

USE OF ONLINE VIDEO IN THE TEACHING OF EXPONENTIAL FUNCTIONS

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ABSTRACT

Graduates with high level mathematical skills are a commodity that Australia needs more of. However the number of high school students taking a level of mathematics sufficient for their university studies is on the decline. This lack of relevant mathematical preparation makes the teaching of these students in their first year mathematics units challenging. Visualisation is an important tool in mathematical problem solving. The use of online videos (eg, YouTube) to illustrate applications of mathematical concepts can help to enhance a student's engagement and ultimately their conceptual understanding. Conducted at a large Australian university with students enrolled in a first year service teaching mathematics unit taught in a traditional lecture and tutorial format, online videos were introduced to enhance students' understanding of the exponential function. The videos present the concepts in real world contexts in a visual way that is relevant and thus provides a starting point for engaging students in mathematical thinking. Online video was augmented with specific exercises in the same context as the videos. The outcomes of this intervention will be discussed.

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