

**UNIVERSITI TEKNOLOGI MARA**

**DEVELOPING AND VALIDATING  
A LEARNING DESIGN  
STRATEGY FRAMEWORK FOR  
LEARNING AT SCALE  
IN HIGHER EDUCATION**

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**PhD**

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## AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.


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## ABSTRACT

This research aims to develop and validate the *Learning Design Strategy Framework (LDS Framework)* for learning at scale (L@S) to guide the collaborative process of rapid content transformation among the practitioners. This study contributes to theoretical and practical knowledge in using design-based implementation research (DBIR), an expansion of design-based research approach, in the context of a private university in Malaysia, where implementation needs to be considered from the start. The research resulted in the development of the principles behind the elements of an *LDS Framework*. The uniqueness of the *LDS Framework* is in its usage as a tool for learning design strategy that is constructively aligned with the university's curriculum approach, when practitioners seek to rapidly transform a course for L@S in a systematic manner. The design-case was set in Taylor's University (TU) amid the strategic campus-wide transformative effort to change its curriculum delivery to become more learner-centred. Having an *LDS Framework* to guide the content transformation effort can ensure a course designed is aligned to the new curriculum approach and meets the quality for L@S in the Taylor's Integrated Moodle e-Learning System (TIMeS). The practitioners mentioned here are the course instructors and the e-Content Development Specialists. The Malaysian Studies 3 (MS3) module was chosen as the exemplar module site in TIMeS to test the *LDS Framework* prototype in practice. This design-based research employed the DBIR approach, have a concern to develop a proposed solution for the capacity to sustain change in a system for content transformation of L@S to be applied campus-wide. In ensuring the research process is rigorous, and able to cater from the evaluation of the needs until the implementation, the agile Successive Approximation Model 1 (SAM1) was utilised as the research design, with four research phases that start with evaluate, followed by design, development, and ends with evaluate. A mixed-method data collection such as a structured interview, Fuzzy Delphi Method (FDM), focus group with learners, and design review was utilised in different research phases. Data analysis using qualitative and quantitative in FDM were employed. The study's findings concluded nine elements for the design matrix that constitute the *LDS Framework* principles in its learning design sequence include the following: (1). Course structure, (2). Module learning outcome(s)(MLO), (3). Graduate capability(s)(GC), (4). Assessment(s), (5). Topic(s), (6). Type of pedagogy(s), (7). Type of activity(s), (8). Type of resource(s), and (9). Digital badge(s).

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*"Simplicity is hard," he said. "I think it takes many, many iterations to peel something to its core, to its most simple and most eloquent form of expression -- and really to its truth."*

*Steve Jobs, from the point of view of Philippe Bouissou, his employee*

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