

# E-ASSESSMENT: OPPORTUNITIES AND CHALLENGES FOR THE SPORTS MARKETING EDUCATOR

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## ABSTRACT

The United Kingdom assessment industry has recently experienced a shift from the traditional "pen and paper" based assessment paradigm to a more dynamic interactive approach utilising new technology. The Joint Information Systems Committee (JISC), which is funded by the UK Higher Education and Further Education funding bodies, has supported this technological aspiration with their Road Map for E-Assessment (JISC 2006). This Road Map created a vision for 2014 and argued that a "pedagogically driven model for e-assessment is needed". Set within this emerging e-Assessment environment in Higher Education this paper explores the experiences of implementing e-assessment in an undergraduate level sports marketing module. It highlights some of the advantages of adopting such a pedagogical approach but counters this with the challenges we faced. It was generally found that the students enjoyed the e-assessment experience and valued the opportunity to be assessed as an individual. The overwhelming advantage to the student, was the immediacy of feedback. The paper discusses the use of X-stream as a Virtual Learning Environment. It provides an insight from both an academic and technical perspective.

## KEYWORDS

E-assessment, Computer aided assessment, Online assessment, Immediate feedback, Multiple choice assessment, Re-usable question banks

## INTRODUCTION

The United Kingdom assessment industry has recently experienced a shift from the traditional "pen and paper" based assessment paradigm to a more dynamic interactive approach utilising new technology. In part, this transformation may have been brought about in a response to the Qualifications and Curriculum Authority (QCA)'s Blue Print for E-Assessment Report. This report provided targets for the implementation of technology in assessment and underlined the need to "embrace a technological future for assessment" (QCA 2004). Similarly, the Joint Information Systems Committee (JISC), which is funded by the UK Higher Education and Further Education funding bodies has further supported this technological aspiration with their Road Map for E-Assessment. This Road Map created a vision for 2014 and argued that a "pedagogically driven model for e-assessment is needed" (JISC 2006, p.4). Most recently, the JISC concluded that e-assessment is more than just an alternative way of doing what we do already. Moreover, it is claimed that e-assessment can enhance the range of skills and knowledge being assessed and provide unprecedented diagnostic information for use by tutors and administrators (JISC 2007).

In addition to these national agenda concerned with e-Assessment, it is evident that a number of scholars have explored the opportunities and challenges of initiating e-Assessment. In particular, Ellaway and Masters (2008) have highlighted advantages of e-Assessment regarding the ability to provide instant and unbiased marking and feedback. There is clearly a benefit for students receiving confidential feedback on their performance almost immediately following the completion of the test. If the feedback is received at the time of the test it is thought to have more weight and consequently students are far likely to retain the information. This can however

usually only be achieved where answers are absolute or predetermined, for example with multiple choice questions. Ellaway and Masters (2008) also allude to the ability to track students and their progress, and highlight the advantage of having an audit trail for quality assurance purposes.

Sheader et al. (2006) compared the value of Computer Aided Assessment (CAA) against paper based assessment for physiology students. They cited some of the advantages as, a reduced marking time; a reduction in paperwork and, similar to Ellaway and Masters (2008), the ability to administer anonymous marking. Sheader et al. (2006) explain how an increase in student numbers and demands on staff time have made the CAA an attractive proposition. They provide a balanced view of CAA and counter these benefits by outlining a range of disadvantages. Specifically, they argue that CAA can result in tailoring questions to the technology and point to the time resource required to develop CAA. Gipps (2005) further reports how resource intensive, both in terms of time and equipment, can be used to create high quality assessments. She explains:

*"Designing high quality multiple choice and other objective questions is a skill that requires more training than does the design of open ended questions traditionally used in tests and examinations" p173*

Many of the online assessment tools offer a limited range of question-types such; multiple-choice, fill in the blank, match up two sets of list items and calculation. Whilst it is possible to enter free text this cannot be automatically marked. On this issue, Sheader et al. (2006) questions the ability to provide high level feedback using the automated system. Gipps (2005) makes a similar point and recognises that the biggest challenge is to provide rich feedback information rather than simply provide scores. She suggests the use of automated diagnostic comments, and providing automated answers with reasoning as potential possibilities.

