Using Generative AI to Enhance Teaching and Learning

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While educator concerns about the potential for students to misuse generative AI such as ChatGPT for cheating and academic dishonesty are understandable, prohibiting the use of AI technology in the classroom is a short-sighted response. Rather than banning AI technology, educators should embrace the technology as a teaching and learning tool. Generative AI has the capacity for stimulating student creativity, offering opportunities for personalized learning, and helping students prepare for the future by providing them with the information and media literacy skills they need in the workplace.

Keywords: generative AI, communication, education, information literacy, media literacy

Introduction

In *The Chronicle of Higher Education*, Terry (2023) presents a student's perspective on the use of generative AI such as ChatGPT among college students. As an undergraduate student at Columbia University, Terry (2023) provides an informative first-hand account of his own use of generative AI to brainstorm and organize initial drafts of his writing assignments. Terry (2023) also points out what he describes as the disconnect between how students use AI technology compared to the way their professors think they use it. His narrative illustrates how the introduction of new technology in higher education often raises questions about its efficacy for teaching and learning. For example, is generative AI a tool for cheating or is it an instrument for teaching students how to improve their writing, critical thinking, interviewing, and debate skills? Moreover, how can communication educators use generative AI to help students build greater information and media literacy skills?

To further illustrate the equivocation surrounding the use of generative AI in the communication classroom, at a recent faculty meeting, my colleagues engaged in a robust discussion on the advantages and disadvantages of using ChatGPT in their public relations, journalism, and media courses. While no definitive conclusions were reached, the conversation did reflect the mixed reactions educators often have about generative AI and its implications for teaching and student learning in online and in-person contexts. Certainly, concerns about the potential for cheating and academic dishonesty are real and legitimate. Nonetheless, as Warner (2022) observes, the leaps we have witnessed in AI technology can also serve as opportunities for instructors to re-examine our teaching practices as well as pedagogical goals and objectives. In this essay, I examine the literature and consider the ways in which educators can use generative AI such as ChatGPT to enhance teaching and learning in the communication classroom.

Generative AI in Communication Education

Edwards et al. (2018) raise the question of what is gained or lost when communication that typically occurs between humans is communicated through AI. They also consider the educational, ethical, creative, and social implications this type of interaction with technology has on the communication process. As the authors explain, while technology has a long history of being used as an educational tool, the introduction of AI technology as a communication source or interaction partner is a relatively recent development in higher education. Edwards et al. (2018) argue that human-machine communication (HMC) or the use of technology as a source of communication and interaction with others has "the potential to disrupt some of our most basic assumptions and expectations about communication and education" (p. 474). As a result, they urge instructional communication scholars to examine the issues related to designing, implementing, and evaluating the use of AI technology in the communication classroom (Edwards & Edwards, 2017; Edwards et al., 2018).

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Teaching and Learning

Luttrell et al. (2020) point out that while technology has the potential to improve the development and practice of effective communication skills, it has not yet been fully incorporated into communication education. Luttrell et al. (2020) discuss five considerations for the future direction of AI technology in communication education and how educators can adapt their teaching strategies accordingly. First, instructors should help students understand and explain how advances in emerging technology apply to foundational communication theories and practices. For example, by adopting AI methods in the classroom, educators can provide students with the experience they need to use AI to verify the truth and validity of online information. Second, instructors should help students understand the ethical implications of using AI technology in relation to decision-making, critical thinking, media literacy, and perspective taking. As such, educators can reinforce the ethical foundations inherent in communication studies and help students create ethical codes of conduct for using AI technology in the classroom and in the workplace. Third, instructors should engage in professional development to foster their awareness of emerging trends for incorporating the application of AI in the communication field. For instance, educators can work collaboratively with industry professionals to address students' skills gaps and align course curriculum to more effectively meet employer expectations. Fourth, instructors and administrators should provide students with access to digital platforms to help them gain knowledge and skills in creating and measuring strategic communication for careers in public relations, journalism, advertising, and marketing. Fifth, instructors should help students acquire media literacy skills to better ensure that they become ethical as well as responsible consumers and producers of social media and AI technology.

To further illustrate the capabilities as well as limitations of generative AI as a teaching and learning tool in journalism and media education, Pavlik (2023) employed ChatGPT to examine what journalism and media educators should teach students about using AI technology as a source for information gathering. Most notably, while one of the advantages of generative AI is the speed at which it can generate and analyze information, it is also important for students to consider the possible drawbacks such as the potential for introducing bias or errors in reporting. Similarly, students should understand the need for oversight and editing of AI content as well as the ethical and legal implications of its responsible use in journalism and media. Pavlik (2023) points out that while generative AI has limitations in terms of knowledge range and depth as well as capability for analytical and creative thinking, it does possess an impressive level of information on journalism and media history, scholars, and issues. Furthermore, because of its potential for content generation in the fields of journalism and media, AI technology should also have increased relevance in journalism and media education.

