

Abstract

This research is focused on the use of teaching and learning strategies to reduce the effects of residual mathematics anxiety can have on the preparedness of Pre-service Primary Teachers in a New Zealand educational context. Math anxiety as a factor of the preparedness of Pre-Service Teachers, can be passed on to students and can adversely affect maths learning in the classroom. Adverse effects upon such learning may be linked to maths learning in the wider community, especially Science Technology Engineering and Mathematics (STEM) careers.

When students study mathematics in a tertiary education environment they face the challenge of learning a new vocabulary, the language of mathematics. It is commonplace for students to feel anxious about acquiring mathematical knowledge and developing mathematical problem-solving skills. Since mathematics has such a wide application in life situations, failing can lead to reduced chances of participating in tertiary education. The current demand in New Zealand for employees with STEM skills adds emphasis to the importance of this subject in the lives of students and teachers, especially at primary level schooling.

Several key themes are evident in the literature. Themes include Mathematical content knowledge, increased awareness of the power of informal methods, multiple approaches to mathematical problem solving, and mathematical resilience.

The research method involves a questionnaire to explore Pre-Service student teachers' math anxiety about specific mathematical topics. The results can be used to develop interventions to mitigate math anxiety. Administration of a post-intervention questionnaire assesses the effectiveness of potential interventions upon teacher math anxiety.

The persistence and importance of Math Anxiety provides motivation to investigate potential risk factors and to identify appropriate strategies to reduce the effects of math anxiety, so that Pre-Service Primary Teachers, might utilise interventions to reducing their math anxiety so that they are better prepared to teach mathematics in schools.