

Implementation of Integrated Environmental Education in the Secondary School Curriculum for Managing Environmental Degradation in Machakos Sub-County, Kenya

Timothy Mandila Chikati

Abstract

This study investigated implementation of integrated environmental education (IEE) in the secondary school curriculum for managing environmental degradation in Machakos Sub-County. The study was guided by the following research questions: To what extent is environmental education (EE) integrated in the secondary school curriculum in Machakos Sub-County? What are the teachers' and students' perceptions of IEE in the secondary school curriculum? What are the levels of environmental literacy of secondary school teachers and students? What support do teachers require to implement IEE related topics in the secondary school curriculum? What instructional approaches do secondary school teachers use to teach IEE topics in the secondary school curriculum? What challenges are faced in implementation of IEE in the secondary school curriculum and what strategies are suggested to address these challenges? This study operated within Fullan's change theory (2007) as a framework for examining the implementation of integrated environmental education in the school curriculum. The theory views curriculum implementation as a model of interactions between four change factors (need clarity, complexity, quality & practicality) as independent variables and teachers' and students' environmental literacy (awareness, knowledge, attitudes, skills, participation) as dependent variables. This study was guided by a conceptual framework that described the link between the stated variables. The study employed mixed methods approach. Both probability and non probability sampling designs were used in tandem with the mixed methods. The target population of the study consisted public secondary schools, public secondary school principals, teachers and form 4 students in Machakos Sub-County, in addition to Kenya Institute of Curriculum Development (KICD) officers from Nairobi County. Questionnaires; interview guides; document analysis schedules and observation guides were used as research instruments for data collection. Frequencies, percentages, means, standard deviations were used to analyse quantitative data while narrations were used to analyse qualitative data. Hypotheses were tested at a minimum of .05 level of significance using independent samples T-Test and one way ANOVA. Study findings demonstrated that EE topics in the secondary school curriculum were inadequate and inappropriately organized; both teachers' and students' perceptions of the integrated environmental education in the secondary school curriculum were generally weak; participants were not well prepared in environmental literacy; support to implement EE was inadequate; collegial cooperation among teachers was lacking; most teachers and students had not fully appreciated learner-centred approaches to EE and environment policy was lacking in schools. The study concluded that most teachers and students did not fully participate in reducing environmental degradation in Machakos Sub County; EE implementation faced specific challenges particularly heavy workload; lack of

environmental policy; lack of time and high premium placed on national examinations. The study recommended that KICD should include at least 50% percent of EE topics in the curriculum; The Ministry of Education should prescribe and oversee implementation of environmental policies in schools. The study recommended for further studies on classroom teaching/learning practices to establish how EE pedagogies are employed in secondary schools in Machakos County.

Keywords: Implementation, Integrated Environmental Education, Secondary School, Curriculum Environmental Degradation, Machakos Sub-County, Kenya

Full text: <http://ir.cuea.edu/jspui/bitstream/1/6192/1/TIMOTHY%20DISSERTATION.pdf>