Research on the Collaborative Education of Aesthetic Education and Ideological and Political Education Empowered by Artificial Intelligence

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Abstract: Artificial intelligence provides new paths and possibilities for the collaborative education of aesthetic education and ideological and political education. By deeply exploring the significance and strategies of how artificial intelligence empowers the collaborative education of aesthetic education and ideological and political education, this paper can not only break down the barriers between disciplines, realize interdisciplinary integration but also improve the pertinence and effectiveness of education. It thus offers strong support for cultivating socialist builders and successors with all-round development of morality, intelligence, physical fitness, aesthetics, and labor.

Keywords: Artificial intelligence; Aesthetic education and ideological and political education; Collaborative education

1. Introduction

The Outline for Building a Powerful Education Nation (2024–2035) proposes continuously shaping a new pattern of fostering virtue through education, promoting the infiltration of aesthetic education in schools, facilitating students' all-around development, and accelerating the construction of a socialist education power with Chinese characteristics. Aesthetic education and ideological and political education hold an important position in the work of cultivating talents in colleges and universities. They complement each other in goals, contents, and methods, and jointly promote the all-round development of students. The Opinions on Comprehensively Strengthening and Improving School Aesthetic Education in the New Era emphasizes incorporating aesthetic education into the entire process of talent cultivation in schools at all levels and of all types, strengthening the identification of values, enhancing cultural confidence, effectively responding to the challenges of Western cultural security, and resisting the infiltration of Western ideology. Aesthetic education and ideological and political education complement each other in educational goals, contents, and methods,

and jointly promote the all-round development of students. The Notice on the Comprehensive Implementation of the School Aesthetic Education Infiltration Action requires the full implementation of the school aesthetic education infiltration action, so that aesthetic education can infiltrate students, teachers, and schools, improve students' aesthetic literacy, cultivate their sentiments, and stimulate their innovative and creative vitality. By 2027, the quality of aesthetic education courses and teaching will be comprehensively improved, and a modern school aesthetic education system with full coverage, diversity, and high quality will be formed [1]. Colleges and universities should follow the path in line with national development in accordance with national policy documents, so as to better cultivate talents.

2. The significance of artificial intelligence in empowering the collaborative education of aesthetic education and ideological and political education

2.1. Innovating educational models and enhancing educational effectiveness

Artificial intelligence not only brings a brand-new educational model to teachers in the collaborative education of aesthetic education and ideological and political education, but also greatly improves the effectiveness of teachers' education. Traditional aesthetic education and ideological and political education often have problems such as a single teaching method and insufficient resource integration, but the involvement of artificial intelligence has broken this situation [2]. In terms of aesthetic education, teachers can present students with richer and more vivid works of art through artificial intelligence technologies such as image recognition and virtual reality. For example, students can visit museums and art exhibitions around the world immersively through virtual reality technology, appreciate art treasures of different styles and periods up close, and feel the beauty of art. In ideological and political education, artificial intelligence can use big data to analyze students' interests and ideological trends, and accurately push ideological and political content that meets students' needs [3].

2.2. Cultivating interdisciplinary talents to meet the needs of social development

In today's era, society's demand for interdisciplinary talents is growing increasingly. The collaborative education of aesthetic education and ideological and political education empowered by artificial intelligence is conducive to cultivating interdisciplinary talents who can meet the needs of social development. Aesthetic education can cultivate students' aesthetic ability, creativity, and imagination, while ideological and political education focuses on shaping students' values, moral concepts, and sense of social responsibility. The integration of artificial intelligence enables students to access a wider range of knowledge fields and cutting-edge technologies when receiving aesthetic education and ideological and political education [4].

