

## **ABSTRACT**

The purpose of the study was to examine the effect of teacher professional development on implementation of integrated science in competency-based curriculum in junior schools in Westlands Sub-County. The study was guided by the social development theory. A descriptive research design was used. The target population were teachers, principals and heads of departments in the 30 junior schools in Westlands Sub County. A census was conducted for the integrated science teachers while 30% of heads of departments and principals were purposively selected. Data were collected through mixed methods. A structured questionnaire was distributed to the teachers in the selected schools. Interviews were conducted with heads of departments and principals. A pilot study was conducted to assess the validity and reliability of the data collection tools. Quantitative data was analyzed using the Statistical Package for Social Sciences version 29, employing correlation and regression analysis techniques. Qualitative data was analysed thematically. Results showed that teacher professional development positively correlated with implementation of integrated science in the CBC in JSS( $r=0.923$ ,  $p=0.000$ ). This study concludes that, despite teachers' strong understanding of integrated science, they face challenges due to a lack of resources, such as teaching materials and laboratory equipment. There was an increase in teacher workload, yet few received sufficient job training or continuous education opportunities in integrated science. The study suggests that JSS should encourage greater involvement in research activities and professional organizations to promote continuous professional growth.