

### **Project Summary for IAL Website**

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<b>Project Title:</b>	IMPROVING PROFESSIONAL DEVELOPMENT THROUGH AN INTELLIGENT ADAPTIVE LEARNING APPROACH: AN IN-DEPTH STUDY ON CONSTRUCTION PROJECT MANAGERS
<b>Project Number:</b>	GA21-04
<b>Year of Approval:</b>	2022
<b>Funding Source:</b>	WDARF
<b>Objectives and intended outcomes of the project:</b>	<p>Deliverables:</p> <ol style="list-style-type: none"> <li>1. A general framework for using adaptive learning in professional development that is applicable locally and internationally</li> <li>2. An adaptive learning system prototype for construction professionals' project management skill development in Singapore</li> <li>3. A toolkit of adaptive learning features which caters to different learning needs across various industries</li> </ol>
<b>Project Team</b>	
<b>Principal Investigator:</b>	Goh Yang Miang
<b>Summary of Project (up to 300 words)</b>	
<p>This study focuses on the use of an adaptive learning approach to improve professional development for construction project managers. Despite efforts from SkillFuture Singapore (SSG) and other agencies, professionals in Singapore continue to struggle with upskilling due to busy work schedules and diverse learning needs. Adaptive learning, which has been successful in higher education, offers personalized learning pathways that can address the time constraints faced by professionals. However, there is limited research on the effectiveness of adaptive learning in professional development.</p> <p>The research aims to answer three main research questions:</p> <ol style="list-style-type: none"> <li>1) Is adaptive learning effective for professional development?</li> <li>2) What are the barriers faced by training providers and enterprises when implementing adaptive learning? What support is needed?</li> <li>3) What barriers prevent professionals from engaging in adaptive learning? What support is needed?</li> </ol> <p>The study will adopt a mixed-methods approach using a quasi-experiment design. The study will be divided into three stages. In the first stage, the researchers will examine the current adoption of adaptive learning and gather general viewpoints on its effectiveness. This will help identify existing barriers and build a framework for adaptive professional development. In the second stage, a prototype of adaptive professional development will be developed based on the findings from the first stage. This prototype will include features like a knowledge unit recommender (KUR) and forum recommender (FR). In the third stage, a quasi-experiment will be conducted to evaluate the effectiveness of the framework and prototype. Surveys, interviews, and focus group discussions will be conducted to gather professionals' perceptions of the adaptive learning approach.</p> <p>Overall, this study aims to evaluate the effectiveness of adaptive learning in professional development and engage training providers in incorporating adaptive learning into their courses. Additionally, the study</p>	

will collect data on professionals' learning needs and expectations to facilitate understanding of adult learners' career choices.