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STUDENTS' AND TEACHERS' PERCEPTIONS OF ARTIFICIAL INTELLIGENCE IN ONLINE AND BLENDED LEARNING

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Abstract

This study, entitled *Students' and Teachers' Perceptions Of Artificial Intelligent In Online And Blended Learning*, aimed to investigate how educators and students perceive the integration of AI-driven technologies in academic settings. Utilizing a qualitative research design through Focus Group Discussions (FGD), the study gathered insights from twelve participants - six teachers and six selected students from AMA Computer Learning Center. The participants shared their experiences, insights, and challenges encountered in the application of AI-powered tools in online and blended learning environments

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Based on the results of the study, several key findings emerged. First, both students and teachers generally regard Artificial Intelligence as a valuable educational asset that enhances the effectiveness, personalization, and efficiency of learning. Second, despite the perceived advantages, challenges such as limited technical proficiency, lack of proper training, and concerns regarding data privacy were commonly cited. Third, AI tools were found to significantly improve student engagement and motivation, with personalized feedback and adaptive learning features contributing to better academic performance. Lastly, while the benefits such as time-saving, automation, and individualized learning were acknowledged, both groups also expressed concerns about overdependence on technology, reduced human interaction, and occasional inaccuracies in AI-generated outputs.

From these findings, the study concludes that Artificial Intelligence is widely recognized by both students and teachers as an effective tool for enhancing online and blended learning environments. However, its integration is often hindered by various technical, training, and privacy-related barriers. AI has demonstrated a strong positive impact on student motivation, engagement, and academic outcomes, suggesting its transformative potential in educational practices. Nonetheless, the identified limitations point to the need for a well-balanced and ethically guided implementation to maximize the advantages of AI while minimizing its drawbacks.

In light of these conclusions, several recommendations were proposed. Educational institutions are encouraged to promote the integration of AI tools to improve teaching effectiveness and learning outcomes. Comprehensive training programs and sustained technical support should be made available to ensure educators and students are equipped to overcome AI-related challenges. Moreover, schools may benefit from adopting AI-driven strategies that support personalized learning and enhance student engagement. Finally, institutions must establish clear ethical guidelines and policies to ensure responsible and balanced use of AI technologies in the classroom. These actions can help create a more adaptive, inclusive, and effective learning environment empowered by intelligent educational tools.

Keywords: 21st Century Teaching, Aemilianum College Inc., AI in Education, AI-Powered Tools, Artificial Intelligence (AI), Classroom Technology, Digital Learning, EdTech Integration, Educational Technology, Teaching Innovation

Introduction

Artificial Intelligence (AI) is transforming online and blended learning worldwide, with educational institutions adopting AI-driven technologies to enhance accessibility, engagement, and personalized learning experiences (Johnson et al., 2023). Countries with advanced digital infrastructure, such as the United States, China, and European nations, are leading AI integration in education, leveraging adaptive learning platforms, intelligent tutoring systems, and automated assessments (Smith et al., 2023). However, developing nations face challenges in AI adoption due to infrastructure limitations and the digital divide, hindering equitable access to AI-powered education (Brown & Taylor, 2022).

AI-powered education is gaining traction, with institutions integrating AI into digital learning initiatives to improve student engagement and personalized learning experiences (Cruz et al., 2023). The Commission on Higher Education (CHED) and the Department of Education (DepEd) advocate for AI-driven educational reforms, yet concerns regarding data privacy, equitable access, and the digital divide persist (Santos & Reyes, 2023). Many educators and institutions remain in the early stages of AI adoption, requiring further investment in capacity-building programs to maximize AI's potential in improving blended learning outcomes (Rivera & Dela Cruz, 2022).

At the local level, AI-powered education is gradually being implemented in Sorsogon, especially in private schools, as blended learning continues post-pandemic. During the COVID-19 crisis, online education became the norm, and while face-to-face classes have resumed, digital learning tools remain essential, particularly for working students who need flexible learning options (Garcia et al., 2023). However, educators face challenges as students increasingly rely on AI-generated solutions, leading to concerns about academic integrity, student laziness, and the diminished role of critical thinking in classroom discussions (Lopez & Ramos, 2023).

Given these developments, conducting this study is timely and relevant. Understanding how AI impacts both students and teachers will help identify its benefits and drawbacks, particularly in maintaining academic integrity, fostering meaningful engagement, and balancing AI's role with human instruction. The findings will contribute to educational policies and institutional strategies that ensure AI is implemented ethically and effectively, promoting quality learning experiences in the digital age.

