

Although Siaya County is among the counties that perform well in the national examinations, Bondo is still one among its Sub- Counties with low student performance in national examinations in Science subjects in general and in Chemistry subject in particular. This could be as a result of insufficient inputs in the schools, for example, inadequate Chemistry subject teachers, inadequate or lack of Chemistry laboratories, inadequate teaching and learning materials in Chemistry subject and increased enrollment levels in the subject. In these schools however, enrollment levels might not be uniform and so it cannot be concluded that it is only the increase in enrollment that impacts on the performance in Chemistry subject in national examinations. The purpose of this study therefore, was to determine the effect of enrollment levels in Chemistry subject on its academic performance in national examinations in public day secondary schools in Bondo sub-county. The main study objective was to determine the levels of enrollment and how it affects the performance in Chemistry subject in national examinations. An input and output conceptual framework was used to show the relationship between the variables. The study used a correlation research design and the study population constituted all the sixteen public day secondary schools in Bondo sub-County, hence no sampling technique was employed to select sample population. The instruments of data collection were questionnaires, interviews, document analysis and observation. The study ensured reliability of the instruments by use of piloting method in 2 schools, which were not considered for the actual study. Validity of data collection instruments was done by two experts from the department of Education Management and Foundations of Jaramogi Oginga Odinga University of Science and Technology who examined the content of the instrument and advised on its face validity. Quantitative data obtained by open and closed ended items in the questionnaires and the documents were analyzed by descriptive statistics and presented in form of bar graphs, pie charts and correlation coefficients while qualitative data obtained by open ended items in the questionnaires and interviews were categorized into themes and sub-themes and analyzed continuously depending on the issues that arose on the process of the study. The findings of this study might be useful to education stakeholders in improving schools' general infrastructure. It might also contribute to knowledge for future study.