

Meet our Strategic Advisory Committee

Our Strategic Advisory Committee (SAC) team meet every six months and advise on scientific, engagement and dissemination issues as well as the overall progress of the project.

The next meeting will be on November 26th 2014 and if there are any specific questions you would like the committee to consider please email: fasmed@ncl.ac.uk

Dr Alison Clark-Wilson

works as a Research Fellow at the London Knowledge Lab, Institute of Education, London, and is currently working on the ambitious Cornerstone Maths project, a UK/US collaboration between LKL and Stanford Research International (www.cornerstonemaths.co.uk). Alison has edited and authored 3 books, the most recent of which is *The Mathematics Teacher in the Digital Age* (with Ornella Robutti and Nathalie Sinclair, published 2014). Alison is an active member of the Association of Teachers of Mathematics, The Mathematical Association and a Fellow of the Institute of Mathematics and its Applications. She is on the Executive Committee of the British Society for the Learning of Mathematics.

Chris Olley is currently director of the secondary maths PGCE (Initial Teacher Education) course at King's College London. He divides his time between working at King's and running a maths education publisher and consultancy called the maths zone

Gill Leahy joined Promethean's Education Strategy team in 2010. She is particularly interested in exploring and facilitating technology's role in realising more effective educational systems through the themes of curriculum development, teacher effectiveness and assessment. She is the Promethean lead on the European ITEC project. Key areas of research are assessing learners' progress through effective questioning and feedback, alongside developing functionality in the mathematics curriculum.

Anders Jönsson is Associate Professor in Science Education Research with a focus on assessment at Kristianstad University, Sweden. Anders is currently working with the development of national tests in science for year 6 in Sweden. The main research foci are assessment of scientific argumentation and formative assessment.

Anders is a partner in SAILS (Strategies for Assessment of Inquiry Learning in Science), which is funded by the European Union's Seventh Framework Programme.

Professor Margareta Ekborg is professor in science education at Malmö University, Sweden. She has a master degree in Biology and has worked as a teacher in Biology, Chemistry and integrated science in secondary school and in the same subjects as well as education in teacher education before doing her PhD in science education. Margareta has worked with producing material for formative assessment for primary school. The material (DINO) is published on the website of The Swedish National Agency for Education. She is also a partner in SAILS.

Dr Ann Dowker is a University Research Lecturer at the Department of Experimental Psychology, University of Oxford. Ann has carried out extensive research on individual differences in arithmetic in both children and adults, and on the phenomenon of 'mathematics anxiety'. She is currently starting work in collaboration with Roi Cohen Kadosh to edit a Handbook of Mathematical Cognition for Oxford University Press.

For further information please see: <http://research.ncl.ac.uk/fasmed>

Or email: fasmed@ncl.ac.uk

The project FaSMEd has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 612337



FaSMEd NEWSLETTER

Issue 3

30th September 2014

Welcome to our third issue of the FaSMEd newsletter. This issue includes news and updates from across the project, as well as a focus on some of the technology to be used by our intervention schools in our partner countries.

This issue was produced by the Newcastle University, UK.

FaSMEd to launch Prototype Toolkit and Professional Development package in Torino

The FaSMEd partners will meet from the 13th to the 15th October 2014 to discuss and launch the prototype toolkit and professional development package that will be used as the basis of the design study across the intervention schools. Our partners at Università degli Studi di Torino will be hosting the meeting.

This will mark the beginning of Phase two of the project where partners will work closely with science and mathematics teachers and students to adapt and develop existing research-informed formative assessment practices with the use of technology. The nature of the technology focus will vary across the partner countries as is discussed on pages 2-3 overleaf.

The meeting will end with a visit to a local school in the Torino area and provides a welcome opportunity for everyone to experience first hand the local contexts of partner countries.



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FaSMEd to attend Scientix Conference 24-26 October 2014

David Wright will be representing FaSMEd and presenting a joint poster session with SAILS

(Strategies for Assessment of Inquiry Learning in Science) at the 2nd Scientix Conference held in Brussels,



Belgium. It is expected that there will be around 550 STEM teachers, policymakers, researchers and project managers in attendance. We look forward to the opportunity of disseminating our first year project progress, as well as networking and identifying possible further connections with other European projects.

