Abstract

The research intended to develop a framework for improving the usability of Learning Management Systems by integrating pedagogical agent. The study adopted usability heuristics as the key factors for enhancing the usability of an LMS through a conversational pedagogical agent. The first objective explored various techniques available for enhancing the usability of the LMS. The techniques includes Learnability, efficiency, and satisfaction are but a few techniques used to measure usability of a web-based system. The second objective examined a variety of ways the pedagogical agent can improve the usability of the LMS. The research recognized that a pedagogical agent could improve the usability of an LMS by making studying more interesting and increasing student to instructor interaction to support active learning. The third objective was for the designing of a suitable framework for improving the usability of an
LMS. The fourth objective intended to evaluate the impact of the computer-based pedagogical agent in the LMS. The research established that the conversational pedagogical agent increased human to computer interaction, makes learning more effective and enjoyable and supports self-paced active learning. An experimental research design was adopted in carrying out the research. A conversational pedagogical agent (Melsyanne) was deployed as a prototype to improve the effective use of an LMS. The target population comprised of 3 HODs, 12 Instructors and 82 Students from three randomly selected higher learning institutions within Nakuru Municipality. Data was collected using questionnaires and analyzed through frequencies and percentages using SPSS. The results were presented using tables, column graphs and pie-charts generated by MS Excel application software. The findings constitute the knowledge pool, from which future research can borrow and add in their research study.

References

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**Index Terms**

Computer Science  
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**Keywords**

Improving Usability, Learning Management System (LMS), Pedagogical Agent.