingly fierce. In the talent competition, the talents cultivated by the traditional teaching mode lack innovative consciousness and ability, which is inconsistent with the development trend of modern education and talent market. Based on the characteristics of AR technology teaching and higher vocational education, the shortcomings and limitations of the traditional teaching of Ideological and political course in higher vocational colleges are becoming more and more obvious, so the innovation and teaching reform of higher vocational education is imminent. Especially in the way of "teaching" and "learning", teaching ignores the dominant position of students, which naturally fails to achieve the ideal teaching effect, while students' learning is often in a passive position, which is not conducive to students' thinking and exploration, and is not conducive to the improvement of students' ability and quality in all aspects. In view of this, this paper analyzes the teaching characteristics of Ideological and political course and the teaching mode of Ideological and political course based on AR technology, hoping to provide more references for front-line educators.

Key words: Ideological and political course in higher vocational colleges; Traditional teaching; AR Technology Teaching

1. Analysis of the teaching characteristics of Ideological and Political Course

1.1 With distinctive epochal and political characteristics

Under the background of the new era, some humanities and social sciences disciplines have little or no impact on the development of the situation. However, the teaching of Ideological and political course is not the case. Its content itself has distinctive epochal and political characteristics, and its teaching methods and practical education mode are influenced by advanced technology.

1.2 With clear pertinence and guidance

Generally speaking, the teaching of various disciplines will be affected by the students' ideological status, but the degree is very different. For the teaching of Ideological and political course, the influence of students' ideological status is almost doubled. Because the teaching object of Ideological and political course is the person with independent personality and independent thinking, it will encounter the obstacles of the original ideological basis in teaching new ideas and thinking, which will ultimately be unfavorable to the development of education and the personal growth of students. In the teaching of Ideological and political course in Higher Vocational Colleges in the future, it is necessary for us to close the relationship with students, understand their ideological reality, ideological state and psychological characteristics, and strive to start from the reality of students, targeted education and guidance, development and training. As the ideological and political course has the characteristics of clear pertinence and guidance, we can also adopt precise teaching and personalized training methods, so as to achieve twice the result with half the effort.

1.3 Strongly rational and practical

The essence of Ideological and political course teaching is to solve the contradiction between students' knowledge and ignorance, the contradiction between faith and disbelief, and the contradiction between knowledge and practice. Therefore, we must adhere to persuading people with reason and moving with emotion in order to achieve the ideal teaching effect. According to the strong rational and practical characteristics of Ideological and political course, the actual teaching should promote the comprehensive optimization of students' knowledge, skills and literacy, and ultimately enable students to implement it in action, so as to improve students' learning ability and comprehensive literacy.

2. Comparative analysis of traditional teaching mode of Ideological and political course and AR technology teaching in China

2.1 Curriculum resources and teaching objects

Under the traditional teaching mode, students concentrate on learning in the classroom. The teaching object is fixed and the teaching content is fixed. Generally, the number of students is between dozens and 100. The teaching objectives, teaching forms and teaching activities are relatively fixed. Micro lecture can ensure the teaching efficiency and quality, and it is difficult to make great breakthroughs and innovations. According to the fixed form, teachers prepare lessons in advance according to the teaching materials, plan the teaching objectives and the scope of teaching content, and then select appropriate teaching methods and strategies according to the characteristics of students, so as to ensure the best teaching effect. It can be seen that the first important thing under the traditional teaching mode is to prepare lessons around the final effect and take more effective teaching methods to teach. As the most important teaching resource, teachers cannot share resources because of their characteristics. In backward areas, poor mountainous areas and so on, the distribution of teachers is uneven,

which is one of the important factors that make it difficult for the traditional teaching mode to break through and develop.

AR technology relies on the Internet and information technology, which is open to the public, and has unique advantages in the teaching of Ideological and political courses in higher vocational colleges. At the same time, AR technology teaching can enhance the teaching effect, unify hybrid teaching and virtual simulation teaching, and complete the teaching work only through the network and mobile terminals. Learners are not limited by nationality, age, education background, knowledge background and other conditions. As long as they have enthusiasm and ideas for learning, they can deeply experience the excellent experience brought by AR technology. Therefore, they can effectively learn, deeply learn, truly understand more ideological and political knowledge, and finally achieve deep Mastery and flexible application. In addition, many colleges and universities in China have tried AR technology teaching, and have conducted research and application in education and teaching, teaching management and other fields, undoubtedly laying a good foundation for the application of AR technology teaching in Ideological and political teaching.

2.2 Teaching and learning methods

The traditional classroom teaching method and mode are single, and teachers occupy the dominant position in the teaching process. In fact, it is difficult to ignite students' learning enthusiasm by combining the oral knowledge points in the teaching materials and explaining the key and difficult points in detail. Under the background of the new era, many teachers try to simply use multimedia and micro lecture technology in teaching, but most ideological and political teachers still stay in the primary exploration stage, and it is still difficult to break through the limitations of the traditional teaching mode only using it as an auxiliary tool to guide the teaching. In the whole process of teaching, students always learn passively, and the learning methods and learning modes are single, which hinders students' diversified and personalized development, and ignores students' autonomy, creativity and enthusiasm in the learning process. Restricted by the curriculum standards and syllabus, the majority of students have limited access to knowledge, and teaching and learning are highly systematic. The author believes that this is actually the advantage of the traditional teaching mode, which allows teachers and students to communicate face-to-face, so as to achieve twice the result with half the effort.

