Assistive Technology

ASSISTIVE TECHNOLOGY IS TRANSFORMING EDUCATION BY ENHANCING ACCESSIBILITY, PERSONALIZED LEARNING, AND INCLUSIVITY, EMPOWERING STUDENTS WITH DIVERSE NEEDS TO ENGAGE MORE EFFECTIVELY IN LEARNING EXPERIENCES.

ASSISTIVE TECHNOLOGY USES

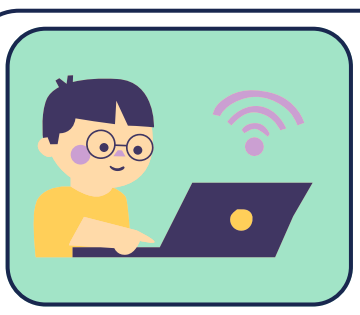
Assistive technology refers to any device, software, or equipment designed to help individuals with disabilities perform tasks that might otherwise be difficult or impossible, enhancing their ability to learn, communicate, and interact with their environment.

Learning Disabilities

Visual Impairments

Hearing Impairments

ASSISTIVE TECHNOLOGY TOOLS



LEXIA

This adaptive learning software adjusts the level of difficulty based on the learner's performance, ensuring that each student progresses at their own pace while receiving the right amount of challenge.

NVDA

This tool reads text aloud and enables students to interact with digital content, which reduces the cognitive load and allows learners to focus on understanding the material rather than struggling with reading challenges.

FM SYSTEMS

These systems transmit the teacher's voice directly to a student's hearing aid or headphones, ensuring clarity even in noisy classroom environments.

Tool	Advantages	Challenges
Lexia	✅ Personalized Learning – It adapts to each student's reading level and pace, providing targeted practice and support to build foundational skills effectively (Pane et al., 2023).	❌ Limited Engagement for Older Students – The game-like format and visuals are often better suited for younger learners, which can make it feel childish or unengaging for older or more advanced students.
NVDA	✅ Free and Open Source – NVDA is completely free to use, making it accessible to individuals and organizations who can't afford commercial screen readers (Ali, 2023).	❌ Limited Support for compared to paid options.
FM Systems	✅ Improved Speech Clarity in Noisy Environments – FM systems transmit the speaker's voice directly to the listener's hearing aid or receiver, reducing background noise and enhancing speech understanding (Karen & Karen, 2021).	❌ Dependence on Equipment and Setup – FM systems require both the speaker and listener to use specific devices correctly, and technical issues or improper setup can disrupt communication.

REFERENCES

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