Welcome Diane Dalby

Diane has recently joined the FaSMEd team at Nottingham, UK. She was appointed as a Senior Research Fellow at the University of Nottingham earlier this year following extensive experience as a mathematics teacher and manager in schools and Further Education. She has worked on a number of national initiatives including the Skills for Life Quality Initiative and NIACE with a particular emphasis on developing the mathematical skills of low-achieving adults. Diane has recently completed three years of full-time doctoral research into the learning experiences of low-attaining vocational students in Further Education colleges.



Focus on technology

FaSMEd seeks to research the use of technology in formative assessment practices in the classroom, although the exact nature of the technology used will vary across partner countries. Here we introduce some of the technology that partners are currently discussing with schools

National University of Ireland Maynooth, Ireland

In conjunction with our co-operating schools we intend to work with the Socrative app for Ipad/smartphone and the Google Docs related programme Flubaroo.

Socrative is a smart student response system that empowers teachers by engaging their classrooms with a series of educational exercises and games. It runs on tablets, smartphones, and laptops. Teachers and students log into the app where teachers can pose questions and student responses are visually represented for multiple choice, true/false and Short Answer questions.



Flubaroo is a free tool that helps teachers quickly grade multiple-choice or fill-in-blank assignments using Google Forms. It also computes average assignment scores, average score per question and flags low-scoring questions. It can show teachers a grade distribution graph and they can also email the students their grades and if needed the answer key.

We are also contemplating working with other Ipad apps such as Educreations and Nearpod.

Utrecht University, The Netherlands

In Utrecht one main goal of the project is to design a computer-based formative assessment toolkit for teachers. The toolkit will eventually comprise a collection of key problems on topics that are often difficult for students at the end of primary school.

Our first design is a set of two tests, A and B, on the topic of percentages. The two tests have similar problems; however, the numbers that are chosen for test B make the problems a little more difficult. Teachers can use this set in case the students can solve all problems in test A.

For each problem the students can apply their own way to solve it. When they cannot solve the problem mentally, they can choose for one of the tools that are built in in the test: The first tool is Scrap Paper, the second tool is a Ratio Table, and the third one is an interactive Percentage Bar.

The teacher can then view the students' work through the software to see how they solved the problems and what tools they used.



Fig. 1

Newcastle University, UK

Newcastle schools plan to trial a variety of technology tools with the FaSMEd materials and activities. These will range from mini-whiteboards and response cards to iPads, whole class response systems such as 'clickers' and hand held technology networks. We will experiment with software such as 'Classflow' developed by Promethean and TI-Nspire 'PublishView' documents.



Our first priority will be to gain more familiarity with the FaSMEd materials and formative assessment strategies promoted by the project and we look forward to getting together with some of our colleagues in other schools later in the year when the first prototypes are available. We see this meeting as a priority in order to initiate a community of teachers working together to develop our practice and to support the development of the FaSMEd project.

University of Nottingham, UK

The schools with which we will be working have class sets of iPads available and general teaching tools appropriate for the project such as *Nearpod/Classflow*, suitable for delivering interactive, collaborative lessons using the wall mounted whiteboard and responses from the pupils; and *Showbie* for individual student work on the iPad with annotation from the teacher. Specialist mathematics tools will also be used including *Desmos* for investigations in coordinate geometry and *Geogebra*, which is a teacher and student toolkit for the development of mathematics resources. Some work using tablet-based versions of 'Classroom Challenges' and 'Card Sorts' developed by CRME at Nottingham will be incorporated.

African Institute For Mathematical Sciences, South Africa

The focus of the South African FaSMEd effort has been on outreach work with teachers. We have run a small number of workshops and seminars for teachers working both locally in the Western Cape and further afield. Our approach has been to do some mathematics, model formative assessment approaches and lead some discussions on formative assessment. Through these workshops we have generated interest in FaSMEd amongst a number of the teachers and a FaSMEd meeting with anyone who is interested is planned for 30th October. After this meeting teachers will be selected to form the cluster group needed for the toolkit development and implementation.



Schools in South Africa vary widely in how well they are resourced and our philosophy is that we do not want to exclude anyone from taking part because of a lack of resources. We are therefore emphasising the formative assessment aspect of the project and, for the moment at least, underplaying the role of technology. However, for us, the most appropriate technologies will probably be non-digital tools such as mini-whiteboards and manipulatives such as card sets.

The photograph here shows some teachers at a FaSMEd workshop in Cape Town. They work in small groups to match cards in the same way that their students might. The activity provides many opportunities for formative assessment; the card-matching helps make the students' thinking explicit which provides information the teacher can use to inform, for example, their questioning.

Our blog, at <http://fasmedaimssec.wordpress.com/> provides more information.