3. Strategies for AI-empowered collaborative education of aesthetic education and ideological and political education

3.1. Leveraging AI to promote collaborative education of aesthetic education and ideological and political education in colleges and universities

Teachers can integrate the collaborative education model of college aesthetic education and ideological and political education through artificial intelligence technology, thereby better cultivating more talents [5]. Firstly, under the educational philosophy of "people-oriented", teachers should establish an AI-based classroom integrating aesthetic education and ideological and political education, enabling students to better perceive the

interconnection between the two. For example, during the preparation stage of a painting course, teachers can use web crawler technology to analyze students' discussions on painting topics in school forums and social media, identify their interest in modern abstract painting schools and artists' works that incorporate social reflections, and use this as a basis for teaching. In the teaching stage of the painting course, teachers can display artists' life stories and creative backgrounds through multimedia in the form of texts with illustrations and video explanations [6]. For instance, when explaining the painting techniques of modern abstract schools, teachers can introduce ideological and political elements by exploring how artists, during specific historical periods amid conflicts between social changes and personal ideals, expressed their inner emotions and critiques of social phenomena through abstract paintings. This integration of abstract ideological and political content with specific painting techniques stimulates students' dual interest in painting art and ideological and political knowledge, helping them realize that painting is more than just a display of skills. Secondly, teachers can innovate teaching methods by introducing AI models such as intelligent painting assistants. For example, students can ask the intelligent painting assistant questions like "How does this abstract painting reflect the artist's sense of social responsibility?" in class [7]. Based on its knowledge reserve, the intelligent painting assistant will list details such as the social background of the artist's creation and the symbolic techniques used in the work, while also providing expanded answers from multiple perspectives. Finally, teachers can utilize AI's data collection and analysis functions to gather information on students' classroom performance, enabling a better evaluation of their mastery of knowledge. For example, if teachers find that students show high enthusiasm for works reflecting environmental protection themes in painting, they can use AI-based image recognition and analysis technology to evaluate students' works—analyzing aspects such as theme expression, color application, and composition—and provide comprehensive assessments based on students' creative ideas. This approach not only records students' learning changes and progress at different stages but also helps teachers optimize their teaching methods, truly achieving the goal of AI-empowered collaborative education of aesthetic education and ideological and political education in colleges and universities [8].

3.2. Integrating aesthetic education with ideological and political education in colleges and universities to enhance students' comprehensive literacy

Teachers can better integrate aesthetic education with ideological and political education through artificial intelligence technology, thereby promoting the all-round development of students. First, teachers should use artificial intelligence technology to build a virtual laboratory for "ideological and political education through paper-cutting art". In the process of establishing the virtual laboratory, teachers should cooperate with technical experts to conduct an in-depth analysis of paper-cutting works from different regions and with different styles, as well as the historical stories and cultural connotations behind paper-cutting art. Based on these analyses, they can design ideological and political education courseware on paper-cutting art, integrating knowledge such as the historical evolution, regional characteristics, and artistic value of paper-cutting art with elements of ideological and political education such as patriotism, national spirit, and cultural inheritance. This allows students to participate in practical operations using virtual reality (VR) and augmented reality (AR) devices [9]. The artificial intelligence system will give certain encouragement to students who perform well and provide step-by-step guidance to those who make mistakes. In this way, students can not only feel the charm of paper-cutting art but also deeply understand the ideological and political connotations it carries, realizing the organic unity of aesthetic education and ideological and political education. Second, colleges and

universities can better deepen the integration of ideological and political education and aesthetic education knowledge by establishing a platform. In the lecture module, colleges and universities can invite masters who specialize in integrating aesthetic education with ideological and political content to give comprehensive explanations on their integration methods, approaches, and projects. This enables teachers to better reflect on their shortcomings and improve their teaching methods. In the case module, colleges and universities can collect cases of integrating aesthetic education with ideological and political education, such as paper-cutting cases, painting cases, and art exhibition cases, allowing teachers to learn how to carry out such integration and better understand the ideological and political elements contained therein, such as patriotism and solidarity. In the practice module, colleges and universities can create content models with different scenarios for students to choose from according to their interests and hobbies, so as to better promote their all-round development. In addition, the platform will record students' usage and provide personalized creative content based on their learning performance, thereby further deepening the inherent connection between aesthetic education and ideological and political education. Through such methods, colleges and universities can not only make full use of the advantages of artificial intelligence but also help students understand the ways and methods of integrating aesthetic education with ideological and political education. This enables students to better accept ideological and political education and improve their aesthetic literacy and ideological and political literacy [10].

