

The Efficacy of Using Mother Language in the Teaching of Mathematics and Science in Primary Schools: Evidence from Grade One Classrooms in Kenya

Martin C. Njoroge

Abstract

Despite the evidence from multilingual education research that states the pedagogical benefits accrued when a child is taught in the mother language, obstacles to the acceptance of its use and implementation in education in Africa are enormous. Although Kenya's language in education policy states that mother language is to be used as a medium of instruction in the early grade years, most teachers use English in introducing children to formal learning. Is it that the teachers do not understand the benefits accrued when a child is introduced to learning in a language that he or she understands? It is against this backdrop that this study set forth to test the efficacy of using Gĩkũyũ (a mother language to many speakers in Kenya) and English (the official language in Kenya) in the teaching of Mathematics and Science in the early grade years to capture the influence the language used had on performance in the two subjects. To achieve the objective of this study, two standard one classes in Kiambu County were purposively sampled. Learners in the experimental class were taught Mathematics and Science using Gĩkũyũ while those in the control class were taught the two subjects using English. A pre-test and a post-test were administered before and after the teaching. Afterwards, the scores recorded in both tests were analyzed quantitatively using the Levene's Test for Equality of Variances and the emerging patterns discussed. The general finding is that teaching Mathematics and Science using Gĩkũyũ is an effective strategy that improves the performance of the two subjects in Kenyan primary schools. The study, therefore, recommends that Gĩkũyũ (and other mother languages) be adopted as a legitimate language of mathematical and scientific communication in areas where the language is spoken in order to facilitate multilingual learners' participation and success in Mathematics and Science.

Keywords: Mathematics, Science, Gĩkũyũ, English, Mother language

Full text: <http://dspace.pacuniversity.ac.ke:8080/xmlui/handle/123456789/1424>