
TEACHERS' ROLE IN THE METAVERSE ERA: ETHICAL CONSIDERATIONS AND RESPONSIBILITIES

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ABSTRACT

With the creation of metaverse platforms, the use of technology in teaching has changed from traditional to highly interactive and student-centered pedagogy. There is scarce literature that considers the role of teachers in the metaverse, especially in regard to their ethical obligations. In this context, the authors address the educator's roles as curriculum planners, social-emotional learning facilitators, and advocates for equity and accessibility. The article provided an in-depth assessment of pertinent ethical issues such as significant loss of privacy, digital divide, mental health challenges, and bias or misrepresentation of identity. As with constructivist and social learner theories, engagement with these issues may be solved with conduct policies that include digital literacy and saturation control. Illustrative case studies emphasize instructional design for immersion and anticipate further interdisciplinary inquiries on policy development and teacher education. Overall, teachers are urged to rethink their pedagogical stance to promote responsible, multi-perspective participation in the metaverse.

Keywords: Metaverse, Ethics in Education, Teachers' Roles, Digital Citizenship, Immersive Learning, Data Privacy, Equity, Mental Health, VR in Classrooms, Inclusive Education.

INTRODUCTION

The shift towards a more digitally advanced system of education in the 21st century is more than notable. One of the most distinguishing innovations is the metaverse, which serves as a virtual space where one can interact in real time as an avatar. It creates new forms of social contact and transforms teaching and learning. The metaverse serves not only as a pedagogical and technological shift, but marks an ethical and philosophical change in education.

Educational institutions have increasingly adopted digital tools, especially after the COVID-19 pandemic. The use of video conferencing and LMS platforms have become quite common. Unlike other technologies, the metaverse enables unprecedented activities. Students are able to virtually experience touring ancient civilizations, participating in chemistry experiments, or even collaborating with peers globally in a variety of enhanced environments (Liu, 2022).

However, all promises come baked with deep-rooted moral obligations. Educators, in particular, face blurred boundaries of the real-virtual worlds when navigating data privacy, mental health, representation, and access. How do they ensure ethical inclusion and psychological safety of learning in the metaverse? These are no longer hypothetical, but rather these questions highlight the frontiers of educational ethics.

This article examines teachers' new roles and ethical responsibilities in the metaverse. Guided by constructivist and socio-emotional learning perspectives, it focuses on the integration of pedagogical metaverse technologies: opportunities, challenges, and shifts of teaching and learning frameworks. It argues for the need to design metaverse-powered education frameworks that are human-centered, inclusive, and ethically driven, not leaving students only fluent in digital citizenship, but fostering thoroughly responsible stewards (Li, 2022).

THE METAVERSE IN EDUCATION - OPPORTUNITIES AND CHALLENGES

The possibilities related to the metaverse's potential in education stems from the erasing of spatial and temporal boundaries which might allow students to take part in learner-driven and hands-on activities. Compared to traditional classrooms, which are static, where learning occurs within the confines of four walls and a linear timeline, class 3D interactive spaces can be designed to foster greater emotional and cognitive immersion. For example, learners can visit the Pompeii ruins, participate in a friendly historical debate with AI avatars, or even

simulate intricate biological processes for real-time learning, all from their homes or classrooms.

Constructivist learning theory, which relates to learners actively engaging in knowledge construction through meaningful social interaction, aligns seamlessly with metaverse platforms. Platforms available with a metaverse have readily accessible social environments where learners can engage their peers in seeking new solutions and collaborative exploration. Such skills are critical, considering the 21st-century world skills demand skills like technologic adaptability, critical thinking, and digital literacy. Also, Minecraft Education Edition, Roblox Education, and AltspacVR provide custom lesson plans and controlled spaces for teachers aimed at classroom integration (Kuhn, 2017).

Furthermore, the metaverse offers comprehensive support to attaining tailored instruction by making it possible for content and pacing to adjust to learners. With appropriate AI differentiating tools, learners being analyzed using engagement metrics to track content relevance to their strengths and weaknesses are encouraged to shape their learning.

