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SUSTAINABLE DEVELOPMENT AND STUDENTS' PERCEPTION OF AI TOOLS IN LEARNING AND ASSIGNMENTS

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Abstract
The rapid integration of Artificial Intelligence (AI) tools such as chatbots and virtual assistants into educational practices is a testament to the educational sector's willingness to adapt to new technologies. This research focuses on students' perceptions of the role of AI in education regarding awareness, comfort, trust, ethical concerns, and general disposition. This research utilized a mixed-methods approach of surveys and interviews. AI has the potential to improve bottom-line motivational and engagement parameters, although some ethical concerns, such as plagiarism and overreliance, are at the other end of the spectrum. This research indicates that integrating AI with the right intent will fulfill most of the objectives of the United Nations Sustainable Development Goal 4 (SDG 4) which aims at quality and inclusive education.

Keywords: Artificial Intelligence, ChatGPT, Sustainable Development Goal 4, Quality Education, Students' Perception, Academic Integrity.

Introduction

AI continues to transform how we educate. Tools like ChatGPT, Google Bard, and other adaptive learning technologies are transforming how learners engage, collaborate, and communicate with educational materials. Quality education is aligned with the United Nations Sustainable Development Goal 4 (SDG 4). Lifelong learning is inclusive and equitable learning opportunities. With the potential to transform education through personalized and scalable applications, AI continues to provide education experiences. Yet, trust, ethical issues, and data bias challenges remain. Thus, understanding students' perspectives on AI is crucial to shaping education and policy.

Research Objectives

This study aims to:

1. Gauge students' awareness levels and trust of AI tools for learning and assignments.
2. Investigate students' perceptions of the usefulness of AI in education and possible ethical concerns.
3. Evaluate the influence of AI tools on students' motivation, creativity, and engagement.
4. Analyze the extent to which AI addresses the targets of SDG 4 on quality and inclusive education.

Literature Review

AI technologies have recently shifted from automating education to those that can provide a personalized learning for students. Zawacki Richter et al. (2019) highlight that AI is used for adaptive learning, feedback generation and academic analytics. Holmes and Tuomi (2024) suggest that generative AI enhances creativity but requires critical reflection if it is not to be misused. Khosravi et al. (2024) that stress the importance of finding a balance between human/AI collaboration without forsaking academic integrity. Yet, there are still some gaps in the relation between AI and sustainable development particularly within SDG 4.

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Methodology

The study was a sequential mixed method research, collecting both quantitative and qualitative data. The sample comprised of 200 UG and PG students from S.A College Arts and Science. Representatives of various groups were guaranteed by stratified random sampling. Awareness, ethics, and trust in AI tools were measured with a structured questionnaire using 5-point-Likert scale (Cronbach's alpha $\alpha = 0.83$ indicating reliability). In-depth findings were gathered, also from 20 students through semi-structured interviews. Descriptive statistics were performed using SPSS, and free-text responses to open-ended questions were thematically analyzed according to the framework provided by Braun and Clarke (2006). Ethical considerations, informed consent and confidentiality were maintained at all levels.

Results and Discussion

Descriptive statistics showed that 68% of the participants were optimistic about AI improving learning efficiency, while 22% were neutral and 10% did not trust AI for ethic reasons. More digital literacy was also associated with more trust. Through thematic analysis three principal themes were identified; greater motivation, ethical salience and risk of dependence. Theme Description % of Respondents Higher motivation AI tools are handy for fast knowledge acquisition and idea generation. 68% Ethical Awareness Students expressed concern about plagiarism and data misuse. 22% Risks of Dependency Some students spoke about overdependence on A.I. tools. 10% These results parallel those reported by Cotton et al. (2023) and Rudolph et al. (2023) argue that there is a constitutive coupling between the responsible use of AI and engagement, while also presenting ethical tensions for the former. Studying AI altogether at the tertiary level is able to_COUNTER: This means_UPPER (1) Introducing AI literacy into tertiary .

Conclusion and Implications

When AI tools like ChatGPT are used ethically, education practices can change. Students' perspectives reveal optimism tempered with ethical trepidation. In order to fulfill the requirements of SDG 4, AI ethics, digital equity and faculty training need to become priorities for educational institutions. AI literacy in the curriculum can also prepare students to engage in responsible innovation in future employment.

Limitations and Future Work

The findings of this study cannot go beyond the setting and are based on self-reported perceptions. For future works, longitudinal research in multiple colleges are needed to investigate the long-term influences of AI tools on academic achievement, creativity and integrity. Inter-cultural comparisons could be adding more knowledge about AI in education.

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