

The Effect of Multimedia-Based Instruction on Students' Achievement and Attitude towards Plane Geometry

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Abstract

The use of technology in the pedagogical process is growing at a phenomenal rate. It has been integrated in many areas of learning particularly in math. However, there is still a dearth research on the effectiveness of multimedia-based instruction in teaching and learning Plane Geometry. Mainly, the paper showed the significant difference of students' achievement and attitude in the pretest and posttest scores. This study investigated the effect of multimedia-based instruction on students' achievement and attitude towards Plane Geometry using a quasi-experimental design. Seventy-eight students were divided into two groups (experimental group or the multimedia-based instruction-MBI and the control group or the non-multimedia-based instruction –NMBI). Students' pretest and posttest achievement and attitude scores were analyzed using independent T-test. Findings of this study revealed a *low* level of students' mean achievement score on distance formula, midpoint, slope, the equation of the line, and the equation of the circle during the pretest (mean score = 16.64 in NMBI and 14.23 in MBI). However, the students' achievement significantly increased in the MBI (posttest mean score = 26.03) compared with NMBI (24.36) group. The student's attitude towards Geometry was *satisfactory* for both groups with means of 2.83 and 3.14 for NMBI and MBI, respectively. Gender, on the other hand, had no significant influence on their achievement and attitude towards Geometry. Between the two teaching strategies, the multimedia-based instruction was found to significantly enhance students' achievement in Geometry. The result highlights the positive influence of MBI in learning Geometry concepts and may be utilized in teaching complex and higher mathematics subjects.

Keywords: *multimedia instruction, effectiveness, achievement, attitude, mathematics*