

Mathematics Education in the New Zealand Setting (Part 2)

Presentation for Representatives from SEAMEO QITEP in Mathematics, Yogyakarta

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Pre-service Mathematics Education Primary (Elementary)

First Year students

112: Understanding Mathematics for Teachers (optional)

This paper provides a study of key conceptual understandings in mathematics for teachers. It provides a sound base for further development of content and pedagogical content knowledge in mathematics.

120: Learning and Teaching Mathematics (compulsory)

An introduction to the learning and teaching of mathematics at years 1-8

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Primary Education Papers ctd.

Second Year students (Compulsory)

220: Understanding Mathematics for Teachers

Further study of the learning and teaching of mathematics at years 1-8.

Third Year students (optional)

324: Numeracy in the Classroom

The paper focuses on the Numeracy Project approach to teaching numeracy/mathematics, and provides an in-depth understanding of the Number Framework and progressions in children's mathematics learning.

340: Numeracy Difficulties: Diagnosis and Remediation

This paper is for numeracy educators and those working with learners of all ages experiencing difficulties in numeracy/mathematics. The paper critically examines research and theory on the causes of these difficulties, as well as focusing on the assessment, diagnosis and remediation of difficulties.

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Graduate Primary Education

This is a one year fulltime course (Jan- Dec).

762: Mathematics Education Students are expected to

- Become confident with their own content knowledge of mathematics and develop a positive attitude to the subject;
- Understand mathematics as a human and dynamic activity that is available to all and where everyone's perspective on what it might be is taken into account;
- Understand pedagogical issues relating to this evolving subject that will enable students to build effective approaches for facilitating learning in mathematics with children across the primary and intermediate age range;
- Engage critically with curriculum developments (such as the Numeracy Professional Development Projects) and mathematics research literature to develop insights regarding learning in mathematics;
- Use relevant curriculum documents and other materials (for example, tki site and technology), to support mathematics learning; and
- Work alongside children to help them refine and improve some of their mathematical ideas.

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Post-graduate Papers

501: Mathematics Education

This paper is designed to enable educators to develop their mathematics teaching with learners of all ages. The paper will involve discussion of mathematical activities and pedagogical issues arising from them. The paper also surveys a range of alternative research perspectives in mathematics education and seeks to connect themes from this research to issues being encountered by educators in their everyday work. A particular theme will address issues of communication in mathematics with an emphasis on mathematics as a fully inclusive activity that can be enjoyed by all learners. References will be made to recent initiatives such as the Numeracy Development Projects and the Learning Progressions for Adult Numeracy.

502: Acquiring Numeracy How Thinking Develops

This paper looks at how learners' thinking becomes increasingly sophisticated as their mathematical understanding grows. A particular focus of the paper is on learning progressions in numeracy and the use of diagnostic interviews to explore various aspects of learners' mathematical thinking and understanding.

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Further Post-graduate Papers

503: Numeracy in the Classroom: Issues & Practices

The paper focuses on the Numeracy Project approach to teaching numeracy/mathematics, and provides an in-depth understanding of the Number Framework and progressions in children's mathematics learning.

The paper extends substantially the introduction to the Numeracy Project given in the Numeracy Project workshops.

504: Numeracy Difficulties: Issues & Practices

This paper is for numeracy educators and those working with learners of all ages experiencing difficulties in numeracy/mathematics. The paper critically examines research and theory on the causes of these difficulties, as well as focusing on the assessment, diagnosis and remediation of difficulties.

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