
On-line student feedback: a pilot study

Liz Barnett, Jane Galbraith, Paul Gee, Fran Jennings and Ron Riley
London School of Economics and Political Science
email: l.barnett@lse.ac.uk

This paper reports on the outcomes of two experimental trials of the use of on-line questionnaires to assess student satisfaction with courses at the London School of Economics and Political Science. In the first year, eighteen course modules were selected from three departments, surveying a total of 1,100 student places. Students on ten of the courses were invited to complete the 'experimental' on-line survey and the remainder were invited to complete the paper-based questionnaires which have been in use for several years. In the second year, the scale of the experiment was increased, to include forty-six courses across seven departments. Response rates were compared and possible barriers to completion of the on-line questionnaire were considered. Whilst electronic monitoring indicated that 95 per cent (first trial) and 80 per cent (second trial) of those contacted for the on-line survey opened the introductory email, only 23 per cent (first trial) and 27 per cent (second trial) completed the on-line survey, compared with a 60 per cent response rate on the paper-based survey. The on-line response is also slightly lower than that achieved by postal surveys of LSE students (30–50 per cent response rates). Whilst some technical difficulties could have acted as a barrier, motivation appeared to be the main barrier. Initial results from the second trial, which included two reminder emails and some small incentives, show that it is possible to increase the response rate, but this may still be unacceptably low for staff whose promotion prospects may be affected by results. A third trial has been proposed, looking at ways in which the process as a whole could be amended, to overcome the problem of 'survey fatigue' that the current system faces.

Introduction

Student feedback on courses has been a standard feature of university life for several years, with a substantial research backing to it (see, for example, reviews by Marsh, 1987; Marsh and Dunkin, 1992). Most feedback systems endeavour to serve more than one purpose, with student feedback forming part of the evidence used by:

- individual teachers to improve teaching;
-

- heads of departments to monitor and guide individual teachers, especially part-time teachers;
- course leaders for course development;
- senior managers to make decisions on probation and promotion related to teaching performance; consider changes to the wider learning environment; help with the marketing of programmes;
- external agencies to assess quality of provision.

There are a number of critiques questioning the validity of student response as a measure of educational quality. For example, Greenwood and Ramagli (1980) review a number of studies showing low correlations between student ratings and final course outcomes, thus questioning whether 'satisfied' students are necessarily 'effectively educated' students. Kerridge and Mathews (1998) revisit this debate, questioning the notion of 'student as client' versus 'student as customer', and again stressing that student satisfaction ratings do not equate with student outcomes. However, within the HE sector, the increasing perception of 'students as customers' is significant (especially as personal financing of HE is increasing). As such, student satisfaction is considered important, and measurement of it will no doubt continue to grow.

Many institutions use a combination of approaches, including standardized questionnaires (often combining both closed and open-ended questions), student discussion sessions, focus groups and meetings, and a range of other student-focused data collection methods (see Partington, 1993 for examples).

The emergence in the UK of the Quality Assurance Agency (QAA) subject review process has encouraged many institutions to look at how systematic their feedback process is. QAA places importance on transparent and robust quality assurance systems, which provide evidence on course quality and are integrated into explicit quality feedback loops. In some institutions, central units take responsibility for the management of the student feedback process; see, for example, the work of the Centre for Research into Quality at the University of Central England (UCE (<http://www.uce.ac.uk/crq/>)). This can be a major task with substantial time and resource implications. In the case of the London School of Economics and Political Science, the Teaching Quality Assurance and Review Office (TQARO) has been operating a centralized student feedback system since 1991 (Husbands, 1997). Up to now the system has been paper-based, with data subsequently scanned into computer and processed electronically. Faced with the substantial costs needed to update/revise the existing processing operation, the Teaching Quality Assurance Committee (TQAC), responsible for the survey, agreed to experiment with on-line delivery. The purpose of the experiment was to establish whether the technology can be used to maintain a robust quality assurance procedure which is less resource- and time-intensive and which can deliver results more quickly.

