Guidance on IT Delivered Assessments

Purpose:	To guide staff of the matters that need to be considered when IT tools are used to deliver assessments.
Definition:	IT delivered assessments are defined as formative and/or summative assessments undertaken through IT tools. This includes multiple choice questions (MCQs) and short answer tests delivered through bespoke software, such as Question Mark Perception (QMP), and the use of on-line tests. It excludes the use of tools to support the recording, marking, or management of an assessment, where the assessment task is not undertaken directly through that software.

Scope

This guidance has been put together to help staff identify the areas that need to be considered when assessments are delivered through IT tools. It is arranged around the three principles of assessment; i.e. that assessments shall be valid, reliable, and explicit. The guidance should be read in conjunction with Senate Assessment Regulations.

IT delivered assessments may be used for formative and/or summative purposes, but where used for summative assessments, staff shall follow the requirements specified in the guidance below. IT delivered assessments can be an efficient way of assessing large classes and have been found to be particularly effective as formative assessment tools; to test knowledge and understanding, by offering students the opportunity to undertake tests in their own time, and by providing detailed and immediate feedback to help students self-assess and reflect on progress. While experience has shown that staff often need to invest up-front time and effort in the design of IT delivered assessments, there is a trade-off, in that running, marking, moderating, and providing feedback on these assessments can often require less resource.

1.   Validity - i.e. assessment tasks will assess what is intended to be assessed.

1.1   Alignment with intended learning outcomes

When designing IT delivered assessments staff should ensure that:

- they are clearly aligned with the intended learning outcomes, which in turn reflect the teaching and other learning activities within the module;
- they promote the active engagement of students with the curriculum areas being assessed;
- the criteria relevant to specific tasks are identified and shared with students. Where possible, staff should seek to interact with and engage in dialogue with students to help determine and agree the criteria;
- the assessment is matched to the level of the module;
- the tasks encourage students to put time and effort into challenging learning activities, to recognise the importance of learning from these tasks, and not just of demonstrating learning through completion of the tasks;

- the questions set are at a consistent level, and that any 'distractors' (incorrect answers close in nature to the correct one) used are sufficiently challenging and;
- that where appropriate, 'standard-setting' procedures are used.

1.2   Accessible to all learners

All students shall have an equal opportunity to demonstrate achievement of learning outcomes. The University's responsibility to address disability and access issues applies equally to IT delivered assessments as to any other form of assessment. Where needed, staff shall ensure that in advance of an assessment, that alternative assessments and/or reasonable adjustments are made available to students who, as a consequence of their disability, may be disadvantaged by such assessments.

Where students are granted Specific Provision, staff shall ensure that IT delivered assessments are undertaken in accordance with the University's Specific Provision Regulations. To help determine what reasonable adjustments can and/or should be made, staff should contact and work with the Disability and Dyslexia Service, recognising that the nature of any adjustments will need to be considered and made on an individual basis e.g. extra-time, screen readers etc.

1.3   Opportunities for feedback

Formative IT delivered assessments should be designed to provide students with immediate and detailed feedback on the specific curriculum areas covered in the assessment. The feedback should be designed to promote learning, assist reflection on performance, and identify gaps in knowledge and understanding.

Staff should ensure that they provide feedback on summative E-assessment tasks, in line with the principles and guidance set out in the University Policy on Academic Feedback. Staff should ensure that they provide opportunities for students to evaluate and act upon feedback and to close any gap between their current and desired performance.

---

2.   Reliability - i.e. assessment processes and procedures will be accurate, consistent and trustworthy.

2.1   Reliability of marking

Where E-assessments are used for summative purposes, staff shall ensure that appropriate processes are adopted to ensure reliability, consistency and accuracy of marking in accordance with the guidance in Senate Assessment Regulations. While most IT delivered assessments will require little moderation, given that the risk of marking error will be low, staff should determine and publicise to students the ways in which final marks will be moderated, checked, and verified.

When setting and agreeing how MCQs will be marked, recognising that students may guess some of the correct answers successfully, staff should consider whether there is an academic rationale for any or all of the following to be adopted:

- Scaling: through which the raw marks are adjusted to ensure that the outcomes broadly reflect the spread of marks achieved in other tasks;
- Negative marking: where students have marks deducted when they enter an incorrect answer;
- Positive marking: where marks are awarded when a specific distractor is chosen, e.g. where a student chooses a response that is close to the correct answer, thus demonstrating a degree of knowledge or understanding;

Staff should also review the results from IT delivered assessments, to allow student understanding of specific subject areas / individual questions to be evaluated.

2.2   Security of IT Delivered Assessments

Staff shall ensure that the following matters are considered when IT delivered assessments are used for summative purposes:

Student identity – that steps are taken to confirm and verify the identity of the candidates in advance of them taking the assessment. This applies to summative IT delivered assessments taken within the University and externally.

System testing – that staff test the software on which the assessments will be run in advance of the assessment to ensure they can be run successfully in that location and/or on different machine types and browsers. Staff should liaise with IT Services in advance of holding an IT Delivered Assessment to ensure that any potential issues can be identified and addressed.

Software availability – that, where appropriate, Internet access on the machines on which the assessment will be taken is blocked temporarily, outside of any browsers needed to run the assessments. Where needed, steps should also be taken to block any other software that could help students undertaking the assessment.

