Louis Savinien Dupuis Journal of Multidisciplinary Research, 2025: V(4)15-15
DOI: 10.21839/lsdjmr.2025.v4.228

Research Article

ONLINE LEARNING AND ASSESSMENT SYSTEM (LEARNSPHERE)

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(Received: 09-04-2025; Accepted 08-06-2025; Published Online 03-11-2025)

Abstract

The rapid growth of digital technologies has transformed education from traditional classroom methods to flexible online learning environments. The COVID-19 pandemic further highlighted the need for reliable online learning and assessment platforms. LearnSphere is a web-based online learning and assessment system that integrates course management, automated assessments, real-time analytics, and collaborative tools. The system enables self-paced learning for students and provides teachers with efficient tools for evaluation and performance tracking, improving the overall quality and accessibility of education.

Keywords: Online Learning, Assessment System, Learning Management System, Learning Analytics

Introduction

Online learning has become an essential part of modern education due to advancements in internet technology and the growing demand for flexiblelearning. Traditional learning management systems often focus only on content delivery and lack integrated assessment and analytics. LearnSphere addresses these challenges by combining learning, assessment, and performance monitoring ina single platform**.**

Literature Survey

Studies on platforms such as Moodle, Coursera, and Google Classroom reveal improvements in accessibility but highlight limitations in personalization and real-time feedback. Research on automated assessment and learning analytics emphasizes the importance of instant feedback and data-driven insights for improving learning outcomes.

Existing System

Existing e-learning systems provide basic tools for online content sharing and assessments. However, they rely heavily on manual grading, offer limited collaboration features, and lack advanced analytics for tracking student performance effectively.

Proposed System

LearnSphere is a web-based platform that integrates multimedia learning materials, automated assessments, analytics dashboards, and collaboration tools. It supports students, teachers, and administrators through role-based access and secure data management.

Methodology

The system is developed following the Software Development Life Cycle. Key modules include course management, assessment automation, analytics, and collaboration tools. Testing ensures system reliability, security, and usability.

Results And Discussion

Testing shows that LearnSphere provides accurate automated grading, stable performance under multiple users, and positive user feedback. Analytics dashboards help identify learning gaps, enhancing teaching effectiveness.

Conclusion

LearnSphere successfully bridges the gap between traditional and digital education by integrating learning, assessment, and analytics. The system improves accessibility, engagement, and learning outcomes. Future enhancements include mobile applications and AI-based personalized learning.

References

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