

edexcel: e-Assessment Case Study

January 2010

OUR COMMITMENT TO INNOVATIVE ASSESSMENT

Edexcel, a Pearson company, is the UK's largest unitary awarding body. We offer academic and vocational qualifications and examinations to schools, colleges and employers in the UK and internationally. Our general qualifications include GCSEs, AS and A Levels, and O Levels; our vocational qualifications include NVQ and BTEC, from entry level to Higher National Diplomas.

At Edexcel, we strive to lead the way in using technology to modernise educational assessment by developing and implementing technology-driven assessment solutions that are valid and reliable. We are established in the field of on-screen marking and have introduced on-screen testing in some of our qualifications. We are currently piloting electronic evidence capture for our Creative and Media Diploma.

ON-SCREEN TESTING

At present, we offer on-screen tests for qualifications such as BTEC, Skills for Life and GCSE Applied French. As part of our technology-enhanced assessment strategy, we have also piloted on-screen tests for our GCSE Built Environment and Construction Industry, GCSE Business and GCSE Mathematics qualifications.

Our BTEC and Skills for Life on-screen tests:

- are offered on demand, so learners can take them when they are ready;
- provide instant provisional results, along with feedback for students; and
- provide detailed feedback on results through Edexcel Online.

Our on-screen GCSE Applied French Reading and Listening tests offer many interactive features designed to increase the accessibility of the exam and so raise achievement. For the Listening exam, students use earphones to listen to audio clips. This allows individual students to stop, start and replay the audio as they choose. Other features of the on-screen tests include engaging visual displays and asking students to make 'drag-and-drop' responses to questions (see Figure 1), dragging images or text into the correct positions.

The on-screen GCSE Applied French tests are offered in a high-security environment. This means that features such as on-demand testing and instant provisional results are not available. These high-security tests have the same timetable as their paper-based equivalents, and the results are available on the same day.