Information and Media Literacy

According to Meyer et al. (2008), information literacy skills involve the ability to locate, analyze, and evaluate the credibility, objectivity, and reliability of information. The authors argue that information literacy is interconnected with the development of critical thinking. Moreover, providing students with the skills "to acquire, use, and evaluate information is a staple of communication education" (Meyer et al., 2008, p. 30). As Lee (2018) discusses, helping students improve their media literacy skills means affording them the knowledge they need to evaluate online information "to consider factors such as who is sending a message, the purpose of the message, the persuasive techniques included, and the potential interpretations of a message" (p. 460). While the topic of media literacy education is interdisciplinary, communication and instructional scholars have the opportunity to make significant contributions in enhancing media literacy knowledge and skills not only to students in the classroom, but also to adult populations beyond the classroom as well (Lee, 2018).

Friesem (2019) states that cultivating media literacy skills involves the process of learning how to gather information, analyze and evaluate online sources, consider the ethical implications of messages, reflect on media consumption, and consider personal as well as media biases. Communication educators can help students increase their media literacy skills by integrating problem-based instruction and

experiential learning in their course assignments. Friesem (2019) notes that problem-based instruction and experiential learning can also help students learn more about the reliability, validity, and trustworthiness of online information and sources while also enhancing their critical thinking skills. In the process, students can also become more reflective about the types of media and technology they consume, the ethical implications of the messages they send and receive, and how their media choices relate to their identity as well as social, cognitive, and emotional needs.

Challenges to Information and Media Literacy

As Tiernan et al. (2023) explain, AI technology presents challenges to information and media literacy as competencies. For example, while AI can generate information, it cannot explain where or why it obtains information. Likewise, AI technology poses issues for information gathering and evaluation by generating hallucinations or incorrect and even fake information and references. To address the problem of hallucinations in AI-generated data, Ringman (2023) urges AI developers to implement topical, safety, and security software guardrails designed to ensure greater accuracy in AI's output process. In addition, measures such as human intervention and oversight in reviewing and assessing AI-generated content can also identify and prevent the occurrence of inaccurate, misleading, or false information.

AI technology has also changed the way we access, evaluate, and consume information and media by providing users with features such as facial recognition software, algorithms generating personalized recommendations, AI-powered assistants such as Siri, and text and image generation which can also include "deep fake" audio and video (Tiernan et al., 2023). As a result, not only has AI transformed how we gather information, but also the very nature of what we consider information to be. Therefore, as communication educators consider what information and media literacy means in the age of generative AI, we must also examine the role AI technology plays in generating and filtering the information and misinformation (Henshall, 2024) we receive and teach students how to evaluate evidence accordingly.

Integrating Generative AI in the Classroom

Many educators were caught off guard by the sudden emergence of ChatGPT in late 2022 (McMurtrie & Supiano, 2023; Ross, 2023). Since its introduction, however, instructors have begun to familiarize themselves with the technology and how generative AI can be used as an instructional tool for writing, brainstorming, problem-solving, answering exam questions, offering feedback, lesson planning, and course design (McMurtrie & Supiano, 2023; Mowreader, 2024: Schroeder, 2023). Educators have also attempted to discover ways to detect when students submit papers using AI-generated text rather than their own writing. As Kan (2023) explains, however, the tools for detecting AI-generated text are often unreliable in accurately distinguishing AI-generated versus human-generated content. As a result, the software can create false flags and mistakenly accuse students of plagiarism even when the work is their own. Students whose first language is not English or those whose writing is overly concise or formulaic often run the risk of being falsely accused of academic dishonesty (Kan, 2023).

Educator Attitudes about AI

To gain insight into the experiences educators have had with adapting to generative AI, McMurtrie and Supiano (2023) surveyed seventy instructors from several academic disciplines. As expected, the responses indicated a wide range of attitudes and perceptions about AI technology. For example, some educators stated that they planned to include language in their course syllabi about the appropriate use of generative AI. Others considered including more in-class writing and project-based learning along with class discussions to examine the strengths and weaknesses of AI technology. While several instructors expressed the opinion that any use of generative AI by students constitutes cheating and plagiarism, others took a less restrictive approach. Rather than banning the use of AI technology in

the classroom, these educators thought they should help their students cultivate greater information and digital media literacy skills that would be useful in their future careers.

