

ECDE7018 Research Proposal

Student Details

Student Family / Surname:	BARATI AHMADABADI		
Student Given / First name:	AKRAM		
Student Number	2403780		
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PhD by Research	PhD Practice Based	PhD by Published Works	Professional Doctorate (including DBA, DProf, Ed D)	MPhil by Research	MPhil Practice Based
☒	☐	☐	☒	☐	☐
MA by Research	MSc by Research	MRes			
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Proposed Research

Proposed Title / Question (20 / 30 words):
A Systematic Review of Academic Literature on Personalized e-Learning from the Past Decade, Identifying Key Elements and Developing a Model through Expert Insights and LMS Analysis
Background & Context (approx. 500 words)
The field of personalized e-learning has grown significantly over the past decade, fuelled by rapid advancements in educational technology, adaptive learning algorithms, and an increasing demand for customized learning experiences that meet diverse learner needs. Personalized e-learning aims to tailor educational content, delivery methods, and assessments to the unique preferences, abilities, and learning speeds of individual students. This research will explore the foundational literature on personalized e-learning published in the past ten years, focusing on prominent developments, theories, and empirical findings. The motivation for this research lies in addressing two key gaps in the field. First, despite the wealth of studies on personalized e-learning, there remains a lack of consensus on the essential components that constitute effective personalization. Various studies highlight different elements, such as adaptive content delivery, real-time feedback, and individualized learning pathways. This research seeks to extract and synthesize these elements systematically, providing a unified framework for understanding personalization in e-learning. Second, while some LMS platforms, such as Blackboard and Moodle, are commonly used for personalized learning, there is limited comparative analysis of how they implement personalization features and how these features impact user engagement, satisfaction, and learning outcomes.

This study will contribute to both academia and practice by not only synthesizing key elements of personalized e-learning but also proposing a model that practitioners and developers can use to enhance the personalization capabilities of LMS platforms. Additionally, it will provide critical insights into LMS systems, particularly focusing on Coursera, to evaluate its potential in supporting personalized learning.

Aims & Objectives (approx. 250 – 500 words)

The primary aim of this research is to conduct a comprehensive review of academic literature on personalized e-learning from the past decade to identify critical components that contribute to effective personalization. Following this, the study aims to develop a practical model for personalized e-learning, informed by insights from educational experts and an analysis of key LMS platforms.

The specific objectives are as follows:

1. To systematically review and analyse academic literature on personalized e-learning published over the last ten years**, identifying key components and trends in the field.
2. To extract essential elements of personalized e-learning. from the literature, synthesizing them into a cohesive framework that encapsulates the key attributes, challenges, and benefits of personalized learning approaches.
3. To consult with educational experts. to validate and refine the elements identified, ensuring they are relevant and applicable to current e-learning contexts.
4. To conduct an in-depth analysis of Coursera LMS platforms to evaluate its capabilities for personalized e-learning and assess how this system support or hinder personalized learning experiences.
5. To propose a model for personalized e-learning, integrating literature insights, expert feedback, and LMS analysis, aimed at enhancing the implementation of personalization features in educational platforms.

Proposed Methodology (approx. 500 words)

This research will employ a systematic literature review approach to gather and analyse academic articles published within the past ten years on the topic of personalized e-learning. The study will consist of several key stages:

1. Literature Search and Screening: Relevant academic databases (Google scholar) will be searched using keywords such as "personalized e-learning," "adaptive learning," and "learning management systems." Articles will be screened based on inclusion criteria, such as peer-reviewed publications and focus on personalization in e-learning.
2. Data Extraction and Analysis: Each selected article will be examined for essential components of personalized e-learning, including theoretical frameworks, technological tools, pedagogical strategies, and reported outcomes. These elements will be systematically categorized and synthesized into a framework that represents the core aspects of personalization in e-learning.
3. Eexpert Consultation: After identifying and categorizing the elements, a series of interviews or focus group discussions will be conducted with experts in educational technology and LMS development. Their feedback will be used to validate and refine the identified elements, ensuring they align with practical requirements and challenges faced by practitioners.
4. Comparative LMS Analysis: The research will then analyse Coursera LMS platform by examining its documentation, features, and user reviews to evaluate its personalization capabilities. Factors such as adaptability, ease of use, learner engagement, and user satisfaction will be considered to assess the suitability of each platform for personalized learning.
5. Model Development: Based on insights from the literature review, expert consultation, and LMS analysis, a model will be developed to guide the implementation of personalized e-learning features in LMS platforms. This model will aim to provide a structured approach to integrating and enhancing personalization within e-learning environments.

Introductory Bibliography

1. **Hrastinski, S. (2019).** "What do we mean by blended learning?" *TechTrends*, 63(5), 564–569.
- Discusses how blended learning integrates personalized learning methods to meet diverse learning needs.
2. **Karaoglan Yilmaz, F. G., & Yilmaz, R. (2020).** "Examining the effects of learner control and learning characteristics on online learners' academic success in personalized e-learning environments." *Interactive Learning Environments*, 28(6), 776–789.
- Focuses on learner control and personalization factors that impact online learning success.
3. **Chen, G., Li, X., & Zheng, X. (2021).** "AI in education: A review on personalized learning." *IEEE Access*, 9, 146968–146978.
- Provides a recent review of AI-driven personalized learning, emphasizing LMS integration possibilities.
4. **Wang, Y., & De la Torre, J. (2022).** "The evolution of adaptive learning technology: Opportunities for personalized learning in higher education." *Educational Technology Research and Development*, 70(1), 239–261.
- Examines the adaptive learning technologies within LMS platforms and highlights potential benefits for personalized e-learning.
5. **Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019).** "Systematic review of research on artificial intelligence applications in higher education." *International Journal of Educational Technology in Higher Education*, 16(1), 1–27.
- Reviews the role of AI in enhancing personalized learning in higher education settings.
6. **Adams Becker, S., Cummins, M., Davis, A., & Freeman, A. (2018).** *NMC Horizon Report: 2018 Higher Education Edition*. The New Media Consortium.
- Discusses trends in personalized learning and technological advancements in education, including adaptive LMS capabilities.
7. **Sun, Z., & Wu, Y. (2023).** "The impact of personalized learning on student motivation and performance: Evidence from e-learning environments." *Computers & Education*, 194, 104700.
- Investigates the influence of personalized learning strategies on student motivation and learning outcomes.
8. **Shute, V. J., & Towle, B. (2020).** "Adaptive e-learning and intelligent tutoring systems: A historical review and perspectives." *Educational Psychologist*, 55(3), 126–142.
- Provides a comprehensive review of adaptive e-learning systems with a focus on personalized learning.