African Institute of Mathematical Sciences: Schools Enrichment Centre

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The crisis with maths education in South Africa

- Education crisis in general
- Mathematics in particular

South Africa is significantly underperforming in education, particularly mathematics teaching and learning. Mathematics teaching is often poor quality, with teachers not able to answer questions in the curriculum they are teaching, one indicator of the challenge. Often national testing is misleading as it does not show the major gap at lower grade levels. Of the full complement of pupils who start school, only 50 per cent will make it to Grade 12 and only 12 per cent will qualify for university entrance. Fundamental reforms are needed in
The causes of the problems

- Research
- A paper for SAARMSTE
Causes of the maths problems (South Africa)

Analysis: Teaching - a key cause?
A need for professional development

- Improving teacher knowledge
- What teacher knowledge?
Teacher knowledge


AIMSSEC

- Teacher education
- … capacity building
- Complements existing provision
A model of professional development

- Blended learning
- Cascading into schools
- Communities of practice
- Embedded in the everyday context
  - Mathematics
  - Pedagogy
  - Enquiry
Residential courses
Then they go home

- Applying what you learned: plan, teach, review
- Mathematics
- Teaching and learning environments
- Workshops for colleagues
- Action research
AIMSSEC’s role

- Planning and running residential courses
- Mentoring, support, guidance
- Marking and feedback
Marking, feedback and formative assessment
An aside: different kinds of assessment

- Gathering information about your students’ current levels of understanding

- What do you do then?

- Summative assessment, formative assessment
Striving for excellence

• Designing teaching
• Designing resources
• Developing a learning community
• Research
Research

- Formative Assessment in Science and Mathematics Education (FaSMEd)
- European Union project
- Eight partners in Europe
- … and AIMSSEC
FaSMEd’s work

- Improving classroom formative assessment
- Design research: a toolkit for teachers
- Interventions and case studies
- Workshops
Welcome

This is the blog for the FaSMEd project at the African Institute for Mathematical Sciences (Schools Enrichment Centre).

The blog is intended as a first dissemination tool, open to anyone to read and comment on. The blog includes:

- What the project is about
- Discussions about some of the questions we are grappling with (e.g. what do we know about toolkits for teachers' professional development?)
Workshops, baseline research, outreach, working with teachers
Welcome

Welcome to the FaSMEd toolkit. This toolkit is still being developed. Some teachers are helping to develop the toolkit by using it, allowing us to observe them using it, giving us their feedback and advising us. The toolkit includes five sections:
Next steps for FaSMEd

- Working with teachers: toolkit
- Visiting schools
- Further research on toolkits
The end