

Research on diverse and innovative pathways of digital intelligence empowerment for cultural quality education of university students

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Abstract: As a crucial pathway for universities to transmit the excellent traditional Chinese culture, strengthen national cultural confidence, and enhance cultural soft power, cultural quality education for university students also urgently necessitates the application of the latest educational information technology in online and offline, in-class and extracurricular educational practices. Guided by Xi Jinping's cultural thought and taking Chongqing University of Science and Technology as an example, this paper leverages the advantages and characteristics of digital intelligence in higher education, starting from aspects such as teaching content, teaching models, teaching methods, and teaching evaluation, to innovatively explore diverse pathways for cultural quality education among university students. It aims to provide assistance in cultivating university students with correct cultural values in the new era and to contribute to the construction of modern civilization for the Chinese nation.

1 Introduction

The report of the 20th National Congress of the Communist Party of China clearly puts forward the goals of "advancing the digitization of education" and "building a high-quality education system". This not only highlights the positive role of educational information technology in renewing curricula and cultivating innovative talents in universities in the new era, but also establishes the significant value of improving the service system of cultural and quality education and inheriting China's excellent traditional culture in universities during this new period.

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2 The theoretical foundation of digital intelligence empowerment in cultural and quality education for university students

2.1 Advantages and characteristics of digital intelligence technology

The development and application of big data, cloud computing, and other technologies in the new era enable effective data mining, storage, and analysis within a short period. These technologies can promptly collect and process quantitative information, providing data references for teaching activities related to cultural and quality education for university students. Furthermore, digital intelligence technology supports multiple devices and platforms such as computers and mobile devices, facilitating teachers and students to access educational resources anytime, anywhere, and enhancing the learning interaction experience.

2.2 The essential connotation of cultural and quality education

2.2.1 Improving knowledge structures

Cultural and quality education is an important form for enriching university students' interdisciplinary knowledge reserves and broadening their horizons. It covers multiple disciplines such as art, philosophy, history, and literature, helping students improve their overall knowledge structures and lay a solid foundation for future employment and career development.

2.2.2 Cultivating thinking abilities

Cultural and quality education pays close attention to cultivating students' individual creative and critical thinking abilities. It emphasizes guiding students to think, judge, and analyze independently and to apply learned scientific and cultural knowledge for reform and innovation. This helps students better adapt to the complex and ever-changing social demands of the new era and solve intricate practical problems.

2.2.3 Enhancing humanistic literacy

Cultural and quality education encompasses moral ethics, artistic aesthetics, and humanistic spirits. Universities can cultivate and enhance students' moral standards and cultural literacy by conducting ideological and political education activities, reading humanistic classics, artistic performances, and social practice activities in daily teaching and talent cultivation processes, enabling them to grow into citizens with four virtues in the new era.

2.3 The integration of digital intelligence technology applications and cultural and quality education

2.3.1 Innovating teaching content

Applying digital intelligence technology in cultural and quality education for university students can help teachers better sort out, integrate, develop, and utilize the latest cultural and quality education achievements from both domestic and international sources. It also

aids in analyzing and utilizing cultural and quality education resources from both inside and outside the university, thereby innovatively designing digitalized and personalized boutique courses and smart classrooms. Ultimately, this helps university teachers and students better conduct teaching and learning activities related to cultural and quality education.

2.3.2 Updating teaching methods

In particular, the emergence of smart classrooms, flipped classrooms, online courses, and boutique courses makes it possible for university students to learn cultural and quality education resources anytime, anywhere, both online and offline. It also makes it a reality for students from different majors at different universities in different regions to access personalized cultural and quality education resources.

2.3.3 Optimizing teaching resources

Digital intelligence technology enables the digitalization, intelligentization, and networked management of teaching resources for cultural and quality education. It promotes the sharing and utilization of these resources among different universities, effectively helping to solve issues such as uneven distribution of educational resources and a lack of targeted matching of educational resources. Even further, digital intelligence technology allows theoretical achievements and practical cases related to cultural and quality education from different countries and regions to collide with each other.

