Abstract No: 06 Science Education

DEMOGRAPHIC FACTORS AFFECTING THE USE OF ICT IN TEACHING LEARNING PROCESS AMONG UNIVERSITY TEACHERS

P.H. Sarawana^{1*} and D.S. Deegalla²

¹Swami Vipulananda Institute of Aesthetic Studies, Eastern University of Sri Lanka, Batticaloa, Sri Lanka

²Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Peradeniya, Sri Lanka

*p.hsarawana@gmail.com

The appropriate use of Information and Communications Technology (ICT) in teaching and learning has been challenging for many higher educational institutes during the COVID-19 pandemic. The study examined the demographic factors that influence the adoption and integration of ICT to enhance the university teaching and learning process. The study adopted a cross-sectional survey design. Data was obtained from academics at the Eastern University of Sri Lanka (EUSL) via a paper-based quantitative survey. Respondents were selected based on a convenience sampling method. Structured questionnaires were distributed among academics in different faculties. Out of 180 questionnaires, 155 were valid for data analysis, representing a response rate of 86%. ICT adoption in teaching and learning, the dependent variable, was not normally distributed. Therefore, non-parametric tests were used to conduct the analysis. The results revealed that gender (z = -1.046, p = 0.296) and age ($\chi^2(3) = 5.927$, p = 0.296) did not influence university teachers' adoption and integration of ICT. However, educational qualification ($\chi^2(3) = 8.293$, p = 0.040) and teaching stream ($\chi^2(5) = 14.351$, p = 0.014) significantly influenced the university teachers' adoption and integration of ICT. The pairwise comparison revealed a significant difference in ICT use in teaching and learning among those holding a bachelor's degree and a doctorate as their highest educational qualification. Teachers with doctoral degrees adopted ICT better than the other degree holders. There is a significant difference in the adoption of ICT between the Academics who teach Science and Fine Arts. Academics who teach Information Technology (IT) claimed that they use ICT more extensively in teaching and learning than other academics. The survey results show that upgrading educational qualifications would increase the quality of teaching practice of academics, thus incorporating ICT into the teaching and learning process to meet the current needs. Therefore, it is of great importance to improve academics' attitudes towards ICT across all faculties.

Keywords: Demographical factors, ICT, Teaching Learning Process