

eLEAP AND END SEMESTER REPORT SYSTEM FOR TEACHING, LEARNING, AND ASSESSING PROGRAM OUTCOMES IN FACULTY OF ENGINEERING UNIMAS

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ABSTRACT

This paper critically examines the implementation of the e-Learning Enrichment and Advancement Platform (eLEAP) and the End Semester Report (ESR) system in the Faculty of Engineering at UNIMAS, Malaysia, as tools for promoting Outcome-Based Education (OBE), particularly during the COVID-19 pandemic. This paper consists of two (2) sections; firstly is the execution using an online T&L platform called eLEAP and secondly regarding the ESR system for assessing the achievement of Program Outcomes (POs) for the engineering courses in the Faculty of Engineering UNIMAS. By implementing these two systems, it was found that the eLEAP system provided many benefits during the COVID-19 pandemic in Malaysia. Therefore, the T&L process including evaluation was implemented during the tough period of the Movement Control Order (MCO) where students and course instructors were not allowed to come physically to the campus.

Keywords: e-Learning Enrichment, End-Semester Report, Engineering Education and Advancement Platform, Program Outcomes, Teaching and Learning

1.0 INTRODUCTION

The Faculty of Engineering at UNIMAS has embraced Outcome-Based Education (OBE) as a framework for curriculum design, teaching, and assessment. eLEAP and the ERS are two key technological tools introduced to support the implementation of OBE. OBE emphasizes the importance of clearly defined program and course learning outcomes (PLOs and CLOs) that guide the entire curriculum and assessment process. eLEAP and the ERS are designed to operationalise this approach by mapping the CLOs to PLOs and Program Educational Objectives (PEOs) to ensure alignment between course-level learning and broader program goals. Furthermore, these two tools are used to facilitate data-driven decision-making and improve transparency by providing centralised platforms for managing learning resources, assessments, and student performance data. Also, these systems promote active learning and continuous feedback by encouraging student engagement and personalised learning experiences.

The COVID-19 pandemic forced a global reckoning, prompting educational institutions to re-evaluate their pedagogical approaches. In this transformative period, the Faculty of Engineering at UNIMAS, Malaysia, embarked on a critical journey – transitioning from a traditional learning paradigm to a robust Outcome-Based Education (OBE) framework (Satri *et al.*, 2019), (Ismail *et al.*, 2010), (Pradhan, 2021), (Qadir *et al.*, 2020).

The main objective of this paper is to explore how these systems were utilised to navigate the unprecedented challenges of the pandemic, evaluate POs for engineering courses, and ultimately, contribute to a more robust and adaptable

engineering education at UNIMAS. By examining the successes and challenges encountered during this pivotal period, we aim to shed light on the potential of eLEAP and ERS as not just pandemic solutions, but as cornerstones in the ongoing evolution of engineering education in Malaysia and beyond.

2.0 eLEAP SYSTEM

eLEAP stands for e-Learning Enrichment and Advancement Platform. eLEAP is the official online Learning Management System (LMS) used to complement the face-to-face T&L process for all academic programs in UNIMAS. It is designed to cater to the teaching, learning, and assessment processes by providing a platform for faculty members and students to access relevant information and resources. The system aims to enhance pedagogy by addressing the challenge of lack of knowledge and training on appropriate pedagogy for online learning. Furthermore, it seeks to ensure effective class management and prevent submission errors through its online interactive programs. This system is managed by the Centre for Applied Learning and Multimedia (CALM) UNIMAS which deals directly with the T&L function by actively promoting and cultivating excellence and innovation in university teaching through technological integration.

The COVID-19 pandemic forced universities to pivot towards online learning, demanding innovative solutions to bridge the educational gap. In this context, UNIMAS, Malaysia, turned to eLEAP (e-Learning Enrichment and Advancement Platform), its official Learning Management System (LMS). While eLEAP offered valuable support and demonstrated the potential of online