

**The Importance of Learning AI to Create a Well-Rounded High School Education**

Megan Harmeling

University of Michigan

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Dr. Josh Pasek

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### **Abstract**

The following is a proposal to high schools about the importance of incorporating lessons surrounding the use of artificial intelligence platforms, specifically ChatGPT, into an upper-level college-preparatory curriculum. As AI becomes increasingly incorporated into the workforce, students should learn how to effectively use AI platforms in a way that can benefit them in their post-graduation lives. A well-rounded education that can best prepare high school students for their future now includes AI. My own personal experience regarding my transition from high school to the University of Michigan without any prior knowledge of AI platforms will be considered. Along with providing reasoning for a needed increase in AI-based education, I've created a mock lesson plan that could be used as part of the curriculum, which centers around comparing the experience of writing a paper with the use of ChatGPT versus without the use of ChatGPT.

My project addresses topics from class like how AI is becoming more prevalent in the workforce, the issue of AI-related education equity, the best methods for ensuring the accuracy of AI-provided information, and how to cite AI as a source. AI was not utilized to write or generate any ideas for this project. I came up with and executed the entirety of the project. I give permission to share my work online.

## **The Importance of Learning AI to Create a Well-Rounded High School Education**

Technology and artificial intelligence are rapidly improving and becoming a larger part of our daily lives. AI-related jobs are increasing in the workforce and students are entering college with extremely varied levels of knowledge surrounding popular AI platforms, like ChatGPT. ChatGPT (Chat Generative Pre-trained Transformer) is especially useful in the context of writing-based classes, and it's growing more important for students to graduate high school with the knowledge of how to use common platforms, like ChatGPT, in an effective way. In a context that's specifically targeted towards a high school English class, I argue that high schools should begin educating their students on how to utilize ChatGPT as a tool to better prepare students for life beyond graduation, whether that means in the workforce or in their continued education.

### **Personal Experience**

Education equity is an extremely important factor in the consideration of AI platforms in an academic setting. Drawing off my own personal experience, ChatGPT was released immediately before I went on a four-month study abroad program, called Semester at Sea, that heavily limited my access to the platform due to a lack of cellular service and wifi. When I returned back to the University of Michigan after those four months, I found that a large proportion of students had taken the time to gain the skills necessary to use ChatGPT to help with academic assignments, projects, and papers. After experiencing this feeling of inequity in my academic understanding of ChatGPT because of my inability to access the platform, I was able to recognize why AI-education is necessary.

Upon asking students at my former high school in Northern Michigan, I found that all AI platforms are currently blocked on school computers and when using the school's wifi network. In a time when AI is becoming a practically guaranteed tool that will be available in higher

education, it begins to put students at a disadvantage when they're not taught how to use basic platforms like ChatGPT. Those who go on to pursue an undergraduate degree, or even go straight into the workforce, must learn how to use AI platforms on their own, rather than getting a well-rounded education that realistically prepares them for a world that utilizes artificial intelligence tools.

Rather than expecting students to learn correct methods on how to use ChatGPT on their own, it would be much more beneficial for high schools to begin incorporating lesson plans that teach the fundamentals of AI-systems. This will prepare them for a life that will inevitably include a significant amount of AI-use and ensure that the correct process is being followed for a generation of record breaking technological advancements.

### **Benefits of Educating Students on How to Use ChatGPT**

A core objective of high school education is to prepare students for their continued academic journey after they graduate. With ChatGPT becoming such a popular tool, it's reasonable to expect students to explore AI systems on their own time, with or without the help of their teachers. With this being the case, choosing to educate students on correct methods of utilizing ChatGPT would be an effective way to set them up for success among their future university peers who have varying levels of AI-understanding.

Students will greatly benefit from learning how to effectively use ChatGPT not just because they'll be up to par with current technological tools, but also because AI is being used more and more in the workforce. The Artificial Intelligence Index Report found that "the demand for AI-related professional skills is increasing across virtually every American industrial sector," (Clark & Perrault, 2023, p.3). Possessing the ability to use ChatGPT will give students a

foundation for entering the rapidly growing job market of AI management, maintenance, and oversight.

