

# EASiHE Case Study Summaries

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The EASiHE (eAssessment in Higher Education) project has been working with five schools across the University of Southampton. These are:

- The School of Humanities
- The School of Civil Engineering and the Environment
- The School of Medicine
- The School of Electronics and Computer Science
- The School of Health Sciences

In addition, via a benefits realisation sub-project we have extended our work to an external institution (Bournemouth and Poole College). The five schools and Bournemouth and Poole College have been our six EASiHE case studies. This document provides a short summary of each case study.

## School of Humanities

Spanish Language Stage 7 (SPAN9013) is an advanced-level Spanish module for final year students. In this case study we went through a process of co-design with the course leader. As a result of this, we produced a set of eAssessments using our eAssessment tools. The focus in this case study was on: the use of video and audio clips; making eAssessments accessible based on the advice of the LexDis project; techniques for motivating students to use the eAssessments; making the use of eAssessments over multiple academic years more sustainable; tools for creating and delivering mobile eAssessments; techniques for creating short but effective student progress reports; how to use the virtual learning environment (VLE) and eAssessment delivery engine in a more coordinated fashion via connectors; student-generated feedback exercises; and comparing different eAssessment toolsets. The eAssessment toolsets we compared were: the Perception commercial toolset; our tools (which support the IMS Question Test Interoperability QTI 2.1 specification); and the Hot Potatoes toolset, which is freeware but does not support QTI. The highest level of Bloom's taxonomy reached by the eAssessments was "evaluation". We tested the eAssessments, made changes as requested and documented the resulting system. In total we took part in over seven hours of face to face meetings.

- Lessons learnt: a big challenge is how to manage the risk associated with introducing new types of eAssessment onto a module.
- How the university was influenced: colleagues and students seem to have been impressed by the quality and effectiveness of these formative eAssessments. At a higher level, favourable feedback from the School has led to the leader of a University-wide Assessment

Review panel seeking input from members of the EASiHE management team on a long-term basis.

- Changes to practice: It seems likely that, because they have worked well, the School will continue using formative eAssessments and there appears to be a strong possibility that their use will be extended into other curriculum areas. This is something that the EASiHE management team will monitor during Phase 3 of the project(April 2010- April 2011).

## School of Civil Engineering and the Environment

Construction Management (CENV2001) is a second-year Civil Engineering module. In this case study we went through a process of co-design with the course leaders. The focus was on: taking an industry standard test (and the associated software) and showing the advantages of delivering it through our software to “help save lives”; and the web 2.0 approach. The highest level of Bloom’s taxonomy reached by the eAssessments was “comprehension”. We produced a set of eAssessments using our eAssessment tools. We tested the eAssessments, made changes as requested and documented the resulting system. In total we took part in over seven hours of face to face meetings.

- Lessons learnt: a big challenge is how to manage the risk associated with introducing new types of eAssessment onto a module
- How the university was influenced: academic colleagues of the original tutor saw the potential of this approach to formative assessment and became involved themselves.
- Student feedback was positive and this is leading to an expectation that formative eAssessment will be provided as the ‘norm’ in such courses. At the University level, the School’s interest has led to the leader of a University-wide Assessment Review panel seeking input from members of the EASiHE management team on a long-term basis.
- Changes to practice: The School will continue using formative eAssessments and will probably extend their use into other curriculum areas. This is something that the EASiHE management team will monitor during Phase 3 of the project(April 2010- April 2011).

## School of Medicine

In this case study in the Wessex Deanery we engaged primarily with the students. These were Orthopaedic Registrars training to be Consultants. In this case study the focus was on: the web 2.0 approach (i.e. the students generating their own questions with detailed feedback); and creating a QTI question editor (called Eqiat) for the students to use. We went through a process of co-design, with the “lead” student being our main point of contact. Together we produced a set of eAssessments using our eAssessment tools. The highest level of Bloom’s taxonomy reached by the eAssessments was “synthesis”. We tested the eAssessments, made changes as requested and documented the resulting system. We note that we also investigated the use of the Minibix QTI repository, although in the end we standardised on the EdShare repository with our QTIBox plug-in as documented elsewhere.

