Research on AIGC Empowering Short Video Course Teaching Reform in Private Universities

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Abstract. With the development of AIGC technology, its application in the field of education is becoming increasingly profound. This article focuses on the application of AIGC in short video course teaching in private universities, systematically analyzing its application status, existing problems, and reform paths. Research has found that AIGC has achieved intelligent generation and dynamic updating of teaching resources, precise customization of personalized learning paths, deep enhancement of interactive teaching experiences, and comprehensive and real-time teaching evaluation in teaching. However, in the teaching practice of short video courses, AIGC faces problems such as insufficient professionalism and originality in generating content, poor technical stability and adaptability, limited cultivation of students' innovation ability, and weakened teacher-student interaction and emotional communication. To this end, it is proposed to introduce industry experts for collaborative creation, improve copyright management, strengthen hardware infrastructure construction, promote technological compatibility, guide students to think critically, strengthen the guiding role of teachers, and plan AIGC usage scenarios reasonably. Research has shown that AIGC technology provides innovative ideas and technical support for the reform of short video course teaching, but there are still many challenges to be addressed in practical applications. In the future, it is necessary to further explore deep integration models, strengthen application effect evaluation, and improve the teaching quality and talent cultivation level of short video courses in private universities.

Keywords: AIGC; Private University; Short Video Courses; Teaching Reform.

1. Introduction

In recent years, the short video industry has experienced explosive growth and has become an important carrier for information dissemination, cultural entertainment, and commercial marketing. According to relevant data, the scale of short video users in China continues to expand, and the surge in market demand has put forward higher requirements for the quantity and quality of short video professionals. As an important platform for cultivating applied talents, private universities have opened short video related courses one after another. However, under the traditional teaching mode, short video courses in private universities have many shortcomings in teaching resources, teaching methods, and practical aspects, which are difficult to meet the needs of the rapidly developing industry. The "Modernization of Education in China 2035" clearly states that "using modern technology to accelerate the reform of talent training models and achieve the organic combination of large-scale education and personalized training."[1] AIGC technology, with its advantages in content generation and intelligent interaction, is gradually being applied in the field of education, bringing new opportunities for the reform of short video course teaching in private universities.

2. The Current Application Status of AIGC in Teaching

2.1 Intelligent Generation and Dynamic Updating of Teaching Resources

In traditional teaching, teachers often need to spend a lot of time and energy creating teaching resources such as courseware, case libraries, and exercise sets, and the resource update cycle is long, making it difficult to keep up with the forefront of the subject and social hotspots. AIGC, when applied in teaching, can intelligently generate diverse teaching resources based on teaching objectives and course content. For example, through natural language processing technology, AIGC can quickly generate text materials that are closely integrated with course knowledge points, such as short video

script creation; Using image generation algorithms to automatically draw clear and intuitive diagrams and teaching illustrations; Using speech synthesis technology to provide standard speech explanations for teaching content. In addition, AIGC can also capture the latest information and academic achievements on the internet in real time, dynamically update teaching resources, and ensure that students are always exposed to cutting-edge and rich knowledge.

2.2 Accurate Customization of Personalized Learning Paths

Each student has different learning foundations, learning styles, and learning progress, and the traditional unified teaching model is difficult to meet the personalized needs of students. AIGC, with its powerful data analysis and learning capabilities, can accurately customize personalized learning paths for students. It collects multidimensional data such as students' classroom performance, homework completion, and test scores to analyze their knowledge mastery and learning weaknesses, and then recommends suitable learning content and practice questions for students. For example, for students with weak mathematical foundations, AIGC will prioritize pushing videos explaining basic concepts and practice questions; For students who have spare capacity, it is recommended to write academic papers and competition papers that are informative. At the same time, AIGC can dynamically adjust the learning path based on students' learning feedback, achieving true personalized teaching.