Research evidence on the use of on-line questionnaires is limited. A HEFCE-funded development project considering student feedback practices across a number of business schools in the UK makes reference to it, but does not cite any research evidence (<http://www.lboro.ac.uk/departments/bsl/ftl.html>). A search of the past ten years of the *Open Learning* journal included a number of reports of evaluations of distance learning programmes – but interestingly these did not include any examples of studies using on-line

surveys. Taylor, Woodman, Sumner and Blake (2000) used both on-line and paper postal questionnaires in evaluating an Open University course. They found that the respondents to the two types of survey had similar profiles. They do not give response rates but report that, over successive on-line surveys, 'the response rate begins high then rapidly tails off'. There is a general impression from those working in the field that getting students to complete on-line questionnaires is likely to result in a low response rate, with motivation, access and IT skill considered the three main barriers. This paper reports on a trial, at LSE, comparing student response to on-line and paper-based surveys, to assess variations in response rate and possible explanations for them.

The LSE student feedback system

At LSE, student feedback is collected twice each year, with a separate survey (focused on part-time teachers) and the standard survey (for lecture courses completed in the first term) undertaken in November/December, and the main data collection (for all other lecture courses) in February/March. Students are asked to comment on each course they attend (generally four courses per student per year). The questionnaire is in two parts. Part A consists of a number of closed questions/rating scales. Questions address both broad issues of course management and resources, and detailed responses from the students on up to three specified lecturers and three seminar/class teachers per course. Part B is a series of open-ended questions for free response which ask students to detail aspects of the course they most/least appreciate. A central unit, using scanners, data analysis and interpretation software, processes the completed questionnaires. Part A data is processed into a set of numerical results. Part B is checked, any abusive comments removed, and the remainder presented verbatim, under the question headings. Individualized reports are prepared for each member of staff and are delivered to them by hand. They are expected to follow up any issues arising and adjust their programmes as appropriate. Details about individuals are also available to convenors (heads of departments) for management purposes, and play a part in decision-making about staff at the end of their probationary period, and at promotion.

Teachers are asked to arrange for the questionnaires to be circulated in class, and to organize for a student representative to collect the completed forms, and return them to the central office for processing. Student anonymity is guaranteed and staff receive reports only on responses to items completed by five or more students.

The process – from sending questionnaires out to classes, to returning the results to individual members of staff – takes around eight weeks. Two members of staff work full-time on this task. Around 14,000 questionnaires are processed, with each student being expected to fill out up to four questionnaires, one for each course attended.

Key features of the paper-based system include:

- a standardized approach, across the institution, achieving a consistently high response rate (of around 60 per cent);
- contact with all students who turn up to classes when the questionnaire is being administered (there are no attempts to verify class lists for this purpose – some students may be absent);
- time set aside in classes for completion of the questionnaire;

- a high degree of anonymity for the students;
- a process which is consistent over time, enabling individual members of staff to build up a picture of their teaching over several years;
- a confidential system for staff, who are aware of who has access to their individual data, and how that data may be used.

The disadvantages of the system are:

- the high cost of operating the system, including the vast quantities of paper involved;
- wasting class time on what is seen to be an essentially administrative task;
- processing time, and consequent delay in feedback to staff;
- the lack of 'ownership' by academic staff of the process, lessening its potential as a development tool.

In addition to these regular surveys of student opinion, the school undertakes more general surveys of the student experience. The purpose and format of these surveys is quite different from that of the annual course survey, but they provide a useful alternative for comparison on response rates, as, like the on-line questionnaire, they are left open to the student to decide whether or not to respond – a very different scenario from the 'forced' situation where students are expected to complete surveys in a classroom situation.

In looking at the development of an on-line alternative, the concern was to maintain the positive features of the existing system, whilst addressing some of the disadvantages.

Issues to be addressed in developing an on-line system

From the start, there was concern about the response rate – particularly given that results on individual teachers are subsequently used as evidence to judge teaching quality at probation/promotion. Any reduction in overall response rate may be associated with a skewing of response (for example, a move away from a 'captive audience' may lead to response only from those who are dissatisfied, or possibly very enthusiastic, about a given course). In this context, worries were also expressed about differential response by course, based on the assumption that students in some subject areas may be less technically literate than others, and hence less likely to respond to an electronic questionnaire.