Although, these opportunities offer some of the greatest difficulties -

- High speed internet, haptic gloves and VR headsets are pricey. The metaverse will almost certainly exacerbate the gap between regions with access to basic internet and areas with no service at all. Developing regions may not have the financial resources or know-how to equip schools with these advanced tools, creating a gap in educational equity.
- Private businesses with financial interests implement most metaverse platforms. Without robust data governance frameworks, student data may be collected and exploited, profiled, or targeted for advertising (Jiang and Xu, 2022).
- Biometric and personally identifying information such as gestures, facial expressions, eye movements, and voice can all be harvested within The Metaverse. Who controls the data, who owns it, and what its long-term psychological effects are, especially considering the lack of acceptance speech and control over it at the time, are some of the issues that emerge.
- Prolonged immersion into virtual environments may make one prone to, particularly younger students, alter ego syndrome, virtual exhaustion, and virtual addiction.

- Race and Gender stereotypes are often prevalent in NPCs and digital avatars. If left unchecked, these will expose a dominant narrative excluding all other communities which are already at risk of being marginalized.

The application of the metaverse in education has incredible potential, however, it requires ethical consideration and needs to be built on systemic justice, inclusive teaching, and thoughtful planning.

EVOLVING ROLES OF TEACHERS IN THE METAVERSE

The metaverse initiates new forms of teaching; it redefines the educator's role by transforming teaching into learning facilitation across multiple spaces. Teaching is not only conducted in a physical classroom, but a teacher now needs to be a cross-discipline guide in pedagogy, technology, and ethics.

Curriculum Designers and Environment Creators

The metaverse requires an educator to prepare immersive digital learning experiences that meet pedagogical objectives (Kala, 2022). A history teacher, for example, may develop a VR Senate so students can be taught as participants, role-playing as senators, and mastering modern Roman history via contextual learning.

This position requires an individual to be a fluent user of technology, including 3D modeling, virtual scripting, and architecture of the specific application. More significantly, they need to integrate instructional design and logic teaching interaction in a virtual space while maintaining organization, inclusion, and meaningfulness in learning opportunities within flexible environments.

Facilitators of Social and Emotional Learning

The Metaverse promotes peer-to-peer interaction, but with insufficient supervision, it can also facilitate cyberbullying, emotional disengagement, or social exclusion due to overstimulation. It is equally the responsibility of the teachers to foster emotional competencies, digital empathy, and social responsibility or civility within the online classrooms.

Wong and Scully propose ways teachers should help students achieve -

- Empathy: Promote perspective taking through avatar-based storytelling.
- Self-awareness: Foster students' reflection on their virtual interactions.
- Conflict resolution: Teach students how to give constructive criticism, manage disputes among peers, and facilitate positive peer interaction.

Advocates for Equity and Accessibility

The responsibility to close the digital divide and access inequalities in the metaverse rest primarily with the educators. In particular, these inclusively access concerns entail -

- Lobbying for institutional purchase of VR/AR equipment.
- Providing training for learners from underrepresented groups.
- Creating materials from various cultures and viewpoints.

Safeguarding against undocumented biases in AI-controlled content, neutral materials, and uniform digitally embodied learners needs to be addressed by the teachers too. Working with the developers, educators can ensure changing AI representations into learning materials for class using concepts of gender diversity, neurodiversity, and multiculturalism (Zhang, 2023).

ETHICAL CHALLENGES IN THE EDUCATIONAL METAVERSE

The application of the metaverse in education comes with a host of concerns that are ethical in nature. On one hand, the technology can improve immersion and engagement in the learning process, while on the other hand, students and institutions become increasingly vulnerable to threats regarding privacy, equity, conduct, behavioral health, and representation. Teachers, as digital stewards of the spaces of their students, have the responsibility to foresee potential inclusive virtual learning environment risks and safeguard against them.

Privacy and Data Security

Concerns regarding data privacy have been at the forefront of conversations in regard to the metaverse, considering the volume and sensitivity of the information being collected. Unlike e-learning platforms that may only harvest log-in details or their browsing history, the

metaverse collects biometric data such as gaze, body language, speech, and even facial expression and emotions. All these pieces of information, while critical for providing responsive and interactive virtual experiences, pose serious danger in terms of surveillance, tracking, and data abuse.

Educators have the utmost responsibility in ensuring student privacy is fully protected. They ensure that no platform used for teaching integrates into the curriculum without full compliance to data protection legislation. This includes the General Data Protection Regulation (GDPR) in Europe or The Family Educational Rights and Privacy Act (FERPA) in the U.S. They should also work with the school's privacy officer to perform privacy impact assessments, select stronger data encryption platforms, and minimize data collection (Dunn, 2014).

