


# Chapter 4

## Enlightening Educators: Unlocking the Benefits of AI in Faculty Development

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### **ABSTRACT**

*This chapter aims to familiarize teacher educators and college of education professors with generative artificial intelligence (AI). As the final instructors that pre-service teachers encounter before they enter the classroom, it is crucial for teacher educators to grasp the technology that their students will need to master in order to support them effectively. According to Shata and Hartley, while education professors tend to hold positive views on artificial intelligence, student perceptions are considerably more skeptical, despite the numerous advantages AI offers in streamlining and enhancing teacher preparation processes. This chapter will outline innovative strategies that provide compelling arguments for integrating AI into lesson development, ensuring alignment with state standards while fostering engaging content strategies and effective resource curation.*

### **INTRODUCTION**

According to a post on Reddit (r/ChatGPT, 2023, May 19), an agriculture and natural science professor at Texas A&M University-Commerce (now known as East Texas A&M University) failed his entire class of seniors who were preparing to graduate because he claimed that all students had used Chat GPT on their final exam. This shocked the entire university, including all faculty, staff, and students. Ultimately, the professor could not fail the students primarily because he could not

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prove that all students used an AI tool. As a Curriculum and Instruction Professor, this shocked me because I had not realized the power of artificial intelligence (AI) and its widespread use in higher education, nor did I realize how many people regularly utilized AI.

After learning about this case, I became interested in exploring tools like ChatGPT and other generative AI (GenAI) applications. The university was making a point of learning more, too, and administrators quickly provided professional development for faculty and staff in artificial intelligence. The university also established an artificial intelligence task force comprising of faculty members. This task force provided resources and additional professional development at the university and created a university-wide statement for all faculty to use in their syllabi. The established statement reminds university students that their professors understand how AI works and will provide instructions and guidelines when using AI in any way. This accepting approach to artificial intelligence, which has been used at the university level if it is done legally and ethically, and where students are transparent about its use, was a very innovative way of thinking that I needed to adopt to utilize these technological tools. Despite the skepticism I (and many other faculty members) have about AI, it has demonstrated the ability to enhance instructional practices and increase educational effectiveness.

Artificial Intelligence (AI) is a set of technologies that enable computers to perform various advanced functions, including seeing images and understanding and translating spoken and written language (Google Cloud, n.d.). It is also capable of analyzing data at a rapid rate. AI is also able to make recommendations for all topic areas. AI is a field of science concerned with building computers that can learn and reason, typically requiring human intelligence. According to Google Cloud (n.d.) “AI is a broad field that encompasses many different disciplines, including computer science, data analytics and statistics, hardware and software engineering, linguistics, neuroscience, and even philosophy and psychology” (Artificial Intelligence Defined, para 2). This innovative field has also been applied in higher education, and AI has provided many benefits to educational settings.

Despite the benefits that generative artificial intelligence provides in higher education, a tremendous number of teacher educators and college of education professors find that it is a very complex field and needs to be studied further. Many educators are skeptical about using AI in education (Reza et al., 2023; Stano, 2024). Educators are concerned that AI may replace human instruction and hinder the development of critical thinking skills (McGehee, 2024). Educators also believe that students use AI for academic dishonesty, including cheating and plagiarism (McGehee, 2024). While it is understandable for educators to have reservations about using AI in educational settings, perceptions of both faculty and students at universities have been analyzed, revealing that faculty members are more positive

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