

INTEGRATION AND DEVELOPMENT OF ARTIFICIAL INTELLIGENCE IN MUSIC EDUCATION

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ИНТЕГРАЦИЯ И РАЗВИТИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В МУЗЫКАЛЬНОМ ОБРАЗОВАНИИ

In today's era of rapid technological development, artificial intelligence technology is changing various fields at an astonishing speed. Music education, as an important field for cultivating human artistic literacy and creativity, is inevitably influenced by artificial intelligence. The integration of artificial intelligence and music education has brought new opportunities and challenges to music education. This article aims to explore the value, logic, and path of integrating artificial intelligence in music education in order to provide useful references for the innovative development of music education.

By analyzing students' learning data, artificial intelligence can accurately understand their learning progress and difficulties, adjust teaching content and methods in a timely manner, and improve teaching effectiveness. For example, intelligent music teaching software can provide targeted suggestions and practice plans based on students' playing situations, helping them improve their playing skills faster.

Through big data analysis and machine learning algorithms, artificial intelligence can select music textbooks and instructional videos suitable for different students from a massive collection of music works. Meanwhile, artificial intelligence can also generate various music exercises and creative tasks, enriching students' learning experience. For example, an intelligent music creation platform can provide students with various music style creation templates and materials, stimulating their creativity. An intelligent music scoring system can quickly and accurately assess students' performance or singing level, providing teachers with objective evaluation criteria. In addition, artificial intelligence can also create a more vivid and realistic learning environment for students through virtual reality and augmented reality technology, enhancing their interest and participation in learning. Artificial intelligence can provide high-quality music education resources for students in remote and impoverished areas, narrowing the education gap between urban and rural areas and regions. Through online music education platforms, students can receive music education anytime and anywhere, without being limited by time and space. Meanwhile, artificial intelligence can also provide personalized music education services for special education students to meet their special needs [1].

The continuous development of artificial intelligence technology has provided strong impetus for innovation in music education. With the continuous optimization of artificial intelligence algorithms and the upgrading of hardware devices, the application of artificial intelligence in music education is becoming increasingly widespread. For example, deep learning algorithms can achieve automatic composition, arrangement, and performance of music, bringing new teaching methods and means to music education. Meanwhile, the development of virtual reality and augmented reality technology has also created a more vivid and realistic learning environment for music education. The demand for music education is constantly changing, and artificial intelligence technology can meet the personalized needs of students and teachers. With the development of society and the improvement of people's living

standards, people's demands for music education are also increasing. Students hope to receive more personalized, efficient, and interesting music education services, while teachers hope to reduce teaching burden and improve teaching effectiveness. Artificial intelligence technology can provide personalized teaching plans and services to students by analyzing their learning data and instructional requirements of educators. The integration and innovation of artificial intelligence and music education is an important way to promote the development of music education. Artificial intelligence technology can be deeply integrated with music teaching methods, teaching content, and teaching evaluation, innovating the modes and methods of music education. For example, artificial intelligence can be combined with music games to create more fun learning experiences; artificial intelligence can be combined with music creation to stimulate students' creativity; artificial intelligence can be combined with music evaluation to improve the objectivity and accuracy of the evaluation. These steps are necessary to implement: strengthen the research on artificial intelligence algorithms to improve the quality and efficiency of automatic music composition, arrangement, and performance; strengthen research on virtual reality and augmented reality technology to create a more vivid and realistic learning environment for music education; strengthen the research and development of intelligent music teaching software and hardware equipment, and improve the personalization and automation level of teaching [2].

Active exploration of innovative models and methods for integrating artificial intelligence with music education promote the reform and development of music education. Experimental research on artificial intelligence assisted music teaching explore new teaching models such as personalized learning and intelligent evaluation. The integration of music education and information technology carries out online music education and distance education and expands the coverage of music education. The integration of music education and artistic practice carries out activities such as music creation, performance, and competitions, and enhances students' practical abilities and creativity.

Cultivation of composite talents in music education and artificial intelligence technology provide talent support for the application of artificial intelligence in music education. The educational establishments should offer professional courses related to music education and artificial intelligence technology, cultivate professionals who understand both music education and artificial intelligence technology, strengthen teacher training, improve teachers' information technology literacy and teaching ability so that they can proficiently use artificial intelligence technology for teaching; encourage music educators to collaborate with technology professionals to jointly conduct research on the application of artificial intelligence in music education [2].

The cooperation and communication among music education institutions, technology companies and research institutions jointly promote the application and development of artificial intelligence in music education. Established music education and artificial intelligence technology innovation alliances carry out industry-university research cooperation projects and promote the transformation of scientific and technological achievements. International seminars and academic exchange activities on artificial intelligence and music education strengthen cooperation and exchanges at home and abroad, and allow learning from advanced experiences and technologies abroad, strengthen communication and cooperation with government departments, strive for policy support and funding investment, and create a favorable environment for the development of artificial intelligence in music education.

The integrated development of artificial intelligence in music education has important value and significance. Through personalized teaching, enriching teaching resources, improving teaching efficiency, and promoting educational equity, as well as the logical support of technology-driven, demand-oriented, and integrated innovation, artificial intelligence has brought new opportunities and challenges to music education. In order to achieve the integrated development of artificial intelligence in music education, we need to strengthen technology research and development, promote educational innovation, cultivate professional talents, and enhance cooperation and communication.

Literature

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EDUCATION AND TEACHING: TRADITION AND INNOVATION, SPACE AND OPPORTUNITY

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ОБРАЗОВАНИЕ И ПРЕПОДАВАНИЕ: ТРАДИЦИИ И ИННОВАЦИИ, ПРОСТРАНСТВО И ВОЗМОЖНОСТИ

Education is a dynamic field that constantly evolves to meet the changing needs of the society. Traditions in education have endured over time, providing stability and a framework for learning. At the same time, innovation is essential to keep education relevant and responsive to the challenges of the modern world. This paper examines the delicate balance between educational traditions and innovations, and explores the areas and opportunities they offer for enhancing the quality of education.

Educational traditions refer to established practices, methods, and values that have been passed down through generations. These traditions often include face-to-face teaching, lecture-based instruction, and the focus on disciplinary knowledge.

Characteristics of educational traditions may include stability, predictability, and the sense of continuity. They provide a familiar structure for both teachers and students and can help build up a sense of community and shared values within educational institutions.

Educational traditions provide a solid foundation for learning by offering established methods and approaches proven their effectiveness over time. They help students develop fundamental skills such as reading, writing, and critical thinking.

Traditions also play an important role in preserving and transmitting cultural heritage. They can help students understand the history and values of their own societies and those of other cultures. Educational traditions can foster a sense of community and belonging among students and teachers. Rituals, ceremonies, and shared experiences can create a strong bond within educational institutions.

Educational innovation refers to the introduction of new ideas, methods, and technologies to improve the quality of education. Forms of educational innovation may include online learning, flipped classrooms, project-based learning, and the use of educational technologies. Advances in technology have had a profound impact on education, enabling new forms of teaching and learning. Digital tools such as tablets, laptops, and educational software have made learning more accessible and engaging.

The changing needs of the society, such as the demand for skills in such areas as science, technology, engineering, and mathematics (STEM), have also driven educational innovation. Educators are constantly looking for new ways to prepare students for the future workforce.