Equity and the Digital Divide

Unless access and affordability are addressed, the educational potential of a metaverse environment will be underutilized. Many families and schools still find purchasing essential hardware for joining immersive open-world metaverse environments, like VR headsets, motion sensors, and high-bandwidth internet, to be prohibitively expensive. This creates an economic burden that disproportionately impacts rural, lower-income, or underrepresented students, increasing the scope of the already widening digital divide.

Having the closest interaction with learners, the teachers should be the first advocates of equity steps that learners have access to. Active equitable access might also mean campaigning for funding to enable the sponsoring of shared devices, working with subsidized schemes from NGOs, or local government sponsorships for equipment, or drafting instructional lesson plans that incorporate asynchronous learning using low technology or time-shifted participation options.

Digital Citizenship and Ethical Behavior

Within the highly captivating and often anonymizing frame of the metaverse, learners have been noted to exhibit behaviors that are completely different from what is observed in a normal classroom. Avatar embodiment can lead to social disinhibition which enables aggressive communication, cyberbullying, or even perpetration of virtual warfare. Furthermore, ethical boundaries, especially among younger learners, can be strongly distorted under the influence

of role-playing and fantasy. It is for this reason that teachers need to instill in them some rudimentary principles of acceptable digital conduct in these extraordinary contexts (Ghoulam & Bouikhalene, 2024).

It is critical to formulate conduct codes that attend to the nuances of virtual interactions. These codes need to specify etiquette and boundaries around presentation and interaction, language use, as well as information consumption and sharing. To ensure that they are valuable, comprehensible, and easily grasped, teachers must invite students to develop these instructions with them. Cyber bullying, misinformation, identity respect, and accountability pertaining to communities should be taught as integral aspects of classroom conversation. Digital citizenship encompasses more than mere etiquette. It underpins the respectful, inclusive, and safe virtual spaces that communities aim to cultivate.

Mental Health and Addiction

The metaverse can be experienced as all-consuming, which can be engaging but also detrimental to one's mental health. Attention, emotion, and imagination are paid copious amounts to captivating virtual spaces. In their current form, without any moderation, this immersion may result in virtual exhaustion, attention splitting, disassociation, and even addiction. Young children are particularly at risk because they lack the cognitive resources for self-regulation and emotional self-awareness (Fawkes & Burde, 2025).

A pre-emptive approach needs to be taken by educators so that none of the negative outcomes occur. Striking a careful balance is important when delineating time periods for metaverse-based activities, and breaks should also be added within and after virtual sessions. To aid students in re-engaging with the physical world and emotionally processing what they encountered in the virtual realm, grounding techniques like reflection through journaling or discussion can be used.

Bias and Representation

While the metaverse is often glamorized to be one full of limitless imagination, it most certainly does not escape the discrimination and biases of its makers. A digital environment with self-built avatars for interaction, often propelled by AI, can have both blatant and nuanced forms of stereotyping. The absence of multicultural representation in avatar selection or the design of

the environment can further enhance the feeling of misrepresentation or invisibility for students. To make matters worse, the algorithms that control NPC behavior or AI tutors can be programmed in a biased manner and therefore reinforce discriminatory norms (Matusitz and Dracas, 2024).

Educators bear the heavy responsibility of addressing these biases and facilitating proper inclusivity. They have to analyze the frameworks and systems to select the ones relevant to their context, as those would allow for avatar customization, multilingualism, and culturally appropriate storylines. Teachers can further develop virtual scenarios with specific tasks in which students have to find and critique the lack or inclusion of diversity in the settings.

STRATEGIES FOR ETHICAL ENGAGEMENT

Teachers must craft holistic approaches to ensure that the educational integration of the metaverse is done in a manner that fosters learning while abiding by ethical conduct. These approaches constitute the design of instruction, provision of support resources for learners, evaluation of content, regulation of behaviors, and collaboration with other parties.

Developing Digital Literacy and Ethical Training

Fostering digital literacy that encompasses all teachers and students is paramount to ensure ethically sound interactions within the metaverse. From a student's perspective, this means having the knowledge to operate within the virtual environment, appreciate ethical issues, and make reasoned decisions concerning data disclosure, avatar conduct, and information credibility. In the case of teachers, digital literacy cannot limit itself to merely using devices, but evaluating their ethical implications, anticipating pedagogical risks, and responding to relentless technological change (Uzun, 2023).