Contingency planning – recognising that no IT system can be 100% reliable, staff should identify what steps will be taken should technical issues prevent students from completing a scheduled assessment. This might include a 'reserve' day on which the assessment will be held should it not be possible to complete it on the scheduled date, or the setting of an alternative task that students can complete without using IT. Staff should also ensure in summative assessments that a small number of machines in the assessment venue are unused when the assessment is being held, to allow students to switch machines in the event of problems occurring on a specific machine during the test. To help minimise disruption in the venue, spare machines should ideally be located apart from the others being used in the test.

Access to summative assessments – that both the assessment and the results are maintained in a secure environment, with due regard to confidentiality. This should normally include action to password protect any tests and completed assignments stored on servers.

2.3   Promoting academic integrity

Staff shall ensure that there is sufficient space between the machines used for summative assessments and that it is not possible for students to copy or collude with others during the assessment.

Where students take the same summative assessment at different times, (e.g. where it is not possible to accommodate all of the students in the same location at one time) staff shall ensure that the integrity of the test is not compromised. This may involve setting / selecting different questions for different cohorts. Staff should also ensure that where different tests are given, that these at the same level, standard, and that they all similarly cover the breadth of the learning outcomes and curriculum being assessed.

To help demonstrate the University's commitment to academic integrity, staff should ensure that any images or written materials that are used in assessments are properly acknowledged through references to the source material. While staff do not need to seek permission to use most copyrighted materials in assessments, staff should be aware that copyright law does not permit music to be used for such purposes.

Staff should ensure that they take any necessary steps to ensure that opportunities for students to engage in Unfair Practice are minimised and that allegations of Unfair Practice are managed in accordance with the Unfair Practice procedure.

---

3.   Explicitness – i.e. assessment tasks, processes and procedures will be accessible, clearly explained to and understood by all stakeholders.

3.1   Information for students on IT Delivered Assessments

Effective engagement with students is critical to success when IT delivered assessments are first introduced, particularly when used for summative purposes. This can be achieved by:

- Informing students at the outset of a module of the methods of assessment and re-assessment that will be used, and the ways in which any IT delivered assessments will be managed, marked, and moderated;
- Negotiating with students to help establish and agree the assessment criteria for that task (where appropriate);
- Providing opportunities for students to take formative tests, with feedback, in advance of the summative assessments, to help familiarise students with the systems that will be used.

It is important that students receive clear advice on the nature any summative IT delivered assessments prior to them taking place. This information may be set out in different ways, for example, in student handbooks, the exam paper rubric, via *Learning Central,* and by invigilators. This should include:

- The location in which the assessment will take place;
- The identification that students should bring to the venue (e.g. student ID card);
- The number and type of questions that will be used in the test;
- The marking system for each question and the overall test (e.g. whether negative marking will operate);
- The duration of the test and the need for students, where appropriate, to take short breaks during the test;
- Details of any resources that students are permitted to use during the test;
- How the test will be run, managed and administered, and;
- The contingency plan that will operate should technical failure(s) arise.

Staff should also ensure that students are notified in advance of a test as to when 'provisional' marks will be released via SIMS and feedback made available.

3.2   Information for invigilators and staff involved in the administration of tests

Staff shall ensure that invigilators are trained to operate the software being used in a test, on related IT matters, and that they are capable of managing any technical issues that could arise during a test.

Where staff use multimedia, images, or text in IT delivered assessments that have the potential to cause offence, they shall ensure that any staff involved in the administration of the test are made aware that it may include content that is both graphic and sensitive in nature. They should also ensure that these materials cannot be copied or distributed to others.

3.3   Information for External Examiners

Staff shall ensure that in summative assessments, where needed, that External Examiners can check questions, access materials and test results, as set out in Senate Assessment Regulations, to enable them to fulfil their duties.

---

4.   **Support and Advice**

Further support, advice and guidance on running IT delivered assessments is available from the following within the University:

- Senate Assessment Regulations [http://learning.cf.ac.uk/wp-content/uploads/2014/07/1.10-Assessment-Regulations-for-Taught-Programmes-of-Study-as-at-190614.pdf]

- Designing Assessments [http://learning.cf.ac.uk/quality/assessment/designing/]

- Policy for Dealing with Defects or Irregularities in the Conduct of Assessments [mail to: exams@cardiff.ac.uk]

- Policy and guidance on Academic Feedback [http://learning.cf.ac.uk/wp-content/uploads/2013/06/Academic-Feedback-to-Students-Policy-and-Guidance.pdf]

- Unfair Practice Procedure [http://learning.cf.ac.uk/wp-content/uploads/2014/06/1.11-Unfair-Practice-Procedure.pdf]

- Extenuating Circumstances [http://learning.cf.ac.uk/quality/assessment/extenuating-circumstances/]

- Disability and Dyslexia Service [mail to: disability@cardiff.ac.uk]

- Superintendent of Examinations [mail to: exams@cardiff.ac.uk]

- For technical queries and advice on running IT delivered assessments [mailto: InsrvConnect@cardiff.ac.uk]

- The Enhanced Learning Technology Team for advice on the use of educational technology [mailto: eltt@cardiff.ac.uk]

- For educational queries on assessment [mailto:LloydA@Cardiff.ac.uk)

- For advice about new services and/or requirements, please contact your College IT Business Partner