

Status of Teachers' Technology Uptake and Use of GeoGebra in Teaching Secondary School Mathematics in Kenya

Irene Mwingirwa¹, Marguerite Miheso-O'Connor

Abstract

The uptake of technology and specifically, GeoGebra software, in teaching mathematics has had mixed success in spite of its documented benefits. This study investigated teachers' perspective towards training and eventual use of GeoGebra as a tool to enhance learning of mathematics. In this article we share findings from a larger study that was conducted in Kajiado County in Kenya (Africa) on GeoGebra use in teaching Secondary School Mathematics. This article presents the relationship between observed teachers' perceptions towards the uptake of GeoGebra, a technology based tool and the actual uptake of GeoGebra using the Diffusion Innovation theoretical framework. Data was collected from practicing mathematics teachers who were exposed to GeoGebra through a series of training sessions. The findings after training sessions with the mathematics teachers showed willingness to use GeoGebra in their classes. The teachers identified Geometry as the topic where use of GeoGebra would be most relevant due to its abstract nature. Teachers' responses indicated that GeoGebra was perceived as useful for teaching and learning Mathematics and that it would help learners grasp concepts in Geometry. However, the study also found out that systemic support would sustain teachers' engagement with GeoGebra at classroom level as actualization of Geogebra use did differ significantly from teachers' perceptions.

Key words: GeoGebra; Geometry; Technology; Secondary school mathematics

Full text: <https://eric.ed.gov/?id=EJ1105111>