Fostering Inclusive Virtual Environments

The inclusiveness of the metaverse does not come about without further planning. It is the responsibility of educators to foster inclusiveness by choosing platforms enabling voice commands, subtitles, contrast modification, and representation in avatars. As much as possible, teachers should use materials from different cultures and identities so learners are able to find their relevance in the worlds they interact with.

Students being participants in the design from an inclusivity perspective is equally important. Students have to enhance the virtual worlds using their experiences and that can only be done if teachers gets students involved in the co-creation process. Educators need to design tasks where learners can alter avatars, create inclusive scenarios, or design community-based environments for their own ethnographic studies. Empathy, creativity, and a sense of ownership toward the environment are fostered to learners in this form of learning (Mistretta, 2022).

Establishing Codes of Conduct

Having a code of conduct is fundamental to the moral upkeep of metaverse classrooms. Teachers should discuss etiquette as a virtual engagement from the start of the school year. Boundaries concerning avatars, language used, disagreement and disrespect, and violation reporting should all be included along with any other agreements that come up.

We must stress the point that these codes must never be static documents. With each new incident or with the development of new technologies, teachers need to revisit the codes. Enforcement mechanisms must be clear yet instructional. Students need to be helped to understand why certain behaviors are prohibited and how they can improve. Promoting accountability by peers, restorative dialogues, and ethical acting transforms the code from a punitive measure into a dynamic framework (Hussain, 2023).

Balancing Immersion with Well-Being

The most prominent feature, and most important hurdle of the metaverse, is its immersion capability, which can enhance deep learning and emotional experiences, but creates the risk of over-stimulation, burnout, or disconnection from the physical world. Younger students or those with heightened sensory sensitivities can find the virtual setting all-encompassing and overwhelming, which can affect their focus, mood, and overall mental well-being in the long run.

Providing virtual experiences requires, from an ethical perspective, that educators incorporate active pauses, grounding, and reflection to balance the energizing aspects of the immersion. Grounding strategies include effective time management, which dictates that virtual lessons be brief and take no more than 30 to 45 minutes for younger students, and include scheduled offline movement breaks. Lessons can be designed to include clearly defined entry and exit

points so that students are able to fully disengage and transition into the virtual metaverse space.

Collaborating with Stakeholders

Teaching in a metaverse environment brings forth new educational ethics that are fundamentally everyone's concern. Teachers can no longer operate in silos; they need to incorporate a wider web of stakeholders, including school managers, developers, parents, policy makers, and even learners. Without all these stakeholders working together, there is no guarantee that ethical practices are observed on every level of metaverse integration.

All teachers in a school setting need to work together with the school administrator and the IT unit in the selection of teaching platforms that are aligned with the institution's ideals as well as with the interests of the learners. Teachers can be a part of the consulting team that decides on the vetting of metaverse instruments and can raise issues on privacy, bias, and accessibility. They should be active in formulating policies for acceptable use, content moderation, and response to ethical breaches.

CASE STUDIES - ETHICAL APPLICATIONS IN PRACTICE

Having theoretical frameworks is one thing but putting them into practice is the most interesting part, especially when those frameworks are surrounded by ethical principles. The metaverse has proved to be an exciting topic of convergence for teachers, and these will evaluate the keys of creativity lies filled with drive backbone alongside ethics.

Case Study 1 - Virtual History Lessons

A teacher in a middle school classroom used Minecraft Education Edition to erect an ancient Egyptian pyramid. The students, in groups, explored chambers, deciphered hieroglyphs, and interacted with AI-generated actors of historical personages. The virtual field trip sought to spark curiosity, reinforce historical content, and promote collaborative learning, serving as a powerful tool (Han & Noh, 2021).

However, ethical issues were not ignored. To safeguard the privacy of students, the teacher made sure that all of the interactions were conducted in a closed, school-controlled environment, where all student avatars were masked and tracking options were turned off. Students entered the environment after agreeing to a contract, drafted together with the teacher,

that outlined expectations for civility, cultural respect, and no avatar harassment.

Case Study 2 - STEM Simulations

A high school chemical teacher executed a virtual lab simulation on the Mozilla Hubs platform which required the use of dangerous or expensive chemical reactions that could not be conducted in real life. The teacher had the students in class wear VR headsets, where they were able to manipulate equipment while observing the reactions to their actions in real time. The students were guided through the process using instructions provided by the teacher.

In consideration of their mental health, the teacher capped every simulation session at 45 minutes. The students were required to undergo a reflective discussion for the teacher to understand their thoughts regarding the simulation and what could be done to improve it. One of the students brought forward how they experienced eye strain, which prompted the teacher to redesign the lab towards less visual complexity and more desktop options.

