Using computers to assess humanities: some results from the national survey into the use of computer-assisted assessment (CAA)

Although using computers in teaching is a fairly common practice in undergraduate courses, the introduction of computers into assessment is a relatively recent innovation and one which excites strong opinions. The use of computers in the assessment of humanities learning is rarer still and even more contentious: in what sense can computers play a meaningful role in subjects which are fundamentally discursive?

As part of a TLTP3 project on computer-assisted assessment (CAA), a national survey into the use of CAA in the UK higher education sector was conducted between January and April 1999. The questionnaire was distributed to a wide range of academics, with humanities being one of several subject groups which were specifically targeted. The following paper offers a snapshot of CAA-related activity in the discipline as well as an overview of attitudes towards CAA and objective testing held by users and non-users.

Background and methodology

For the purposes of the survey, CAA was defined as any assessment in which the delivery and/or marking of the assessment were carried out by a computer or an optical mark reader (OMR).

In order to reach both users and non-users of CAA, a two-pronged approach was used to distribute questionnaires. Firstly, following a literature search, a database was constructed, consisting of approximately 1,000 people (mostly academics) thought to be active or interested in the field. Secondly, in order to widen the scope of the study and reach non-users of CAA, approximately 9,000 questionnaires were distributed through existing networks and organisation such as ALT, UCoSDA, the Royal Geographic Society and some CTI centres, including the CTI Textual Studies. Additionally, questionnaires were sent directly to quality assurance heads, educational technologists and staff developers, and an institutional case study was undertaken at the University of Edinburgh.

Respondents

Approximately 25 % of the targeted individuals responded. Of the remaining, unknown respondents, we estimate a 10 % response rate after factoring out duplication. In total, 754 questionnaires were returned, the majority of which came from academics. The survey confirms findings of a previous study which suggested that CAA is predominantly used in computing, sciences, maths and business studies. (Stephens, 1995) There does, however, appear to be some increase in activity in social sciences and humanities subjects.

Sixty three questionnaires were returned from lecturers and researchers in the humanities, including staff working in the following disciplines: classics, English, drama, linguistics, history, theology, media arts, Gaelic studies, philosophy, humanities computing and modern languages. Of these, 17 were currently using computers in assessment, 44 were non-users of CAA and 2 had previously used CAA but no longer did so.

Of those currently engaging in CAA in the humanities, the majority (71%) were employed at 'old' universities, while 24 % taught at 'new' universities. All of these practitioners reported using computer-aided learning (CAL) in their teaching and all intended to continue using CAA in the future.

Current use of CAA – question types, pedagogical purpose and delivery method

The largest group of CAA users within the humanities were lecturers in modern languages and linguistics. Computerised assessments were also recorded in philosophy, Latin, and literary studies (English and European). In total, details of thirty-seven assessments were reported with the bulk of them (66%) being used with level one students. According to the data, a typical example of CAA in the humanities would be a test or assignment set for formative purposes, and composed of multiple choice and text input questions. It would be delivered across the web or a stand alone computer network to first year students. This profile is based on the following information provided about the nature and content of the assessments.

To begin, respondents were asked to identify what delivery mechanism they were using for each test or assignment. (Some respondents were using more than one delivery system per assessment, thus the numbers add up to more than 100%.) 68% of assessments recorded were run on a closed computer network, while 40% were delivered across a web-based system.

Respondents were also requested to indicate the purpose for which they were employing CAA: diagnostic (to indicate levels of competence), self-assessment (for students to check their own understanding of material), formative (primarily to give students feedback) or summative (such as end-of-module examination.) Perhaps not surprisingly, most assessments were described as belonging to more than one category. The most popular use of CAA was for formative assessment, with 72 % of tests/assignments characterised as such. Equal numbers were labelled as diagnostic (48%) and self-assessment (48%) with 40 % described as summative.

For every assessment they recorded, respondents were asked to identify what question types it comprised; most assessments combined two or more question types. Multiple-choice questions were the most popular format (present in 84% of assessments) closely followed by text input items. Nearly a third of tests included questions involving audio or video and 12 % used graphics-based questions.

The biggest differences between arts and humanities respondents and the overall sample came in question type and purpose of assessments. Whereas with the full set of respondents, CAA for summative assessment was the most popular application, it was the least popular with humanities lecturers. Furthermore, text input

and multimedia-based questions were proportionally more heavily used with humanities CAA than with the overall sample.

Advantages/Disadvantages

All respondents were asked about their perceptions of the advantages and disadvantages of using CAA as an assessment method. Amongst CAA users, a wide range of advantages to implementing CAA within a module was identified, including the enabling of independent learning, provision of 'tailored' feedback, students' perception of fairness in the assessment process, speed of results, tracking of student performance and the application of CAA to distance learning. Other advantages noted were quicker feedback to students, time savings, objectivity of the tests and the potential breadth of the assessments.

Specific comments made by users about the advantages of CAA included the following:

'Encourages individual completion of language-learning tasks that may be neglected by other means'

'Students work at own pace and get instant feedback.'

'Helps students identify the subject's technical base'

'Giving students feedback where otherwise there would be none'

'Repetition is enormously beneficial in language work.'

Disadvantages identified by users and non-users included time taken to prepare appropriate material for assessments, costs, technical problems, limited question types available, lack of suitability of question types for discursive subjects, staff and student resistance, and security. Particular comments made by users included the following:

'In philosophy, it [CAA] can give students a false sense of achievement; they may not realise that this technical base is only the starting point for producing discursive material.'

'Writing questions to the right level of difficulty is hard.'

'Some students are easily bored by style of questions, even in fairly sophisticated programs.'

'Parameters for answers need to be restricted.'

On the issue of objective testing, which is what the majority of CAA entails, respondents were sharply divided. On the one hand, a small group felt that objective testing was inappropriate for humanities teaching, while others believed that it was a method of providing much-needed practice and feedback to students, whose large numbers militated against frequent assessment by other means. Not surprisingly, most believed objective testing to be better-suited to lower level study (years one and two) than advanced (years three and four, postgraduate).

Issues for consideration/ conclusion

The use of computers in humanities assessment is in early stages of development and currently has limited uptake compared to the use of CAA in other disciplines. Nevertheless, there appears to be a growing interest in the area, particularly as the usage of CAL and computer-mediated communication in humanities teaching gains popularity. Of the non-users who took part in the survey, 75%

answered either 'yes' or 'maybe' when asked if they would consider using CAA in the future.

In a recent case study of the use of CAA in a module on Modernity at Sheffield Hallam University, Chris Hopkins concluded that if humanities students and staff were going to have faith in CAA as a valid method of assessment, 'they must have an explicit sense of the assessment rationale underpinning this, including the sense that it is not a replacement for essays and exams, but something fundamentally different' (Hopkins, 1998). Similarly, in the CAA Centre national survey, humanities users often emphasised in their responses that CAA did not supplant other methods, but complemented them. No respondent used CAA as a sole method for assessing students in the humanities; all combined CAA with other assessment techniques within a varied assessment profile. Additionally, the majority of respondents reported using CAA for formative and diagnostic purposes - in other words, as a learning tool.

References:

Hopkins, C. (1998) 'Web + Qmark + Humanities Students = ?' *Computers and Texts*, No. 16-17.

Stephens, D. and Mascia, J. (1995) *Results of a Survey into the Use of Computer-Assisted Assessment in Institutions of Higher Education in the UK*. Loughborough: Flexible Learning Initiative.

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