

FaSMEd

**Raising achievement through Formative
Assessment in Science and Mathematics
Education**

**Work Package 1 - Project design -
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Objectives

- **The objective of the WP is to:**
- **Establish the theoretical and methodological foundations of the design study by drawing on evidence based approaches to educational change with a focus on raising the achievement of students in mathematics, science and technology.**

Achievements and challenges

- All deliverables produced on time (month 7):
 - Map of the design study
 - Glossary of terminology
 - Research protocols
 - School selection criteria
 - Professional development strategy
- Further position papers produced and reviewed by partners to underpin the methodological and theoretical basis for the study. (WP8 intervention)

Position papers: Shared on internal website



- Design Study as a methodology
- Toolkit design
- Low attaining learners in science and mathematics
- The use of technology in mathematics and science education
- The use of technology in formative assessment
- Learning through ‘cognitive conflict’ in science and mathematics education
- Professional learning of teachers

These papers draw together all partners to consider existing theoretical and methodological examples to draw on for our study.

Issues

The relentless focus on Design Research, hence the need to remind partners that the objective is to produce a resource - other 'research' outcomes are secondary to this.

Ethical issue - should we 'label' the students as 'low achievers'? - Decision to refer to focus as 'raising achievement'. (While insisting that schools work with full range of students including 'low achievers')

Issues

Formative assessment: a product or a process?

(It is not enough to have produced a sophisticated assessment instrument - it is crucial how the information produced is used by the teachers and students to inform and support progress).

Hence professional development is a key component.

Issues

Toolkit - what is the best format and structure which will support the formation and development of communities of practice/inquiry in schools so that the interventions are scaleable?

Translation of glossary?

The need for communication and unanticipated further meetings to clarify theoretical and practical issues (WP8)