

Instructional Practices in Biology and their Influence on Student Performance in Secondary Schools in Kenya

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Abstract

Performance in Biology in the Kenya Certificate of Secondary Examinations (KCSE) has been below expectations, and has continued to cause concern to educators and the general public. In the past five years, performance of biology nationally has been below average. This performance has been attributed to many factors among which are the uses of predominantly teacher-centered approaches in teaching. Biology was recorded among the worst performed subjects nationally in the KCSE 2008. This prompted this study. The purpose of this study was to investigate the instructional practices that biology teachers employ when teaching. The objective of the study was to establish the instructional methods used by the teachers of biology. In order to achieve the objective of the study, research focused on the instructional methods in use in secondary schools. A descriptive survey design was used in the study. Stratified, simple random, and purposive sampling techniques were used in the sampling. District Quality Assurance and Standards Officers, school principals, biology teachers and form three students participated in the study. Three types of instruments were used to collect data: Classroom Event Observation Schedule, interview schedules, and questionnaires. The data obtained was analyzed using descriptive statistics. The findings showed that teacher-centered methods were dominant in the teaching learning process. Biology teachers had the necessary qualifications, training and experience. From the findings, there was a clear indication that instructional methods employed in the teaching affect performance in biology. Teachers used teacher-centered more than learner-centered approaches in teaching denying learners the opportunity for active involvement in the learning process and this had led to low understanding of biological concepts. Active participation of students in the learning process should be enhanced. The available resources though inadequate should be fully utilized to enhance practical work. Teachers and learners should be motivated to encourage a more positive attitude. There should be continuous and effective monitoring of the teaching practices.

Keywords: Instructional practices, Biology, Influence, Student performance

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