2.3 The Comprehensiveness and Immediacy of Teaching Evaluation

Traditional teaching evaluation often focuses on exam scores, which cannot fully reflect students' learning process and comprehensive abilities.In digital classrooms, classroom learning analysis tools with AIGC as the core can analyze massive personalized data such as student interaction.emotional changes, and human-computer interaction during the learning process through big data. The generated "individual portraits" of students can explore their potential needs, effectively enhance teachers' grasp of classroom teaching, promote teachers to optimize classroom teaching in a timely manner, and improve precision teaching efficiency. [2] The application of AIGC in teaching evaluation has achieved comprehensiveness and immediacy of evaluation. It can not only automatically grade and grade students' homework and exam papers, but also comprehensively evaluate students' communication skills, teamwork skills, innovative thinking, etc. by analyzing their performance in classroom discussions and group cooperation projects. For example, in group projects, AIGC can record each student's task completion status, speaking frequency, and quality, and generate detailed process evaluation reports. Moreover, AIGC can provide immediate evaluation and feedback to students after completing learning tasks, allowing them to timely understand their learning achievements and shortcomings, so as to quickly adjust their learning strategies. This instant feedback mechanism effectively improves learning efficiency.2. Analysis of Problems in AIGC Application in Short Video Course Teaching

3. Insufficient Professionalism and Originality in Generating Content

The short video teaching materials generated by AIGC, such as scripts, visuals, etc., although can meet the basic teaching needs, there are obvious shortcomings in professionalism and originality. Due to the fact that AIGC is based on a large amount of existing data for learning and generation, it is difficult to output content with depth and uniqueness when facing the complex creative needs and cutting-edge technologies of the short video industry. For example, when explaining advanced filming techniques and innovative editing skills for short videos, the cases generated by AIGC may remain at the level of conventional operations, unable to showcase truly groundbreaking and leading creative ideas in the industry, making it difficult for students to access the highest quality and cutting-edge professional knowledge. At the same time, the content generated by AIGC may also have copyright risks, and some materials may be used without authorization, causing legal disputes and affecting the normal development of teaching.

3.1 Poor Technical Stability and Adaptability

The operation of AIGC technology relies on powerful computing power and a stable network environment, while the teaching facilities and network conditions of private universities are uneven, which can easily lead to unstable technical operation. In short video course teaching, if the AIGC tool encounters problems such as lagging or crashing when generating video materials or conducting real-time interaction, it will seriously affect the teaching progress and students' learning experience. In addition, there are differences in the compatibility of AIGC with different short video production software and teaching platforms, which may result in format incompatibility and functional issues during the import and use of AIGC generated content, increasing the difficulty for teachers and students to use AIGC for teaching and learning.

3.2 The Cultivation of Students' Innovation Ability is Limited

Excessive reliance on teaching resources and creative templates generated by AIGC may lead to students developing fixed thinking patterns and limiting the development of their innovative abilities. When students are creating short videos, they tend to refer to the script framework and visual style provided by AIGC, lacking independent thinking and exploration, resulting in serious homogenization of works and difficulty in showcasing personalized creativity and unique perspectives. In addition, AIGC cannot replace the guiding and inspiring role of teachers, and there are obvious shortcomings in cultivating students' emotional expression and cultural connotation exploration of short video content, which is not conducive to students forming unique creative styles and artistic literacy.

3.3 Weakening of Teacher-Student Interaction and Emotional Communication

The large-scale intervention of AIGC technology in university classrooms will deconstruct the subjectivity of education from three aspects: firstly,the recommendation mechanism of technical algorithms constructs virtual educational subjects through data portraits,deconstructing the central position of educational subjects: Secondly, the cognitive agency function of AIGC leads to the technical dissolution of teachers' discourse authority, Finally, the frequency of human-computer interaction has increased, gradually replacing the frequency of teacher-student interaction, leading to the virtualization of the concrete carrier of value transmission and dissolving the educational soil of precision teaching. [3] Short video courses themselves emphasize practice and creative sharing, requiring a lot of ideological collisions and emotional communication between teachers and students, as well as among students themselves. However, the intervention of AIGC may make the teaching scene digitized and virtualized, weakening the emotional connection and interactive effect between teachers and students. Teachers find it difficult to accurately grasp students' learning status and psychological needs through their classroom performance and immediate feedback, and are unable to provide timely emotional support and personalized guidance, which affects the quality of teaching and students' learning enthusiasm.

