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DEVELOPING AND VALIDATING STAKEHOLDER-ALIGNED MICROLEARNING FRAMEWORK FOR MICRO-CREDENTIAL PROGRAMMES IN MALAYSIA

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ABSTRACT

The growing disparity between academic skills and dynamic workforce demands, coupled with persistent challenges in quality alignment, stackability, and standardisation within existing micro-credentialing (MC) initiatives, necessitates adaptive educational models. This study developed and validated the Integrative Microlearning Framework for Higher Education (IMF-HE) to enhance the design, quality assurance, and relevance of Microlearning (ML) and MC programmes in Higher Education (HE). Employing a Design and Development Research (DDR) methodology, the study progressed through 3 phases; needs assessment and framework development (Phase 1), validation (Phase 2), and evaluation (Phase 3). Phase 1 utilised surveys (170 MC content developers), semi-structured interviews (20 multi-stakeholders), and a systematic literature review. The IMF-HE was validated via a two-round Delphi Technique with 11 subject matter experts (SMEs) in round one and 10 SMEs in round two from academia and industry, leading to the subsequent development of the Operational Blueprint which was developed following suggestions from Delphi Round 1 experts. This Blueprint functions as a structured guide that translates the framework's abstract principles into actionable practices, outlining specific strategies for technological adaptation, resource support, and content development within HEIs. The study was followed by a structured interview with six MC content developers from academia and industry for final evaluation of both the IMF-HE and its corresponding Operational Blueprint. Findings from phase 1 revealed that integrating insights from the two needs assessments and the literature review enabled a more detailed understanding of the actual demands and challenges within HEIs informed the prototype framework. Key findings from Phase 2 demonstrate strong expert consensus (mean scores 4.1-5.0, median $\geq$ 4.0, IQR < 1.0) on the framework's comprehensiveness and effectiveness. Additionally, MC content developers in Phase 3 reported positive perceptions of the IMF-HE's practical utility in guiding ML development and fostering a holistic ML ecosystem. The IMF-HE provides strategies for Higher Education Providers (HEPs), supporting alignment with the Malaysian Qualification Framework (MQF), promoting flexible curriculum delivery, and enhancing lifelong learning and employability nationally. This study offers a comprehensive framework necessary for advancing ML integration in HE, ensuring its long-term applicability and transferability across diverse educational and professional contexts.

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TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION

1.1 Introduction

This chapter highlights the important elements of the study such as the background of the study, the statement of the problem and the research objectives. It also explains some of the terms used in the study, the significance and limitations of the research.

1.2 Background of the Study

The skills gap in Malaysia reflects a persistent global trend; employers around the world are consistently dissatisfied with the workplace readiness of university graduates. A 2014 Gallup poll, for instance, found that only 10% of business leaders believed college graduates were adequately prepared for the workforce (Jeantet, 2018), highlighting the depth of the issue (Lockley, Derryberry & West, 2016). In Malaysia, this mismatch is evident in graduate unemployment, which has been linked to a misalignment between qualifications and labour market needs, as well as ineffective curriculum delivery in higher education institutions (HEIs) (Lam, Hassan, Sulaiman & Kamarudin, 2018). Furthermore, research confirms a gap between graduates' self-perceived capabilities and the competencies employers demand (Venaruzzo & Diaz, 2025; Brown, Perkins & Pryor, 2021; Dehoney & Millichap, 2015; Johnstone & Soares, 2014; Mischewski, 2017). This growing dissatisfaction highlights that the problem is not static but intensifying, given the evolving expectations of employers and the increasing pressure on universities to demonstrate workforce relevance.

This gap is most apparent in practical employability skills, particularly soft skills such as communication, critical thinking, problem-solving, teamwork, adaptability, and leadership, alongside technical competencies required by a rapidly changing labour market (Leopold, Battista, Jativa, Sharma, Li & Grayling, 2025; Kipper et al., 2021; Yanek, 2020; Mourtzis, 2018). The evidence that this is a growing need rather than a persistent problem lies in the accelerating pace of technological