Critical Success Factors and Barriers in the Implementation of E-Learning in Higher Education: A Literature Review

Analysing Key Factors, Barriers, and Best Practice in the Digital Transformation of Higher Education

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1 Introduction

This literature review addresses the transformation of higher education through digital learning technologies, examining both enabling factors and obstacles to successful implementation. The following sections establish the research scope and contextual foundations before synthesising evidence from recent scholarship.

1.1 Focus and Aim of Review

The review aims to critically examine the key success factors and barriers influencing effective e-learning implementation in higher education institutions. It seeks to synthesise multidisciplinary evidence from technological, pedagogical, institutional, and policy perspectives. The target audience includes educators, institutional policymakers, researchers, and digital learning practitioners interested in improving e-learning strategies and outcomes.

The guiding research question for this review is:
What are the critical success factors and main barriers influencing the effective implementation of e-learning in higher education institutions?

1.2 Significance of Review

This review addresses the urgent need to understand e-learning dynamics in the wake of rapid digital transformation accelerated by recent global events such as the COVID-19 pandemic. It is significant for guiding institutions in optimising investments,

enhancing learner engagement, reducing disparities, and designing resilient e-learning ecosystems.

2 Context, Perspective, and Theoretical Framework

This section outlines the theoretical foundations and methodological approach employed in synthesising the literature. The framework integrates technological readiness, institutional support, learner engagement, and policy dimensions to enable systematic comparison of empirical findings.

2.1 Context of the Topic

This literature review focuses on the implementation of e-learning within higher education institutions, a field undergoing rapid digital transformation globally. The review adopts a pragmatic perspective aimed at synthesising empirical findings across technological, pedagogical, and institutional aspects, without employing overly complex theoretical models.

2.2 Perspective and Framework

To guide the synthesis of literature, a simplified framework combining key dimensions from established models is used: technological readiness, institutional support, learner engagement, and policy environment. This framework allows for straightforward categorisation and comparison of findings from diverse studies, making it suitable for a systematic search and thematic analysis of articles sourced from academic databases.

The review follows a structured methodology inspired by the PRISMA guidelines to ensure rigor in identifying, screening, and selecting relevant literature. This practical framework supports clear, transparent presentation of evidence while avoiding the pitfalls of unnecessarily complicated theories, ensuring the review remains manageable within the word limit and accessible to a broad academic audience.

2.3 Methodology for Literature Selection

The literature review draws upon scholarly articles sourced from four key academic databases: the University of Essex Online (UoEO) library, Scopus, IEEE Xplore, and Google Scholar.

Key search terms used to locate relevant literature are e-learning implementation, online learning adoption, digital education, and technology enhanced learning. These terms were combined with higher education, university, college as well as barriers, challenges and obstacles. This method facilitates a robust and focused collection of scholarly articles suitable for comprehensive synthesis. Actual search terms were formatted as follows:

- ("e-learning implementation" OR "online learning adoption") AND ("higher education" OR "university" OR "college")
- ("digital education" OR "technology enhanced learning") AND ("barriers" OR "challenges" OR "obstacles") AND ("higher education")

To ensure the relevance and quality of the sources, only peer-reviewed articles in English, published within the last five years have been considered. Additionally, emphasis was placed on selecting articles that have been cited by other reputable sources, reflecting their influence and acceptance within the academic community. This approach aids in capturing both current and impactful research on e-learning implementation in higher education, conducive to a robust and credible synthesis.

2.4 Structure of Review

This literature review is organised into three main sections:

- Section 1 identifies the main findings from the selected literature.
- Section 2 identifies the critical success factors of the implementation of e-learning in higher education institutions.
- Section 3 identifies main barriers and challenges.

3   Main findings from the Literature

3.1   Critical Success Factors

3.2   Main Barriers and Challenges

4   Critical Evaluation

4.1   Strengths, Limitations, Discrepancies of the Literature

4.2   Future Directions

5   Conclusion

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References: