

# Computer Laboratory Management System for Government Schools in Sri Lanka: Design Science Approach

Thamara Damayanthi<sup>1,2\*</sup>, Supunmali Ahangama<sup>3</sup>

<sup>1</sup>*Department of Information Technology, Univerisity of Moratuwa, Bandaranayake Mawatha, Moratuwa 10400, Sri Lanka, damayanthiut.21@uom.lk*

<sup>2</sup>*Sudharma College, Megalle, Galle 80000, Sri Lanka, uthamara@gmail.com*

<sup>3</sup>*Department of Information Technology, Univerisity of Moratuwa, Bandaranayake Mawatha, Moratuwa 10400, Sri Lanka, supunmali@uom.lk*

Due to globalization, Sri Lanka's education system is experiencing major difficulty in maintaining educational quality. It is imperative to adopt the latest educational technology to meet global education standards. Information Technology (IT) tools can be used as creative teaching aids to increase the quality of teaching and learning. Computer laboratory in-charge teachers will have to share scarce IT resources among the school community. This study proposes a new methodology for sharing IT resources and it will facilitate the implementation of a computer laboratory management system (CLMS). The study was conducted using the Information System (IS) Design Science approach to create a usable IT artifact to solve this foreseen problem in government schools. The pre and post- evaluations were done with research rigor based on Delone and McLean's IS success model in multiple iterations to allow users to determine whether their expectations are achieved by the system. 59 computer laboratory in-charge teachers participated in the evaluation process of the existing system and the new system. The result shows that the new CLMS will benefit the target community with some improvements to increase the service quality of the IS.

**Keywords:** *CLMS, computer laboratory management system, D & M IS, Delone and McLean model of information systems success, design science approach*