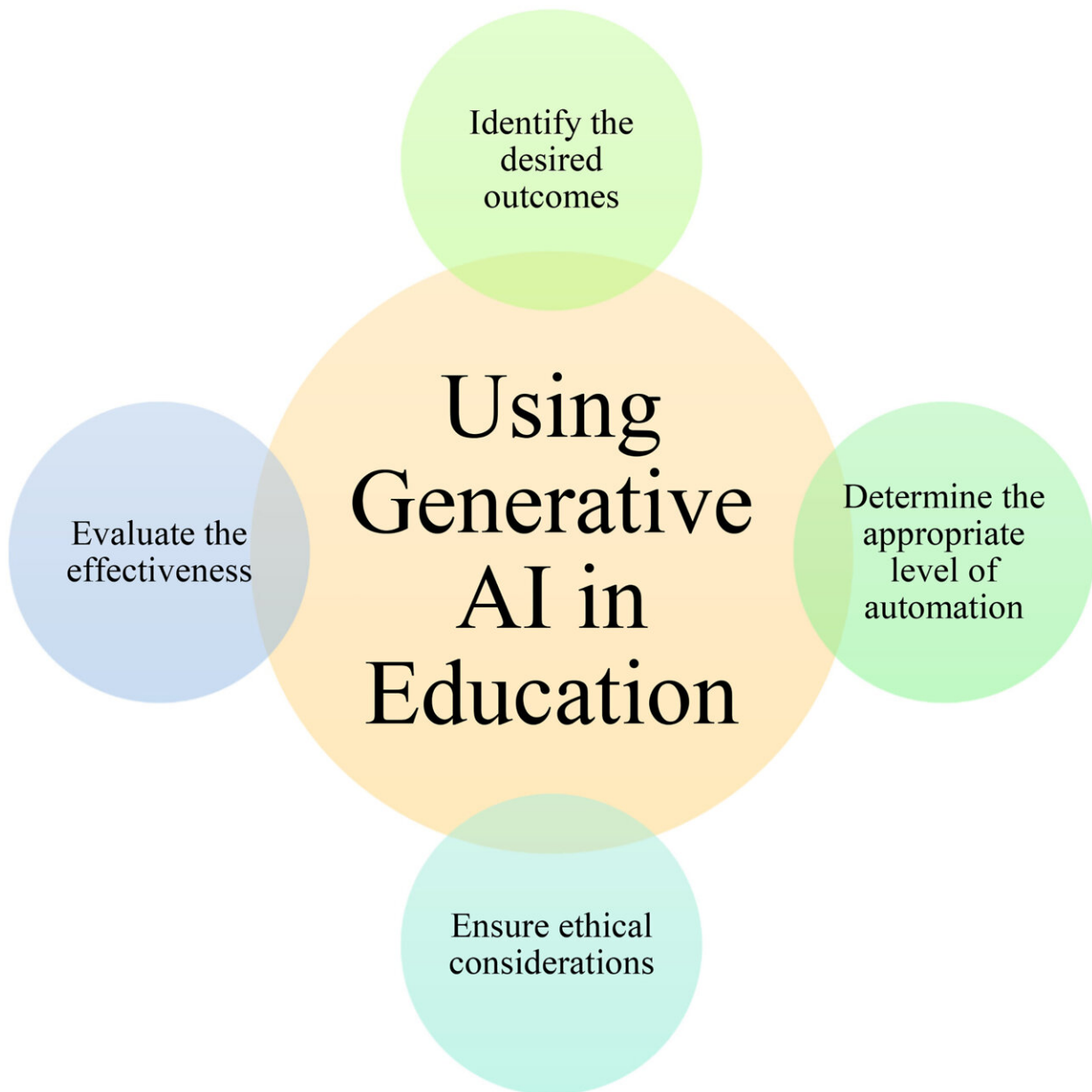


ChatGPT as 'educative artificial intelligence'

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Theoretical framework for using generative AI in education. Note. Permission is

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With the advent of artificial intelligence (AI), several aspects of our lives have become more efficient and easier to navigate. One of the latest AI-based technologies is a user-friendly chatbot—ChatGPT, which is growing in popularity owing to its many applications, including in the field of education.

ChatGPT uses algorithms to generate text similar to that generated by a human, within seconds. With its correct and responsible use, it could be used to answer questions, source information, write essays, summarize documents, compose code, and much more. By extension, ChatGPT could transform education drastically by creating virtual tutors, providing personalized learning, and enhancing AI literacy among teachers and students.

However, ChatGPT or any AI-based technology capable of creating content in education, must be approached with caution.

Recently, a research team including Dr. Weipeng Yang, Assistant Professor at the Education University of Hong Kong, and Ms. Jiahong Su from the University of Hong Kong, proposed a [theoretical framework](#) known as 'IDEE' for guiding AI use in education (also referred to as 'educative AI').

In their study, which was published in the *ECNU Review of Education* on April 19, 2023, the team also identified the benefits and challenges of using educative AI and provided recommendations for future educative AI research and policies. Dr. Yang remarks, "We developed the IDEE framework to guide the integration of generative artificial intelligence into educational activities. Our practical examples show how educative AI can be used to improve teaching and learning processes."

The IDEE framework for educative AI includes a four-step process. 'I' stands for identifying the desired outcomes and objectives, 'D' stands for determining the appropriate level of automation, the first 'E' stands for ensuring that ethical considerations are met, and the second 'E' stands for evaluating the effectiveness of the application. For instance, the researchers tested the IDEE framework for using ChatGPT as a virtual coach for early childhood teachers by providing quick responses to teachers during classroom observations.

They found that ChatGPT can provide a more personalized and interactive learning experience for students that is tailored to their individual needs. It can also improve teaching models, assessment systems, and make education more enjoyable. Furthermore, it can help save teachers' time and energy by providing answers to students' questions, encourage teachers to reflect more on educational content, and provide useful teaching suggestions.

Notably, mainstream ChatGPT use for educational purposes raises many concerns including issues of costs, ethics, and safety. Real-world applications of ChatGPT require significant investments with respect to hardware, software, maintenance, and support, which may not be affordable for many educational institutions.

In fact, the unregulated use of ChatGPT could lead students to access inaccurate or dangerous information. ChatGPT could also be wrongfully

used to collect sensitive information about students without their knowledge or consent. Unfortunately, AI models are only as good as the data used to train them. Hence, low quality data that is not representative of all student cohorts can generate erroneous, unreliable, and discriminatory AI responses.

Since ChatGPT and other educative AI are still emerging technologies, understanding their effectiveness in education warrants further research. Accordingly, the researchers offer recommendations for future opportunities related to educative AI. There is a dire need for more contextual research on using AI under different educational settings. Secondly, there should be an in-depth exploration of the ethical and social implications of educative AI.

Thirdly, the integration of AI into educational practices must involve teachers who are regularly trained in the use of generative AI. Finally, there should be policies and regulations for monitoring the use of educative AI to ensure responsible, unbiased, and equal technological access for all students.

Dr. Yang says, "While we acknowledge the benefits of educative AI, we also recognize the limitations and existing gaps in this field. We hope that our framework can stimulate more interest and [empirical research](#) to fill these gaps and promote widespread application of AI in [education](#)."

More information: Jiahong Su (???) et al, Unlocking the Power of ChatGPT: A Framework for Applying Generative AI in Education, *ECNU Review of Education* (2023). [DOI: 10.1177/20965311231168423](https://doi.org/10.1177/20965311231168423)

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