

Effectiveness of Thin-client computing over Stand-alone Computing in Schools' Computer Laboratories on Improving Computer Literacy Level in Kenya

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Abstract

Computer literacy is essential for a workforce to compete favorably in this increasingly computerized environment. Most organizations and institutions require a workforce that is computer literate. This calls for schools to equip more students with computer skills. Schools should be adequately equipped to offer hands-on experience and nurture rapid learning, yet be intuitive and interesting to students. Setting up and maintaining a computer laboratory goes with a cost which most schools cannot keep pace with thus the need to embrace other effective computer architectures. The aim of this research was to investigate the effectiveness of thin-client computing over stand-alone computing for service delivery in computer laboratories. Survey research method based on quantitative research design was adopted for this research. Data collection was done using a questionnaire, interview and observation. A sample size of thirty percent of the secondary schools which offer computer studies in Bungoma County was used for data collection. Stratified and simple random sampling techniques were used to select the schools to take part in the research. The research findings revealed that the main computer architectural configuration deployed by secondary schools for computer studies is stand-alone computer architecture. Thin-client computer architecture is more cost-effective compared to standalone computer architecture which if deployed in computer laboratories, schools will be able to offer computer studies to more students thus making more people computer literate.

Index Terms: Computer literacy, Computer laboratory, Thin-client computing, Stand-alone computing, and Resource utilization

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