

Chapter 7

The Power of AI for the Sake of the Metaverse in Education

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ABSTRACT

The potential for immersive, individualized, and interactive learning experiences for students has made the use of metaverse technology in education an extremely popular subject. This virtual reality environment, “the metaverse,” allows users to communicate with other users in a virtual environment by utilizing tools like augmented reality, artificial intelligence, blockchain, and machine learning. Metaverse technology offers higher levels of creativity and customization than conventional e-learning techniques. It enables improved user-environment interaction and can replicate emotional and cognitive processes that are more similar to those encountered in face-to-face learning environments. By providing opportunities that would ordinarily not be available, this innovation creates new chances for enhancing established learning activities. The use of metaverse technology in education has the potential to completely transform the educational process by providing students with an immersive, personalized, and interactive environment.

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INTRODUCTION

The development of new technologies has brought about tools that are revolutionizing many industries, including education. Metaverse technology is perhaps the most significant example of this. It promises to innovately supplement conventional learning techniques by providing immersive and interactive learning elements as well as a collaborative learning environment. It is clear that metaverse technology holds enormous potential for the young generation alpha cohort, who engage highly with communication technologies such as Instagram, Tik Tok, and other social platforms, as educators investigate this tool's potential for assisting personalized student learning experiences. Technology is extremely important to them. Their entire existence is centered around technology, from entertainment to gaming (PubG, Free Fire, Fortnite, and others), connecting with peers, and even education in the wake of the COVID-19 pandemic.

According to a study by (Turk, 2017), Gen Alpha children can use touchscreens and navigate through different smartphone apps by the age of two, whereas it took their forebears many years to learn how to do so. However, Generation Alpha cautions that we should be aware of the drawbacks of technology use in this situation (Pitchford et al., 2019). For Gen Alpha, the future is promising, but with unsettling and persistent cautions. coming soon. because of the growing population crisis and mental health crisis.

In comparison to traditional media formats, the virtual environment provides more real-life simulations, allowing for better student interactions and access to interdisciplinary connections among diverse subjects in the sciences. According to Getchell et al. (2015), metaverse technology has been identified as a valuable pedagogical asset in game-based education. This study shows that educators can design new learning environments using this innovative platform in a flexible manner, allowing the complement of traditional teaching approaches. The educators' pursuit of exploring educational possibilities in metaverse technology confirms one thing: this innovative tool has the potential to transform student learning experiences (Zhou et al., 2022).

In our study, we aim to provide global quality education in the context of a university by incorporating metaverse in the process of education as an innovative method of education, where the generation alpha is the major category of students considered as the survey's target. Is a tool for getting an idea about students' preconceptions about metaverse as a first step in our research.

Review of Literature

The COVID-19 pandemic has changed the way we connect and meet each other all over the world, to the point where our conception of meeting and collaborating in order to teach or learn has changed (Bokyung et al., 2021). Virtual reality metaverses such as Roblox and Zepeto have created a new social space for people who are unable to leave their homes due to COVID-19, allowing them to congregate in large groups for festivals or concerts. So students can benefit from the advantages of metavers in the context of COVID-19, as well as having the opportunity to communicate with their peers and gain knowledge in a collaborative manner (Bokyung et al., 2021) about this idea said "When schools were closed due to COVID-19 and students could not attend school, the "Classroom Map" among various 3D maps in Zepeto was the most popular." The students went to the Zepeto classroom instead of the regular classroom." So, the metaverse is not only a place to have fun and play, but also to learn. According to (Madiaga et al., 2022) in a briefing to the European Parliament, the metaverse is an evolution of the internet towards Web3 that will include a variety of technologies such as blockchain, digital currencies, NFT's, and 5G,

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