AR technology teaching is fundamentally different from the traditional teaching mode. The construction of virtual space based on AR technology can transform students into the main body, and the majority of higher vocational students can also explore new learning resources and learning content, and have the opportunity to control their own planning and learning. Based on AR technology, a variety of learning channels and rich resources are derived, enabling learners to choose their favorite courses independently, without time and space constraints, and students' learning is more active, independent and flexible.

2.3 Teaching evaluation

The traditional teaching mode has no many restrictions on the evaluation link. It mainly adopts the concluding evaluation method, which uses data and achievements to evaluate students' learning situation. The reference scores are also mainly divided into examination scores and usual scores, which is very common in the ideological and political course teaching in higher vocational colleges. For traditional teaching evaluation, the teaching evaluation supported by AR technology is more diversified. Not only teachers can evaluate students, but also teacher-student mutual evaluation, student self-evaluation and student mutual evaluation can be applied. It can inspire students to interact and communicate in the learning process, and ultimately reflect the actual situation of all the indicators that determine the teaching effect.

3. Analysis of Ideological and political course teaching based on AR technology

3.1 AR technology introduction

The main principle of AR education application is to use sensor equipment to collect massive information data, and then convert it into model operation or form control signals through the computer, and then call and interact with the real location, object and its meaning, organically combine reality and virtual learning scene in a seamless way, and finally create a virtual perceptual world that looks like reality and fantasy. Using this situation to infect students can enhance students' cognition and knowledge experience, and then enhance students' learning effect.

3.2 Ar key technology analysis

1. Image matching and recognition

There are also four key steps in image matching and recognition: feature point detection, feature point description vector extraction, feature point coarse matching, and error elimination. This technology is one of the important research contents in the current computer field, and it is also widely used in education.

2. 3D registration

3D registration technology can be applied simultaneously with other hybrid registration technologies to build a stable virtual environment and virtual space. It uses computer vision algorithm or motion detection equipment to obtain the coordinate relationship between the virtual image, information and the real world, and finally projects the virtual object onto the photographic plane accurately, and shows the seamless integration of the two, which can achieve a good effect of virtual imaging.

3. combination of deficiency and reality

After the above two technologies, the transformation relationship of different coordinate systems is determined, and enough information is obtained to support the virtual model. Virtual combination is to play a role at this time, and fuse the projected virtual objects in the real scene or display device with the real environment to obtain enhanced live images. By quickly capturing human actions and virtual gestures,

it can be placed in human senses and virtual environment to enhance students' learning experience and sense of reality.

4. interactive control

Interactive control technology is closely related to tracking and registration technology and display foundation, and its completeness is also reflected in the final effect. At present, AR interactive behavior should be able to timely feedback the learning situation, so that it can be widely used in the process of education and teaching to play a radical role. With the development of artificial intelligence, big data applications and other new technologies, we have reason to believe that more interactive and authentic interactive technologies will reappear in the future.

3.3 Application of AR in Ideological and Political Teaching

1. build ar simulation system to promote students' knowledge understanding

At this stage, the teaching of Ideological and political course in Higher Vocational Colleges in China is still concentrated in a specific time and space, and some specified teaching contents are comprehensively discussed and studied through classroom teaching and practical activities. However, due to the influence of many factors, such as the curriculum standards, the restrictions of class hour arrangement, and the lack of investment in teaching equipment and virtual training equipment, students' in-depth learning, efficient learning, comprehensive and designed practical activities have not been effectively strengthened. In other words, the long-term accumulation is not conducive to the improvement of students' ability and quality in all aspects, so that the teaching efficiency and quality of Ideological and political course are lowered.

2. build a learning resource library to cultivate students' independent thinking and exploration

AR technology can realize the integration of multiple teaching resources, and provide students with an access interface to reduce the cognitive load of Ideological and political learning. Combined with the three dimensions of physical perception, cognition and situation, AR technology can further expand the application of AR technology in the teaching of Ideological and political courses in Higher Vocational Colleges. According to the characteristics of Ideological and political courses and ideological and political practice activities, AR technology can develop a large number of network resources, 3D teaching cases, video tutorials and so on in a hierarchical and structured way according to the knowledge points and skills contained in the corresponding tasks, so as to establish a comprehensive and three-dimensional teaching resource library for teachers' integration and utilization, and for students' learning and exploration. Based on the fact that higher vocational college students make full use of fragmented time to learn ideological and political content, the AR network resource platform supported by AR technology can provide more opportunities for autonomous learning, or use the virtual laboratory based on AR technology for students' communication and interaction, cooperative exploration and practice, which can achieve twice the result with half the effort.

Concluding remarks

In a word, it is necessary for teachers of Ideological and political courses in Higher Vocational Colleges to actively emancipate their minds and explore new teaching methods in the new era. Integrating AR technology teaching into subject education, building simulation system can effectively expand teaching content, teaching resources, and build learning resource library, which can provide rich data resources for future ideological and political teaching, and help the professional growth and comprehensive development of higher vocational students. By comparing traditional teaching with AR technology teaching, we can intuitively see the pros and cons of teaching. Of course, we also hope that through the reform and innovation of teaching mode, the ideological and political education in higher vocational colleges can keep pace with the times.

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