

# Cybergogy in the Age of The Metaverse: Opportunities and Challenges for Online Learning in Higher Education

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*"Pedagogy is the driver and technology is the accelerator"* - Michael Fullan.

In the age of the **metaverse**, technology in the classroom is now entering a completely new realm. An immersive, interactive and inclusive virtual space for online learning in higher education has arrived. In this article, we look at the opportunities and challenges presented for **cybergogy**.

## Cybergogy – what is it?

**Cybergogy** is an educational approach that aims to aid educators and students of all ages by promoting and enabling autonomous and collaborative learning in a digital setting. According to [Wang and Kang](#), and [Saeed](#), to achieve successful **cybergogy**, it is essential to combine pedagogy (the conventional method of instruction, in which the educator is the primary figure in the classroom, and the students are passive participants), andragogy (a teaching method that emphasizes the establishment of a cooperative and interactive learning environment in which students are active participants, and the educator acts as a facilitator), heutagogy (a step further, that emphasizes self-directed education, in which students assume responsibility for their own education and learning objectives), and peeragogy (a collaborative method of education that encourages students to collaborate and create new knowledge), with an in-depth understanding of technology to create engaging and effective learning experiences.

In higher education, incorporating [pedagogy](#), [andragogy](#), [heutagogy](#), and peeragogy in a **cybergogy** strategy allows educators to create a personalised and adaptable learning environment that is better suited to the needs and preferences of each student. **Cybergogy** uses technology by providing simulations, online discussions, and multimedia-rich materials that can make teaching and learning more interesting and interactive in virtual environments. Therefore, **cybergogy** is a powerful teaching and learning practice that combines traditional and modern teaching methods and technology to create a more engaging, personalised, and effective learning experience, particularly in a virtual environment.

## Opportunities for cybergogy in the age of the metaverse

The **metaverse** is a virtual world where individuals can engage in immersive forms of interaction with each other and with digital objects. The **metaverse** is still in its early stages of development but is

progressing rapidly. The [interest](#) in exploring its potential applications in various industries, including [higher education](#), is on the rise and is expected to continue to grow.

One potential use of the **metaverse** in higher education is to enhance the accessibility of educational resources. For instance, virtual libraries created within the **metaverse** allow students access to a vast array of digital resources and exhibits. The **metaverse** could also be used to develop [immersive and interactive](#) educational programs for students, including working professionals in various fields such as business, engineering, medicine, and law.

### ***Interactivity***

The **metaverse** is a powerful space that educators can use to engage students and encourage interactive learning through cutting-edge technologies. [Research](#) has shown that the majority of learners require visual aids to fully comprehend information, and the human brain processes pictures, videos and animation faster than text, making visual learning significantly more effective. With the advanced technology presented in the age of the **metaverse**, educators can now design learning activities and assessments that reflect real-world situations and contexts, such as 3D modelling and simulations to demonstrate complex concepts and theories or virtual laboratories and experiments for students to participate in.

In addition to traditional forms of online instruction, such as discussion boards, interactive assignments like quizzes, polls, and surveys, the **metaverse** will provide opportunities for new forms of interactive online instruction to be developed. For example, Artificial Intelligence (AI) and Augmented Reality (AR) will provide opportunities to foster interactivity between students and educators, as well as evaluate students' levels of comprehension of the subject matter covered in the course. Students will be able to work at their own pace, receive immediate feedback and check the progress of their performance.

### ***Inclusivity***

The **metaverse** has also created opportunities for learners who otherwise might face physical, financial, or other [barriers](#) to attend traditional classes. For instance, educators can use digital tools to ensure that students with disabilities, such as hearing, visual, or mobility impairments, have access to all course materials, videos, and online platforms. Furthermore, in the future, the metaverse is expected to transform current higher education learning management systems, such as OpenEdx, Skyprep, Moodle, Blackboard, Canvas and others. Educators would be able to deliver programs through more [self-guided approaches](#) supported by robust AI and AR frameworks of assistance to the [widest possible group](#) of students.

However, while many learners are digital natives, some learners may continue to face barriers to accessing technology due to their physical or financial circumstances. To promote diversity and accessibility in remote classrooms, educators will be using more smart applications, including mobile devices. These applications (apps) will be designed to cater to the needs of learners who may be unable

to access traditional computer systems. By leveraging these app technologies, educators will be providing an inclusive and equitable learning environment that accommodates the unique needs of all learners.

## Challenges

**Cybergogy** in the age of the **metaverse** offers many exciting opportunities for education, but also presents some **unique** challenges that need to be **addressed** to ensure effective teaching. First, not everyone has access to the technology and apparatus required to partake in the **metaverse**. This could create a digital gap and restrict **cybergogy's** reach to certain groups of individuals. Next, the **metaverse** is a complex digital environment that is susceptible to technical problems such as lag, bugs, and failures.

Developing a sense of community and social interaction is the third difficulty of **cybergogy**, which could continue in the age of the **metaverse**. Interaction through a virtual environment that allows students to feel emotionally connected to their peers and educators could remain challenging. Meanwhile, the learning curve may pose enormous obstacles. Students may require additional time and assistance to acclimatise to the virtual learning environment and methods.

Finally, the **metaverse** could pose privacy and security concerns. Educators and students could potentially face greater hazards and be exposed more to cyber risks such as malicious software, hacking, ransomware and denial of service attacks.

## Conclusion

Without a doubt, **cybergogy** in the age of the **metaverse** offers substantial immersive, interactive and inclusive opportunities for the continued development of online learning in higher education. Despite some challenges to think through, including access and also security and technical issues, it will be exciting to see how the metaverse will be incorporated into cybergogy.

*How is the metaverse being incorporated into cybergogy in your institution?*



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