Report on the EU Minerva funded project: Internet-Based Assessment in Distance Education

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Format of the Report

This report will consider the extent to which the goals of the project have been met to date, the likelihood of successful completion of the project and sustainability in the future.

Goals

The goals of the project are:

1. To develop material, methods and tools for internet-based assessment.
2. to train teachers in assessment theory and internet-based test construction and test administration.
3. to support teachers in the implementation of internet-based assessment.
4. To develop a web portal with a resource centre to support interested teachers, and to generate new knowledge in this area.

Goal 1: To develop material, methods and tools for internet-based assessment

The project partners have been successful in developing materials and methods for internet-based assessment. In two of the three contributions existing software has been used to develop new internet-based assessment systems in the humanities and science. The software has been customised to meet local needs. There has been a creative use of materials which has led to innovative uses of the medium which would not have been possible in paper based systems. The methodology used was influenced by the medium.

The development process facilitated student self-evaluation of their own learning enabling them to develop their metacognitive skills. The systems provided students with different levels of feedback on their performance including elements of formative and summative evaluation. There was also the opportunity for the students to provide feedback to the course developers.

In the third contribution, progress in developing and using software was limited. A survey had been undertaken to establish the extent to which staff in the institution were already making use of web-based resources for teaching and assessment. In development terms this was very much work in progress.

Goal 2: To train teachers in assessment theory and internet-based test construction and test administration

In two out of three of the contributions, teachers have been trained in the use of the technology and the software. They have had formal induction into how to integrate internet-based assessment systems into their pedagogical approaches as related to the subject areas. The approach adopted has been to utilise existing software to assist teachers in constructing their own tests. In some of the examples the software had been used very creatively.

Goal 3: To support teachers in the implementation of internet-based assessment.

Teachers have been offered support at the individual level. This has led to the implementation of similar approaches adapted to specific subject domains. Most of the question formats were multiple choice but this did not always mean they were at a low cognitive level. Many required deep processing to be answered correctly. Particularly innovative were examples offered in relation to diagrams where students were required to apply their knowledge to subject specific practical tasks. This application could be extended and applied to a wide range of other subject domains.

Goal 4: To develop a web portal with a resource centre to support interested teachers, and to generate new knowledge in this area

The system has been implemented in several subject domains which has led to the possibility of student evaluations of the operation of the systems in different learning environments. As a result of these implementations the project has:

- raised awareness of the possibilities of using technology to assist in formative and summative assessment processes;

- raised issues relating to the importance of assessment as part of the learning process and made it practically possible to enable students to receive feedback and become actively engaged in assessing their own learning on a regular basis;

- raised the possibility of saving teacher time. While setting up the assessment database is time consuming in the short term, in the longer term it saves marking time;

The organic nature of the structure of the database allows for continuing updating of questions as curricula change over time. This is key to the sustainability of the project in the long term.

Strengths of the development of the project

The project is sustainable in the long term. It can continue to be developed over time without additional demands on teacher time once the initial work has been undertaken.

The implementation of the software has supported student learning.

It has raised awareness of issues relating to assessment, formative and summative, which particularly in Sweden had become disengaged from learning and the curriculum.

It has been successful in developing knowledge about assessment among participating teachers.

It has encouraged the use of ICT in assessment processes which has had benefits for students and staff.

Challenges

The nature of the questions posed in the assessment procedures could be broadened and diversified to include a wider range of tasks. An emphasis on task-based questions would add relevance to the assessment from the student perspective. The development of questions which were problem based and allowed for creativity could be explored. How feedback could be given in relation to responses to such questions might also be considered.

There is room for improvement in the nature of the feedback given to students in some of the applications. In some subjects the feedback was very general, e.g. right/wrong, where as in others more specific comments were given with directions as to where to find additional information. The latter is preferable for enhancing student learning and can be developed across all of the subject domains.

There is a need to explore systematically differences in the implementation, transferability and sustainability of the assessment approaches in relation to the cultural, socio-economic and political imperatives in each of the participating countries.

Issues

The implementation of the project to date suggests that there are cultural differences in the conception of the innovation and the way it can be introduced and implemented depending on the prior experiences of the partners in each participating country. These differences may be related to the specific prior experiences of staff with different types of assessment procedures and ICT, the management structures, regulations and procedures within the participating institutions and the socio-political circumstances within which the institutions themselves find themselves. These have had an impact on implementation and are likely to influence future success and sustainability. There is the potential to explore these issues in depth. The theoretical approach underpinning implementation in each of the partner institutions was influenced by policy at institutional and national level. These are key issues to be considered at the level of the European Commission.

Future developments

Possible further developments might include:

- the extension of the web-based assessment to other subject domains. This might best be achieved through working at the departmental level rather than through individual teachers;

- exploring issues related to the alignment of the learning objectives, the teaching methods and the assessment procedures as perceived by students and teachers;

- introducing elements of ICT into the teaching situation to enhance the links between learning, teaching and assessment;

- exploring further the remote element of the use of ICT in the curriculum as well as in assessment.

(End of Report)