

Teaching Load as Classroom Based Predictor on Quality Academic Achievement among Girls in Mathematics as a Subject in Secondary Education in Kisumu County

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Abstract

The education of females has a profound effect on national development as lack of their education has been linked to poor sanitation and high illiteracy rate. As the world grows even more dependent on technologically driven competencies, girls' participation in mathematics affects future career and economic opportunities. It is documented that women's participation in mathematics related fields such as engineering is below 20%. There was therefore need to conduct a study in Kisumu County, Kenya to establish the influence of teaching load as a classroom based predictor as an independent variable on girls' academic achievement in mathematics in secondary education at form four level. The dependent variable was Kenya Certificate of Secondary Education (KCSE) examination results of girls between 2010 and 2014. The objective of the study was to establish the influence of teaching load on girls' academic achievement in mathematics at form four level. Correlation research design was applied to examine the degree of influence that exists between two or more variables by use of statistical data. The target population consisted of 142 public secondary schools which presented female candidates for KCSE between 2010 and 2014, 142 Principals, 142 Heads of mathematics department and 390 mathematics teachers who taught the girls under study. Stratified random sampling technique was applied whereby schools were categorized as girls' secondary schools and mixed secondary schools. Purposive sampling was done to select all the 18 girls' secondary schools in Kisumu County while systematic random sampling was applied to select 38 out of 124 mixed secondary schools in Kisumu County. The sample constituted 39% of the study population. Data was collected using questionnaires, interviews and document analysis. Instruments of data collection were validated by the researcher's supervisors and reliability of the instruments was established through test retest method by carrying out a pilot study in 5 schools which were not part of the study sample. Quantitative data was analyzed using descriptive statistics in form of frequency counts, percentages, means, Pearson's Product Moment Correlation and regression analysis. Qualitative data from interview schedule was analyzed by using thematic analysis. Statistical Package for Social Sciences (SPSS) version 22 was applied to assist in analyzing data. The findings of the study concluded that there was a negative relationship between teaching load and quality academic achievement among girls in mathematics at form four level. The study recommended that more mathematics teachers should be employed to reduce the teaching load for effective classroom performance.

Keywords: Teaching load, Quality Academic achievement, Classroom based predictor, Secondary school education.

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