The importance of helping students acquire AI literacy skills supports the results found in an Association to Advance Collegiate Schools of Business (AACSB, 2023) study arguing that preparing students to meet the demands of the digital future means providing them with experiential opportunities to understand and apply AI technology today. Regarding the implications these findings have for communication instruction, the AACSB (2023) study underscored how educators can employ generative AI as a valuable instructional tool for enriching student learning and success. By harnessing the possibilities of AI technology, instructors can help students learn to ask questions, apply critical thinking skills, and develop a growth mindset that will prepare them to take on the leadership roles and challenges they will face in the future.

Teaching and Learning

While educator concerns about cheating and academic dishonesty are understandable, banning the use of AI technology in the classroom is a short-sighted response (Duckworth & Ungar, 2023). Instead, instructors should discover ways in which AI technology can help students apply analytical thinking and problem-solving skills. The authors discuss how generative AI illustrates the distinction between knowledge and thinking. For example, while a chatbot may possess an infinite knowledge base of facts and information at its disposal, it lacks the human ability to think, reflect, and reason. To help students further realize the limitations of AI technology, Duckworth and Ungar (2023) describe how educators can help students exercise critical skills in writing and debate, analyzing arguments, examining evidence, and evaluating sources by encouraging them to question and fact check AI-generated information. Rose (2023) proposes that instructors take a dialogic approach to help students use generative AI to practice higher order thinking skills. For example, instructors can ask their students to compare essays they have written to those composed by AI technology. Students can then engage in additional writing and analysis by providing feedback and suggestions for themselves or their classmates on improving their writing.

Generative AI can also be employed as an instructional tool for creating outlines and drafting essays (Roose, 2023; Torres & Nemeroff, 2024). By working individually or with their classmates, students can then apply the outlines to write essays, short stories, and scripts of their own. Students can also practice comparing and contrasting ideas, evaluating evidence, and engaging in debate preparation. Likewise, instructors can work collaboratively with their students in creating grading rubrics for defining the components of a good essay. Students can then use their rubrics to analyze and evaluate essays written by generative AI for content, evidence, and accuracy (McMurtrie, 2023). Educators can also help students gain confidence in preparing for job interviews by using generative AI to gather information about organizations and organizational culture, analyze keywords in job descriptions, practice answering interview questions, and engage in mock interviews (Chamorro-Premuzic, 2024).

Responding to the Future of Generative AI

To examine generative AI's impact and to produce strategies for how to more effectively harness the potential of AI technology in higher education, D'Agostino (2023) spoke with several faculty members and administrators for their recommendations. One of the suggestions they offered is for educators to become familiar with AI technology and to explore the implications it has for enhancing teaching and learning. Achieving this objective, however, means that administrators should provide faculty and staff with the training and support they need for professional development. Educators should also consider the learning objectives of their courses and reflect on how AI technology aligns with achieving those outcomes. They also discussed the importance of considering the types of AI literacy skills that students will need to succeed in the future and the necessity of encouraging students to join the conversation and share their thoughts on why and how they use technology.

While AI technology can be useful in helping students utilize critical thinking skills for effectively addressing the real-world challenges they will face in their future careers, Abramson (2023) argues that educators should also be judicious in integrating its use in the classroom. She offers several insights for instructors to consider such as how technology can help them achieve course objectives and encourage AI literacy. In addition, educators should also weigh the potential for academic dishonesty, communicate their expectations to students on using generative AI, and increase their own AI literacy by applying the technology for planning or administrative purposes. Abramson (2023) advises instructors to exercise patience as AI technology continues to evolve. She points out that while learning new technologies can seem overwhelming, the experience can also be empowering for instructors as well as students. The main take away is that as both educators and students gain greater AI literacy, we will be able to better understand and identify its strengths, weaknesses, biases, and potential for misuse.

Conclusion

The goal of this essay is to examine the emerging literature on generative AI and consider how communication educators can use AI technology to enhance teaching and learning in the classroom. Although educator concerns about the possible misuse of generative AI contributing to academic dishonesty are valid, a total ban of generative AI technology is counterproductive. Instead, communication educators can discover ways to frame the use of AI technology to effectively integrate it into our courses. Besides helping students develop writing and analytical skills, instructors can also help students improve the information and media literacy skills they need to be successful now and in the future. As Edwards et al. (2018) argue, communication scholars have much to add to the conversation about designing, implementing, and evaluating the use of AI technology in instructional contexts in and outside of the classroom to "help guide industry and educators toward best practices" (p. 478). Certainly, generative AI presents new challenges, new levels of complexity, and new opportunities for enhancing rather than replacing critical thinking and creativity in the communication classroom.

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