### **Important AI-Related Topics to Teach**

In the context of a common upper-level high school English course, one of the most common uses of ChatGPT is to generate essays/papers. It will be beneficial for students to learn how to do this, including tips on what types of prompts to begin an assignment with, how to ask ChatGPT to make edits, and how to incorporate specific sources into generated content. It is also important to teach students how to critically review and edit a manuscript generated by AI. By learning these skills, students will be better prepared for their post-grad lives, where there aren't restrictions on using AI platforms.

A crucial skill that is worth teaching students is how to cite their use of artificial intelligence platforms like ChatGPT. ChatGPT can produce significant amounts of work and writing, and it's important that students don't just know how to utilize AI tools, but also give credit where credit is due. Santa Clara University (2023) recommends citing ChatGPT in the following format:

	<b>APA Format</b>	<b>MLA Format</b>
<b>In-Text Citation</b>	Paraphrase from OpenAI's ChatGPT AI language model, personal communication, *date accessed*	(OpenAI)
<b>References Page Citation</b>	Not applicable, leave off of references	OpenAI. ChatGPT. <a href="https://openai.com/blog/chatgpt">https://openai.com/blog/chatgpt</a> . Accessed *date*.

It's also important for students to learn the necessity of fact-checking sources and information that ChatGPT provides. It's extremely easy to input a prompt into ChatGPT's message reader and take its response as fact. This, however, becomes an issue due to ChatGPT's

tendency to create information by overgeneralizing a concept that was true on an individual level, also known as generating hallucination errors (Marcus, 2023). When people fail to ensure the accuracy of information provided by AI systems, they run the risk of spreading misinformation. To combat this issue of misinformation being spread, educators should teach their students about inconsistencies in AI generated information and how to properly check sources.

On a similar level, students should be aware of the need to critically proof-read content that ChatGPT creates. ChatGPT's system is programmed to constantly predict the next most likely word in order to generate a full response to a prompt. This system is bound to produce errors, which should be checked by a student before being submitted in an academic or professional setting.

### **Necessary Fundamentals**

Many people start their argument against educating students on how to use AI platforms by stating that this will take away from the basic academic ability of students. This is an entirely valid argument, which is why high school lessons regarding artificial intelligence should not be taught until students are at an upperclassmen level, in the period when they're transitioning from learning fundamentals to a college preparatory curriculum. This will ensure that students are still learning the regular writing skills that are necessary for a proper English education for the majority of their high school career.

A common misconception is that once students shift towards using AI platforms to complete assignments, they'll lose their ability to produce assignments on their own. This is where the calculator example comes into play. When calculators were first introduced into academic settings, a large concern was that students would become incapable of doing math

calculations on their own. However, because a large portion of early education still involves learning how to do calculations without a calculator, this fear is unfounded. Students have adapted to using calculators as a tool because of the common understanding that it's a skill that all students will develop during their education.

It's reasonable to believe that AI platforms, like ChatGPT, will follow a similar trajectory and become a common staple in writing practices. By allowing fundamentals to be learned throughout the majority of the education process and then introducing lessons on how to effectively use ChatGPT during later upper-level high school courses, schools can ensure the academic integrity of their students while still preparing them for success in an increasingly AI-dependent world. These fundamental English skills will continue to be useful when proofreading and fact-checking content that is produced by ChatGPT.

### **Mock Lesson Plan Surrounding ChatGPT Use**

Attached are two mock lesson plans that could be used to teach students how to utilize ChatGPT when writing a 5-page research paper. In the beginning of the semester, while ChatGPT is still blocked on school computers and wifi networks, students will be asked to write a research paper about a topic of their choice. They'll have to make their thesis statement very clear and include three academic sources to support their topic.

