

How Can I Prevent Plagiarism in the Artificial Intelligence Era?

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Editor's Note:

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Hi. My name is Martine Peters, and I'm a professor at the Université du Québec en Outaouais. I'm also the director for the Partnership on University Plagiarism Prevention. For the past 20 years, I've been working on different projects all involved in finding pedagogical strategies to promote academic integrity and prevent plagiarism in students' assignments. This is what today's 20 Minute Mentor program will discuss.

Let's start with a few definitions. Plagiarism has existed for a very long time. Before technology, students would hand-write what they copied from books. The act of plagiarism is taking someone else's words or ideas and presenting them as one's own without proper attribution to the author. Of course, it was a lot more difficult to find where the students had copied from because finding the original source was done manually, which was time consuming and not very effective. This does not mean that there was not much plagiarism. It was probably just not detected by professors.

With the evolution of technology, two major things happened. First, the internet made getting information super easy, and second, computers made copying and pasting a breeze. However, plagiarism basically remained the same. Students would find information on the web and directly copy and paste it in their document, not giving credit to the author.

What changed was the ease to detect plagiarism, either with a quick search on the web or with plagiarism detection software. And so it appeared as though, suddenly, there was a lot more plagiarism, but many researchers would say that there was no more plagiarism than before technology appeared, just more detection.

Now, with the recent surge of generative artificial intelligence in our schools, the definition of plagiarism has changed dramatically. Whereas before, students had to find the information, choose it, determine where to include it in their text, write text around the information, and revise the text, artificial intelligence has eliminated all those steps. Nowadays, a student can write a prompt in an artificial intelligence tool, giving it specific requirements, and it will generate a complete assignment, which the student can then hand in to be graded.

There are four things to understand when it comes to a text generated by an artificial intelligence. First, to generate a text, the artificial intelligence will draw from its gigantic database, which has been constituted by books, websites, and other written documents that are available publicly on the web. So basically, if the artificial intelligence does not give any references, it is plagiarizing authors that are in the database.

Secondly, the artificial intelligence is only as intelligent as the sources in its database when it is not connected live to the internet. If the data is not up to date, inaccurate, the text generated will also be incorrect. This is why, often, artificial intelligence tools are accused of generating false or misleading information or spreading biases that are present in their training data.

Third, it's crucial to comprehend that if you have 30 students, you can get 30 different texts generated by an artificial intelligence for the same assignment. So while the texts are original, they are often similar in their style of writing, might lack context, emotional depth, or nuance, creativity, all the things we want to encourage in our students' writing. Fourthly, and unfortunately, currently, it is very difficult to detect if an assignment has been written by an artificial intelligence, whether manually or with a detection software, which means that the number of plagiarism cases could potentially explode.

But it's important to remember that using artificial intelligence to help with producing an assignment is not necessarily plagiarism. There are very legitimate ways of using artificial intelligence that do not constitute plagiarism. So how would I define student plagiarism in an AI era? If students hand in part of a text or a whole text generated by artificial intelligence, it is plagiarism because they did not write it. If they get permission from their teacher to get help from an AI text to write their own text, that is not plagiarism.

Now, as teachers, how can we promote a culture of academic integrity in our institution? And more concretely, how do we prevent plagiarism in our assignments? Here are seven pedagogical strategies you can implement.

First pedagogical strategy, discuss academic integrity with students. A highly significant method to foster academic integrity involves engaging in discussion with your students as these conversations serve to raise awareness and enhance comprehension of the

fundamental principles underpinning academic integrity. Gravois Lee and Burns have a five-page document where they give all kinds of ideas on how to approach the topic. I highly recommend it. In my own classes, my students always enjoy debating the ethical dilemmas.

Second pedagogical strategy, be a model. The first way to do this is to be a model of integrity for your students. In all of your presentations, make sure that your references are always present. Also, be transparent. Whenever you use AI, say so and explain to your students how you did and for which reasons. Not only will you gain a lot of credibility, but you will also be teaching your students how to use it ethically. Once in a while during class, I will point out to my students how I have referenced an image or a text, explaining that then they can go and see why I thought it was something they should read.

Third pedagogical strategy, modify your expectations of originality. One of my favorite readings which drastically changed my view of originality is from Johnson-Eilola and Selber. They were already precursors in 2007 when they said that it was not realistic to expect students to produce original work. Indeed, when we think about originality, it's something unique, distinctive, innovative, and certainly not simply copied from another source.

However, how can we expect students, who are learners, to produce something new and innovative? Johnson-Eilola and Selber explained that we can ask students to be creative instead of being original. A creative idea can draw inspiration from another source. It can stem from making connections between two texts.

For example, when I ask my students for a comment on a theory, they read texts from various authors and present their opinion about the different ideas. Their texts are not original since no new ideas are produced, but they do have a fresh, creative way to present and argue the theory. Obviously, I expect my students to reference their sources and to comment on the author's ideas. So, the pressure for my student to produce something original is gone, and with it, the temptation to plagiarize.

Fourth pedagogical strategy, use authentic assessment tasks. Often, our students view our assignments as busy work. They can't see a clear connection between what we are

asking them to do and the relevance to their future career, a real-world application. Other students will complain about the repetitiveness or the minimal challenge of the assignments. This will result in an absence of engagement.

The beauty of authentic assessment is the motivation it can bring to students when we're asking them to do tasks that they will eventually do in their working environment. Authentic tasks will promote judgment, reflection, and creativity. Students will have to be active participants in this type of task, where they will need to make decision and solve problems. Example of authentic tasks are case studies, debate, simulations, data analysis, oral presentation, et cetera. According to Sotiariadou et al., students who are engaged in an authentic task are less likely to plagiarize.

