Research on the Application Strategy of 5G+ Virtual Reality Immersive Teaching to Empower Higher Vocational English Classroom

Jiaqun Long *
Guangdong Jiangmen Preschool Normal College, Guangdong,529000, China

Abstract: English teaching in higher vocational colleges often lacks the real context of language use, which can not meet the needs of a lot of repeated training. 5G+ virtual simulation can effectively solve the dilemma of English teaching in higher vocational colleges. This paper is based on the experience of virtual simulation technology integration in English classes in higher vocational colleges, which plays an important role in training students' vocational skills and promoting employment.

1. Background of the study
Against the backdrop of the continuous development of 5G mobile communication technology, various new technological concepts are constantly being introduced into the classroom. VR, AR holographic projection and other technologies are being introduced into the classroom, providing favorable tools and means for situational teaching methods, making 5G+virtual reality immersive teaching the main focus. College English is an organic component of the curriculum system of higher vocational education, with both instrumental and humanistic qualities. It is a compulsory public basic course for non English major students in vocational colleges. This article implements the fundamental task of cultivating morality and talents, and carries out ideological and political demonstration classes in accordance with national standards and document spirit, in accordance with the Talent Training Plan and Curriculum Standards, combined with the 1+X Practical English Communication Vocational Skills Test (VETS), This article conducts research from three aspects: teaching theory, technological development, and application cases, adjusts teaching strategies, organizational forms, and resource provision, constructs the "PCCE" theory practice integrated hybrid teaching model, and provides application strategies, plans, and implementation plans for empowering vocational English teaching with 5G+virtual technology.

2. Virtual reality immersive teaching of public English in vocational colleges

2.1. Overview of 5G+ virtual reality immersive teaching
5G+ virtual reality immersive teaching, also known as scene teaching, is a part of situational teaching method. It means that in the teaching process, teachers purposefully create specific scenes with emotional colors and vivid images to help students understand the course content, imperceptitiously stimulate students' emotions, and help students understand and build knowledge. Teachers and students have touch interaction with the English language model, and students feel as if they are there, experience immersive learning, and then achieve the effect of understanding the content of English texts. 5G+ virtual reality immersive teaching helps to solve the teaching limitations of vocational public English courses, helps to enhance students' interest and concentration, and then improves the classroom teaching effect.

2.2. 5G+ immersive teaching in education application prospects
5G+ virtual reality immersion is the experimental environment of teaching, creating a cultural context for students to learn language, allowing students to conduct experiments and practical training exercises in the virtual environment, so as to break the lack of teaching situation, teaching context, time and space restrictions, and cross-cultural communication barriers in public English teaching in higher vocational colleges and effectively improve students' comprehensive ability. English skills course includes listening, speaking, reading, writing.

*Corresponding author:78908257@qq.com

© The Authors, published by EDP Sciences. This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (https://creativecommons.org/licenses/by/4.0/).
transliteration and other aspects. Through 5G+ virtual reality immersive teaching and English application context similar to real scenes, simulation of relevant experimental interaction effectively solves the teaching dilemma of lacking real language context and students' sense of participation in English teaching. With the help of modern information technology, teachers pay attention to the vertical growth of different students, explore and carry out personalized guidance and evaluation in the teaching process, and stimulate and promote students' English learning. With the improvement of the function of the quality big data analysis platform of the school, the coverage of value-added evaluation of students can be further expanded in the future, the evaluation parameters can be increased, and the grouping plan, task setting and teaching method can be adjusted according to individual differences, so as to further promote the individualized teaching and promote the foreign language professionals and compound foreign language talents needed in English education and academic research.

2.3. Virtual Reality immersive teaching of public English in higher vocational colleges

The application of virtual reality immersive teaching in higher vocational English teaching is more and more extensive, and the teaching mode of higher vocational English has changed. In the traditional classroom, many English teachers in higher vocational colleges adopt the knowledge-based teaching mode. Teachers play a dominant role in the English classroom teaching process, while students are in a passive position, and the classroom teaching activities are relatively simple, which leads to the poor English language application ability of students. In the context of 5G+ artificial intelligence era, teachers apply a formal version of some new teaching concepts and teaching models to the actual teaching process through artificial intelligence products, which can effectively communicate with students, better grasp the learning situation of students, and provide personalized guidance in the true sense.