At the end of the semester, after being taught the correct methods of how to begin and edit a paper using ChatGPT, the importance of fact-checking and proof-reading, and how to cite their use of ChatGPT, students will write a research paper using the same topic as before, but this time with the help of ChatGPT. They'll have to turn in their final paper, along with a copy of their entire ChatGPT editing process, and a short write-up of how their experience differed from writing a paper on their own with the same topic as the start of the semester.

This AI-centered assignment will be graded based on how realistic its writing style/content mimics what would be written by a student, how relevant and accurate the sources are, and whether facts given are verifiable. The copy of the student's ChatGPT editing process will be graded based on whether they used AI in an efficient manner (were they making significant edits or just accepting one of the first drafts given?). Finally, the write-up of their experience using ChatGPT will be graded based on whether or not they applied concepts learned in class to their paper.

The goal of this assignment is to demonstrate the difference between having to write a paper completely on your own versus using ChatGPT as a tool. Using AI as a tool will strategically be done at the end of the semester so that students are still able to learn important fundamentals throughout the semester, and apply their newfound knowledge of ChatGPT once they're shifting towards the move to college or the workforce.

### **Conclusion**

It's no secret that artificial intelligence is rapidly advancing and becoming a common tool in college education and in the workforce in general. By neglecting to teach students about how to effectively and responsibly use AI platforms, including ChatGPT, high schools are failing to best prepare their students for the future. A well-rounded education that adapts to technological advancements must now combine academic fundamentals with the knowledge of artificial intelligence platforms that students will inevitably encounter in the real world.



## Mock Lesson Plan #1

### Beginning of Semester

Write a 5-page research paper surrounding a question/topic of your choice. This is a very open-ended prompt and should display your creativity.

Examples include:

How does social media use impact our mental health?

How has pop music evolved over the past decade?

Choose a major historical event and explain its overall impact on society.

What is an up-and-coming climate change solution?

Your paper must include 3 credible academic sources. Be sure to go in-depth on your topic and demonstrate your understanding. Include individual impacts, societal impacts, reasons why your topic is important, etc. You should make your general thesis clear and include an abstract paragraph that highlights the central question you're trying to answer.

### Teacher Notes

- students will be given 2 weeks to complete their research paper
- students are NOT permitted to use AI platforms in any way (all AI technology will be blocked on student computers during the time of this assignment)
- this assignment will be given at the start of the semester

## Mock Lesson Plan #2

### End of Semester

Utilize ChatGPT to write a research paper that centers around the same question/topic as your paper for Mock Lesson Plan #1. Begin by entering the following prompt into ChatGPT: “Write a 5-page research paper about the topic, \*insert topic here\*”. Continue editing your paper using ChatGPT and attach a copy of your entire editing process. Include 3 academic sources and be sure to check the credibility of each source.

After finishing your research paper, submit a 1-page follow-up paper that summarizes your experience doing the assignment on your own compared to writing it using ChatGPT. Include the steps you took to ensure the credibility of your sources and explain your editing process.

### Teacher Notes

- students will be given 2 weeks to complete their AI research paper and follow-up paper
- students are required to use AI (specifically ChatGPT) and submit a copy of their entire editing process – this can be done by screenshotting the ChatGPT program
- this assignment will be given at the end of the semester after we’ve gotten through lessons surrounding how to effectively use ChatGPT

## References

- Clark, J. & Perrault, R. (2023). *Artificial intelligence index report 2023*. Stanford University, Human-Centered Artificial Intelligence (HAI).  
[https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI\\_AI-Index-Report\\_2023.pdf](https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI_AI-Index-Report_2023.pdf)
- Marcus, G. (2023, March 13). *Why are we letting the AI crisis just happen?* The Atlantic.  
<https://www.theatlantic.com/technology/archive/2023/03/ai-chatbots-large-language-model-misinformation/673376/>
- Santa Clara University. (2023, September 25). *Research guides: Citing business information: How do I cite ChatGPT?*. Santa Clara University Library Research Guides.  
<https://libguides.scu.edu/bizcites/chatgpt>