Impact of Experiential and Mastery Learning Programmes on Academic Achievement in Secondary School Agriculture

By

Frederick Ugwe Ngesa

A Thesis Submitted to the Graduate School in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Agricultural Education of Egerton University

Egerton University
Njoro, KENYA
2002

ABSTRACT

This study investigated the impact of experiential and mastery learning programmes on academic achievement in secondary school Agriculture. In addition, the effects of the interactions of the learning programmes with the gender of student, school category and school location on performance were examined. The study used post-test only control experimental design. Two experimental treatments, experiential learning (EL) and mastery learning (ML) programmes, were used to teach Agriculture to Form I students in selected district and provincial secondary schools in Kenya. Another group of Form 1 students who learnt the subject under conventional learning programme constituted the control group. The sample consisted of 2693 students who learnt the subject in 38 schools. Of the sample, 993 students in 13 schools learnt under experiential learning programme, 764 students in 12 schools learnt under mastery learning programme and 936 students in 13 schools were taught using the conventional learning programme during the academic year 2000. Scores in three end-of-term examinations were administered to the experimental and control groups during the year provided the primary data for analysis. Questionnaires were used to collect information from Agriculture teachers, heads of science departments and headteachers of the experimental schools. Descriptive statistics, t-tests and one-way analysis of variance procedures were used in analysing the data. The findings were that: experiential and mastery learning groups scored significantly higher than conventional learning group; scores of experiential and mastery learning groups were not significantly different; boys scored significantly higher than girls under both experiential and mastery learning programmes; girls who learnt under experiential learning programme scored significantly higher than those who learnt under mastery learning programme; students who learnt in provincial schools scored significantly higher than those who learnt in district schools under both experiential and mastery learning programmes; students who learnt in rural schools under mastery learning programme scored significantly higher than those who learnt in urban schools; and there were significant differences in scores by the provinces where the students learnt. Major recommendations from the study are: both experiential and mastery learning programmes qualify as appropriate interventions for improving performance in Agriculture; experiential learning programme provide appropriate approach to teaching Agriculture to girls; and programme of systematic production and distribution of teaching resources need to be instituted.

TABLE OF CONTENTS