Given that this research has used Multiple Choice Questions (MCQ's) in its methodology, we felt it was important to expand on some of the challenges and issues around using MCQ's. Fellenz (2004) provides a fairly comprehensive summary of the advantages and disadvantages. The advantages include the speed and ease by which they can be marked particularly for large groups; double marking is not required because the answers are absolute and the sheer volume of areas/themes that can be questioned in a short space of time. A further advantage relates to an increase in construct validity because they enable students to be tested on knowledge per se rather than writing ability.

On the other hand there are also numerous disadvantages associated with such tests. Fellenz (2004) raises concern about the use of such tests at higher levels of cognition and recognises that they are predominantly used to test lower levels of learning. The closed nature of the tests is also found to "limits their ability to test student abilities regarding the recognition, identification and formulation of ill-structured problems" (Fellenz, 2004, p.704).

Numerous authors in particular, Bennett (2002), Buzzetto-More and Alade (2006) and Ellaway and Masters (2008) recognise and value the ability e-Assessment has for creating question banks that are reusable and transferable. The question banks are seen as specialist repositories where questions can be stored under subject/theme headings. These repositories can be used in a random manner in assessments if required.

Traditional forms of assessment often require staff (academic and support) to focus their efforts predominantly at the post assessment stage. In contrast, e-Assessment requires concentrated effort during the initial preparation phase. As already indicated, this period can be intense and time consuming and is cited as the principal barrier to the development of institution wide e-Assessment. That said, those institutions that provided staff with dedicated IT support to assist with the development of such assessments were more likely to succeed in the transition to e-Assessment (JISC 2007).

It has also been noted that whilst some academics are being innovative with the new technology, relatively few are using e-Assessment at a summative level (JISC 2007).

Set within this emerging e-Assessment environment in Higher Education this paper aims to explore our experiences of implementing e-Assessment in a sports marketing module (a twelve week block of teaching and learning). We will highlight our successes, challenges and by doing this, we hope to add to discussion and research in this area. This paper has been jointly written by the academic member of staff responsible for writing and delivering the content for the module and the technical expert who produced the actual e-Assessment using the X-stream platform (institution Virtual Learning Environment). It is therefore anticipated that our collaborative activities will provide an insight from both an academic and technical perspective.

## METHODOLOGY

It was decided that we would introduce an e-Assessment to an undergraduate, level 3 (third year undergraduate), Strategic Marketing module. A multiple choice question bank was created and constructed using the X-stream platform. In order to provide students with instant feedback whilst still within the test environment an automatic marking and feedback system was created. This was developed using the assessment building tools within the institutions Virtual Learning Environment (VLE) Blackboard Vista also known as X-stream. The cohort of students (made up of 5 groups of students) were all presented with the assessment at the same time ( $n = 101$ ) on the same day. Following completion of the e-Assessment students were afforded the opportunity to click on the "my grade book" feature to view their submission. The students could see each of the questions with the correct answer and the answer they had given. They could view their overall grade for this part of the assessment and the contribution that it made to their final module grade. In addition students could see how well they had performed in relation to the overall cohort statistics. After viewing their performance on the module one group of students ( $n = 36$ ) were asked to complete a short evaluative survey about this new e-Assessment. The intention had been to question all 101 students who had completed the assessment but practical difficulties on the day restricted the number of students that could be surveyed. As part of the evaluative tool a series of statements were presented to the students and they were asked to rate their agreement with the statements using a 5-point Likert scale. The results from this evaluative survey are presented in the next section.

