INTEGRATION OF INFORMATION COMMUNICATION AND TECHNOLOGY IN TEACHING AND LEARNING OF BIOLOGY IN SECONDARY SCHOOLS IN MIGORI COUNTY, KENYA

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A PhD Research Proposal submitted to the department of Educational Communication and Technology, School of Education, Kenyatta University

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DECLARATION

Student

This research proposal is my original work and has not been presented for a degree in any other University.

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Supervisors: This proposal has been submitted with our approval as university supervisors.

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ABSTRACT

This research is designed to study the integration of ICT in the teaching and learning of biology in secondary schools in Migori County, Kenya. It will employ descriptive survey design which will utilize stratified, simple random and purposive sampling techniques. The study targets Sub-County Education Officers (SCEOs), County Director of Education (CDE), all the secondary schools in Migori County, all head teachers, all Form Three Biology teachers and all Form Three Biology students in these schools. The study will be guided by the following objectives; to find out whether ICT is used in biology teaching and learning processes in Migori County, to investigate challenges faced by teachers and students in ICT integration in classroom instruction and to evaluate the role of school administration in ICT integration. The study will use a sample size of thirty two (32) schools which is 19% of the entire population. Research instruments will include; questionnaires for use by biology students, structured interviews for biology teachers, head teachers, SCEOs and CDE, Observation schedules for biology lessons and ICT resource checklists. Data will be analyzed through Descriptive and Inferential statistical procedures. The calculation of the measures of central tendencies will answer research question (i). Frequencies and percentages will be used to answer research questions (i) and (ii). Responses from close-ended questions will be organized, coded, converted into numbers and analyzed quantitatively using Statistical Package for Social Sciences (SPSS). Quantitative analysis will give vivid account of the situation under study, show the relationship between variables and also attempt to advance alternative explanation derived from the data. Qualitative Analysis which involves analyzing information in a systematic way will be used in responses from interviews and open ended questions where some statements from interviewees will be quoted verbatim. It will answer research question (iii). Inferential statistics specifically t-test and test of significance will be used in order to determine whether the respondents’ scores regarding their views on ICT integration in biology teaching and learning differs depending on their positions and role in schools. The researcher will obtain information on ICT integration and then try to establish patterns, trends or relationships from the information gathered from the interviewees.