

Artificial Intelligence Adoption and Strategic Decision-Making: Evidence from the Higher Education Sector in Developing Countries

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Abstract

Artificial Intelligence (AI) is increasingly transforming decision-making processes across multiple sectors, including higher education. Universities worldwide are adopting AI technologies to improve administrative efficiency, enhance learning outcomes, and support strategic planning. The research adopts a quantitative approach using survey data collected from university administrators, faculty members, and academic decision-makers. The study contributes to the literature by highlighting the importance of AI technologies in strengthening institutional governance and strategic management in higher education. The results provide practical implications for policymakers and university leaders seeking to integrate AI into educational management and decision-making systems.

Keywords: *Artificial Intelligence, Strategic Decision-Making, Higher Education, Digital Transformation, Developing Countries, Educational Management*

Introduction

Artificial Intelligence (AI) has emerged as one of the most transformative technologies of the 21st century, influencing various sectors including healthcare, finance, manufacturing, and education. In the higher education sector, AI is increasingly being used to enhance teaching and learning processes, automate administrative tasks, and support institutional decision-making. Universities worldwide are leveraging AI-powered systems for predictive analytics, student performance monitoring, and strategic planning. AI technologies such as machine learning, natural language processing, and predictive analytics enable universities to analyze large volumes of data and generate insights for informed decision-making. These technologies help institutional leaders improve operational efficiency, enhance student engagement, and optimize resource allocation. According to recent studies, AI adoption in higher education can significantly improve academic management, administrative efficiency, and strategic planning processes.

Objectives

This study aims to examine the relationship between AI adoption and strategic decision-making in higher education institutions in developing countries. The research contributes to the literature by providing empirical evidence on how AI technologies support strategic management and institutional performance in the education sector.

The main objective of this study is to examine the impact of AI adoption on strategic decision-making in higher education institutions in developing countries.

1. To analyze the level of AI adoption in higher education institutions.
2. To examine the relationship between AI adoption and strategic decision-making.
3. To identify the factors influencing AI implementation in universities.
4. To evaluate the impact of AI-driven decision-making on institutional performance.

Methodology

This study adopts a quantitative research design using a cross-sectional survey approach to examine the relationship between Artificial Intelligence (AI) adoption and strategic decision-making in higher education institutions in developing countries. A quantitative approach is appropriate for testing hypotheses and analyzing relationships among variables such as AI readiness, institutional support, and decision-making effectiveness.

Findings and Discussion

The key findings of this study can be summarized as follows:

- AI adoption in higher education institutions in developing countries is growing but still at a moderate level.
- There is a strong positive relationship between AI adoption and strategic decision-making effectiveness.
- Data analytics capability significantly enhances the impact of AI on decision-making.
- Institutional digital readiness is a critical factor influencing AI adoption.
- Financial constraints, limited expertise, and infrastructure limitations remain major challenges for AI implementation.

Overall, the findings indicate that artificial intelligence technologies have significant potential to improve strategic decision-making in higher education institutions. However, universities in developing countries must strengthen their technological infrastructure and human resource capabilities to fully benefit from AI-driven innovations.

Conclusion

Artificial Intelligence (AI) is increasingly becoming a transformative technology in many sectors, including higher education. The purpose of this study was to examine the adoption of AI technologies and their influence on strategic decision-making in higher education institutions in developing countries. The findings of the study demonstrate that AI adoption has a significant positive impact on the effectiveness of strategic decision-making within universities.

Overall, the findings suggest that while AI technologies have significant potential to enhance decision-making processes in higher education, successful implementation requires strategic investments in technology, human resources, and institutional capacity building. The results of this study provide several practical implications for university administrators, policymakers, and educational stakeholders.

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