

**INFLUENCE OF SELECTED COMPUTER APPLICATIONS ON
FACILITATION OF CHEMISTRY LEARNING IN KENYAN
SECONDARY SCHOOLS: THE CASE OF MATHIOYA SUB-
COUNTY**

**MUTHONI VICTOR MAINA
BEDS/000513/2122/12911**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF
EDUCATION DEGREE OF MOUNT KENYA UNIVERSITY**

JUNE, 2015

ABSTRACT

Computer applications play a key role in Kenya's education, for instance in teaching of sciences, more specifically in chemistry, whose teachers were trained in the SMASSE INSET of 2012, with the theme of integration of information and communication technology in teaching and learning. The purpose of this study was to establish the impact of using computer applications on the facilitation of chemistry learning in Kenyan secondary schools. The objectives of the study were to establish the influence of PowerPoint slides instructions on chemistry teaching, to find out the effect of video instructions on chemistry teaching, to identify the effect of WebPages on chemistry teaching, to determine the impact of email and online chats on chemistry teaching. The study adopted the theory of multiple intelligences that was proposed by Howard Gardner in 1983, which advocates for the learner being an active participant in their own learning, while the teacher plays the role of construction of knowledge with the learner. Descriptive survey design was adopted in this study; the research design was relevant to this study as it involved collection of data without manipulation. The study was carried out in Mathioya Sub County. The target population for this study was all secondary schools in Mathioya Sub County. The researcher purposely selected schools within Mathioya Sub County that offered computer studies; there were only 10 schools within the Sub County that integrated ICT in teaching and learning chemistry. The researcher then randomly selected 23 teachers, and 121 students, and 4 school principals. Questionnaires and interviews were used to collect data. The data was analyzed using descriptive statistics with the aid of SPSS program. Majority of the teachers and students agreed that usage of PowerPoint enhanced syllabus coverage due to the facts that; the use of PowerPoint made the lesson interesting to students, PowerPoint allowed students participation during lesson delivery, lesson preparations made easier with the use of slide presentation, and that it also enhanced understanding of abstract topics. In conclusion the findings indicated that CMI positively impacted classroom teaching, and therefore schools should adopt and enjoy enormous benefits associated with adoption of this technology.