COMPARISON OF COMPUTER ASSISTED AND CONVENTIONAL INSTRUCTION IN SECONDARY SCHOOL PHYSICS IN MERU CENTRAL DISTRICT-MERU COUNTY-KENYA

BY

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A RESEARCH PROPOSAL SUBMITTED FOR THE DEGREE OF MASTER OF EDUCATION IN THE SCHOOL OF EDUCATION KENYATTA UNIVERSITY

DECLARATION

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

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This proposal has been submitted with our approval as university supervisors,

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ABSTRACT

This study will be undertaken to compare computer assisted learning and conventional teaching methods in teaching physics in Kenyan secondary schools. The aim of the research will be to compare the effect of computer assisted learning and conventional teaching strategies on performance in physics and the effect of computer assisted learning on gender achievement in physics. The study will use an experimental design. Secondary school in Meru Central District will constitute the population of the study. The study sample will be made of Form Two students studying physics from six (6) secondary schools in the district. In each school, one class will be an experimental group and the other the control group. The research instruments will comprise of a pre-test and post-tests each of which will comprise ten items. The pre- test will be based on Form One physics to test the general knowledge of the sampled schools in physics. The pre-test will be piloted in three secondary schools within the district; one mixed day school, one boys' county school and one girls' county school, for validity and reliability. The control and experimental groups will be taught by their teachers the topic magnetism under six subtopics; properties of magnets, magnetization, demagnetization, domain theory, uses and storage of magnets and magnetic field patterns for three weeks (eleven (11) lessons of forty (40) minutes each). The experimental group will learn the topic using computer assisted method. They will use computer instructional materials which have been developed by the Kenya Institute of Education (KIE). The control group will be taught using conventional methods by their physics teachers. The tests will then be coded, loaded and then analyzed using a computer program called the Statistical Package for Social Sciences (SPSS).The data collected during the study will be quantitative which will be summarized and analyzed using inferential statistics such as standard deviations, chi-square and analysis of variance (ANOVA). It will be presented using descriptive statistics such as the mode, mean, median, percentages and frequency distribution.