Fifth pedagogical strategy, give great instructions. Once you've chosen your authentic task, you must prepare clear and concise instructions to give to the students. One college teacher once told me that instructions must be like a marketing pitch. So I create instructions that are very clear, without ambiguity. I try as much as possible to make my instructions visually appealing as well as include a relevant message that is likely to capture my students' attention and generate their engagement.

I also craft my expectations to be adaptable to a variety of students, depending on their needs. Basically, I want my instructions to be a call to action to prompt my students to buy into my assignment. When it comes to preventing plagiarism, Harris wrote a great article in which he discusses strategies for prevention that apply specifically to instructions. For example, he suggests that specific components be included in the instructions, such as two internet sources, to scientific journal sources, or even a specific paper that you have discussed in class that must be integrated in the assignment.

One of my favorites is to require process steps, meaning my students have to hand in versions of their plan—a rough draft, the bibliography, and then the final draft. This takes the pressure off of them because the assignment is not to be handed in all at once, and they get feedback along the way, which reassures them that they are on the right track. Go read Harris' paper. You will find more strategies for instructions to prevent plagiarism.

Sixth pedagogical strategies, which tools should you allow and when? In my instructions, to prevent a breach of academic integrity, I make sure to be very clear about what AI tools students are allowed to use when they write their assignments. A very short one-page paper by Spannagel, published in 2023, is a top read for me. It states five rules that apply to social media and artificial intelligence uses but clearly indicate that the final responsibility lies with the students. His last rule can give you a lot of leeway—no rules without exceptions. Because his rules are simple, they can be used as is in your classroom or modified to best fit each of your assignments.

Seventh pedagogical strategy, detecting and sanctioning plagiarism. It might not seem like a pedagogical strategy that will promote academic integrity. However, if you suspect that a student has plagiarized, whether the usual way or with AI, you must report it. And if the student is found guilty, there must be sanctions. Detecting and sanctioning within your institution has a deterrent effect, discouraging students from engaging in dishonest practices and ensuring that they are accountable for their actions.

As artificial intelligence becomes omnipresent in our institutions, faculty and students alike are going to develop a new way of writing. Eaton in 2023 has said that a hybrid human way of writing will become the new norm. In this way of writing, an artificial intelligence will become integrated, ethically, in many aspects of writing. Familiarizing yourself with this is essential, and it's equally important to pass on this knowledge to your students.

Here are a few tips on how you can integrate artificial intelligence in your teaching and in your students' assignments. Remember, students are responsible for whatever they hand in. To begin with, let's talk about this debate in which certain writers are indicating AI as a co-author.

In their position statement in February 2023, the UK Committee on Publication Ethics, it's called COPE, has stated—and I quote them, "AI bots should not be permitted as authors since they have no legal standing and so cannot hold copyright, be sued, or sign off on a piece of research as original."

I believe it's the same thing for students' assignment. The very clear message you need to give to your students is that they are the sole person responsible for the assignment

they hand in. They need to verify all information, all references, as well as the syntax, grammar, spelling, et cetera. They are responsible for it all.

Now, one of the best ways to write a coherent assignment is to plan it. Using AI for this task is very intelligent and also ethical. For example, one of my students could write the following prompt, “provide the planning for a math unit for a grade two class on adding and subtracting.” The outline will contain the main structure, the various sections, and ideas for activity. Once my student has this outline, he can then start to write the unit. It’s a very intelligent way to use AI.

Second, if you want your students to write properly using AI, you need to teach them how to formulate good prompts, which is a skill set that will foster creativity, critical thinking, and effective communication for their studies, but eventually for the AI-driven world they will evolve in. Pedagogical resources to teach prompt literacy are starting to appear on the web. Personally, I enjoy the very recent CAST model by Hayes, Jacobs, and Fisher, which stands for Criteria, Audience, Specification, and Testing.

There’s another author that promises a very interesting way to work with prompts. You could teach it to your students. It’s well worth the read. Geoffrey Litt suggests five ways to push the artificial intelligence to give more information about the original prompt. Why is it so important to teach students about prompt literacy? Students who learn how to tailor their prompts to obtain what they need from the AI will be adept at problem solving during their studies and will become lifelong learners.

Before artificial intelligence, students used Google or Google Scholar to search for information. The difference is that they had to find the information, sift through it, and then select the relevant information for their assignment. With artificial intelligence, the information is already processed. This can be time-saving for the students, but also, the artificial intelligence might leave out information. That is why students must always fact check and ensure that the key relevant information is included in the assignment, especially right now when artificial intelligences like ChatGPT still have a lot of false information in their databases.

You can encourage students to use more specialized artificial intelligence to search for information. Consensus is a top pick for me. This artificial intelligence helps find

references to support an argument. For example, when I ask if plagiarism is often caused by lack of skills, Consensus quickly produced 10 articles published between 2007 and 2020 with appropriate statements supporting this fact. A very useful artificial intelligence tool for us and our students.

Using artificial intelligence for paraphrasing and revising a text is a good way to use artificial intelligence, essential for students who often have difficulty paraphrasing the ideas of other authors. They tend to formulate sentences that either closely resemble those of the original author or their paraphrased version are too far from the original author's concepts. There are many intelligence tools that can help students with paraphrasing. QuillBot and Grammarly are just two of them. These AI tools can also be used by students to revise their assignments.

When AI is used to revise or to paraphrase, it is totally legitimate, as long as you as their teacher have authorized this AI use. Having said all this, remember, all uses of artificial intelligence do not constitute plagiarism, but ultimately, it is our responsibility to teach students how to use AI ethically.

We need to have high expectations of our students, but we also need to be very clear of what those expectations are. That is the recipe for students' assignments that will be creative, engaged, ethical, and interesting to grade. Thank you very much.

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