

# A Design Theory for Holistic Student Self-service University Management System

Muhamad Idaham Umar Ong 1\*, Mohamed Ariff Ameen 1

Faculty of Computing (FKOM), College of Computing and Applied Sciences, Universiti Malaysia Pahang,  
26300 Gambang, Pahang, Malaysia.

\*Corresponding Author: [idaham@ump.edu.my](mailto:idaham@ump.edu.my)

## **Abstract:**

The role of Information System Design Theory in software development is enormous. With the help of design theory, developers could estimate what the system will be and what the system will do. The focus of the article is to establish the design theory of a self-service university management system. The objectives of this publication are to identify the most relevant publication that will act as a guideline to generate the design theory artefacts and to establish the artefacts which will consists of three components named kernel theories, meta-requirements and meta-design for the stated system. The system scope will be focused on enabling self-service functions. Validation will be done through a traceability matrix between the meta-requirement and meta-design against the real-world user requirement. The significant of this article is to provide an initial set of design theory artefacts to be utilization software developer in development or evaluation of a University Management System.

**Keywords:** Holistic Student; System Design Theory; User Requirement

## **Acknowledgment**

This work was supported in part by University Malaysia Pahang under Grant RDU191802-2.