The other main area of concern was with data protection and anonymity. Would students feel confident that their anonymity would be maintained, given that they are well aware that email and Internet access can be monitored? On the other hand, might students attempt to 'sabotage' the process, for example, by multiple 'malicious' responses from a single person? On this point, staff would need assurances, given that the evidence collected is used in the context of their career progression.

Trial One

Given some of the reservations expressed above, as well as lack of definitive evidence from elsewhere on the robustness of on-line course evaluation, a pilot study was set up, taking a limited range of courses in a small selection of departments.

Three departments were selected (Government, Philosophy and Statistics) to give some indication as to whether different student groups have different IT skills/preparedness to use an on-line format. Six modules were selected from each participating department and structured randomization was used to allocate some to the control and some to the trial group.

Over 1,000 potential respondents were included in the pilot, with 530 being sent the electronic version (trial modules), and the rest being sent the traditional paper-based system (control modules). One difference with the on-line system was that circulation lists were based on central records of course members, whilst the paper version went only to those who happened to be in class on the appropriate day. These figures do not necessarily tally! Given that each student attends four or more courses each year, it was quite possible that some students may have found themselves responding to one course using the paper-based questionnaire, and another using the on-line format. The actual questions in the paper-based and on-line formats were the same, but the presentation was not. In the paper-based version, students were presented with several questions per page. On-line, they were faced with a single question per screen.

Students attending the control courses received the paper-based questionnaires following the normal procedures. Class teachers (provided with an OHP describing the new system) alerted students attending the trial courses to the on-line questionnaire. Students were then individually emailed with a message describing the on-line survey pilot, and giving them direct access to the on-line site with a single mouse-click. They were sent a reminder three weeks later. Emails were monitored to see how many students opened the initial message, and how quickly it was accessed. Completed Web forms were also monitored to check that each student only responded once per course. A follow-up survey was later emailed to all students on the trial courses to gauge their reactions.

Trial Two

Trial Two used the experiences of Trial One to see if it would be possible to scale up the on-line survey without facing major technical difficulties. For Trial Two, 2,011 students from twenty-four courses in seven departments received the on-line survey, along with 2,347 students from twenty-two courses in the same selection of departments being included as a 'control', receiving the paper-based survey. The additional departments were Law, Social Psychology, Information Systems and Economics. Trial Two continued to look at ways of increasing response rate through improving the quality of presentation and ease of completion; increasing the number of 'reminder emails' sent to two (only sent to those who had not replied), and testing out the use of small incentives. On the last point, we ran an automated 'lottery', with students randomly allocated to different groups being told they might win photocopying cards worth £5 or £10 if they returned the survey.

Key questions addressed in evaluating the trials were:

1. Do the response rates on-line compare favourably with the paper-based system? Is there any obvious difference in uptake by department/student year group? Is there any evidence to suggest that incentives and reminders improve the response rate?
2. How confident are students about the on-line version? Are concerns about confidentiality, anonymity and access to the data set addressed to a degree that ensures confidence?

3. Has the system for monitoring responses (to ensure that only students registered for the module respond) worked, without allowing the identity of respondents to be revealed?
4. Is it possible and useful to attempt to replicate the paper-based system on-line, or does the new delivery method require fundamental changes to the structure/form of the questionnaire?
5. How costly of staff time and effort are the two systems?

Results

Response rates

In Trial One, email monitoring indicated that 95 per cent of students contacted read the initial message within two days of it being sent out. However, only 23 per cent went on to complete the questionnaire. In contrast about 60 per cent of paper questionnaires were returned. There were no significant variations by discipline or by year of study.

In Trial Two, 80 per cent of the on-line group opened the initial email message (the remainder deleted without reading (7 per cent), or did not open the message). A total of 48 per cent went on to open the survey applet, and 30 per cent completed and submitted the survey. The effects of the reminder were marked by peaking response rates in the two days following the emails, but there was a fall off over time, and the second reminder 'peak' was substantially lower than the first. Given the study design, it was not possible to identify the relative effects of improvements in the technical delivery of the questionnaire, improved publicity, the use of an extra reminder, and the introduction of incentives in raising the response rate from 23 per cent in the first trial to 30 per cent in the second.