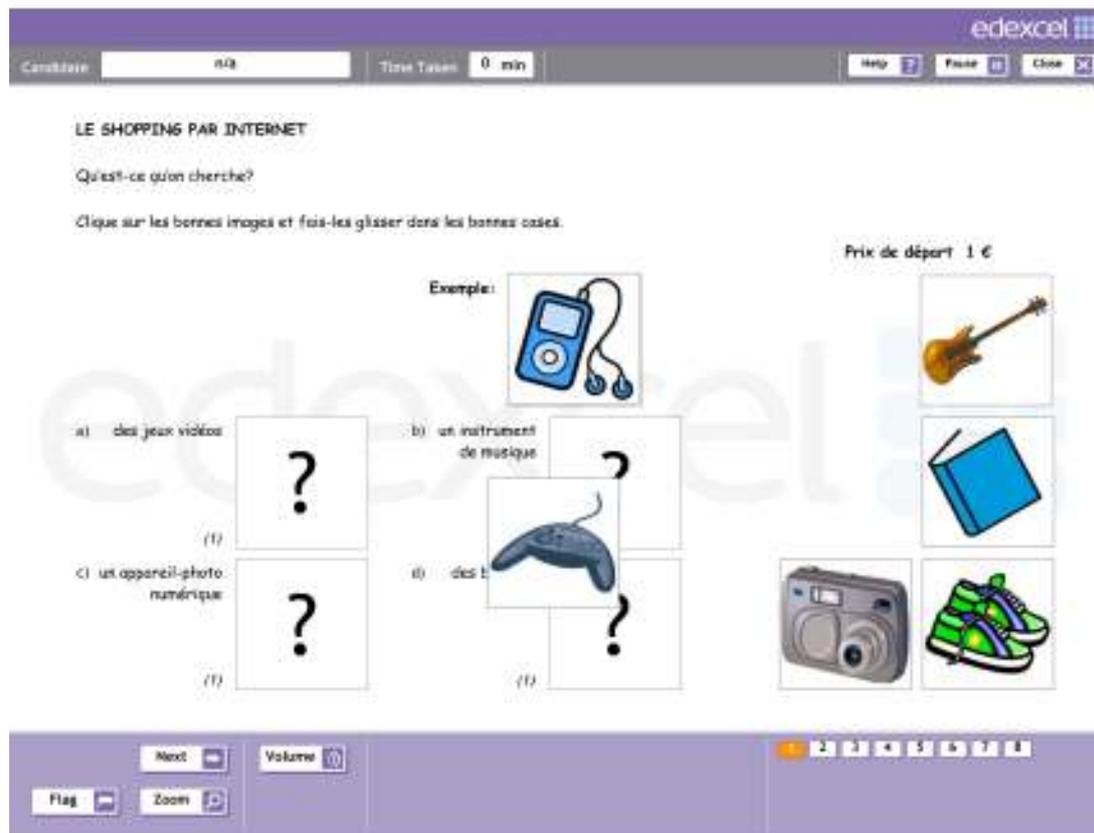


Figure 1: A 'drag-and-drop' question from GCSE Applied French

ELECTRONIC EVIDENCE CAPTURE

We are currently running pilots on an electronic evidence capture system called e-Scape, with 20 centres offering the Edexcel Creative and Media Principal Learning units over a period of two years.

Important aspects of the e-Scape system include:

- web-based e-portfolios that are created during the Diploma activities;
- easy-to-use online tools for creating coursework tasks and for the collection of evidence in a variety of formats (see Figure 2);
- online tools to simplify the sharing of assessment data among centres as students move around during the course of the Diploma; and
- one central repository for the easy submission of evidence, accessible by teachers and Edexcel, with no need to convert evidence into different formats in order to physically submit it.

e-Scape distinguishes itself from other e-portfolios by the way in which it provides a structure for both the collection of student-generated data and its assessment and verification. Its flexibility allows it to incorporate numerous styles of learning, teaching and qualification types, and it provides authoring tools to enable the development of a number of value-added products.

Markers, moderators and verifiers need only have an up-to-date web browser to access the e-Scape e-portfolios, removing the need for any specialist software that students and teachers might have used during the production of the assessment evidence.

