

## Chapter 3

# Taking a Leap to Education 4.0: The Practitioner–Learner Partnership in the Refinement of a Module Site for Learning at Scale

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### ABSTRACT

*This chapter reports on the design refinement process of the Malaysian Studies 3 (MS3) module site from the perspective of the designer, taking into consideration the feedback from the end-users who are the learners. The learners' feedback was reviewed with the practitioners for further refinements of MS3 version releases. This study contributes to the body of knowledge in design and development research bridging theory and practice based on a real-life design-case of in Taylor's University to make the leap to Education 4.0. The study affirms that in designing for a learner-centered environment a partnership is needed between the practitioners and learners to fully understand the learner's needs. Further, continuous support from an e-Learning team must be established in a HEI, to ensure a smooth transition to leaping from the traditional into an online classroom and this is also true when designing for learning at scale (L@S). Finally, a robust LMS must be a part of the eco-system to ensure L@S can be effectively delivered.*

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## INTRODUCTION

The technology advances brought forward by the 4th Industrial Revolution (4IR) by the developed countries grew in tandem with the rapid advances in technology that also implicated the delivery of education widely known as Education 4.0. Today's learners live in a world where change is the only constant (Schwab, 2016). The change in the application of Education 4.0 as mentioned by Fisk, (2017) was defined by the nine trends in its application, some of which includes ubiquitous and personalized learning, the freedom to choose how learners want to learn, as well as a direction towards a more hands-on project-based learning. Of the nine trends which Fisk (2017) mentioned, one which stood out and became the focal discussion of this study is on how learners choose to learn. To investigate, a practitioners-learners partnership was necessary in the refinement of the design and delivery of Malaysian Studies 3 (MS3) module. The MS3 module site piloted the transformation of a module site for Learning at Scale (L@S) in a virtual classroom using Taylor's Integrated Moodle e-Learning System (TIMeS), in Taylor's University. Before the MS3 project, no course was conducted for L@S in TIMeS.

A participative approach was implemented between the practitioners who are the e-Content Development Specialists, also referred to as the designers and course instructors, and the learners to improve the MS3 module learning design strategies. The MS3 module site went through continuous evaluation in three iterative cycles to understand the learners' early reactions to experience the MS3 module site conducted in TIMeS and to evaluate the MS3's module site strengths and weaknesses that can be improved upon in the next iteration. The success of this pilot project will enable more modules to be transformed rapidly using the MS3 module site as the module site template.

The first section of this paper describes the literature review on Education 4.0 (Edu4.0), Learning at Scale (L@S), the online learning platform TIMeS, past studies on students' reactions, and a partnership between teacher and learners for the refinement of a course. This is followed by the research methodology of the study, results, and findings as well as discussions that lead to the conclusion and recommendation of the way forward in approaching the development for L@S module site such as MS3. This study is a follow up to the design-case study on a Framework for L@S by the principal researcher (Ayub, Goh, Luaran, & Lim, 2018; Ayub, Wei, et al., 2019; Ayub, Goh, Luaran, & Keppel, 2019; Ayub, SNA, Luaran, & Goh, in press).

The objective of this research is to address the research question at Phase 3, that is the Implementation Formative Evaluation Phase, according to the Successive Approximation Model (SAM) research design. Further information on SAM2 will be elaborated in the research methodology section of this chapter (refer Figure 2). The research question is as follows:

How did the end-users' (learners') reaction influence the improvement of the module site?

To answer this research question, a design and development research (DDR) approach was implemented, along with applying qualitative and quantitative data collection methods. The researcher utilized three student cohorts from March 2018, August 2018, and March 2019 for the data collection of this study.

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