FaSMEd

Meeting with schools
November 2014

Project aims

The project aims to:

➢ foster high quality interactions in international classrooms that are instrumental in raising achievement for low achievers;

➢ expand our knowledge of technologically enhanced teaching and assessment methods addressing low achievement in mathematics and science.

Research aims

The research will explore the **use of technology** in **formative assessment classroom practices** in ways that allow teachers to respond to the emerging needs of **low achieving learners** in **mathematics and science** so that they are better motivated in their learning of these subjects.

Project partners

- University of Newcastle, UK
- University of Nottingham, UK
- Ecole Normale Superieure de Lyon, France
- National University of Ireland, Maynooth, Republic of Ireland
- University of Education, Freiburg, Germany
- University of Turin, Italy
- Freudenthal Institute, Holland
- African Institute for Mathematical Sciences, Capetown, South Africa
- Sor-Trondelag University College, Norway

Main objectives

- Produce a toolkit of curriculum materials and methods for teachers to support the development of practice;
- Produce a professional development resource that exemplifies use of the toolkit;
- Offer approaches for the use of new technologies to support the formative assessment of lower achieving students;
- Develop sustainable assessment and feedback practices that improve attainment in mathematics and science.

Research questions

➤ How do teachers **process** formative assessment data from students using a range of technologies?

➤ How do teachers **inform their future teaching** using such data?

➤ How is formative assessment data **used by students** to inform their learning trajectories?

➤ When technology is positioned as a learning tool rather than a data logger for the teacher, **what issues does this pose** for the teacher in terms of their being able become more informed about student understanding?

Formative assessment = Adaptive teaching

Students and teachers
　　Using evidence of learning
　　　To adapt teaching and learning
　　　　To meet immediate needs
　　　　　Minute-to-minute and
　　　　　　day-by-day

　　　　　　　(Thompson and

Wiliam, 2007)

	Where the learner is going	Where the learner is right now	How to get there
Teacher	Clarifying learning intentions and criteria for success	Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding	Providing feedback that moves learners forward
Peer	Understanding and sharing learning intentions and criteria for success	Activating students as instructional resources for one another	
Learner	Understanding learning intentions and criteria for success	Activating students as the owners of their own learning	

Formative assessment

The prototype toolkit outlines several key areas of interest:

- Building on student's prior knowledge
- Identifying and responding to students' conceptual difficulties
- Using questioning
- Increasing student collaboration
- Students becoming assessors.

http://fasmed.wikispaces.com/The+FaSMEd+project

Local research focus

- The research will take place in the period Jan-July 2015;
- A cluster of three schools will be involved;
- The research will focus on the use of iPads in mathematics classrooms;
- Through the research classroom activities will be developed for the toolkit and case studies for project evaluation.

Research questions

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Data for case studies

Data requirements:
- Background information on school, teachers and students;
- Three observed and video-recorded lessons for each school;
- Reports from teachers on lessons;
- Interviews with teachers;
- Questionnaires and focus groups with students;
- Attainment and attitudinal data;
- Reflective diaries/blogs from teachers.

Ways of working

A cycle of lesson planning involving collaboration, observation, reflection and feedback into the next cycle.

Feedback

Collaborative planning

Implementation

Observation

Reflection
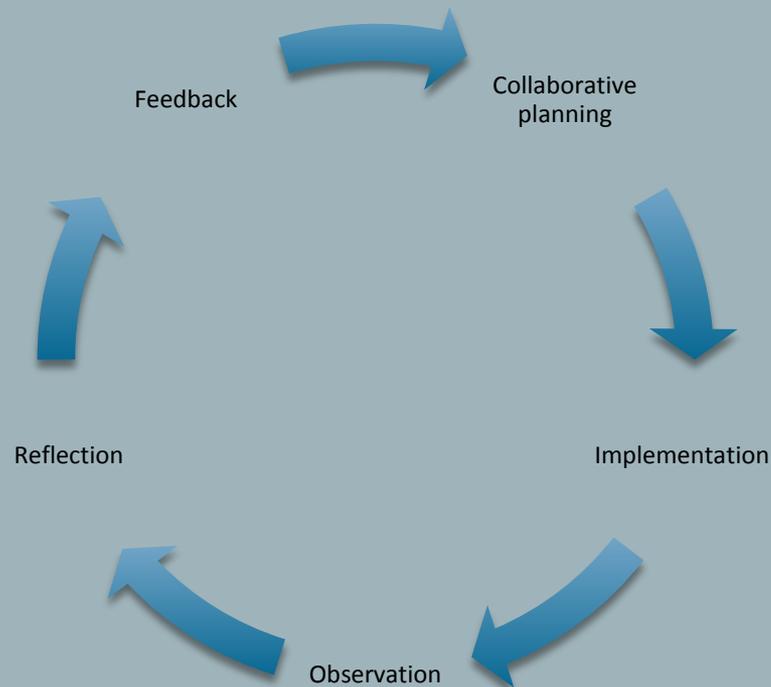
Questions and next steps

➢ Priorities and interests of school partners
➢ Classes to be involved
➢ Ways of working
➢ Commitment
➢ Ethical approval and consent forms