3.3. Establishing digital resource libraries and strengthening platform security supervision

First, universities can establish digital resource libraries to upload various content, integrating aesthetic education and ideological and political education, making it convenient for teachers to find the materials they need according to their own ideas. For example, when building a digital resource library for embroidery art, universities can form a team consisting of embroidery experts, ideological and political teachers, and information technology personnel. This team can conduct in-depth visits to folk embroidery workshops, museums, art exhibitions, etc., to collect high-definition images and video materials of embroidery works. At the same time, they can sort out textual materials such as historical documents on embroidery art and oral records of inheritors, and upload them to the digital resource library [11]. Artificial intelligence technology will not only label and analyze the characteristics of embroidery works, such as stitching techniques, patterns, and colors, but also generate content related to the evolutionary laws of embroidery art in different historical periods and regions, as well as its connections with the social culture and customs of the time. This enables teachers to search according to their needs. For instance, when teaching Along the River During the Qingming Festival, teachers can not only find content introducing its exquisite embroidery techniques but also discover ways to explore the prosperous scene of ancient society and the wisdom of working people reflected in the work, thereby organically integrating aesthetic education with ideological and political education. Second, in the process of using artificial intelligence teaching platforms, universities will involve massive amounts of sensitive information such as students' personal data and learning records. To prevent information leakage, universities need to strengthen platform supervision and establish sound data security management systems [12]. They can use advanced encryption technologies to encrypt data, ensuring security during transmission and storage. They can set access permissions to specify different access scopes for different individuals. Additionally, by conducting regular security inspections and maintenance of the platform, universities can promptly eliminate potential security risks, prevent artificial intelligence technology from being used for purposes other than

integrating embroidery art with ideological and political education, ensure the stable and safe operation of the teaching platform, and provide reliable guarantees for the integration of aesthetic education and ideological and political education [13].

3.4. Promote the collaborative education of aesthetic education and ideological and political education in colleges and universities through the practice of artificial intelligence

In the research on artificial intelligence empowering the collaborative education of aesthetic education and ideological and political education, it is difficult to achieve ideal results relying solely on the one-sided indoctrination of ideological and political teachers. Colleges and universities can carry out practical activities integrating artificial intelligence with aesthetic education and ideological and political education through practical cases, so as to better cultivate students' innovative spirit and sense of responsibility [14]. First, hold practical activities with the theme of artificial intelligence and aesthetic education. Colleges and universities take "artificial intelligence + aesthetic education" as the core theme and carry out relevant practical activities with the help of advanced artificial intelligence technology. For example, Shenzhen Polytechnic held a digital art design competition on March 15, 2025. In this competition, teachers and students of the school responded to the job demands of the digital creative industry, focusing on AIGC technology, model textures, character movements, engine animation, etc. This not only examined students' comprehensive abilities and mastery of skills, but also their comprehensive ability to apply artificial intelligence in the field of digital art design. By participating in this competition, students can not only deeply experience the perfect integration of technology and art, stimulate innovative thinking, but also obtain a practical platform to cultivate their sense of responsibility, understanding that technological development should serve society and humanity [15]. Second, establish practice bases for artificial intelligence and aesthetic education. Colleges and universities can establish cooperative relationships with technology enterprises and art institutions to jointly build practice bases for artificial intelligence and aesthetic education. This enables students to directly participate in the research, development, and practice of artificial intelligence and aesthetic education projects, deepening their understanding of artificial intelligence and aesthetic education at the practical level. In project operation, they can perceive the ideological and political spirits embodied in the integration of technology and art, such as teamwork and the pursuit of excellence, thus better achieving the goal of artificial intelligence empowering the collaborative education of aesthetic education and ideological and political education.

4. Conclusion

The collaborative education of artificial intelligence, aesthetic education, and ideological and political education is not only an inevitable trend in the development of educational modernization but also an important measure for cultivating talents in the new era. This paper deeply integrates aesthetic education with ideological and political education through the application of artificial intelligence technology, aiming to better realize resource sharing and complementary advantages. In the future, with the continuous development of artificial intelligence technology, the collaborative education of aesthetic education and ideological and political education will embrace broader prospects for development. Colleges and universities should comprehensively integrate the contents of aesthetic education and ideological and political education on the basis of conforming to national development, so as to better improve students' comprehensive quality and promote their all-round development.

Disclosure statement

The author declares no conflict of interest.

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