4. The Reform Path of AIGC Empowering Short Video Course Teaching in Private Universities

4.1 Enhance the Professionalism and Originality of Generated Content

Introduce industry experts for collaborative creation, establish a cooperation mechanism between universities and short video industry experts, and invite senior creators and technical experts to participate in the generation process of AIGC teaching materials. Experts can combine their own practical experience to provide AIGC with professional knowledge frameworks and cutting-edge technology points, guiding it to generate more in-depth teaching cases. For example, when explaining advanced shooting techniques, invite cinematographers or well-known short video directors to provide unique shooting ideas and cutting-edge industry skills, integrate them with the basic content

generated by AIGC, and enhance the professionalism and uniqueness of the case. At the same time, experts can also review the content generated by AIGC to ensure its accuracy and authority.

4.2 Enhance Technical Stability and Adaptability

Private universities are increasing investment in teaching facilities, upgrading servers and network equipment, and providing a stable hardware environment for the operation of AIGC technology. Establish a dedicated AIGC teaching server cluster to improve computing power support and ensure the smoothness of AIGC tools in generating complex video materials and conducting real-time interactions. At the same time, optimize the campus network architecture, improve network bandwidth and stability, and reduce lag and crashes caused by network problems. In addition, AIGC technology equipment should be regularly maintained and upgraded to promptly fix system vulnerabilities and software failures.

4.3 Promote the Cultivation of Students' Innovative Ability

Strengthening the guiding role of teachers, teachers should fully play their core role in cultivating innovative abilities and enhance their inspiration and guidance for students. In the teaching process, teachers should not only impart knowledge and skills, but also pay attention to cultivating students' innovative consciousness and artistic literacy. Through case analysis, group discussions, one-on-one guidance, and other methods, guide students to deeply explore the emotional expression and cultural connotations of short video content, and help them form a unique creative style. At the same time, teachers should promptly identify students' innovative highlights, provide positive encouragement and feedback, and enhance students' confidence in innovation.

4.4 Strengthen Teacher-Student Interaction and Emotional Communication

Reasonably plan the usage scenarios of AIGC, clarify its auxiliary positioning in teaching, and plan its usage scenarios and time reasonably. In the process of theoretical knowledge explanation and basic skill training, the use of AIGC can be appropriately increased to improve teaching efficiency; In areas that require deep interaction between teachers and students, such as creative discussions, work reviews, and practical guidance, the involvement of AIGC should be reduced to ensure sufficient face-to-face communication time between teachers and students. For example, in the creative ideation stage of short videos, organizing group discussions with students and involving teachers to guide students to exchange ideas and collide thinking; In the work review section, on-site display and teacher-student mutual evaluation are used to enhance emotional communication and interactive effects.

5. Summary

AIGC technology provides strong technical support and innovative ideas for the teaching reform of short video courses in private universities. Empowered by AIGC, it can effectively solve the problems of insufficient resources, traditional teaching modes, and weak practical teaching in short video course teaching in private universities, and improve teaching quality and talent cultivation level. AIGC has significant advantages in the development of teaching resources, innovation of teaching modes, strengthening of practical teaching, and innovation of teaching evaluation, which brings new development opportunities for the reform of short video course teaching. Although AIGC has shown great potential in the reform of short video course teaching in private universities, it still faces some challenges in practical applications, such as the security of technology applications and the acceptance of AIGC by teachers and students. Future research can further explore the mode and method of deep integration between AIGC and short video course teaching, and strengthen the long-term tracking and evaluation of the application effect of AIGC.

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