The Future of Education: Transformative Potential of AI and the Metaverse in Translation Technology Education

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Abstract:

The educational metaverse and recent advances in artificial intelligence (AI) have revolutionized education by combining cutting-edge technologies to produce dynamic, virtual, individualized. And immersive learning environments. In order to improve learning experiences and reduce conventional educational constraints, the metaverse — a virtual platform that combines three-dimensional, virtual reality, augmented reality, and/or other digital technologies— is being increasingly adopted in higher education to enhance the effectiveness, customization and engaging of learning experiences.

Despite the growing interest in the integration of artificial intelligence (AI) and the educational metaverse, there is a lack of comprehensive reviews that address this combination, particularly in terms of theoretical frameworks and the design of learning tools. This paper aims to fill this gap by providing an extensive overview of relevant publications and outlining the development of an AI-powered metaverse specifically tailored for learning translation technology (Metranverse). Grounded in well-established learning theories and supported by prior literature, this study seeks to elucidate the potential of AI-enhanced metaverse environments to transform educational practices in the context of translation technologies for Chinese-English and English-Chinese texts.

By synthesizing existing research, the paper will identify key trends, challenges, and opportunities in the integration of AI and the educational metaverse. Furthermore, I will propose a conceptual framework for designing effective learning tools within the context of translation technology, ensuring they are pedagogically sound and technologically advanced. This framework will be informed by theories with the distinctive features of Metranverse (metaverse, AI, mobile-based, and audio-visual learning content), which emphasize the importance of gamified, personalized, and ubiquitous learning experiences.

The practical insights derived from this study will offer valuable guidance for educators, developers, and researchers on best practices for incorporating AI-enhanced metaverse environments into educational settings. Considerations for development will include user-centered design, functionality and pedagogical implications. Ultimately, this paper aims to contribute to the ongoing discourse on the future of education by highlighting the transformative potential of AI and the metaverse in fostering innovative and effective learning experiences.