# Assessment Redesign Tips in the Age of Artificial Intelligence

**Assessment Redesign Tips in the Age of Artificial Intelligence**

Artificial intelligence presents new opportunities and challenges for designing assessments that are both meaningful and resilient. Below are some considerations for reimagining assessments, organized into three key categories: foundational considerations, AI-resistant assessments, and AI-augmented assessments.

## Key Principles for Assessment Design

1. **Clarify Your Objectives**: What are the core learning objectives for your assignment? Do your students know these? Keep these goals front and center as you explore new formats. According to Harvard Graduate School of Education, students are already leveraging AI tools to fill in gaps in their understanding, especially when these gaps are not directly addressed in classroom settings ('AI Helps with Getting Answers for Unasked Questions'). Making objectives explicit can help students understand where AI fits and where it should not replace individual thinking.
2. **Alternative Demonstrations of Understanding**: Could students demonstrate their understanding in different ways? Consider presentations, debates, or hands-on projects. Face-to-face, in-person demonstrations might be preferable for gauging genuine student thinking.
3. **Assessing the Whole Process**: Are you currently focusing solely on the final product for assessment? How could you include other parts of the process to better capture student learning?
4. **Encouraging Deep Engagement and Deliberate Thinking**: Given that AI might make it easier for students to avoid deep engagement, how can assessments be restructured to emphasize deliberate thinking? Consider using open-ended questions that require iterative refinement, incorporating reflection prompts that ask students to evaluate their own understanding, or requiring students to solve problems in a step-by-step manner that highlights their reasoning process.

## Making Assignments AI-Resistant

1. **Where Does Genuine Student Thinking Matter Most?**

- Clearly define the specific tasks or questions where students must demonstrate their own critical thinking. For example, ask them to provide personal reflections, solve problems step-by-step, or explain key concepts in their own words. Highlight these requirements explicitly in your instructions so that students understand where AI tools should not be used.

2. **Adding Human-to-Human Elements**:
   - Introduce verifiable, face-to-face components. For example, require students to cite a classmate's argument from an in-class discussion or debate. The Stanford study on AI and cheating highlighted that social verification—having to share work with peers—can act as a powerful deterrent against misuse of AI ('What Do AI Chatbots Really Mean for Students and Cheating?').
   - Create checkpoints where students need to explain their thinking orally or in writing during one-on-one conferences. Consider tools like discussion boards, process notebooks, etc.
3. **Unique and Personal Contexts**:
   - Ask students to incorporate personal experiences or local contexts that an AI might struggle to replicate convincingly. The research in 'Why Students Cheat' suggests that assignments drawing on individual, unique experiences are less likely to invite dishonesty, as they encourage authentic, personal engagement with the material.
4. **Encouraging Ownership of Ideas**:
   - Encourage students to take ownership of their ideas by documenting their thought process. This could be through journaling, maintaining a project notebook, or submitting a draft with comments explaining their choices and revisions.
   - Oftentimes starting writing or work in class, via free-writing, helps students generate initial ideas and lowers the barrier to beginning a larger project, encouraging authentic and individual engagement.
5. **Leveraging Non-Traditional Formats**:
   - According to UMass Amherst’s Center for Teaching and Learning, using multimedia or non-traditional formats for assessments can help reduce the incentive for using AI ('How Do I Redesign Assignments and Assessments in an AI-Impacted World'). By requiring students to create videos, podcasts, or infographics, it becomes more challenging to produce a convincing AI-generated response that matches individual student styles.

---

## Making Assignments AI-Augmented

1. **Where Can AI Enhance the Process?**

- Think about points in the student workflow where AI can support learning rather than replace thinking. Examples include:
    - **Brainstorming**: Using AI to generate ideas for topics or approaches.
    - **Crystallizing Ideas**: Asking AI for examples or counterpoints to refine an argument.
    - **Troubleshooting**: Leveraging AI as a debugging partner in coding or as a grammar checker in writing.
    - **Polishing**: Allowing AI tools to assist with refining the final product, such as style improvements or formatting. As noted in the Harvard Business School article 'The Faculty Lounge,' AI can serve as an important tool in bridging gaps during initial brainstorming phases, making the student's final product more thought-out before teacher intervention.

2. **Leveraging AI for Data Analysis**:
    - For STEM assignments, AI can help students perform data analysis, such as identifying trends or visualizing data, but students should also verify AI outputs to ensure accuracy. This approach encourages students to use AI to assist with complex calculations while still relying on their understanding to interpret results effectively. John Spencer, in Spencer Education, suggests that using AI in such capacities can improve evaluative skills by focusing on interpretation and verification ('AI and Assessment').
3. **AI for Feedback and Peer Review**:
    - AI tools can provide initial feedback on grammar, clarity, and content, helping students refine their drafts before submitting them for teacher review. This makes teacher feedback more targeted and efficient ('Students Are Using AI Already').
    - AI can also be used in peer review, offering structured feedback that helps peers provide more meaningful comments and enhances their evaluative skills ('AI and Assessment').
    - AI tools can provide preliminary feedback on grammar, clarity, and content before teacher review, helping students refine their work. Students value AI's role in streamlining drafts before submission, making teacher feedback more focused ('Students Are Using AI Already'). AI can also facilitate peer review by offering structured feedback, improving peer comments and enhancing evaluative skills ('AI and Assessment').

---

## Works Cited


- Harvard Graduate School of Education. "Students Are Using AI Already: Here's What They Think Adults Should Know." *Usable Knowledge*. Retrieved from

https://www.gse.harvard.edu/ideas/usable-knowledge/24/09/students-are-using-ai-already-heres-what-they-think-adults-should-know

AACU. "Why Students Cheat: It's Not Them, It's Us." *Liberal Education*. Retrieved from https://www.aacu.org/liberaleducation/articles/why-students-cheat-its-not-them-its-us

Harvard Business School. "The Faculty Lounge." Retrieved from https://he.hbsp.harvard.edu/2024-10-29-the-faculty-lounge.html

Stanford University. "What Do AI Chatbots Really Mean for Students and Cheating." Retrieved from https://ed.stanford.edu/news/what-do-ai-chatbots-really-mean-students-and-cheating

UMass Amherst Center for Teaching and Learning. "How Do I Redesign Assignments and Assessments in an AI-Impacted World." Retrieved from https://www.umass.edu/ctl/how-do-i-redesign-assignments-and-assessments-ai-impacted-world

Spencer Education. "AI and Assessment." Retrieved from https://spencereducation.com/ai-assessment/