- Lessons learnt: a big challenge is how to manage the risk associated with introducing new types of eAssessment onto a module

- How the university was influenced: colleagues of the original user have come to see the potential of this ‘web 2.0’ approach to improving academic performance and have become enthusiastic contributors themselves. At the University level, interest in the rich media used in these formative eAssessments has led to the leader of a University-wide Assessment Review panel seeking input from members of the EASiHE management team on a long-term basis.
- Changes to practice: These formative eAssessments are judged by their users to work well, and it seems certain that their use will be continued and extended. Due to the high status of the users (NHS surgeons/consultants/teachers), other clinical departments could be expected to follow this lead. This is something that the EASiHE management team will monitor during Phase 3 of the project (April 2010- April 2011).

## School of Electronics and Computer Science

Discrete Mathematics and Multimedia Systems are two Computer Science modules in the School of Electronics and Computer Science. We went through a process of co-design with the course leaders. The focus in this case study was on peer assessment via our PeerPigeon tool (for Multimedia Systems); and on using our web service interface to our “QTIEngine” QTI eAssessment engine, to create a customised eAssessment website (for Discrete Mathematics). We produced a set of eAssessments using our eAssessment tools. The highest level of Bloom’s taxonomy reached by the eAssessments was “evaluation”. We tested the eAssessments, made changes as requested and documented the resulting system.

- Lessons learnt on Multimedia Systems. It was necessary to update PeerPigeon due to the passage of time. Also, it required more time than was expected from the lecturer to describe how they wanted the peer review to take place. And it required more time than was expected from the technical member of staff and the lecturer combined, to execute the first peer review process.
- Lessons learnt on Discrete Mathematics. Timing is extremely important. Because of staff illness we missed the window during which students could comfortably be given the eAssessments whilst staff promoted and monitored their use. Instead we gave the eAssessments to the students slightly later (after Christmas 2009) at which point the students were expected to do the eAssessments at their own pace.
- How the university was influenced. We have learnt that peer review is a very good form of formative eAssessment, especially at higher levels of Bloom’s taxonomy.
- Changes to practice. Traditional assessments can be planned, written and given to the students during the semester the module is running. In contrast eAssessments should be planned and prepared the term before the module runs.

## School of Health Sciences

In this case study the focus was on the training of nurses in the School of Health Sciences. We went through process of co-design with the course leaders. In this case study the focus was on user interface design. We produced a prototype system for presenting eAssessments in a visually

engaging fashion. We also created a prototype engine for interactive “serious game” simulation-based eAssessments. The highest level of Bloom’s taxonomy reached by the eAssessments was “analysis”. We tested the eAssessments, made changes as requested and documented the resulting system.

- Lessons learnt: a big challenge is how to manage the risk associated with introducing new types of eAssessment onto a module
- How the university was influenced: Serious Games of the kind being developed for this School are regarded with considerable interest by many academics within the University. Word of these innovative developments has spread widely throughout the institution, which has in turn attracted the attention of the central IT department, which is now being asked to consider providing similar kinds of Serious Game for other departments.
- Changes to practice: Academics and learning technologists throughout the University have heard about the Serious Game and are now looking into ways of extending their own formative assessment practice into more innovative channels. This is something that the EASiHE management team will monitor during Phase 3 of the project (April 2010- April 2011). It should also be noted that the University Assessment Panel’s Chair has expressed interest in developing this.

## Bournemouth and Poole College

This case study involved a Bournemouth and Poole College (BPC) module teaching sign language. We went through a process of co-design with the BPC ILT Development Centre Manager and the course leader. The focus in this case study was on adapting our eAssessment system so it functioned correctly outside of the University of Southampton; and also on creating a QTI editor (Eqiat). We produced a set of eAssessments using our eAssessment tools. The highest level of Bloom’s taxonomy reached by the eAssessments was “analysis”. We tested the eAssessments, made changes as requested and documented the resulting system.

- Lessons learnt: We have learnt how to create a set of open source tools for lecturers to create, deposit and update eAssessments that include more than just textual information. Also, we have learnt how to overcome the challenges of applying our eAssessment tools and techniques in the context of an external institution.
- How the university was influenced: Since this is an ‘outreach’ activity the emphasis here is on the University itself influencing assessment practice in other institutions. This will be monitored by the EASiHE Management Team and where possible developed during Phase 3 of the project (April 2010 – April 2011).
- Changes to practice: It seems likely that, because they have worked well, the College will continue using these tools and expects to extend their use into other curriculum areas. The EASiHE management team will monitor this during Phase 3 of the project (April 2010- April 2011).

## Further Information

For more detailed information about these case studies please refer to the EASiHE website. This includes links to the detailed documentation, technical papers, the EASiHE blog, the EASiHE Wiki, EASiHE talks and other information.

<http://easihe.ecs.soton.ac.uk/>