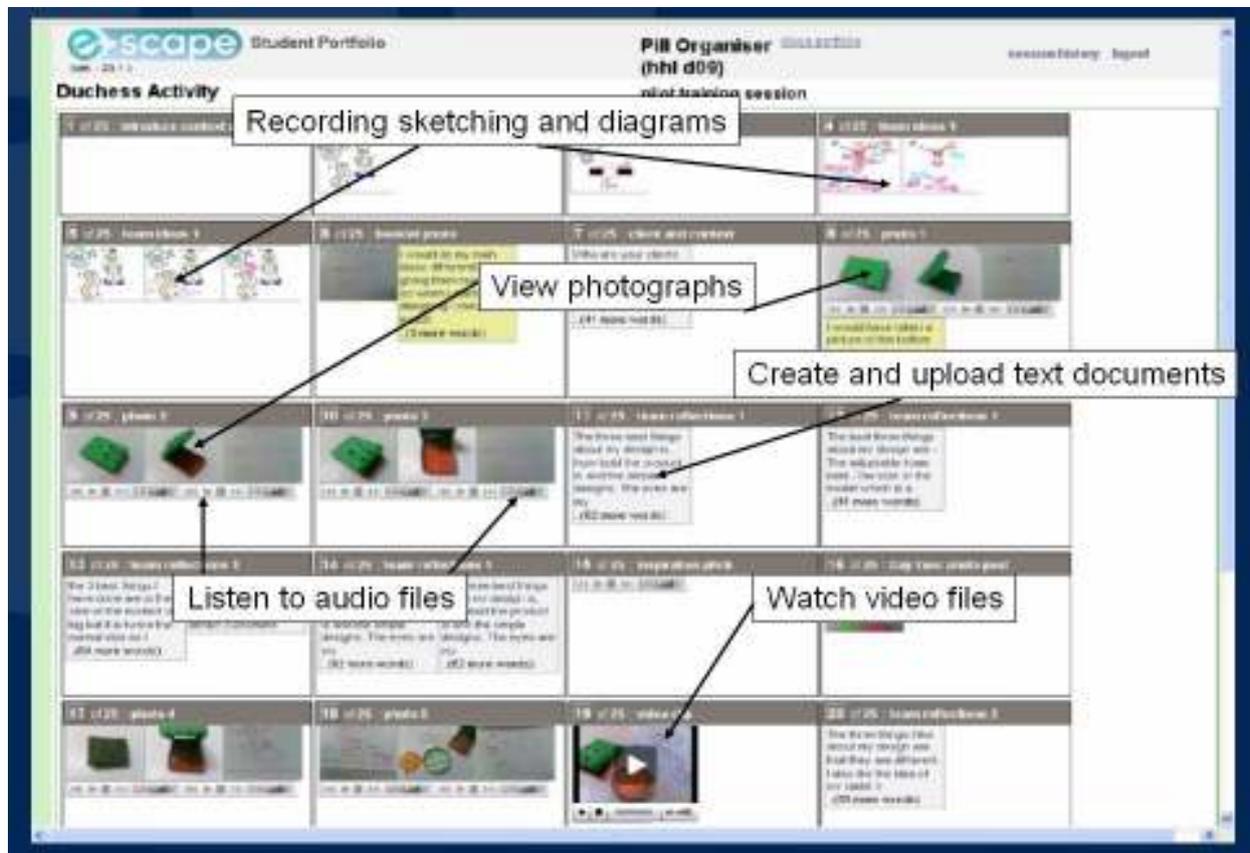


Figure 2: Diversity of file formats stored in an e-Scape e-portfolio

OUR APPROACH

When developing on-screen tests, we aim to ensure that the assessment is enjoyable for the candidate and increases flexibility for the centre. At the same time, we make sure that each test is designed and validated with the same rigour as any traditional, paper examination. Therefore, before an on-screen test is released live, we conduct non-live trials with a small number of centres. These are typically followed by live pilots, which establish the validity of the test items and the reliability of the marking processes and allow us to gather candidate and teacher feedback.

On-screen high-stakes tests are conducted with the same level of security as paper-based high-stakes examinations. We issue stringent security guidelines for our examiners and centres on how to manage on-screen tests effectively. Our test delivery platform includes rigorous authentication protocols. We also lay out clear guidelines for minimum network standards and provide free technical support for centres. In these ways, we ensure that our on-screen tests maintain the integrity of traditional examinations while providing all the benefits of on-screen assessment.

Accessibility is another key consideration in the provision of on-screen tests. The anticipation of students' needs, which forms such a strong element of the Disability Discrimination Act, informs all our activities in this area, and our writers are given Fair Access By Design guidelines when they produce content. As our use of e-assessment becomes more sophisticated, we are exploring the ways in which technology can facilitate greater access for a greater number of learners. Paper editions of all on-screen tests are produced, and modified versions of these can be provided on request.

WHERE NEXT?

We are currently participating in the Functional Skills on-screen pilot programme. We are investigating new types of test items, stimulus materials and marking mechanisms to support the provision of Functional Skills English and Mathematics on-screen tests that meet the criteria for these qualifications.

We are also investigating ways to move beyond the use of multiple-choice questions in on-screen tests. Multiple-choice questions are well established as a means to test knowledge and understanding, and they are widely used in e-assessment. However, this kind of assessment provides limited information about the capability of the learner to develop as a professional and to learn at work. To overcome this, we have been experimenting with context-based assessments that require the learner, via the use of rich-media and simulations, to take situational and contextual factors into account.

Finally, we are keen to explore the use of the e-Scape system for other types of qualification and for other subjects, such as ICT.