Student and staff confidence

In Trial One, 45 students (8.5 per cent) who were sent the on-line survey replied to the follow-up survey designed to elicit their reactions. Most of these (35) had actually completed the on-line survey. Respondents were generally appreciative of the experiment, being pleased that it saved class time, saved paper and was more private. There were concerns about time taken to complete the on-line version. As each question is a separate screen, it 'feels' much longer than the paper version. There were a few comments on technical difficulties, but this did not seem to be a major barrier to use. Fifteen claimed that the briefing OHP had not been shown in class. Twenty-three students thought arrangements for confidentiality were satisfactory but four still had some concerns.

For staff, the main concern lies with the poor response rate. Monitoring of response should be able to weed out any people who try to abuse the system by replying several times on the same course. There was no evidence of any attempts to do this on this occasion.

Another possible issue of concern for staff is that the low response rate using the on-line version might lead to quite a different set of results as compared with the paper-based version. For example, one might hypothesize that only the more motivated students would respond to the on-line survey. These might include students who are very concerned and/or students who are most enthusiastic about a given course, and this might lead to more extreme ratings and greater deviation on scoring. At LSE, questionnaire scores play a part in probation/promotion decisions. Hence any systematic difference in scoring would have serious implications for staff confidence. To explore this issue, six questions were selected from the total questionnaire, and variations in response from the two groups compared.

Questions on the library, overall course satisfaction, and the quality of lecturing showed no systematic differences in response from the two groups. However, on class teaching there does appear to be a slight tendency for on-line respondents to give a less favourable response to tutors than those completing the paper questionnaire. Results here were consistent, but numbers of respondents were too small to draw any firm conclusions. Anecdotal evidence from both staff and students suggests that in some cases students feel uncomfortable about completing questionnaires in the presence of class teachers; this might provide an explanation for this effect, and is in line with other studies (see, for example, Wachtel, 1998: 195, reference to Pulich who 'contends that even if the instructor leaves the room while the students are filling out the forms, some students may still be inhibited by the fact that the instructor himself/herself distributed them').

Replicating the paper-based system

It was technically possible to replicate the paper-based questionnaire for the on-line trial. However, several respondents did find the format off-putting, as each question was on a separate screen. The format was improved in Trial Two, but still maintained the match with the paper-based version. With the agreement of the staff, it may be possible to move to a different format for the on-line survey in the future, but this will require careful political negotiation, given the sensitive nature of student evaluation of staff.

The move from paper to on-line presents a new set of options on customization, making it easier to design questionnaires more relevant to the needs of individual departments without at the same time seriously increasing costs of data processing and analysis.

Costs

There are clearly costs in setting up any new system. However, the set-up costs for the on-line trials have been minor, compared with estimates for upgrading equipment/software needed for the paper-based system. There are some recurrent costs associated with the on-line survey, which do not apply to the paper-based system. These include sorting out class email listings, and monitoring of response. However, current estimates suggest that this is a much smaller task than the major data input and data-cleaning requirements of the paper-based system. With the latter, around 20 per cent of scanned data showed problems which required operator intervention.

Speed

The processing of the on-line version was very quick, thus enabling faster feedback to the teachers.

Discussion

In terms of cost, time, accuracy of data translation and speed, the on-line questionnaire is clearly better. Trial Two, involving many more students, demonstrated that technical issues in scaling up the process should not prove too problematic, although as yet, students cannot access the survey applet from outside the school network with ease (which may be another barrier to response for some students).

On concerns about confidentiality of the data, and anonymity of respondents, it is important to be able to assure the integrity of the technical staff operating the system – but this does not seem to be an issue of undue concern to students.

The key factor considered in the LSE on-line trial was response rate. On this point, the trial was considered a failure. Anecdotal evidence from elsewhere suggests that motivation, access and IT skill are the three main barriers to effective use of on-line feedback. Our results tend to suggest that student IT literacy and access to computers do not appear to be major barriers, although issues of screen design and time taken to complete the questionnaire will continue to be addressed in future trials.

What of motivation? This perceived 'failure' requires further analysis. The high response rate of the paper-based version is in part due to it being delivered in a 'captive' situation in class. What is more, it totally fails to gauge the opinions of students who, for whatever reason, are not in class on the relevant day. As such, it may be biased against those who have ceased to attend because of problems with the quality and/or content of the teaching.

