

## Leveraging Technology to Promote Adult Learning

# ChatGPT: Leveraging AI to Support Personalized Teaching and Learning

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### *About This New Column*

Some adult learners are self-directed, but most benefit from ongoing guidance and support from educators—even more so in technology-rich environments. The purpose of this column is to explore ways to leverage digital tools to enhance collaborative learning experiences among adult educators and learners. Rather than aim for mastery of a digital tool before use, educators are encouraged to consider learning new technologies alongside their students, modeling the reality of ongoing skill development as our way of life.

## ChatGPT

ChatGPT, a chatbot powered by artificial intelligence (AI), is generating a pointed debate in education and beyond. ChatGPT is an online tool that creates human-like written responses to any prompt imaginable. Since its launch by OpenAI in late 2022, several of the country's largest K-12 school districts have banned the site with concerns that students could use ChatGPT to cheat or plagiarize essay responses (Jimenez, 2023). While some educators view ChatGPT as a platform for perpetuating misinformation and biases inherent to AI systems, others see opportunities to improve teaching, learning, and professional practice (Atlas, 2023). In adult learning contexts, AI has the potential to automate administrative tasks, providing more time for educators to create more participatory, data-driven, learning experiences (Goodell & Kolodner, 2023).

Educators across learning contexts are considering the implications of using generative artificial

intelligence technology, such as higher education (Rudolph et al. 2023), academia and libraries (Lund & Wang, 2023), journalism and media education (Pavlik et al. 2023), and medical education, including clinical decision-making (Kung et al. 2023). ChatGPT can be used to generate emails and reports as well as to simulate real-life scenarios for training and practice (Atlas, 2023). While ChatGPT cannot replace a teacher, it can help maximize their limited time by automating assessment development, grading, and selection of learning materials (Zhai, 2023). As Barr et al. (2023) make clear in the emerging body of work related to learning engineering, for feedback to be most effective, “it must be frequent, fast, and rich” (p. 140). Technology can improve our capacity to assess, respond, and meet learners' needs in real time. ChatGPT creates an opportunity to learn about and experiment with emerging AI technologies, and to understand their limitations, in and outside of the learning experience.

## What Is ChatGPT?

ChatGPT is a chatbot powered by AI developed by OpenAI, an AI research and deployment company. The app is designed to sound conversational and generate written responses to typed prompts. The language model is based on a kind of machine learning that allows it to process information from a diverse range of texts, from online articles to spoken conversations. It can be used for a variety of natural language processing tasks, including language translation, text creation, and summarization.

ChatGPT is a large language model (LLM). Applied linguists may be familiar with a related concept known as corpora, which helps linguists, researchers, and educators develop authentic guidance and resources, such as dictionaries and curricula, based on how language is really used (Thornbury, 2006). In a similar way, ChatGPT draws from massive amounts of existing texts but with the added layer of machine learning. Just as corpora has proven itself to be very impactful in language instruction, ChatGPT can have a similar impact on language learning and literacy-building. The research preview of ChatGPT is free to use and encourages users to provide feedback on the generated responses. The platform outlines high-level examples, capabilities, and frequently asked questions as well as limitations for its use.

## Limitations of ChatGPT

The main limitation of ChatGPT is that it is only as good as the data it's trained on (Stephen, 2023). In some cases, responses may be off topic or nonsensical (Majumder, 2022). Moreover, limited or incomplete datasets can result in the producing and sharing of misleading, offensive, or biased content. The data for ChatGPT is believed

to include most or all of Wikipedia, pages in Reddit, and a billion words from the internet, most of which was produced by wealthy, White men (Weil, 2023). While there is some effort to filter obscene content, the internet is replete with content that perpetuates racism, sexism, homophobia, White supremacy, and neo-Nazism. Still the model learns from its users. If adult educators and learners are not using the tool, they are in essence not contributing to its development and improvement either.

Several concerns have been raised related to individual data privacy and security. OpenAI offers no procedures for individuals to check whether ChatGPT stores their personal information or a way to delete it (Gal, 2023). Another limitation is the literacy level needed to access content which tends to generate text at a level equivalent to that of a highly educated speaker. It is important to note, however, that educators can request for information to be generated in plain language, at a specific grade level, or even for English learners.

## Opportunities to Strengthen Adult Learning Through ChatGPT

ChatGPT presents a unique opportunity for adult educators to explore AI as a mechanism for skill-building across multiple literacies. Research shows that information literacy, the skills and abilities to navigate and find information online that is accurate and verified (American Library Association, n.d.), is significantly associated with the ability to identify fake news (Jones-Jang et al., 2021). While banning AI technology for a time might mitigate the risks of spreading misinformation, an arguably more dire risk is the missed opportunity to introduce AI tools in an educational environment and facilitate critical

conversations around their use and credibility. Rather than block access to AI technology, which may generate false and biased information, educators should use it to support adult learners in developing the literacy skills and digital resilience needed to find, interpret, and make meaning (World Education, 2022).