2.4. Exploration and application of virtual reality immersive teaching in online English teaching in higher vocational colleges

In the actual teaching process, teachers create a good teaching scene through virtual reality immersive teaching, so that students can better improve their English literacy in the virtual teaching environment. For example, Teachers make full use of virtual reality immersive teaching, appropriately add Chinese culture teaching content, so that students can learn to tell stories around themselves in English, at the same time, teachers can guide students to tell ideological and political topics in English, tell Chinese stories well, and carry forward Chinese culture; Teachers can make use of virtual reality immersive teaching, let students watch English learning videos related to Chinese culture, and put forward students' ideological puzzles based on their actual life. [1].

3. Application cases of virtual reality immersive teaching of public English in vocational colleges

This case takes Sports and Children Sports, a public basic English course for preschool education majors. This teaching case relies on the rich online college English teaching resources, the PCCE teaching mode of "Prepare - Construct - Combine - Evaluate" is established: After the learning task is released, the "two platforms" of pre-class resource database and vocational education cloud are used as drivers to improve students' autonomous learning ability. [2]

3.1. Guide: Release resources and import topics; Show and introduce, stimulate interest

Before class: Teachers release voice training of "Children's sports Activities", push sports micro-lessons and group tasks of "Organizing children's sports activities in English", introduce topics, students learn independently online, complete pre-class quizzes and conduct group oral tasks, teachers rely on vocational education cloud platform to conduct data analysis, understand students' self-study, and find that students lack awareness of children's sports activities. According to this, the teaching arrangement is adjusted and the students are divided into different groups.

3.2. Analysis: Analyze the key points of "language + skills" and summarize the skills

(1) The teacher guides the students to complete the comprehensive listening task on the platform and summarizes the language points;
(2) In the form of group inquiry, students analyze cases, complete matching games, and use Mindmaster to sort out listening and speaking skills under the guidance of teachers.

3.3. Sudden: Use 5G+ virtual reality to create scenarios and improve tasks

(1) Create professional scenarios for children's sports and carry out listening and speaking tasks; Master the vocabulary and sentence patterns of children's sports activities.

The virtual reality immersive teaching method is adopted to provide students with a virtual environment which is very similar to the real childhood sports professional event scene. It is an important teaching link of English listening and speaking training, providing students with a real bilingual experience, simulation scenes and virtual simulation environment of language service. It not only cultivates students' bilingual ability and improves their language service ability in emergencies, but also enables students to experience emergencies in all dimensions and practice their language ability and intercultural communication ability.

(2) Use 5G+ virtual reality to create scenes, get familiar with and master high-frequency words and
language expressions in the situations of organizing children's sports activities, cultivate students' practical language communication ability in different roles, understand the relevant knowledge of children's English teachers, and promote the development of students' English application ability.[3]

3.4. Exhibition: Publish comprehensive tasks and use virtual simulation practice

(1) Virtual scenes of sports activities in international kindergartens showing school-enterprise cooperation, leading students to experience real career needs, and mastering oral expression and skill points of daily sports activities.

(2) Students carry out daily sports activities in kindergarten in English on the MYET oral platform, conduct multiple evaluations, and compare and analyze the scores before class and in this demonstration.

