Discussion of Artificial Intelligence (AI) and NAEP Ethical Use Policy Considerations

Goal

The purpose of the November session is to gather input from the full Governing Board to inform the crafting of draft policy for the ethical and responsible use of artificial intelligence (AI) for the National Assessment of Educational Progress (NAEP) program. Board action on the policy guidance is expected in March 2025. The purpose of the policy is to acknowledge the Board's attention to the potential impacts of AI on the program, acknowledge the federal laws and regulations that will govern the use of AI in the program, articulate the Board's view of the responsible and ethical use of AI in the context of NAEP, and commit to the Board's responsible and ethical use of AI in carrying out its responsibility to maintain and enhance the relevance, quality, and utility of NAEP.

To prepare for this discussion, we recommend reviewing the draft policy considerations included following this document, and to consider the following questions:

1. Do you agree with the policy considerations included, how they are organized, and how they are defined?
2. Keeping in mind the governing structure of NAEP (with Board responsible for policy and NCES responsible for operations)[1], do you agree with the level of detail provided?
3. Are there any considerations that are missing yet important to guide the responsible and ethical use of generative AI in NAEP?
4. What additional information would the Board need to provide substantive feedback and direction to allow revision and action on this policy?

Overview

The National Assessment Governing Board convened an Ad Hoc Committee on Generative Artificial Intelligence (AI) in May of 2024. One of the key tasks for this committee is to offer recommendations to the Board on policy guidelines for the use of generative AI within the NAEP program to protect privacy and intellectual property, safeguard against bias, and promote ethical use of AI technologies. This policy is intended to be broad and applicable across NAEP processes; individual Board committees will address specific AI uses within existing policy over time, as needed.

The committee convened in late September of 2024 to offer recommendations on an initial set of considerations to include in Board policy. Seven of the ten Board Ad Hoc committee members, the Commissioner of NCES as ex-officio member, and the Associate Commissioner of NCES participated and offered feedback. Draft policy was

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[1] Please refer to the Legislative Roles and Responsibilities Analysis produced in May 2024 for more details.

also reviewed by NCE staff and external AI experts Rebecca Finlay of Partnership on AI and Alina von Davier of Duolingo. Feedback was incorporated and discussed with Ad Hoc Committee on Generative AI leadership before finalizing the draft for full Board review.

At this November meeting, Ad Hoc Committee Chair Ron Reynolds will facilitate a discussion to gather Board input to inform crafting of policy in preparation for Board action in March of 2025.

Background Information

Traditional AI and Generative AI

We suggest use of the definition of artificial intelligence as defined by the U.S. Department of Education, Office of Educational Technology (2024), which is consistent with the White House Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence:

> The term "artificial intelligence" means a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments.

Further, the Executive Order defines generative AI as:

> The class of AI models that emulate the structure and characteristics of input data in order to generate derived synthetic content. This can include images, videos, audio, text, and other digital content.

The intent of the Board policy is to focus on uses of generative AI, which is the focus of many recent technological advances (e.g., chatbots); though these considerations are also relevant for novel uses of traditional AI that involve significant changes to the program. To help define the types further, AI can include simple models, sometimes referred to as traditional AI, designed for specific purposes to make a prediction based on available data. These models follow exact rules and instructions created by human programmers (Nguyen, 2024). For example, the autocomplete function in an email program can be considered traditional AI that has been used prior to the recent AI boom (Zewe, 2023). Generative AI is a subset of AI that has seen rapid development in recent years. Generative AI involves systems trained on much larger datasets designed to create new and original content through learning of patterns and structures (Nguyen, 2024). Zewe (2023) notes that distinctions blur between generative AI and other types, and therefore distinguishes generative AI as a "machine-learning model that is trained to create new data, rather than making a prediction about a specific dataset."

In conducting its responsibility to update NAEP assessment frameworks, the Board acknowledged the impact of generative AI in its recent decision to delay updating the NAEP Writing Assessment Framework until AI's impact was clearer. It will continue to

take into account AI's impact on maintaining relevant assessment content and its other responsibilities.

As it has to date, the Board will also continue to engage with NCES to provide input as needed and stay abreast of its exploration of both traditional and generative AI tools for NAEP. Examples of use cases that NCES has already begun to explore include:

- Use of traditional AI for the automated scoring of constructed-response items for NAEP Reading and Mathematics.
- Use of generative AI for the development of a chatbot that would provide responses to questions posed by users through a search of publicly available NAEP data and documentation.
- Use of generative AI for assistance in identifying relevant passages or item themes to include on NAEP assessments.

Guiding Resources

In its exploration of AI, NCES coordinates with the Department of Education and other federal agencies to ensure its AI operations for the NAEP program are consistent with federal law, regulations, and guidance regarding ethical and responsible use of AI technologies. Guiding documents encourage government agencies to explore the use of AI to increase efficiencies, while being cognizant of limitations and risks. As the Board explores the impact of AI on conducting its responsibilities, as well as collaborating with NCES to provide input on their responsibilities, Board staff will keep current with relevant laws and regulations, and will engage with the Department of Education's designated Chief AI Officer, to ensure its compliance with federal and Department guidance.

It should also be noted that NCES, as part of the U.S. Department of Education and a federal statistical agency, must also follow Department and OMB requirements (including the recently released Trust Regulations to strengthen the U.S. federal statistical system's ability to produce accurate, objective and trustworthy information) in its statistical activities.

Federal Guidance:
[Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence | The White House](#)

Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence [| The White House](#)

[OMB Guidance Information](#)

Department of Education:
Website: [Artificial Intelligence - Office of Educational Technology](#)

[U.S. Department of Education Artificial Intelligence Guidance](#)

Reports:
[Designing for Education with Artificial Intelligence: An Essential Guide for Developers](#)

[Artificial Intelligence and the Future of Teaching and Learning (ed.gov)](#)

References

Nguyen, T. (accessed 2024, September 17). *Traditional AI vs Generative AI: Breaking Down the Basics.* Neurond. Da Nang City, Vietnam.

U.S. Department of Education, Office of Educational Technology. (2024). *Designing for Education with Artificial Intelligence: An Essential Guide for Developers*. Washington, D.C.

Zewe, A. (2023, November 9). *Explained: Generative AI*. MIT News | Massachusetts Institute of Technology. https://news.mit.edu/2023/explained-generative-ai-1109