FUTURE DIRECTIONS AND RESEARCH NEEDS

A research consideration is required towards the moral implications and educational capabilities as the metaverse integrates with the educational systems further. It is important to focus on some gaps that require empirical research, cross-disciplinary cooperation, and policy development.

In the short term they have gained the attention of educators, but the long-term effects studies focus on the psychological effects, especially regarding attention span, identity, and social development, has not been researched. There is a need for longitudinal studies, and short-term engagement immersion studies do show benefits.

Equally important is the ethical boundaries for content generated by AI for use in a metaverse classroom. With the use of AI tools determining how avatars are animated and lessons are presented along with student evaluation ai driven systems, there is need for immediate oversight to ensure equity, transparency, and accountability. Teachers, ethicists, and developers must establish policies that will control the use of AI in education.

CONCLUSION

The development of the metaverse as an educational platform represents an unprecedented

milestone in the integration of technology into education and raises new ethical considerations for the pedagogical paradigm. This digital space is filled with limitless possibilities, but equally requires new-age educators who are well-versed in the empathy, advocacy, and inclusivity necessary for avatar and virtual logic alongside a literal understanding of the world.

As teachers now have to assume the additional responsibilities of social-emotional learning and equity advocacy, their workload continues to deepen. They must be able to reason ethically with care and address privacy issues, the digital divide, governance, health surveillance, mental health, and bias as examples. By taking conscious steps to integrate digital literacy, inclusive design, codes of conduct, and collaborative governance, the educators are able to shift the metaverse from being an educational technology gimmick into a real, human-centered teaching and learning environment.

REFERENCES

- Dr. N. Kala. (2022). Revolutionizing Medical Education with Metaverse. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*, 26–32. <https://doi.org/10.32628/cseit22844>.
- Dunn, H. S. (2014). FERPA compliance in higher education. In *the 2014 Information Security Curriculum Development Conference*. ACM Press. <https://doi.org/10.1145/2670739.2670740>.
- Fawkes, A., & Burden, D. (2025). The Metaverse for Individual Training and Education. In *The Military Metaverse* (pp. 74–87). Chapman and Hall/CRC. <https://doi.org/10.1201/9781003457336-6>.
- Ghoulam, K., & Bouikhalene, B. (2024). Metaverse Applications in Education 4.0. *International Journal of Educational Innovation and Research*, 3(2), 183–195. <https://doi.org/10.31949/ijeir.v3i2.9733>.
- Han, S., & Noh, Y. (2021). Analyzing Higher Education Instructors' perception on Metaverse-based Education. *Journal of Digital Contents Society*, 22(11), 1793–1806. <https://doi.org/10.9728/dcs.2021.22.11.1793>.
- Hussain, S. (2023). Metaverse for education – Virtual or real? *Frontiers in Education*, 8. <https://doi.org/10.3389/feduc.2023.1177429>.
- Jiang, C., & Xu, J. (2022). The Application Research of Education Metaverse Under the Framework of SWOT Analysis. In *Metaverse – METAVERSE 2022* (pp. 55–67). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-23518-4_5.
- Kuhn, J. (2017). Minecraft: Education Edition. *CALICO Journal*, 35(2), 214–223. <https://doi.org/10.1558/cj.34600>.
- Li, X. (2022). Research on the Application and Risk Prevention of Metaverse in Vocational Education. In *Metaverse – METAVERSE 2022* (pp. 41–54). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-23518-4_4.

- Liu, X. (2022). The Application of the Metaverse in Ecological Education. In *Metaverse – METAVERSE 2022* (pp. 95–102). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-23518-4_8.
- Matusitz, J., & Dacas, J. (2024). Education in the Metaverse. In *Communication in the Metaverse* (pp. 115–138). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-63485-7_7.
- Mistretta, S. (2022). The Metaverse—An Alternative Education Space. *AI, Computer Science and Robotics Technology, 2022*, 1–23. <https://doi.org/10.5772/acrt.05>.
- Uzun, M. M. (2023). Metaverse Governance. In *Studies in Big Data* (pp. 231–244). Springer Nature Singapore. https://doi.org/10.1007/978-981-99-4641-9_16.
- Zhang, K. (2023). Metaverse Applications for Construction of Educational Digital Resources. In *Metaverse – METAVERSE 2023* (pp. 108–119). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-44754-9_9.