

Discussion of “Addressing the Challenges of AI-Generated Assignment Submissions in Education: Insights and Strategies”[☆]

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This excellent article by Wang et al. raises important concerns and suggests possible options to address the fact that students in higher education are increasingly using AI to complete their assignments. The strategies and suggestions presented in the article are excellent for courses in Data Science, and we believe this entire article is also relevant across *all* courses in higher education. In this discussion paper, we reflect on the article, offer additional suggestions, and connect these ideas to the 2026 College GAISE report.

One AI tool has recently introduced an option in which students can submit a handwriting sample, and AI will complete an assignment *in the student’s handwriting* (Sisodia, 2025). A recent article tells us that “Members of the class of 2026 have had access to AI since they were freshmen. Almost half of them are using it to do their work.” (Bogost, 2025). Another recent article simply says “Everyone is Cheating Their Way Through College.” (Walsh, 2025). How do we, in the age of AI, effectively prepare our students for meaningful lives and careers? How do we effectively build and assess student understanding?

As the article suggests, AI is here to stay, forbidding its use is not effective or wise or even possible, and we need to acknowledge it and adjust our classes and our assessment methods accordingly. How do we do that?

1. Incorporating oral assessments. This is the first assessment strategy noted in the article, and we reinforce it here. Oral assessments are an extremely effective way to gauge student understanding and to facilitate student learning. Students can be free (and encouraged) to learn material in whatever way is helpful to them (including using AI as a tool) but an oral exam or oral presentation requires them to retain and understand and process what they have learned. The author has been amazed at how little time it takes (often just 5 minutes) to discover whether students have been wrestling with the material and have built some understanding of it. For scalability, these oral exams can be short and relatively easy, designed only to determine whether a student has been engaging in an honest way with the material. Of course, they can also be much more in-depth and longer for higher-level courses. Oral assessments can work well even in an online course, but we recognize that they may be virtually impossible to incorporate in large classes without significant help.
2. Flipping the classroom. In a flipped classroom, much of the content learning happens outside the classroom (often in class videos or other provided material), followed up by deeper in-class engagement (often in groups) with the material. Much has been written about the benefits of flipping the classroom, in learning and in inclusivity and in student engagement. There

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were many reasons to flip the classroom *before* AI. There are even more reasons to do so now. Flipping the classroom allows students to learn material outside of class, including by using AI as a tool. The follow-up in-class activities create an increased incentive for students to engage with the material enough to build understanding of it.

3. In-class (graded) Assessments. Accurately assessing student learning in the age of AI requires us to transfer more of our assessment tools to in-class (and often offline) assessments. It is possible to do so even in a very technologically-heavy data science classroom, although it might require more creativity and new ways of thinking about assessment. To encourage full engagement by the students, ideally these in-class assessments (even brainstorming, creative, open-ended assessments) will be graded (although possibly just with a quick check.)
4. Short offline quizzes. Continuing the theme of increasing in-class assessments, regular short offline quizzes seem particularly valuable as a way to assess student understanding. As the article suggests, however, long offline closed-book exams testing memory of facts are less relevant in the age of AI and search engines.

The College GAISE report (Guidelines for Assessment and Instruction in Statistics Education) was written in 2005, revised in 2016, and is now being revised again to reflect current content and pedagogy and to include Data Science. The guidelines are endorsed by the American Statistical Association and are considered the gold standard for effective teaching about data. The 2026 College GAISE recommendations (Lock and Perrett, 2026) are even more essential in the age of AI. The most relevant here, of the ten recommendations, are Recommendations 8 and 9: “Employ evidence-based pedagogies that actively engage students in the learning process” and “Use a variety of formative and summative assessments to improve teaching and learning.” These recommendations align perfectly with the excellent suggestions in the article by Wang et al.

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