## RESULTS

Table 1. Usefulness of online assessment

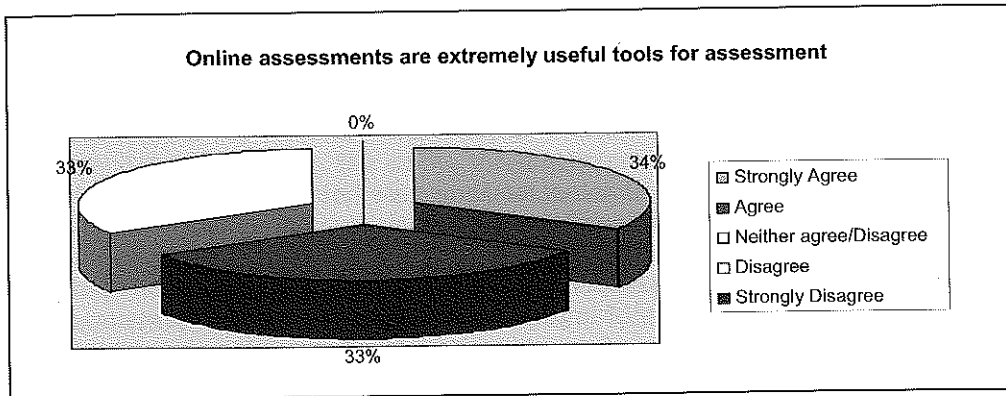


Table 2. Individual assessments

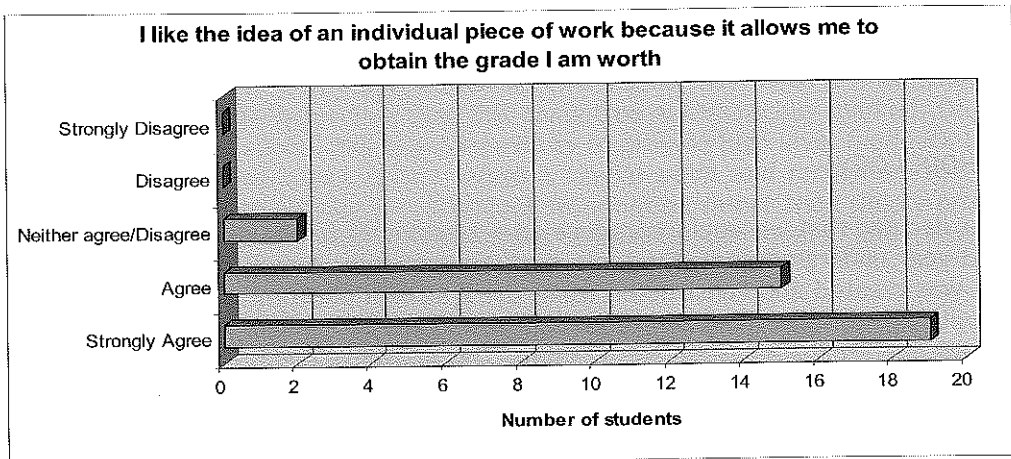


Table 3. Individual vs. group assessment

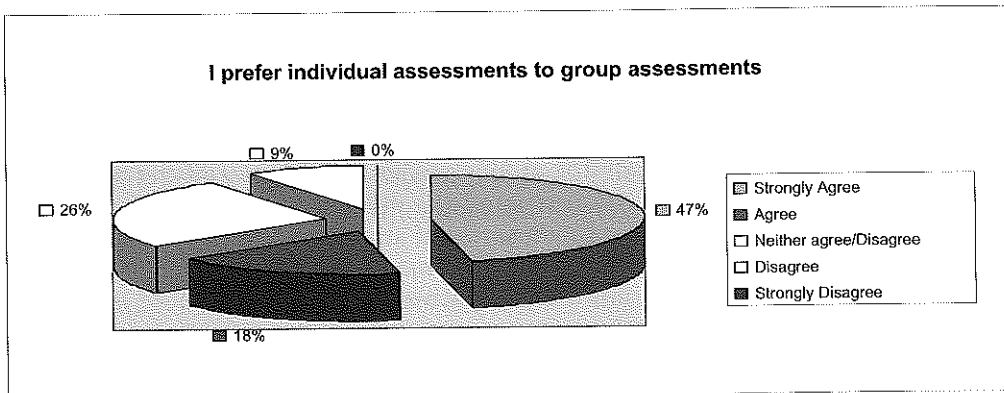


Table 4. Instant feedback

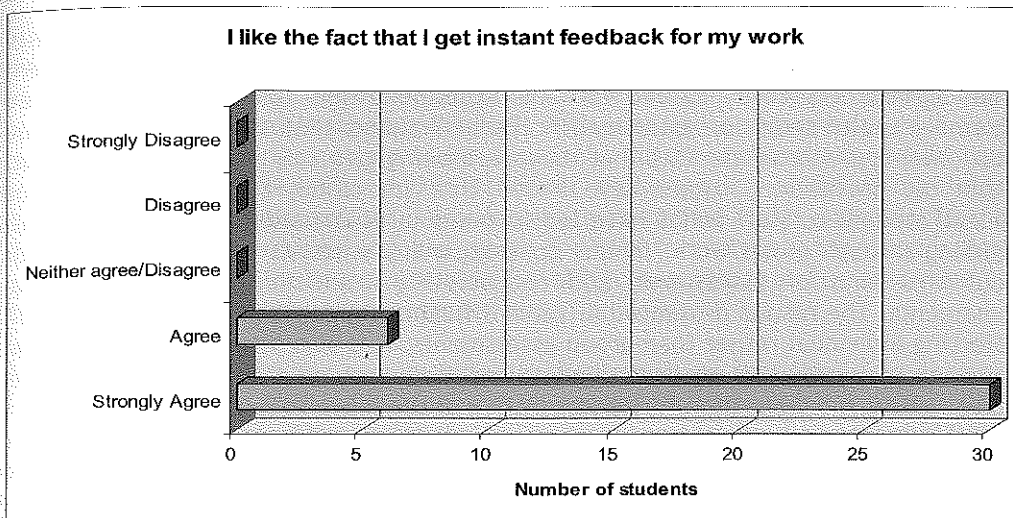


Table 5. Immediate feedback is more meaningful

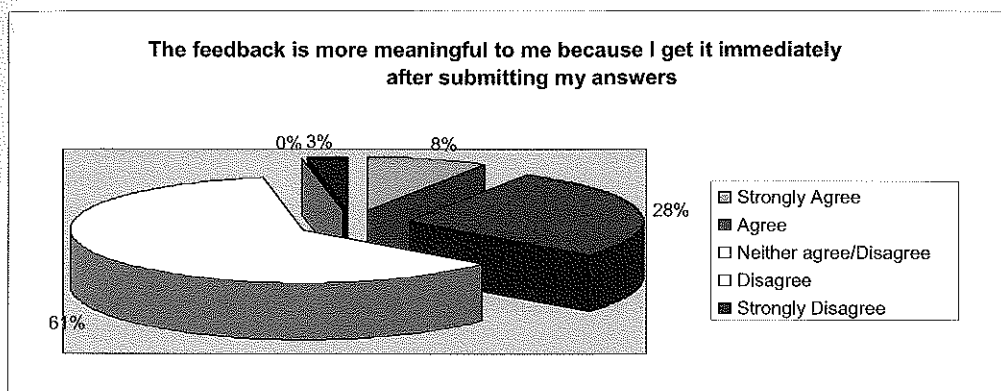
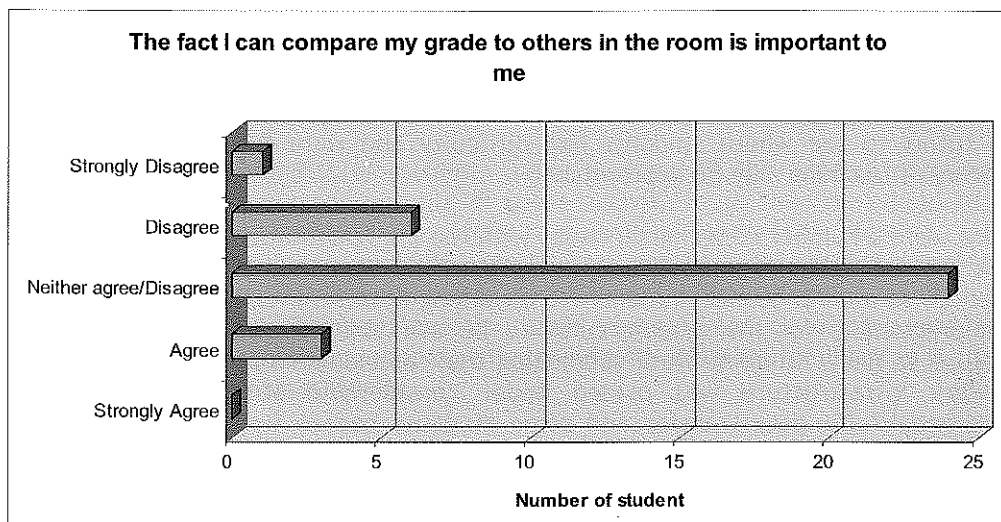


Table 6. Grade comparison



## DISCUSSION

The results demonstrated that generally the students did value the use of an e-Assessment. Table 1 shows that 66% of the students undertaking the e-Assessment either agreed or strongly agreed with the statement that "online assessments are extremely useful tools for assessment". Table 2 shows that the majority of those questioned appreciated the fact that they were being given an individual assessment. Within our institution, tutors have noted that increasing student numbers and reduced student-to-staff ratios have led to many large modules (over 150 students) assessing through group work. In this context, many students have raised concerns about this kind of assessment and requested a transition back to individual assessments. The results presented in Table 3 further support this argument with 65% preferring individual rather than group assessments. It is also interesting to note that this particular group of students had raised such concerns through their annual course review and were therefore appreciative of the move to individualised work.

