SAILS CASE STUDIES: AN EXAMPLE

Paul van Kampen
Dublin City University

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While most science educators agree that inquiry-based science education is more effective than exposition and practice, the latter still dominates classroom practice (Rocard et al, 2007). Additionally, there is a real dearth of assessment methods that align with IBSE (*Black* and *Wiliam*, 1998). The SAILS project set out to address this situation by developing resources for assessment of inquiry and embedding these in teacher education programmes.

SAILS Inquiry and Assessment materials (Units) will be used by teacher educators with in-service teachers and pre-service teachers in order to help them broaden assessment opportunities in the classroom and to cater for a broad range of teachers, contexts and cultures, subject areas and educational levels. In particular, SAILS materials highlight how assessment practices can link in with inquiry lessons and show teachers the benefits of inquiry in classroom practice; they also illustrate the variety of assessment opportunities and processes available to them.

SAILS Units provide clear examples for teachers of how inquiry skills can be assessed, alongside content knowledge, scientific literacy and scientific reasoning and illustrate the benefits of varied types of assessments. More specifically, they illustrate how evidence of student learning can be collected and evaluated using a variety of methods, e.g. student discussion, written evidence, diagnostic questions etc. A core aspect of each unit is the inclusion of case studies, that is to say, narratives written by teachers that describe their and their pupils' experiences of using IBSE and assessment items in their own classroom. This presentation will report on a number of case studies collected from the implementation of the SAILS project, with particular focus on physics topics.

A section of inquiry-based learning sequences that incorporate the indication of assessment opportunities of selected key skills and competencies for a variety of age groups within the 12-18 year range will be discussed. The experiences gained in using these learning sequences on the same topics from a variety of countries will be shared. In particular, details of how the learning sequence was adapted to encourage students to adopt inquiry strategies and teachers to carry out assessment before, during, and after the learning sequence, will be presented along with details of how the evidence collected was used. An example of how a case study went through various stages to cater for teachers from across SAILS will be given, and examples of student artefacts and how teachers were able to use these for formative evaluation are presented.

References:

Black, P. & Wiliam, D. (1998) Assessment and Classroom Learning. Assessment in Education. 5 (1) 7-74

Rocard M., Csermely P., Jorde D., Lenzen D., Walberg-Henriksson H. & Hemmo V. (2007). Scientific education now: a renewed pedagogy for the future of Europe.SAILS case studies: an example

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