

The Kenyan Government in her National Development Plan intends to achieve a universal primary ICT literacy by the year 2008. This is will be possible if the following is done. First, effective computer instruction should start at pre-school level. Second, there should be a policy to guide the use of computers in instruction in pre-schools and primary schools. Finally, the factors which influence pre-school and primary school teachers' instructional computer use in Kenya should be appreciated and catered for by schools and teacher training institutions. This study was designed to establish and compare pre-school and lower primary school teachers' instructional computer use and investigate the weighting of the various factors that impacts instructional computer use. The population of this study was all teachers in pre-schools and lower primary schools in Nairobi Province that have computers for instruction. The study employed an "ex-post facto" research design. The dependent variable was instructional computer use, while the independent variables were computer- self-efficacy, attitudes towards computers, computer knowledge, computer training, time support, and technical support. Stratified random sampling technique was used to select the sample. Questionnaire, interview and observation methods were used to collect the required data. The t- test for independent samples was used to test Hol and Hot, while Multiple Regression and ANOVA were used to test Ho3. Data was prepared for analysis using the Statistical Package for Social Sciences. The results show that instructional computer use in both pre-school and lower primary schools was limited. A t-test of independent samples found no significant difference in instructional computer use by school level and gender. Analysis of variance results revealed that the variations among the independent variables in both pre-schools and lower primary schools were significant. Multiple Regression results revealed that all the six variables together predicted pre-school and lower primary school teachers instructional computer use and at pre-school level computer self-efficacy was the greatest contributor to instructional computer use, while in lower primary schools computer knowledge was the greatest contributor. The results also revealed that at pre-school level attitudes towards computers, computer self-efficacy, time support, and technical support were significant variables, while the significant independent variables in lower primary school level were; computer knowledge, time support, and technical support.