Similar to the findings of Bennett (2002), Buzzetto-More and Alade (2006) and Ellaway and Masters (2008) our students welcomed instant feedback for their assessment. Indeed, Table 4 illustrates that 100% either "agreed" or "strongly agreed" with the statement that they liked instant feedback for their work. However, it was surprising to see in Table 5, that only 36% felt that the feedback was more meaningful because it was given immediately following the completion of the assessment. On reflection, we expected this response to be higher. Indeed, there are a range of possibilities for this situation, perhaps students are not fully aware of the benefits of instant feedback because they experience this less frequently? It could also be that simply being given the correct answer to a question is not sufficient and more detailed feedback, or as Gipps (2005) put it "rich feedback" was needed.

In constructing the e-Assessment we thought it would be valuable for students to compare their performance to the rest of the cohort. The results in Table 6 showed that students did not really want this service and contrary to our expectation they did not value this element of our e-Assessment.

Within the broader context of developing this e-Assessment we found, like JISC (2007) that this development was very front heavy with much work done at the preparation stage. However, the benefits were seen with the automated marking which clearly saved time at the post assessment stage. A further noticeable advantage of this e-Assessment was the data management aspect. It was simple to transfer cohort grades from the X-stream system to other institutional wide applications. A further benefit was the ability to see which questions were most difficult for the students with the instant ability to view each question and find what percentage was given to each of the five alternative responses. This was useful for the tutors to see where students had difficulty and were future changes to the delivery of teaching may be appropriate.

There were a number of technical issues with the implementation of this assessment. Firstly, it was difficult to book computing labs with more than 100 computers in one location. As a consequence students were working at different campuses which made it impracticable for the module tutor to be available to all students. Secondly, because so many students were submitting their assessments at the same time the network infrastructure was placed under considerable stress. This led to a "bottleneck" for data transfer and some students had to wait considerable time whilst their assessment were submitted. Finally, it was recognised that students could access other internet sites whilst completing the test so we had to ensure invigilators were aware of this possibility and equipped to respond to this within University examination regulations.

## CONCLUSION

The results from this research clearly demonstrate that the students have welcomed this style of assessment and, in particular, the ability to be assessed as an individual whilst in a large cohort. However, in producing this assessment we would need to recognise that the current assessment deals with only text and graphics which can be equally delivered using a paper-based approach. Future assessments should utilise some of the unique benefits of the electronic delivery such as delivering “media-rich” questions. These questions can incorporate streaming audio, video footage and different type of interaction which students are able to analyse before responding to questions. This could be of considerable benefit to any course areas which use such media and may also assist in the engagement of students.

The quality of feedback for each question is also something that should be developed in the future. The ability for students to access further guidance materials for specific subject areas whilst still in the ‘exam environment’ is a key potential benefit of e-Assessment.

We intend to develop both the quality feedback and more effective question content through approaches such as ‘multiple choice item development assignment’ (MCIDA) described by Fellenz (2004). This paper discusses the process of empowering students to create challenging multiple choice questions of their own. This approach would operate in parallel with the drive for more “rich-media” question content by encouraging students to research possible question materials and critically analyse their selections.

Fellenz (2004) suggests that this process leads to several benefits for the students including:

- Spending more time learning about course content.
- Generating a better understanding of what multiple choice questions can be used to effectively assess – leading to how to better prepare for their own summative assessments.
- The justification of question, answer and ‘spoiler’ materials engages the subject matter of a given course “*at high cognitive levels*” in students by examining the evaluation and justification of their selections.
- Developing a feeling of ownership around the assessment methods used in their course – leading to a ‘critical awareness’ of why certain assessment methods are used at various stages of study.
- Encouraging students to engage more heavily in the feedback provided to them during their own summative assessments.

In addition to the benefits of students being involved in the process of question development itself; selected outputs of these activities can then be added to the ‘question bank’ of reusable assessment questions, therefore shaping future assessments in the subject area. This could then lead to the establishment of a continual development cycle for question development which refreshes, expands and updates the existing assessment ‘question bank’ year-on-year. Ensuring a vast range of challenging, high-quality questions with considered, detailed feedback is available for future summative assessments.

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