3 Empirical status of digital intelligence empowering cultural quality education for college students

3.1 Lagging updates to teaching content

In recent years, despite the Party and the state's emphasis on deepening the reform of educational informatization and advancing innovations in quality education, universities such as Chongqing University of Science and Technology have increasingly valued the application of digital intelligence technology in promoting cultural quality education. However, issues such as untimely and incomplete updates to digital teaching content still exist. In particular, they fail to leverage the latest technologies based on industry development to enhance and upgrade cultural quality education. Some universities overly focus on the application of digital intelligence technology while neglecting innovations in cultural quality education. Some, on the other hand, overly emphasize adjustments to the content of cultural quality education, weakening the practical application of digital intelligence technology. This results in a failure to find a fit or balance between the two, making it difficult to achieve timely updates and real-time maintenance of the teaching content of cultural quality education.

3.2 Monotonous teaching methods and tools

Taking Chongqing University of Science and Technology as an example, although an increasing number of universities are integrating digital intelligence technology into laboratory construction and online course updates, some teachers are overly reliant on technological means, neglecting the advantages and characteristics of traditional teaching methods. This leads to a lack of necessary communication and interaction in the teaching process, affecting the effectiveness of cultural quality education. Meanwhile, although

digital intelligence technology brings more possibilities for personalized and targeted teaching to a great extent, issues such as difficulties in data collection, insufficient data samples, and inadequate data analysis have been found in practice, making it difficult to truly support online and offline cultural quality education.

3.3 Uneven distribution of teaching resources

In recent years, Chongqing University of Science and Technology has achieved certain results in the integration of digital teaching resources and the development of cultural quality education resources. For example, the application of red cultural resources such as the Red Rock Spirit in education and teaching has become increasingly sufficient, and teachers and students have increasingly emphasized the integration of cultural quality education content into both first and second classrooms. However, there is still a certain resource gap. For instance, the development of excellent foreign cultural quality education resources is not sufficient, and the utilization of cultural quality education resources from other provinces and regions in China is not comprehensive. Some universities have not invested in digital technology applications in cultural quality education, and some engineering majors significantly lack the application of digitalized cultural quality education resources.

4 Diverse strategies for digital intelligence empowering cultural quality education for college students

4.1 Integrating local cultural features to enrich teaching content

Firstly, improve the system for updating the teaching content of cultural quality education. To ensure the systematic nature of digitalized cultural quality education content and enhance the timeliness of the application of local cultural teaching with distinctive features, local universities should refine and improve supporting systems, clarify the responsibilities of all parties, actively develop and utilize red revolutionary resources and intangible cultural heritage skills, and embed them into the theoretical and practical teaching of cultural quality education, enhancing college students' cultural self-confidence.

Secondly, optimize the production mode of cultural quality education content. Universities should actively encourage teachers to break down discipline barriers and apply the latest digital intelligence technology to promote innovations in the design of cultural quality education content. For example, leverage cloud computing and big data technologies to help build a cultural quality education resource library, and utilize new media and multimedia technologies to enrich the presentation forms of cultural quality education.

4.2 Applying the latest digital intelligence technology to innovate teaching methods

On the one hand, promote blended teaching. Utilize virtual reality and augmented reality technologies to create digitalized teaching situations, and leverage online elite courses, smart classrooms, offline practical activities, artistic activities, and other methods to allow more college students to immerse themselves in perceiving the red revolutionary culture and experiencing local intangible cultural heritage, personally visiting revolutionary memorial halls, museums, intangible cultural heritage workshops, etc., to deepen their impression of cultural quality education.

On the other hand, implement personalized teaching. Use artificial intelligence and digital network technologies to widely collect data and information on college students' participation in cultural quality education, and mine and analyze their personality traits and actual needs to help teachers design targeted personalized teaching plans. Of course, during the process, it is also necessary to actively develop intangible cultural heritage resources such as folk arts and traditional crafts, so that personalized teaching can also help college students inherit and promote local cultural features.

4.3 Utilize online and offline channels to integrate teaching resources

Firstly, develop local cultural quality education resources. Chongqing itself possesses relatively rich local cultural education resources and intangible cultural heritage resources. Their development and utilization through online and offline channels can certainly enrich the cultural quality education materials of universities such as Chongqing University of Science and Technology and improve the overall quality of related course design and teaching plans for cultural quality education.

Secondly, expand external cultural quality education resources. For local universities such as Chongqing University of Science and Technology, conducting cultural quality education cannot be separated from in-depth cooperation with industry enterprises, cultural institutions, and sister universities, from sorting out and integrating cultural quality education course resources and practical resources from both domestic and international sources, and from the application of digital intelligence technology in the development of teaching resources.

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