

# Trends in Educational Technology



## Assistive Technology (AT) for the classroom

Mobile and AT devices are tools to implement equity for all students and create functional skills between the user and digital interaction (Al-Rashaida et al., 2022). Through the environments or experiences, the tasks evoke the need to match individual abilities, disabilities, conditions, and motivation for personal learning success (Estes et al., 2020). Extended, virtual, augmented, or mixed realities (Alnagrat et al., 2022) represent behavioral (Zhang & Song, 2022) and engaging opportunities for all levels and learning paces (Estes et al., 2020). Finally, sensory cues and inputs form the relationship between immersion, social, and sustainable performances (Zhang & Song, 2022; Munshi, 2022).



## Contemporary and Rising AT and Trends

### Human Processing and Decision-making

Robotic systems can understand and assess students' needs and provide support (Chen et al., 2023). Programming applications are seen in robots, artificial intelligence (AI) software, chatbots, and mobile game-based learning. IdiomsTube.com helps teach English using YouTube videos (Lin, 2022). They provide a system of adding language-learning tasks and vocabulary building. This website uses the first of its kind in computer-assisted language programming and instruction. In addition, the site replaces learning English from television.



### AT Interfacing

Embedded sensory operations and real-time interfaces can delete gaps in learning (Shen & Sun, 2022). Technology improves aptitude in a variety of unique applications such as the Nintendo Wii Controller helps ADHD control movement behavior (Shih et al., 2014), effective drawing computer design for industry training (Hsu, 2022), facial recognition for verification and learning eye and emotional signals to aid comprehensiveness (Shen & Sun, 2022), and avatar and AT voice assistance (Pelletier et al., 2021).



### Humanizing Online Teaching

Collaboration learning bridges a variety of perspectives, knowledge, and cooperation. Human-friendly online environments bring well-being (Chen et al., 2023). Online formats create a classroom of digital solitude. Humanizing touches include Blackboard, Zoom, break-out rooms, Chatbot, and any instant feedback and interaction that keeps students engaged (Mendoza et al., 2022; Pelletier et al., 2021).



## Human Processing and Decision-making



#### Advantage:

As with any interactive AI software, robot, gaming, or instructional formats, the learner controls time, information, environment, and engagement (Chen et al., 2023; Lin, 2022). This AT is a constant co-learning between digital and human feedback loops.

#### Disadvantage:

Because AI and devices are continuously developing, mechanical, physical, and data feedback may not work effectively or need fine adjustments to the program. To identify human behaviors and performance, feedback still needs the teacher's input for supervision and support (Chen et al., 2023; Lin, 2022).

## AT Interfacing

Using AT, digital, voice-assisted, facial recognition, touch screen, and drawing devices aid in physical and mental development for all (Shih et al., 2014; Hsu, 2022; Shen & Sun, 2022). Any device or forum that keeps the learner engaged and progressing is the key to implementing these tools with traditional learning.

Programming can always be modified or developed more effectively and detailed. Future 2D programs could be designed for 3D experiences. More personalized equipment that is smaller, cheaper, and better suited is invariably the goal. The challenge is making more real-time experiences accessible and available. Facial recognition is still in the developmental stages in the classroom (Shih et al., 2014; Hsu, 2022; Shen & Sun, 2022).



#### Advantage:

#### Disadvantage:

## Humanizing Online Teaching



#### Advantage:

Students prefer the face-to-face experience. Online instruction is an instrument for learner-center activities, time, and organizational management, and aids the teacher in meeting individual needs more effectively. With mixed realities, everyone can show and express their perceptions (Chen et al., 2023; Mendoza et al., 2022; Pelletier et al., 2021; Hughes & Roblyer, 2023).

#### Disadvantage:

Unfortunately, technology still has a long way to go to provide access, equity, and affordability for all. AT still needs to represent all tasks and disabilities which need to be yet designed (Chen et al., 2023; Mendoza et al., 2022; Pelletier et al., 2021; Hughes & Roblyer, 2023).

All References can be seen on my blog site

<https://www.nadinesdoctoratejourney.com/blog/week-7-infograph>