3.5. Comments: Integrated professional, expert comments

During the class: Organize students to carry out "Children's Sports Activities", guide students to related vocabulary and sentence patterns, assign roles and props, work in groups, complete the interpretation of the picture short play of "Children's Sports Activities", and invite the kindergarten principal to comment.[4]

4. Innovation and characteristics of virtual reality immersive teaching cases of public English in vocational colleges

4.1. This teaching case adheres to the requirement of the unity of dominance and subjectivity.

Teachers adhere to the student-centered approach in pre-class research, in-class exploration and after-class development, and fully highlight students' principal position through task-driven, thematic exploration, achievement sharing, scene creation and role experience, so that students can recognize relevant knowledge points and their scores after class are significantly improved compared with their scores before class. English language application skills, thinking ability, oral expression ability, cooperation ability, written expression ability and have approached or exceeded the expected value; Post quick answers, discussions, in-class exercises and tests through the vocational education cloud platform to test knowledge learning at any time; Relying on intelligent multimedia classroom and virtual simulation technology to ensure teaching resources; FiF artificial intelligence voice system, AI virtual dialogue and information technology are adopted to effectively solve key and difficult points, and rich curriculum AIDS and English learning apps are used to stimulate students' interest, experience career scenarios, and help improve students' comprehensive English application ability and professional literacy.

4.2. This case focuses on assessing students' comprehensive ability to integrate language application with career scenarios, and adopts the evaluation system of "whole process, multi-dimension and diversification".

Whole process: before class, during class and after class process assessment and formative assessment combined form of assessment. Multidimensional: Combined with language points, language application skills, language integration vocational ability evaluation criteria, from multiple dimensions of evaluation.

Diversification: The whole process relies on the vocational education cloud platform and learning software for data tracking, combines online and offline, teachers, kindergarten tutors, students self-assessment, mutual assessment, platform system evaluation multi-subject evaluation, explore value-added evaluation, and ensure that the evaluation results are scientific, systematic and comprehensive.

4.3. This teaching case adheres to the requirement of combining theory and practice, uses 5G+ virtual reality immersive teaching, combines real work tasks in kindergartens, integrates pre-school education disciplines and English skills, and implements online and offline simultaneous teaching.

The course platform and course resources expand the learning space, and students have high participation in various teaching activities and enthusiastic response in class. The learning effect is significantly improved;
Teaching attaches importance to students' theory and thought "internalization in mind, externalization in action", and guides students to think about how to implement the knowledge they have learned into action; By setting up practical thematic teaching, students' learning and innovation ability have achieved obvious results. Students can use virtual reality to carry out children's English sports activities from the perspective of their major, organize children's English sports games combined with professional skills, and actively participate in social practice and give back to the society.

5. Conclusion

Using B/S architecture, relying on PHP and JavaScript development, VR virtual reality technology is used to build real scenes. Through training and experiment, two different interactive training modes are used to model students' actual scenes, which can provide students with a more real and interactive learning experience and help them better master English knowledge and skills. And improve the application ability in the actual scene. At the same time, teachers can better track students' learning, implement personalized instruction, and provide targeted guidance. Through virtual reality immersive teaching innovation, theories in the classroom and practical teaching activities outside the classroom can be organically combined to further improve students' comprehensive English literacy, independent learning ability, teamwork spirit and craftsman spirit, further cultivate students' critical thinking ability and ability to solve complex problems.

Using 5G+ virtual simulation technology to simulate the real vocational practice environment, it creates a cultural context for students to learn the language, allowing students to conduct experiments and practical training exercises in the virtual environment, thereby breaking the difficulties existing in English practice teaching such as the lack of teaching situation, the lack of teaching context, the limitation of time and space, and the barriers of cross-cultural communication, and stimulating students' interest in English learning. Change the monotony and boredom of the traditional practical teaching of public English courses in higher vocational colleges, let students have "immersive" training every time, enhance the sense of reality and participation in learning, improve students' ability to cope with tension and deal with emergencies, through the "situational teaching method", "case teaching method", "game teaching method" and other teaching methods. Comprehensively improve students' oral English level and practical ability, so as to enhance the practical teaching effect of public English courses in vocational colleges, and effectively improve students' comprehensive English application ability and professional quality[6].

Biography:
Long Jiaqun, female, October 1984, Yangchun City, Guangdong Province, Han nationality, Ph.D. candidate, lecturer, English education, artificial intelligence.

References