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**CHALLENGES INFLUENCING INTEGRATION OF INFORMATION  
COMMUNICATION TECHNOLOGIES IN TEACHING OF BIOLOGY IN  
PUBLIC SECONDARY SCHOOLS IN BARINGO COUNTY, KENYA**

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## DECLARATION

I declare that this Thesis is my original work and has not been presented in any other university for consideration of any certification. This Thesis has been complemented by referenced sources duly acknowledged. Where text, data, graphics, tables have been borrowed from other sources, these are specifically accredited and reference cited using APA system and in accordance with anti-plagiarism regulations.

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This thesis has been submitted with our approval as University Supervisors

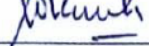
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## ABSTRACT

Integration of Information Communication Technologies (ICT) in teaching and learning is intended to enable teachers to facilitate learning more effectively and enhance students understanding of concepts. The purpose of this study was to investigate challenges influencing integration of ICT in teaching of Biology in Baringo County, Kenya. The objectives of this study included determining the extent of ICT integration in teaching Biology in secondary schools; establishing the school related factors influencing the integration of ICT in the teaching of Biology; determining the teacher related factors influencing the integration of ICT in the teaching of Biology and establishing the Biology curriculum related factors that affect the teaching of Biology. The study was based on Rodger's theory of Diffusion of Innovation (2003). Random stratified sampling was used to obtain a sample of thirty six schools (5 boys, 6 girls and 25 mixed) out of a population of 140 schools. A principal and one Biology teacher from each of the school participated in the survey. Furthermore 6 Sub-County Quality Assurance Officers (SCQAO) also participated. Research instruments used were Questionnaires, checklist for ICT resources, interview schedule and lesson observation. The data obtained was analyzed using mean, frequencies and percentages. The findings shows that teachers with teaching experience of 21 years and above did not embrace use of ICT in teaching, there is skewed distribution of ICT resources among the sub-counties in Baringo, other factors found affecting integration of ICT in teaching of Biology are lack of specific special classes for teaching Biology, lack of ICT resources, inadequate time of preparing ICT resources, lack of ICT technical support and inadequate digital e-learning materials. The recommendation included curriculum review which will necessitate full of integration ICT in teaching apart from only digitizing the entire curriculum, the Government through the Kenya Institute of Curriculum Development (KICD) to consider offering computer studies as a compulsory basic education in secondary schools this would form the basis of fundamental foundations that will anchor our education system deep in the muscles of technology and education managers be sensitized on the need to support the teachers in their quest for ICT integration.