A more appropriate comparison would be to look at questionnaires sent out to students, rather than delivered through the 'captive' classroom setting. At LSE, a series of one-off postal surveys of the student experience achieved response rates of 30–48 per cent (Stockdale, 1991, 1993, 1993a, 1994, 1996). The most recent postal survey of LSE students was undertaken by MORI in spring 2000. This achieved a response rate of 33 per cent. At UCE, a centrally managed annual student satisfaction survey achieved a response rate of just over 50 per cent in 1992, but this declined to around 38 per cent in 1997. Various reports of postal surveys of distance learning students (for example, Macdonald-Ross and Scott, 1997; Webb, 1992) indicate response rates of 24–33 per cent. Trial Two, with a response rate of 30 per cent, is still not up to the level achieved by most of these postal surveys. However, one other feature of the on-line survey (and the chosen 'control') is the frequency and volume of surveys of this nature that students are expected to complete. Work at UCE has raised concern about student 'questionnaire fatigue'. The UCE systems works on a sampling basis, and students will only receive a maximum of one questionnaire per year (although one reason for the fatigue is the growing number of departments doing their own surveys). At LSE, each student faces around four surveys every year. At some stage, the issue of quality over quantity of response will need to be addressed. It may well be that if the on-line survey is to be perceived as successful – in terms of improved response rate – then more consideration will need to be given to the content and detail in the survey, and to the purposes for which the data is used.

For now, we await a decision on whether to continue with the trials. If they do continue, it is likely that the next stage will again address the issue of 'scaling up' to ever greater numbers of students, to check the impact that this may have on our computer system. Following this, we hope that it will be possible to revise the format, cutting down on the number of separate surveys students will be expected to complete (thus addressing the fatigue problem) and creating new survey designs more fitted to the on-line medium.

Ultimately, it will be important to get an appropriate balance between the demands of quality control and judgement centrally and the needs of staff for information and guidance on how to improve their teaching.

References

Galbraith, J., Gee, P. and Riley R. (1999), 'Interim report on the teaching quality assurance committee (TQAC) – pilot study in Lent Term 1999 of an on-line, Web-based, student

course evaluation questionnaire', Internal Report to the Teaching Quality Assurance Committee in LSE.

Greenwood, G. E. and Ramagli, H. J. (1980), 'Alternatives to student ratings of college teaching', *Journal of Higher Education*, 51 (6), 673–84.

Husbands, C. (1997), 'Variations in students' evaluations of teachers' lecturing in different courses on which they lecture: a study at the London School of Economics and Political Science', *Higher Education*, 33, 51–70.

Kerridge, J. R. and Mathews, B. P. (1998), 'Student rating of courses in HE: further challenges and opportunities', *Assessment and Evaluation in HE*, 23 (1), 71–82.

Macdonal-Ross, M. and Scott, B. (1997), 'A postal survey of OU students' reading skills', *Open Learning*, 12 (2), 29–40.

Marsh, H. W. (1987), 'Students' evaluation of university teaching', *International Journal of Educational Research*, 11 (3), 255–78.

Marsh, H. W. and Dunkin, M. J. (1992), 'Students' evaluation of university teaching: a multidimensional perspective', *Higher Education: Handbook of Theory and Research*, 8, New York: Agathon Press, 143–233.

Partington, P. (ed.) (1993), *Student Feedback – Context Issues and Practice*, USDU.

Stockdale, J. (ed.) (1991–6), a series of LSE internal studies of the student experience.

Taylor, J., Woodman, M., Sumner, T. and Blake, C. T. (2000), 'Peering through a glass darkly: integrative evaluation of an on-line course', *Education, Technology and Society*, 3 (4), available online at http://lifets.ieee.org/periodical/vol_4_2000/taylor.html.

Wachtel, H. K. (1998), 'Student evaluation of college teaching effectiveness: a brief review', *Assessment and Evaluation in Higher Education*, 23 (2), 191–211.

Webb, R. (1992), 'A new survey of NEC learners', *Open Learning*, 7 (1), 58–62.