Statement of the Problem

Specifically, this study sought to answer the following questions:

1. How do students and teachers perceive the role of Artificial Intelligence in enhancing the effectiveness of online and blended learning environment?

2. What challenges do students and teachers face when integrating Artificial Intelligence-powered tools into online and blended learning platforms?

3. How does Artificial Intelligence influences students' engagement, motivation, and academic performance in online and blended learning settings?

4. What are the benefits and limitations of Artificial Intelligence-driven solutions from the perspective of students and teachers in the context of online and blended learning?

Scope and Delimitations

This study explores students' and teachers' perceptions of Artificial Intelligence (AI) in enhancing the effectiveness of online and blended learning environments. Specifically, it aims to examine how AI contributes to improving digital education, the challenges faced in integrating AI-powered tools, its impact on student engagement, motivation, and academic performance, as well as the benefits and limitations of AI-driven solutions in education. The study employs a qualitative approach through a Focus Group Discussion (FGD) with 12 participants - six teachers and six selected students from AMA Computer Learning Center. By gathering insights from both educators and learners, the research seeks to understand the practical implications of AI in education and its role in shaping the future of digital learning.

This study is limited to the perspectives of teachers and students from Speed College, and findings may not fully represent the experiences of other institutions with varying levels of AI integration. Additionally, the study focuses only on online and blended learning settings, excluding traditional face-to-face learning environments where AI adoption may differ. The research is also restricted to qualitative data from FGD sessions rather than quantitative metrics, which may limit the generalizability of the results. Furthermore, this study does not assess the technical

aspects of AI implementation but rather focuses on user perceptions, challenges, and experiences in utilizing AI-powered educational tools.

Gap Bridged by the Study

The reviewed studies shared similarities with the present study, particularly in examining AI integration and its impact on education. Villarino explored AI adoption among rural college students in the Philippines, highlighting their perceptions, ethical concerns, and institutional policies regarding AI tools. Similarly, Generale investigated AI literacy among university students, focusing on gender differences in knowledge, application, ethics, and self-efficacy. Asio and Soriano examined AI's growing role in Philippine higher education, discussing faculty and student perspectives on its integration. Mulenga and Shilongo reviewed hybrid and blended learning models, emphasizing AI's role in shaping personalized and interactive learning experiences. These studies collectively provided insights into how AI and blended learning models influenced student engagement, teacher training, and institutional policies, aligning with the present study's focus on AI in education.

Despite these similarities, the present study bridged a gap by providing a more focused analysis of AI's influence on student engagement and academic integrity within a specific educational setting. Unlike Villarino's broad discussion on AI adoption, this study delved deeper into how AI tools affected students' learning behaviors, perceptions, and ethical considerations in blended learning environments. While Generale explored AI literacy based on gender differences, the present study investigated AI's direct impact on academic engagement and performance. Moreover, compared to Mulenga and Shilongo's review of hybrid learning, this study examined AI's real-world application in student-centered learning approaches. By addressing these gaps, the present study contributed a unique perspective on AI's role in education, emphasizing the importance of institutional policies, AI literacy programs, and strategies to enhance critical thinking and integrity in AI-assisted learning.

Research Focus

This study seeks to investigate the impact of Artificial Intelligence (AI) on blended learning in local educational institutions, with a specific emphasis on ACLC Sorsogon. It aims to investigate how AI-powered technologies influence student engagement, academic integrity, and teachers' roles in promoting critical thinking. The study will look into the advantages and disadvantages of incorporating AI into education, particularly in terms of fair access, ethical implementation, and the changing dynamics between technology and traditional pedagogy. This study's findings will help to improve policy development and capacity-building efforts aimed at improving the quality and integrity of AI-powered education.

AI INTEGRATION GUIDELINES AND MODELS FOR ENHANCING DIGITAL EDUCATION

The rapid advancement of artificial intelligence (AI) has transformed digital learning environments, offering tools that can personalize instruction, automate administrative tasks, and improve student engagement. However, many educational institutions face challenges in effectively integrating AI into their practices due to lack of training, unclear implementation frameworks, and resistance to change. This initiative provides structured guidelines and models to ensure that both faculty and students can responsibly and effectively harness AI technologies for meaningful educational outcomes.

Objectives

1. To equip educators and students with the necessary knowledge and skills to use AI tools effectively in academic settings.
2. To develop institutional frameworks that support responsible and ethical AI adoption.
3. To promote student-centered learning through the integration of AI-driven personalized tools.
4. To foster collaboration and innovation in teaching and learning through AI-enhanced methodologies.

