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Graphical calculators in the classroom.

**“The Effects that Graphical Calculators have in
the Enhancement of Mathematical
Learning in the Classroom.”**

**A THESIS PRESENTED IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR
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Abstract

The graphical calculator is a phenomenon that is beginning to become a favourable mathematical learning and teaching tool in New Zealand secondary schools. Discussions about the use, role and the impact that this technology in secondary schools have, and will continue to be a topical issue for some time to come.

Technology use in today's mathematics classrooms is of particular interest due to current curriculum reforms. The graphical calculator is a fairly recent technological tool that can be added to the array of mathematical tools already at the disposal of both the teacher and the student.

This study examines the use of the graphical calculator in classrooms to gauge whether it has the potential to assist in the learning of mathematical concepts and to see if students become more active learners when using graphical calculators.

The graphical calculator can be used in the classroom, in as much the same way as an overhead projector or even a piece of chalk. It is a tool for illustrating a concept, opening up avenues for investigation and can enhance the learning that is going on. Secondary school mathematics today is much more than the acquisition of arithmetic and algebraic skills it encourages understanding. The graphical calculator can be considered a powerful, pocket computer and successful users require a higher level of understanding than that which is required for rote or skills based learning.

The introduction of the graphical calculator into classrooms confronts existing mathematics' content and methodologies in the imparting of mathematical knowledge from the teacher to the students. With this in mind, teachers in New Zealand need to react and prepare for this impending change.

This study looks at the impact the graphical calculator had on eight secondary schools, the mathematics teachers inside these schools, and the way in which the graphical calculator was used in their classrooms. The study also examined the implementation of the calculators and the effects that they had on teaching and the mathematical programme delivered to students in the classroom.

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