





Deliverable D1.2 Glossary: A glossary of terminology used within the project, translated into the required languages

FaSMEd Glossary

The following paragraphs are intended to be summaries of some of the key terms in the FaSMEd project. They are informed by a set of 'position papers' produced by the partners, which will be available through the website, for those who want further detail.

Formative assessment

Formative assessment (or assessment for learning as it sometimes called), in contrast to 'summative assessment, is NOT 'testing' students but a method of teaching where (Black & Wiliam, 2009): "evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited." (Black & Wiliam, 2009). In other words it involves classroom activities where students and teachers are: "using evidence of learning to adapt teaching and learning to meet immediate needs minute-to-minute and day-by-day." (Wiliam & Thompson, 2007).

Convergent and divergent assessment

Torrance and Pryor (1998) distinguish between convergent and divergent assessment modes (both necessary when fit for purpose):

- Convergent assessment is accomplished mainly by the teacher who has a precise plan and an
 intention to stick to it. It involves closed or pseudo-open questions and tasks and feedback focussed
 on summative judgement of performance and the successful completion of the task. Interaction is
 normally embedded with an Initiation-Response-Feedback sequence.
- Divergent assessment implies an on-going dialogue between and amongst learners and teachers where learners initiate as well as respond. This involves flexible or complex planning which incorporates alternatives and uses primarily open tasks with questioning by teachers and learners directed at helping rather than testing; a focus on understanding and on prompting metacognition.

Design Study/Research

Design-based research (Swan, 2014) is a formative approach in which a product or process (or 'tool') is envisaged, designed, developed and refined through cycles of enactment, observation, analysis and redesign, with systematic feedback from end-users. Educational theory is used to inform the design and refinement of the tools, and is itself refined during the research process. Its goals are to create innovative tools for others to use, to describe and explain how these tools function, account for the range of implementations that occur and develop principles and theories that may guide future designs. Ultimately, the goal is transformative; we seek to create new teaching and learning possibilities and study their impact on end-users.







Toolkit

The FaSMEd description of work says: "The expression 'toolkit' refers to a set of curriculum materials and methods for pedagogical intervention." In practice this may consist of:

- Curriculum materials:
 - Assessment tasks that make teachers more aware of learning obstacles.
 - Sample lesson plans that show how formative assessment may be embedded to help overcome these obstacles.
- Processes for pedagogical intervention:
 - Professional development modules
 - Ways of using the professional development modules

However, the development of the toolkit, following the method of design research, will evolve as the project progresses.

Case Study

It is intended that the final report and the 'toolkit' will include 'case studies' to illustrate the development and implementation technologically enhanced formative assessment pedagogy in mathematics and science. "A case study provides a unique example of real people in real situations, enabling readers to understand ideas more clearly than simply by presenting them with abstract theories or principles" (Cohen, Manion, & Morrison, 2011 p 289). This may include video of the classroom or of teachers' meetings.

Professional Development

The FaSMEd position paper on Professional development (PD) warns that PD is perceived and experienced differently across countries. It is important therefore not to assume too much about expectations and norms in other countries.

However, the position paper then goes on to conclude that there is a high degree of convergence in descriptions of successful professional learning. Typically these include securing interest and engagement from the teachers, providing a theoretical framework for understanding of the innovation/strategy/programme and offering some practical tools to apply to classroom practice.

It also notes that "Professional Learning Communities" (PLC) emerge as one of the most promising formats for professional learning. This is because the conditions for powerful professional learning, fundamentally require teachers to feel safe to experiment, examine the impact of their experiments, to talk openly and to get down to established principles about effective student learning.

Tool/technology

Following Vygotsky (1999) we use the term 'tool' and 'technology' to mean any artefact (which could be symbolic) which mediates thought and communication. Thus a tool which enhances formative assessment might be a hand gesture (eg: holding up three fingers) used by a class as a mass response or it could be a sophisticated digital instrument.







References

- Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. Educational Assessment Evaluation and Accountability, 21(5), 26.
- Cohen, L., Manion, L., & Morrison, K. (2011). Research Methods in Education (7th ed.). Abingdon: Routledge.
- Swan, M. (2014). Design Research in Mathematics Education. In S. Lerman (Ed.), Encyclopedia of Mathematics Education. Dordrecht: Springer.
- Torrance, H., & Pryor, J. (1998). Investigating Formative Assessment: Teaching, Learning and Assessment in the Classroom. Buckingham: Open University Press.
- Vygotsky, L. S. (1999). Tool and sign in the development of the child. In R.W.Rieber (Ed.), The collected works of L. S. Vygotsky, (Vol. 6). New York: Kluwer Academic.
- Wiliam, D., & Thompson, M. (2007). Integrating Assessment with Instruction: What will make it work? In C. Dwyer (Ed.), The Future of Assessment: Shaping Teaching and Learning. Mahwah, NJ: Lawrence Erlbaum Associates.