Goals

1. Enhance digital literacy and AI competency among educators and learners.
2. Improve the quality and efficiency of teaching and learning processes using AI tools.
3. Develop a sustainable and adaptable AI integration model for institutional use.
4. Encourage ethical and critical use of AI in education.

Strategies

1. **Training Programs**
    a) Conduct regular workshops and seminars for faculty and students on the use of AI tools (e.g., ChatGPT, adaptive learning platforms, AI grading tools).
    b) Provide online modules and micro-credentials on AI ethics, usage, and applications.
2. **AI Integration Model Development**
    a) Design a scalable institutional model for AI integration including governance, technical support, and feedback mechanisms.

b) Collaborate with IT and curriculum designers to embed AI tools in course delivery.

3. **Policy and Ethical Guidelines**
   - Establish Clear Policies for Responsible AI Use, Including Issues Of Data Privacy, Plagiarism, And Transparency.
   - Integrate Discussions Of AI Ethics In Relevant Curricula.

4. **Monitoring and Evaluation**
   - Develop Evaluation Tools To Assess The Effectiveness Of AI Use In Learning Outcomes And User Satisfaction.
   - Collect Feedback From Users To Continuously Improve The Implementation Strategy.

Expected Outcomes:

- Increased proficiency and confidence in using AI tools among faculty and students.
- Adoption of a structured AI integration model across courses and departments.
- Improved academic performance and engagement through personalized and adaptive learning.
- A culture of ethical and responsible AI use in educational settings.

Strategy Example: AI Training Program for Educators

Description

Implement a structured training program titled **"AI Tools for Teaching: Practical Integration Workshop Series"** aimed at faculty members across all departments.

Implementation Steps

1. **Workshop 1 – Introduction to AI in Education**

   Overview of AI tools like ChatGPT, Grammarly, Turnitin AI Detection, and adaptive learning platforms such as Khan Academy or Century Tech.

2. **Workshop 2 – Hands-On AI Tools Application**

   Educators practice using tools for lesson planning, content generation, and assessment feedback.

3. **Workshop 3 – Ethical and Responsible Use of AI**

   Covers data privacy, academic honesty, and how to guide students in using AI responsibly.

4. **Capstone Task – AI-Enhanced Lesson Plan Submission**

   Each participant submits a sample lesson or activity integrating an AI tool, which is peer-reviewed.

Support Materials:

1. Step-by-step video tutorials

2. Quick-start user guides
3. Access to a peer support group or forum

Monitoring

Pre- and post-training surveys to assess skill gains and readiness to apply AI in class.

Expected Result

Educators become confident in integrating AI into their teaching, resulting in more interactive, personalized, and efficient instruction.

Findings

Based on the results of the study, the following key findings were identified and formulated:

1. Students and teachers generally perceive Artificial Intelligence as a valuable tool that enhances the effectiveness, personalization, and efficiency of online and blended learning environments.
2. Both students and teachers encounter challenges such as limited technical skills, lack of training, and concerns over data privacy when integrating AI-powered tools into digital learning platforms.
3. Artificial Intelligence positively influences students' engagement and motivation, with many reporting improved academic performance due to personalized feedback and adaptive learning features.
4. While students and teachers recognize benefits such as time efficiency, personalized learning, and automated support, they also acknowledge limitations like dependence on technology, lack of human interaction, and occasional inaccuracies in AI outputs.

Conclusions

Based on the findings of this study the following conclusions were formulated:

1. Artificial Intelligence is widely recognized by both students and teachers as an effective enhancer of online and blended learning environments.
2. Despite its potential, successful AI integration in education is hindered by technical, training, and privacy-related challenges.
3. AI significantly contributes to improving student engagement, motivation, and academic outcomes in digital learning settings.
4. While AI offers notable educational benefits, its limitations highlight the need for balanced, guided, and ethical use in teaching and learning.

Recommendations

Based on the conclusions drawn from this study, the following recommendations were formulated:

1. Educational institutions may actively promote the integration of AI tools to enhance teaching effectiveness and learning experiences.
2. Comprehensive training programs and technical support may be provided to equip educators and students with the skills needed to overcome AI-related challenges.
3. Schools may adopt AI-driven strategies that foster personalized learning to further boost student engagement and academic performance.
4. Institutions may establish clear policies and ethical guidelines to ensure the responsible and balanced use of AI in education.
5. Educational institutions may actively promote the integration of AI tools to enhance teaching effectiveness and learning experiences.
6. Comprehensive training programs and technical support should be provided to equip educators and students with the skills needed to overcome AI-related challenges.
7. Schools may adopt AI-driven strategies that foster personalized learning to further boost student engagement and academic performance.

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