

DESIGNING MATHEMATICS TASKS FOR THE PROFESSIONAL DEVELOPMENT OF TEACHERS WHO TEACH MATHEMATICS STUDENTS AGED 11-16 YEARS

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Short description of the workshop: aims and underlying ideas

This workshop focuses on identifying and developing tasks that are appropriate to use in professional development with mathematics teachers of 11 – 16 year olds who self-identify as being “non-specialists” in mathematics. The professional development of this group of teachers tends to get overlooked because of the focus on senior secondary mathematics and primary mathematics. Many non-specialist teachers of mathematics lack confidence in their knowledge of mathematics and yet they play a pivotal role in the mathematical education of students. There is much still to be learned about what constitutes appropriate professional development for them - from both a mathematical perspective and in terms of pedagogy.

We have been involved in professional development with this broad group of teachers over the past four years in our vastly different educational contexts. We invite professional development practitioners, teachers and researchers to join us for a workshop that engages with professional development tasks for non-specialist and reflects upon these tasks from different international perspectives, and from different practices of teaching, professional development and research.

| Planned timeline | Topic | Material / Working format / presenter |
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| Introduction (10 min) | Importance of focusing on non-specialists in mathematics PD, broad principles for designing appropriate PD tasks, description of the similarities and differences in the UK and SA contexts. | Input from presenters. |
| Section 1 (40 min) | Working on a sample of PD tasks and reflecting on the design. | Small group work, discussion and feedback. |
| Section 2 (40 min) | Use of Variation Theory in designing tasks for maths PD, exploring examples of tasks. | Brief input by presenters, small group work on tasks illustrating Variation Theory, feedback and discussion. |
| Closing (10 min) | Wrapping up, opportunities for future collaboration. | Input from presenters. |

