

A comparison of Malaysian secondary students perceived ease of use and usefulness of dynamic mathematical software

ABSTRACT

Technology is becoming important in the lives of school students. The integration of technological tools has been widely practiced in teaching and learning mathematics in order to enhance students' understanding of mathematics. Teaching and learning mathematics can be beneficial through the use of dynamic software. Learning mathematics on computer screens can be some sorts of visual entertainments for students. The teaching process is absolutely no longer about the interaction between the teacher and the students but also it can be the interaction between the student and the software itself. Therefore, institutions should attempt to utilize dynamic software in order to add value to the education process. The use of Geometer's Sketchpad (GSP), Autograph and the Graphing Calculator (GC) had been implemented for the learning of mathematics in Malaysian secondary schools. This paper will discuss how students perceived the ease of use and usefulness of using Autograph and GSP and GC during learning Quadratic Functions. A total of 124 secondary school students in Malaysia participated in the study. They were randomly assigned into three different groups. Each group underwent instruction utilizing either one of the software. Findings showed that students' mean scores of perceived ease of use of the graphing calculator is higher compared to the use of Autograph and GSP. However, there was no significant difference in the mean scores of perceived ease of use and perceived usefulness of the three software. These findings have shown promising implications for the use of mathematical software and graphic calculator in teaching mathematics at Malaysian secondary school level.

Keyword: Geometer sketchpad; Graphic calculator; Autograph