ChatGPT provides ample opportunities for experiential learning, where learners participate in concrete experiences, reflect on their knowledge, and connect ideas to existing knowledge (Digital Promise, n.d.). See below for six examples of how ChatGPT can be leveraged to support adult learning.

### Create Activities to Support Learner Variability

Within a single lesson, teachers might be simultaneously teaching grammar, writing skills, workforce skills, and more! Different learners might need different practice opportunities, depending on their proficiency in various skill areas. Learners can be divided into groups or work individually to prompt ChatGPT for the kind of practice they need. For example:

- **Grammar Group** - Ask ChatGPT for 10 sentences with an object in each sentence. Work together to change the objects to object pronouns. In the same thread, ask ChatGPT to rewrite those sentences with object pronouns to check work.
- **Writing Group** - Brainstorm workplace problems that learners might share with their supervisor in a memo, along with some recommended solutions. Ask ChatGPT to write a memo with that content, and then use the rubric (provided by the teacher) to grade ChatGPT's work.
- **Work Skills** - Ask ChatGPT to produce step-by-step instructions for a typical workforce

process, like clocking in. Then, work together to write five follow-up questions that you would ask on your first day of training. Ask ChatGPT your questions. Repeat with another typical workplace process.

### Debate

Instead of a debate between classmates, learners can debate the chatbot on a topic relevant to the subject area. Learners can ask ChatGPT an open-ended question like, "Is artificial intelligence good for society?" or "Does the United States have a secure and fair voting system?" The AI-powered piece becomes a central point of discussion to build subject-area knowledge and critical thinking skills. Keep in mind that ChatGPT is programmed not to give opinions or beliefs but it will draw from its dataset to produce information and common perspectives.

### Develop Critical Thinking Skills

ChatGPT itself is good fodder for critical thinking. It's a simple, tangible tool powered by a complex, controversial technology. In addition to any academic activity that you use ChatGPT for, you could engage learners in critical thinking on the topic of using AI-powered tools in general. Having learners make predictions about the impact of AI on various societal systems or using a *Six Thinking Hats* activity are two ways to facilitate this learning (Kivunja, 2015).

### Fact Check the Bot

Because ChatGPT is manipulating language from existing datasets (and not necessarily citing facts), the output is not always accurate or verified. To assist learners in developing information literacy, it's important to have a conversation about this drawback in the many contexts in which misinformation is spread. Learners can practice fact checking by asking ChatGPT to

share information on a specific topic and then going through the process of distinguishing facts from opinions in the text, searching for credible sources that will either confirm or dispute the facts presented, and rewriting the passage with accurate information.

### **Produce Examples**

As a teaching tool, ChatGPT can be used to produce examples of a target language output. A teacher can prompt ChatGPT with the same parameters that they are giving in an assignment to learners and the chatbot will give them a sample for learners to follow. ChatGPT can even write texts in a certain tone or style. To develop workforce readiness skills and digital literacy, have ChatGPT write an email to a supervisor both in a formal and informal tone for learners to compare.

### **Promote Contextualized Vocabulary Development and Use**

ChatGPT can develop endless amounts of text to be analyzed. Learners could identify key vocabulary or look for parts of speech in sentences from an informative essay that ChatGPT writes. For English learners, ChatGPT can also be used to explain idioms or phrases, such as “this is a high bar to clear.” When using ChatGPT to develop language skills in the classroom, consider how you might also foster learner agency. Pair all of the preceding activities with a conversation about ChatGPT so that learners know what the tool is, its benefits and drawbacks, and how they can use it independently to continue learning and practicing their language skills.

## **Conclusion**

Leveraging AI technology to increase learner support could be particularly impactful in adult education, where 78% of educators funded under the federal Workforce Innovation and Opportunity Act are employed part-time (Bergson-Shilcock, 2020). For example, the National AI Institute for Adult Learning and Education (AI-ALOE) is exploring the use of AI-powered virtual teaching assistants to answer basic questions for learners in adult and continuing education. Their research-based approach uses data-driven feedback loops to improve the ability to provide personalized support. AI-ALOE also works to mitigate risks of AI, such as privacy, security, and bias, by including adult educators and learners in the design and improvement of AI technologies (Ruiz, 2022).

As adult educators, our role is to work alongside adult learners, assisting them in the development of the multiple literacies that they need to succeed in work, education, and life. ChatGPT is useful in many aspects of this goal including as an instructional design tool for teachers, a learning tool that assists in the development of academic and cognitive skills, and a tangible application of AI technology. When we incorporate these tools into instruction, we extend learning beyond a single academic focus and into a deeper understanding of the advances in technology and its impacts. Undoubtedly ChatGPT and other AI-powered tools will continue to develop and permeate systems that impact adult educators and learners. Introducing AI to the classroom—both as a learning tool and as a topic of discussion—sooner rather than later is one way to keep pace with the rapidly changing landscape of technology.

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