

FaSMEd Project Developments ...

Ethical Review Report 1 submitted

FaSMEd has received its external Ethical Review for the first half of the project from Professor Vivienne Baumfield, University of Exeter, UK.

The report examines and reflects on the FaSMEd project to date, with particular focus on the project design, governance structure and ethical framework.

FaSMEd has been recognised for its emphasis on collaborative inquiry using multiple channels for communication. As we move into the second period of the project, the report makes recommendations for continued development and evaluation.

A copy of the report will soon be available at: <https://research.ncl.ac.uk/fasmed/deliverables/>

Mid-term Project Review in Brussels

Work Package leaders have travelled to Brussels ahead of the project's Mid-term Review on the 30th September 2015. We look forward to this as an opportunity to review

achievements and milestones so far and look forward to project developments as we enter the second half of the FaSMEd project.

FaSMEd film

Julian Marshall and his team from MLM Learning Design are continuing to work on the development of the FaSMEd film

It is intended that the film will have two purposes:

1. To promote and celebrate the project (its mission, process, outcomes and legacy), with the intended purpose that it encourages others to explore and develop the use of technology in supporting formative assessment (in science and mathematics) in their own settings.
2. A collection of short extracts or episodes that could be used for Continued Professional Development and form part of the FaSMEd Professional Development Package for teachers; it is intended that these episodes could provide valuable material for teacher reflection and discussion.

For more information about the developing FaSMEd film please email: info@mlmllearningdesign.com

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

Our Facebook page: <https://www.facebook.com/fasmedproject>

Follow us on Twitter @ FaSMEdProject

Or email: fasmed@ncl.ac.uk

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



FaSMEd NEWSLETTER

Issue 7

30th September 2015

Welcome to our seventh issue of the FaSMEd newsletter. This issue includes news and updates from across the project

This issue was produced by Newcastle University, UK.

FaSMEd Resource Winner of the Sixth Scientix Resource Award

Work Package 3 deliverable *The Prototype Toolkit*, has been selected in best STEM reports category of the *Sixth Scientix Resource Awards*. *The Prototype toolkit*, created by the FaSMEd project, along with *Moving schools closer to the world of science*, by the Eduscience project, were selected as joint winners of this category.

Also recognised in these awards were *FEAST workshop 1: Talking about science – floating and sinking* selected as the best teaching material addressed to teachers in STEM education, published by the FEAST project and *The Rosetta – Primary Resource Book*, of the ESERO project, as the best teaching materials for students in STEM education.

More information about this competition and the 57 materials that were submitted can be seen at: <http://www.scientix.eu/web/guest/scientixawards/resources-competition-6>



Ulrike Thomas joins FaSMEd team at Newcastle, UK

A big welcome to Ulrike who has recently joined the team at Newcastle, UK. As many of you know, Lucy Tiplady will be taking maternity leave from November 2015 and so Ulrike will be taking on many of Lucy's responsibilities within FaSMEd.



Ulrike is an experienced researcher from the Research Centre for Learning and Teaching (CfLaT) at Newcastle University. Before embarking on a career in research she was a primary school teacher for 9 years. Ulrike has been involved in a range of research projects and evaluations which have examined the impact of innovative pedagogy and curricular on students and teachers. In her capacity as a researcher she has been developing her role as an interviewer and is particularly interested in exploring techniques and tools which encourage a more ethical, participatory and meaningful exchange.

Please get in touch with Ulrike at: U.Thomas@newcastle.ac.uk

Lucy hopes to return to the FaSMEd project in September 2016.

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FaSMEd Project reaching International audiences

It may have been summer holiday season, with many of our project teachers and students taking a well deserved break, but a number of our partners have taken the opportunity to join forces and deliver presentations together reporting on the ongoing developments and emerging impacts of the FaSMEd project.



Partners from the Ecole Normale Supérieure de Lyon and Università degli studi di Torino delivered a workshop in July 2015 entitled 'Which support technology can give to mathematics formative assessment? The FaSMEd project in Italy and France', followed by a Round table 'Formative assessment in the FaSMEd Project: reflections from classroom experiences' at the *Commission internationale pour l'étude et l'amélioration de l'enseignement des mathématiques* (CIEAEM) conference, Aosta, Italy. These two presentations were well attended and produced fruitful

discussions about the importance of feedback, the role of technology and the fundamental role of the teacher in the formative assessment process. For the French and the Italian teams, it was a rich occasion of exchanging about classroom observations and analysis of case studies, leading to the collaborative writing of a chapter in the next CIEAEM sourcebook, which will be published by Springer.

