

**Incorporating Artificial Intelligence (AI) into Coursework:
Preparing Students for the Workplace**

Jessica Scarfuto
732-947-0092

jscarfuto@civil.tamu.edu

Zachry Department of Civil and Environmental Engineering

Rilee Hall
(832) 454-4011

rileehall@tamu.edu

Agricultural Leadership, Education, and Communications

Theresa Pesl Murphrey
(979) 458-2749

t-murphrey@tamu.edu

Agricultural Leadership, Education, and Communications

Megan Greenwood
713-492-6158

mpg023@tamu.edu

Agricultural Leadership, Education, and Communications

Texas A&M University

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Introduction

Artificial intelligence (AI) as it relates to higher education has received tremendous attention in the last decade, and even more within the last year due to the introduction of OpenAI's newest model of ChatGPT in November 2022 (Schiff, 2021 & Firat, 2023). ChatGPT (Chat Generative Pre-Trained Transformer) is a sophisticated, AI operated language model that uses complex algorithms to generate human-like responses into text-based prompts (Fraiwan & Khasawneh, 2023; Halaweh, 2023). Reaching 100 million users only two months after its launch (Halaweh, 2023), ChatGPT has become a hot topic among many occupational and organizational sectors. This technology has the potential, if used properly, to revolutionize various aspects in the educational environment, such as research, writing, and editing (Halaweh, 2023).

ChatGPT's ability to answer questions, summarize information, detect grammatical errors, and introduce new information with speed and efficiency makes it a form of AI that can be extremely valuable (Atlas, 2023). However, with such technology comes concerns for its application and usage. Halaweh (2023) says, "...there are concerns that students may copy and paste texts without critically analyzing what has been highlighted or chosen from a source, without citing the original source, and without recognizing the potential for plagiarism" (p. 2). While this is a valid area of concern, other research has presented ways to combat this and to ensure transparency, credibility, and authentic learning. Some of those suggestions include statements of clear policies for usage, student conducted reflection reports, audit trails of queries, and usage of AI detector tools to review the final piece (Halaweh, 2023; McMurtrie, 2022; Chatterjee & Dethlefs, 2023). As AI technologies are becoming increasingly present in our day-to-day lives, it is our job as agricultural instructors to ensure our students are aware of AI's possibilities and ramifications.

How it Works

By incorporating assignments that use ChatGPT and other forms of AI into coursework, students gain a guided awareness of the technology that they are likely to come across in higher education and occupational settings. An assignment was created and implemented across three classrooms at Texas A&M University. The assignment tasked students to use ChatGPT to write an email to their "boss" and inform him/her that the lead time of a project will be approximately 50% longer than expected due to issues. Students were then told to analyze the work of the AI and the ethics of using such software by answering questions regarding professionalism and adequacy of what was produced, how to handle issues that arise from using the technology, and how it may change workplace communications. Implementing assignments such as this encourages students to reflect on the ways their use of ChatGPT and other AI can help or harm them, providing guidance for the limits of technology and how they might use it in the future.

Results to Date

We used the AI assignment with 92 students across 3 courses at Texas A&M University. The goal was to engage students in the use of AI, specifically ChatGPT. Overwhelmingly, students were very impressed with how well ChatGPT wrote and felt that the communication it generated was professional in spelling, grammar, and sentence structure. However, many students raised concerns that key details were often missing or that the AI added details that they had not prompted it to include. Because of this, the group was split on the ethics of using AI in the workplace. Most students stated that it was not appropriate in school settings. Many students mentioned the issue with “authenticity” of communication. In almost all cases, students agreed that the responsibility for the validity of the communication was on the person who had used the AI. Thus, while students perceived AI as a tool – the responsibility for accuracy was with the person using the technology. The importance of regulation and ethics was mentioned. Many students felt that it was an acceptable tool to save time on otherwise tedious tasks while others had privacy concerns, felt that it was plagiarism, or were concerned that the document would not necessarily reflect the writer’s understanding of the subject matter.

Overall, most of the students were unfamiliar with ChatGPT prior to the assignment, they perceived ChatGPT as a helpful tool and were surprised at how good the AI technology performed. As shared by one student, “this is my first experience with AI .. and I am completely mind blown by its capabilities.” Based on the experience with our students, we believe it is critical to expose students to the use of AI, such as ChatGPT, so that we can teach critical thinking alongside these new technologies.

Future Plans

While a lot of work surrounding AI software is text-generative, it goes beyond just that. AI has expanded into fields of imagery and presentation, such as Adobe’s Photoshop application (Karaata, 2018). With that being said, future plans include expansion of activities that are connected to other sectors, not just writing and research. The goal of this implementation is to bring awareness of AI usage to the students within an educational context. Rather than stopping students from using ChatGPT and other AI resources, we want students to become aware and exposed to AI in a controlled environment to allow them to learn what it can and should be used for as well as the ramifications and consequences that can result from improper use.

Resources Needed

With ChatGPT being an online language model, access to the internet and technologies like computers, laptops, or iPads is needed. The majority of higher education institutions have computer labs with up-to-date software that students can access if they do not have a device of their own. Some AI technologies are free to use, but others require subscriptions. If there are intentions to use a technology that is not free, funding to purchase the subscription is needed. However, similar to computer lab access, many universities already provide some subscriptions to their students, such as Adobe Creative Suite.

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