

environment. The Metaverse also provides a wealth of options for experiential learning [37].

Digital learning

When smart classes were added to school education curricula, they enhanced students' learning with video projection on various subject topics. The metaverse aims to make these classrooms a notch smarter by allowing students to fully immerse themselves in such videos, helping them experience all the content more closely [38]. Moreover, it provides a space for them to experiment, fail and learn from their failures in subjects that require practical experiments. Even physical classes can use such 3D virtual learning to achieve desired learning outcomes.

Practical Learning

It is possible to combine or exchange ideas from various fields to better understand them with Metaverse. For instance, computer science, mathematical formulas, and many other topics can better support physics concepts, resulting in more comprehensive learning [39].

Virtual campus activities

Students can participate in various events and activities like competitions, sports, educational groups, and much more, like attending courses with other students in a virtual setting. Students can make It gives the impression of being physically present on campus and actively participating in events [40].

Virtual Guidance

In the physical education system, learners faced difficulties with the absence of a trainer, and metaverse solved the guidance absence problem. Using meta-avatar, Virtual Reality (VR) and Augmented Reality (AR) instructors can instruct the learner on time in Metaverse education [41]. Education is no stranger to this new reality and the potential for teachers and students is unlimited.

Interdisciplinary learning

The metaverse has the potential to solve subject barriers and encourage interdisciplinary study. In the metaverse, the

learner can learn interdisciplinary subjects and topics from their subject-wise instructors like the physical education system [42]. Also, interdisciplinary corporate departments can do their real-time pieces of training and meetings with clients or employees.

Bringing awareness

Metaverse can increase learners' awareness, by making various types of instant announcements, video content, and a documentary on any topic within a short time and it is also possible to reach the learner within a short period. In that case, guidance will approach awareness to contain [43]. Students will not just take-home theoretical awareness knowledge.

Virtual Educational tours

In the metaverse educational world, students can take necessary short tours from other classrooms with permission. The metaverse aids in students' expanding their horizons and widening their worldviews by enabling them to visit any location of their choice in a virtual setting within minutes [44].

Events, and people

In the virtual environment of the metaverse, educators might invite well-known individuals or sources of wisdom and information to speak to students about their diverse life experiences [45]. They can go to interesting lectures, conferences, and symposiums. They can also hold festivals and other types of events to assist them to renew their brains.

Virtual Punishment

To avoid unexpected behavior and violence from the students, teachers can make rules as an unwritten regular punishment on metaverse like- addressing discipline issues fast, putting distractions away, treating the avatar like more than a person, making a dress code (Avatar dress code), add visual cues to lessons, decide on signals, hold class wherever teacher can hold students' attention, and create a question parking lot [46].

C. The framework of the metaverse in education

How metaverse distinguishes a physical education system

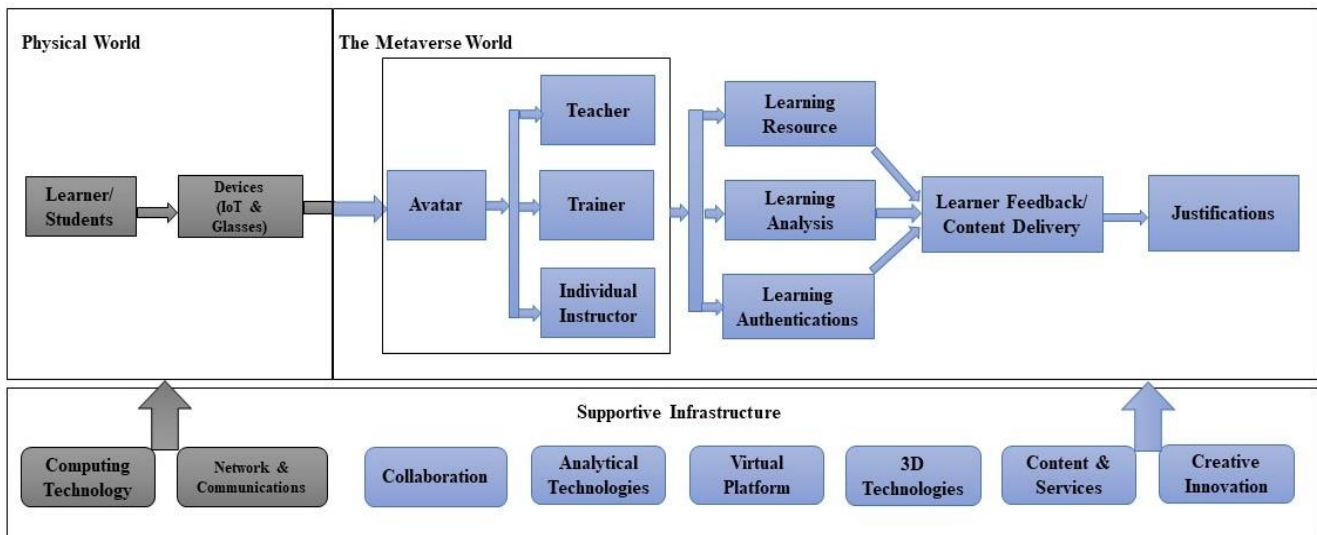


Fig. 8. The Metaverse educational framework