

Learning Management System for Data Structures and Algorithm

Marco Paulo J. Burgos, MSIT

City College of Calamba

ABSTRACT

The study focused on the development of Learning Management System (LMS) for Data Structures and Algorithms which allows the students to take modular online learning especially during the period of Covid-19 pandemic. This study aimed to answer five (5) problems: stages of development of the system using the Waterfall Method, the level of acceptability of the developed system based on the ISO 25010 standard, the difference in the evaluation of the three groups of respondents, the challenges encountered while using the system, and the implementation plan. The ninety (90) respondents were composed of sixty (60) students, fifteen (15) faculty members, and fifteen (15) IT experts. The study adopted a questionnaire checklist based on the ISO 25010 standard to determine the acceptability using the criteria functional suitability, performance efficiency, usability, and reliability. It also used an interview guide to gather the respondents' experiences while using the system and document analysis using web resources. Based on the evaluation of the respondents, reflected by the weighted means of each variable, the developed system was acceptable. Furthermore, the ANOVA results showed no significant difference in the evaluation of the three groups of respondents in terms of functional suitability, performance efficiency, usability, and reliability.

Keywords: learning management system, online education, data structures and algorithms, ISO 25010, Covid-19 pandemic, chatbot