ets research institute

HIGHLIGHTS

Responsible Use of AI in Assessment

ETS Principles

Overview

There is a critical need to define responsible AI in the context of measuring skills and knowledge, as we shape the future of assessments.

AI is here to stay and holds tremendous value for education. It enables personalized learning and assessment with data-driven insights and predictive analysis for teachers and students.

AI technologies can improve accessibility for students with diverse learning needs, help eliminate bias against specific student populations and facilitate collaborative learning experiences.

Yet, overreliance on AI comes with significant ethical concerns for education, and many of these issues are unique to the assessment and measurement domain.

With a 76-year history of advancing the science of measurement, ETS is helping to create a blueprint for the responsible use of AI in assessments.

As the world's largest assessment organization, we have a long history of handling sensitive data, conducting research, plus developing capabilities to support responsible, ethical and valid use of data in our testing products and services. Our dedication to fairness, validity and inclusivity remains unwavering as we transition into the era of artificial and augmented intelligence.

We have embarked on a mission to define the standard for the responsible use of AI in educational testing and the assessment of skills. We pledge to approach this mission with the same dedication to responsibility and integrity that has characterized our work in educational testing for nearly eight decades.

The guidelines developed by our ETS Research Institute:

- Reflect our broader vision of leveraging the power of assessment to close educational and social disparities. The future of assessments is personalized, socioculturally responsive and test-less — AI will help realize this.
- Benefit everyone including educators, government institutions, employers, and, most importantly, those being assessed.
- Ensure that AI enhances its immense potential without sacrificing the quality, validity or fairness of assessments.

Integrating existing standards into ETS' framework will result in responsible AI use in educational assessments.

There already exists a universal consensus on what responsible use of AI means, thanks to the efforts of organizations such as the National Institute of Standards and Technology (NIST), the US Department of Education, the Organisation for Economic Co-operation and Development (OECD), The European Commission, and United Nations Educational, Scientific and Cultural Organization (UNESCO). The Joint Standards by the American Psychological Association (APA), the American Education Research Association (AERA), the National Council on Measurement in Education (NCME) and the International Test Commission (ITC) also provide important guidance on ethical approaches to educational measurement.

Our goal at ETS is not to replicate what already exists. Instead, we aim to create practical tools and methods for effectively implementing these principles in educational assessment.

ETS' principles for the responsible use of AI in assessments — current and future — are rooted in the core values of validity, reliability, fairness, privacy and alignment with educational values.

ETS principles for responsible use of AI in assessments

ETS experts are exploring and defining the standards for responsible AI use in assessments. A comprehensive framework and principles will be unveiled in the coming months. In the meantime, we present our vision, outlining the critical areas these standards will encompass.

Fairness and bias mitigation

- Make ongoing efforts to evaluate, mitigate and eliminate biases in AI.
- Train AI using data that is diverse, representing various students' backgrounds, abilities and experiences.
- Embed fairness objectives into the system's design and architecture, ensuring alignment with overarching goals.

Privacy and security

- Strive for AI systems to be designed with built-in security measures to safeguard against potential threats and vulnerabilities from the outset.
- Adopt and maintain rigorous security practices throughout the development and deployment processes to protect AI systems against unauthorized access and malicious use.
- Safeguard personal data collected, processed and stored by AI systems so it is handled in a manner that respects privacy rights and complies with relevant laws and regulations.

Transparency, explainability and accountability

- Make AI algorithms understandable and transparent, allowing stakeholders to comprehend and question their decision-making.
- Involve diverse stakeholder input in the development and application of AI to meet user needs and uphold rights.
- Provide explanations clearly and understandably where appropriate, while also identifying situations where communicating explanations could potentially lead to malicious exploitation.

Educational impact and integrity

- Verify the validity and accuracy of predictions and inferences, and ensure they support the educational goals they are intended to achieve.
- Use AI in a way that respects individual rights and privacy, considers potential unintended consequences and avoids harm to users.
- Prioritize evidence-based measures to ensure that errors in models do not exacerbate existing societal biases or power disparities.
- Participate in international collaborations and initiatives aimed at developing ethical guidelines, standards, and best practices for AI use in education, while recognizing the global impact of AI technologies on learning and society.
- Promote global collaboration on developing guidelines for responsible use of AI in educational assessment to drive positive global impact across diverse educational systems and cultures.

Continuous Improvement

- Continuously monitor AI models to take in real-world performance feedback and adapt to changes in user populations.
- Continually evaluate and adjust algorithms and data to minimize bias.
- Request ongoing feedback on ethical implications from all stakeholders and use that feedback to refine the model and address emerging ethical concerns.

It is essential that we establish guidelines for its use that focus on both safeguarding students and enhancing learning.

For 76 years, ETS has been driving human progress by defining skills and knowledge that matter and creating effective assessments. As we've entered the era of AI, we continue to drive the industry toward a future where everyone has a fair chance at demonstrating the full spectrum of their competencies — in ways that are best for them.

Our framework on the responsible use of AI in assessments marks a new milestone in our quest to elevate human potential.

These principles are just a starting point, a dynamic guide that will be revisited as new technologies emerge. Continuing our legacy of innovation, we are exploring the advancement of AI in real time, continuously adapting our research agenda to address the ethical implications that arise with each new application.

We invite you to join us on this journey!