Newcastle University collaborated with fellow European projects *Strategies for Assessment of Inquiry Learning in Science* (SAILS) and *Assessment of Science, Technology and Mathematics Education* (ASSIST-ME) to deliver a Symposium in Strand 11: Evaluation and assessment of student learning and development, of the *11th Conference of the European Science Education Research Association* (ESERA), University of Helsinki in September 2015. The symposium entitled 'A pan-European perspective on assessment and inquiry based learning in science, technology and mathematics instruction' presented on the approaches adopted by these three large-scale European projects focusing on assessment and inquiry based learning in STM education across primary and secondary education.

Also in September, partners from the National University of Ireland Maynooth, Ecole Normale Supérieure de Lyon, Università degli studi di Torino and Newcastle University presented a joint symposium



in Network 9, Assessment, Evaluation, Testing and Measurement, at the *European Conference of Educational Research*, at Budapest University. The symposium entitled 'Formative Assessment in Science and Mathematics Education (FaSMEd)' began with an overview of the project, its values and approaches, before presenting in more detail how the project is developing through working with teachers and students in each of the partner countries represented. Our external evaluator, Dr Alf Coles, was the discussant and stimulated a very useful discussion with attendees.



FaSMEd partner news from ...

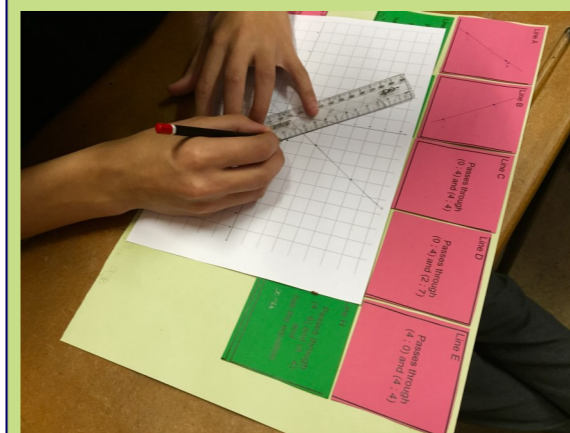
South Africa

The South African partner has just completed the third round of classroom interventions. As with previous rounds, this involved meeting individual teachers at their schools and jointly planning a lesson. Whereas previously many of the teachers had taught the same lesson, this time around it seemed that their needs were all quite different. For example, one teacher, Greg, asked the FaSMEd team to find or devise a classroom activity to address his students' difficulties with reading graphs, to determine, for example, where $g(x)$ is greater than $f(x)$, or where $f(x)$ is increasing. Two other teachers, Rob and Regis, were looking for activities to use as revision for the upcoming Annual National Assessments. Rob wanted a lesson on straight line graphs and Regis wanted something to pull together a range of topics that had been covered during the year.

All the South African FaSMEd lessons adopt 'active learning' approaches, with students working in small groups or pairs, usually on an activity involving card sorts or similar. Very often teachers use big versions of the cards to model the activity and to go through the card matches at the end of the lesson. All teachers have sets of mini whiteboards and these are used by the students at all stages of the lesson, and in particular in the introductory part of the lesson to provide teachers with information about the students' current understandings.



Overall, teachers and students appear to have enjoyed using the FaSMEd lessons, and it seems that teachers and students are now more comfortable with the different approaches the FaSMEd lessons require them to take. There is considerable evidence that teachers feel that they have developed professionally over the course of the project and that some of the FaSMEd teaching strategies are being used in other lessons, such as the use of mini whiteboards for formative assessment.



Large-scale study in The Netherlands

After extensive piloting of the Utrecht toolkit that was developed within the FaSMEd project, the Utrecht team has now started a large-scale study in which 6th grade teachers use and evaluate the toolkit. No less than 28 schools have agreed to participate in this study, which runs from September 2015 to February 2016.

Participating teachers attend three PD meetings, in which the Digital Assessment Environment (DAE) is discussed and explained, and results of the students are analysed with the help of the research team and other participants. Four subject domains are assessed over the course of three months: percentages, fractions, the metric system, and graphs. Teachers also share details of their assessment practices with the researchers by filling out questionnaires, and give access to their students' achievement scores on mathematics in the Cito Monitoring System, both before the start of the study (June 2015) and after completion of the study (February 2016).