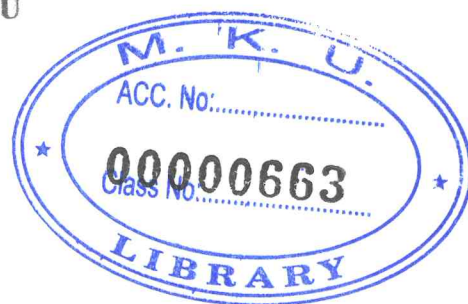


**FACTORS ASSOCIATED WITH HIGH SCHOOL LEARNERS' POOR  
PERFORMANCE IN BIOLOGY PRACTICALS: A SURVEY STUDY OF  
SCHOOLS IN MAKUENI DISTRICT, IN MAKUENI COUNTY.**

**ADAMS MUSYOKA KIMEU**

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
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## ABSTRACT

Students differ from one another in a wide variety of ways, including the types of instruction to which they respond best (learning styles), the ways they approach their studies (orientations to studying and approaches to learning), and their attitudes about the nature of knowledge and their role in constructing it (levels of intellectual development). While much has been written about all three categories of diversity in the general education literature, relatively little solid research specific to biology education practical has been performed.

We have suggested a number of promising areas for study:

*Validating instruments used to assess learning styles, orientations to study, and levels of intellectual development of biology students.*

Most of the instruments listed in this paper have been subjected to reliability and validity analysis, but few of the validation studies involved biology student populations.

While results obtained with an instrument that has not been rigorously validated may be informative (especially if they are consistently replicated in independent studies), conclusions can be made and generalized with much greater confidence if the instrument has been shown to be reliable and valid for the population being studied.