

# Al and Accessibility: The Why, What, & How

By AEM Center at CAST

Published: June 1, 2024

The contents of this website were developed under a cooperative agreement with the US Department of Education, #H327Z190004. However, those contents do not necessarily represent the policy of the US Department of Education and you should not assume endorsement by the Federal Government. Project Officer, Rebecca Sheffield, Ph.D.



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International license. http://creativecommons.org/licenses/by-sa/4.0/



National Center on Accessible Educational Materials (2024). Al and Accessibility: The Why, What, & How. Wakefield, MA: National Center on Accessible Educational Materials.

## Al and Accessibility: The Why, What, & How

Artificial intelligence (AI) refers to the development of computer systems capable of performing tasks that typically require human intelligence. Al technologies can promote inclusivity and accessibility for disabled individuals by addressing significant challenges in mobility, communication, and public services access, such as:

- Physical disabilities that limit travel options.
- Speech difficulties that hinder real-time conversations.
- Intellectual disabilities that make navigating medical appointments, safety information, and education particularly challenging.
- Learning disabilities that make it difficult to access school curriculum and express knowledge.

#### Al Applications & Possibilities

Al has already improved accessibility through facial recognition, voice dictation, electronic speech-to-text, and smart home technologies. These advancements aid those with various disabilities, from dexterity issues to hearing challenges.

Emerging AI technologies, like self-driving cars and <u>AI-assisted wheelchairs</u>, promise greater mobility for those with physical limitations. Advanced augmentative and alternative communication (AAC) systems, like <u>Voiceitt</u> and <u>OTTAA Project</u>, are improving speech translation and symbol-based communication, foreseeing a future of more efficient conversational participation for AAC users.

#### **Generative Al**

The rise of large language models (LLMs) like ChatGPT marks a leap in generative AI. These tools, trained on vast online data, offer human-like interactions but require cautious information validation. Using generative AI, especially in accessibility, opens new avenues for exploration and application.

### **Getting Started**

Google updated Bard to use its Gemini LLM and has changed the name from Bard Chat to Gemini. It has a similar capability to ChatGPT 4.0 but doesn't require a paid subscription. If you have a Google account, log in to Gemini to use it.

Start by asking questions on content areas you are knowledgeable about. Consider its applications in accessibility. For example, using any of the major gen Al sites, you could quickly make multiple versions of one of your worksheets at different Lexile or grade reading levels. Use the prompt: "Please rewrite this text at this (Lexile level or grade level)" and paste your text into the message window. Please be sensitive to copyright and only do this with content that you created or have the rights to.