Chapter 4
ChatGPT and Academia:
Exploring the Transformations and Transitions

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ABSTRACT

Since its launch in November 2022, this tool has brought massive transformations in almost every imaginable field. Among those fields, academia is perhaps the most discussed domain. However, much of what ChatGPT can do is still understudied. Therefore, this chapter aims to investigate the potential impact of ChatGPT in the domain of academia while exploring the possibilities for the future. The study emphasizes the theories that link ChatGPT's presence to its effects on academia and research.

1. INTRODUCTION

OpenAI released ChatGPT, an intelligent conversation agent, to the public on November 30, 2022. Since then, its popularity has grown exponentially. Thanks to its outstanding natural language processing (NLP) and conversation capabilities, it provides a textual interface that is simple to use and enables users to make simple requests, ask questions, and request the creation of different types of text. ChatGPT

can learn from and predict the next word in a phrase very effectively thanks to its massive, intricate natural language model and its enormous underlying datasets.

Generative AI (Gen-AI) systems and their potential implications on academics have come into sharp focus with the release of OpenAI's ChatGPT. The AI powered ChatGPT improves the environment of education and research as a result of the rapid advancement in technology. The move towards digitization has been one of the biggest developments in education. Online education, which has increased access to education for individuals all over the world, was also a result of this transformation. Despite its contribution to the subject, stakeholders are still assessing the potential disruption it may bring about for those involved in the academic system. The conventional concept of education has changed from being a service institution to becoming a commercial model thanks to the current improvements in education.

ChatGPT is a general-purpose conversation chatbot that is based on OpenAI's GPT-3 language model. It is trained to create text that mimics human speech in reaction to a particular stimulus or discourse and can engage in authentic, open-ended debates on a number of topics. With the help of the new development process, ChatGPT is now able to react to follow-up questions, admit mistakes, disprove incorrect beliefs, and decline inappropriate enquiries. Because of the revolutionary changes brought about by the internet, it is now much simpler for academics to cooperate and publish their findings throughout the world. This human-like approach increases its appeal among users, who utilise it at various domain levels to test its effectiveness in comparison to how real humans think. According to Dong, N., & Chen, Z. (2020), AI has increasingly being pushed as having strategic advantages for education. Loeckx (2020) asserts that AI may be an effective teaching tool that lightens the strain on teachers and students while still offering outstanding learning possibilities. With modern educational changes like the digitalization of educational resources, gamification, and personalised learning experiences, there are many opportunities for the development of AI applications in education (Abera & Loeckx, 2020).

ChatGPT has significantly improved academia by providing a tool that may benefit scholars, teachers, students in a number of ways. Additionally, there may be risks to real academics, educators, researchers, and students because they won't be able to use their critical thinking skills to create information, increasing their dependence on educational chatbots. These difficulties, according to Zhai, X. (2021), highlight the need of educating the next generation to provide them the skills and talents they'll need to live in a world that is rapidly changing.

ChatGPT can do a wide range of academic duties, including automatically writing essays that are appropriate for the circumstance and style, providing rapid feedback on any content, and enhancing the accessibility and standard of education. However, ChatGPT can cause a variety of problems in the academic world, including biassed output, the inability to preserve academic integrity, the downgrading of individual

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