

**CHOICE OF AND PARTICIPATION IN PHYSICS BY SECONDARY
SCHOOLS STUDENTS: A CASE OF BUURI DISTRICT, MERU COUNTY,
KENYA**

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ABSTRACT

Enrolment in physics in secondary schools is often lower than enrolment in Biology and Chemistry. This unequal enrolment in the three sciences has been in the public domain for some time now. The study had special interest in physics because it is an optional science subject in most schools and is taken by those confident enough to take on a third subject. Physics is a key science subject expected to drive Kenya's Vision 2030 initiative, which aims at making the country a newly industrialized middle income country, providing high quality life for all its citizens. The study examined the choice of, and participation in physics by secondary school students in Buuri District, Meru County. The study was conducted in 18 out of 36 secondary schools in Buuri District. The study looked into the following objectives:- what influences the students on choice of, and participation in physics; resource gaps facing the choice of, and participation of physics; magnitude to which physics teacher affects student choice of, and participation in physics and whether physics content influences student choice of, and participation in the subject. The research used non-probability and probability design to ensure that the four categories of schools were included in the sample. The researcher looked into logical and ethical considerations before embarking on data collection. Questionnaires were used as instrument of data collection from the students and teachers while interview guide was used to collect data from the principals. The questionnaires were piloted to test their validity and reliability. The research instruments were constructed after a careful consideration of the study's objectives. The instruments were subjected to students, teachers and principals who were not in the sample to test their validity and reliability. Analysis of the data was done using descriptive statistics. Both qualitative and quantitative methods of data analysis were employed. In terms of qualitative analysis, all the gathered data was analyzed using descriptive statistics by use of frequency tables, percentages and bar graphs. Qualitative data was analyzed thematically in relation to the opinions, views and perceptions of the respondents. The findings of the study may be used by the practicing teachers and policy makers in solving the challenges involving the choice of, and participation in physics. The main findings of the study were as follows: quantitative nature of physics was the main contributing factor for low number of students choosing physics; some topics in physics curriculum were found to be a challenge to the students hence contributing to the low number of students choosing the subjects; lack of equipped laboratories and adequate text books reduced the number of students choosing physics; lack of enough quality physics teachers in some schools was a factor for the low number of secondary school students that chose physics; a change of approach to the teaching of physics, availing of quality physics teachers, increasing facilities and textbooks in order to make physics interesting and popular to students was recommended.