

Chapter 3

Authentic Assessment in the Digital Age: A Brain-Based Framework with GenAI-Enabled Support – Dai Gu, Yueqing Zhong, and Bilgehan Ayik

A Compiled List of Tools and Resources

GenAI Tools

- [ChatGPT](#): a widely used large language model created by OpenAI that can generate text-based and multimodal content.
- [Gemini](#): a large language model created by Google capable of generating text-based and multimodal content.
- [Claude](#): a GenAI that excels at coding and effortlessly creating ready-to-use tools.
- [DeepSeek](#): a start-of-the-art large language model that is transparent in its thinking process and generates text-based content.
- [Colleague.ai](#): a specialized GenAI assistant tailored to meet the needs of teachers and students.
- [Brisk](#): an AI teaching assistant that helps teachers quickly create instructional materials, differentiate resources, and provide personalized student feedback.
- [Diffit](#): a GenAI tool designed to help teachers create differentiated instructional materials for diverse learners.
- [DALL-E](#): a GenAI image generation tool.
- [Magic school](#): an AI platform with a comprehensive suite of tools for teachers, such as Rubric Generator, Writing Feedback, AI Resistant Assignments, etc.
- [Conder](#): A GenAI tool designed to create quizzes and assessments, with a standard-aligned assessment library and read-aloud support. It's easily integrated into Google Forms and LMS.
- [CRSciA Generator](#): a GPT that can generate culturally responsive science assessment items and rubrics aligned with NGSS.
- [Curipod](#): Teachers can create lessons from scratch or use Curipod's AI to generate topics, questions, and slides.
- [MIZOU](#): a Chatbot designed to conduct engaging assessments, activities, and automatic grading in 50 languages, while allowing student feedback.
- [TWEE](#): designed to assist language teachers and students. It can create questions for any YouTube video.
- [ScribeAI](#): A GenAI tool that helps educators and students transcribe lessons and generate summaries, making it easier to create accessible study materials and detailed lesson reviews.
- [TeacherBot](#): A chatbot-driven AI tool designed for personalized tutoring, capable of adapting its teaching methods based on the student's individual progress in a subject.
- [Questgen](#): A tool designed for teachers to create customizable quizzes with automatic grading. It integrates AI to provide tailored question difficulty based on student performance.

Assessment resources

- [Performance Assessment Resource Bank](#): An online collection of expert-reviewed performance tasks and resources across subjects and grades.
- [Best practices in Social Studies assessment](#): A broad range of social studies assessment resources.
- [The Formative Assessment Project](#): A collection of resources focused on the design and implementation of formative assessments, including sample rubrics, guidelines, and strategies for feedback.
- [Authentic Assessment Toolbox](#): A set of tools that guide teachers in creating real-world assessments that reflect how students can apply knowledge and skills in professional contexts. It includes rubrics, frameworks, and case studies.
- [Understanding Your Assessment](#): A process map aimed at improving educators' understanding of assessment design, feedback strategies, and student self-assessment, including a video walking through a score report.
- [Assessment tools](#): a list of tools provided by EdTech Books.

Videos on Technology Integration Models

- [SAMR model](#): a model for teachers to evaluate the ways they incorporate technology into teaching.
- [SAMR in Practice](#): An instructional video series showing real-life examples of teachers applying the SAMR model to integrate AI tools in classroom settings effectively.
- [TPACK Model \(Technological Pedagogical Content Knowledge\)](#): A framework for teachers to integrate technology into their teaching practices while ensuring pedagogical and content knowledge are balanced. Resources and videos are available through various educational platforms like Edutopia and ISTE.

Prompt Engineering

- [10 ChatGPT Prompt Engineering Frameworks You Need To Know](#)
- [The Five “S” Model](#)
- [AI Model Evaluation Framework](#)
- [LLM prompt](#): example prompts for various purposes, including designing authentic assessments, developed by Dr. Melissa War
- [AI Prompt Library](#): A curated collection of pre-designed prompts for educators to use with AI tools, covering topics like essay grading, personalized learning feedback, and content generation.

AI competency frameworks

- [UNESCO AI competency framework for students.](#)
- [UNESCO AI competency framework for teachers](#)
- [UNESCO AI competency framework for policy-makers](#)
- [What is AI Literacy? Competencies and Design Considerations](#)
- [Generative AI literacy: Twelve defining competencies.](#)
- [Empowering Learners for the Age of AI: An AI Literacy Framework for Primary and Secondary Education](#)
- [A framework for the Learning and Teaching of Critical AI Literacy skills](#)

Challenges and Suggestions for Teachers

Beginning teachers

- **Challenges:**
 - Limited familiarity with GenAI.
 - Limited experience in the curriculum and culturally responsive assessment strategies for MLs.
- **Suggestions**
 - Include hands-on GenAI activities in teacher preparation programs.
 - Continued training on GenAI integration and ML's needs.
 - Access to experienced teachers, GenAI experts, and assessment experts.

Mid-career and veteran teachers

- **Challenges:**
 - Resistance to changing traditional assessment methods.
 - Difficulty with adopting innovative technology.
 - Balancing workload.
 - Struggling to align GenAI assessments with learning standards and objectives.
- **Suggestions:**
 - Design workshops to address concerns about GenAI.
 - Provide training on GenAI, including its benefits (e.g. reducing workload, increasing accessibility), limitations, and integration strategies.
 - Peer collaboration

General suggestions across groups

- Access to ready-to-use GenAI-powered authentic assessment templates/examples.
- Focusing on understanding MLs' needs.
- Continuous school support.
- Engaging in a community of practice.