

# Developing Prospective Primary Teachers' Personal Content Knowledge of Mathematics

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Developing prospective primary teachers' knowledge of mathematics is a crucial step towards improving the teaching of mathematics. This round table will explore approaches to raising the personal content knowledge, and the confidence of student teachers.

In one College of Education, incoming students were screened using a test that required student teachers to do costing and time calculations in the context of planning a class trip. Students that struggled with this test were required to attend a 30 hour course targeted at developing their personal content knowledge, and willingness to engage with mathematics. The course had a strong emphasis on problem solving and sharing of ideas through discussion. The course was assessed through daily journal entries.

The research literature specifies many examples of prospective primary teachers having weak content knowledge of mathematics, suffering from mathematics anxiety, or using algorithmic approaches in mathematics. The students required to attend the courses had similar dispositions and needs. In order to empower the students to begin to address their own mathematical needs and start growth towards being teachers of mathematics, the course was designed to reinforce to the students that they could extend their own knowledge by being active participants in the process.

Experiences from this course will be shared as part of a more general discussion on developing prospective primary teacher's personal content knowledge of mathematics.

## Trigonometric Graph and the Real World: The Technical Students' Experience

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This paper will relate the experience of four groups of Bruneian technical students working on a project titled "Trigonometric Waveforms Around Us". This project tries to connect whatever was learnt in class to the real world. The main aim was to show students that mathematics phenomena are around them and that mathematics is useful in everyday life. A second aim was to enhance to make them more interest and motivated in learning mathematics. The paper examines their chosen topic and looks at the problems that students face in carrying out the project. Data was mainly collected through observation, interviews and journal writing. Although the students were unmotivated in the beginning, their interest and motivation increased as they went deeper into the project.