Using Electronic Meeting Systems for Subject and Course Evaluation

Maureen P. Lynch  
*University of South Australia*  
*Email: maureen.lynch@unisa.edu.au*

William K. (Bill) Wood  
*University of South Australia*  
*Email: bill.k.wood@unisa.edu.au*

Abstract

The University of South Australia requires all lecturers to conduct evaluations of their subjects. The form of the evaluation can be chosen by the individual lecturer. Many lecturers have found that standard questionnaires give quite superficial feedback – students fill them out in a hurry, and often the feedback is not helpful in giving ideas for improvement.

We have been using an electronic meeting system (GroupSystems V) to evaluate a number of subjects. The system preserves the necessary anonymity while allowing electronic conversations to take place, thus achieving cross fertilisation of ideas and suggestions for subject improvement. These electronic conversations are printed out, giving the lecturer an immediate hard copy record of students’ ideas for contemplation and comparison over time. As a result, we have found this a valuable method for achieving actual quality improvements in subjects, as against simply rating a subject.

1. Introduction

Considerable emphasis is currently being placed on the quality of teaching and learning in Australian Universities. The Commonwealth Government conducts periodic reviews of the quality of teaching in all government-funded Universities, and Universities with good results from this review get additional funding. There is thus a considerable incentive for Universities to develop good teaching practices.

In line with this, the University of South Australia has a continuous quality improvement programme called Quality in Learning and Teaching (QILT). It states “For each subject there must be at least one evaluation strategy developed and implemented with specified protocols which provide students with the opportunity to anonymously provide an evaluation of the subject from a student’s point of view”[4]. As this suggests, the objective of this programme is to achieve the highest possible quality learning experience for our students, commensurate with budget etc constraints.

Another part of this policy states that “the development of standardised student evaluation of teaching systems should be actively discouraged”[4]. The policy goes on to state that the form of evaluation should suit the needs of the subject etc.

The QILT programme requires each lecturer to carry out an evaluation of some aspect of his/her subject every time it is run. The lecturer is responsible for choosing an appropriate evaluation method. Each evaluation may examine a different aspect of the subject, but every aspect of the subject must be evaluated over a five year period. The areas which must be covered over the five year period are:-

- teaching materials;
- assessment of students;
- lectures (to large groups of students);
- practicals (“hands on” computer laboratories etc);
- tutorials (small groups of students);
- resources.

2. Traditional Evaluation Using Questionnaires

The normal method of gaining student feedback is to get students to fill out a questionnaire survey, either at the end of the course, part way through it, or perhaps to conduct several surveys during the Semester. Typical questions relate to whether the students enjoyed the subject, whether the style of lecturing was appropriate, whether the lecturer was well-prepared, whether use of audio-visual aids was appropriate etc. Students typically select a number between one and five (or seven) on a scale from excellent to very poor.

These surveys also typically have areas on the questionnaire for free format comments, suggestions etc. There is often provision for comments against individual questions, as well as for general comments at the end.
Many lecturers have found this type of subject evaluation almost useless for identifying areas of potential improvement in their subjects. They are of some use in preparing a ‘league table’ of subjects which students like best through to those that they like least. However, as a means of identifying how improvements could be made, they provide very little information.

Hence, a considerable scepticism has developed over the use of questionnaire surveys as a means of evaluating subjects. Some specific problems are:-

- A rating from excellent to poor on some aspect does not indicate what problems exist, if any – the fact that an aspect of a subject is rated as poor does not indicate what could be done to improve it. Similarly, sometimes an aspect of a subject is rated as very good, but there might still be ways of improving it – these surveys tend to give very little indication of this.

- Most instruments have provision for students to write in free format comments, to overcome the above problem. Some students write helpful suggestions in these spaces. However, in general, if the questionnaire is mainly filled in by ticking boxes etc, many students ignore the comments section, or write unhelpful comments there.

- Sometimes one aspect of a subject is very unsatisfactory, and students become dissatisfied because of this. They will then tend to ‘punish’ the lecturer by rating every aspect of the subject poorly. However, in fact, many aspects of the subject may be excellent, with only one or two needing significant improvement. This does not reflect accurately in questionnaire surveys.

- A questionnaire survey in which a lecturer receives a below average rating can tend to have a depressing effect on a lecturer, especially if there is a lack of constructive criticism. Then, instead of regarding the survey as a way of helping improve the subject, he/she can tend to become angry, and to dismiss the survey findings as useless.

- Questionnaires are filled out in isolation. Students do not have the opportunity to bounce opinions around, so that they can come up with suggestions as to how the subject could be improved, and to build on embryonic ideas. It is often through discussion that a synergy arises, and really valuable suggestions ensue.

- Typically, output from questionnaire surveys is summative, i.e., just a set of numbers which do not motivate lecturers to make any changes. However, the University’s policy is that lecturers should “review regularly the content and focus of their subjects, make revisions as required and critically reflect upon their teaching, using feedback from students and other sources to ascertain to what extent they are being successful in achieving the aims of the course and subject and meeting the needs of students”. This more formative approach is qualitative in nature, and not easily supported by questionnaire surveys.

### 3. Evaluation Using Discussion Groups

Some lecturers use discussion sessions with students to gain feedback. This can sometimes provide useful ideas, and the discussion format can trigger suggestions for improvements. However, this has the fundamental flaw of lack of anonymity – students are unlikely to be too critical when a lecturer has the power to pass or fail them.

### 4. Evaluation Using Electronic Meeting Systems

As a result of the above problems, many lecturers in the Faculty of Business and Management in the University of South Australia have turned to an electronic meeting system (GroupSystems V) as a potentially better way of getting relevant, accurate and rich feedback about their subjects. We received a research grant to investigate approaches to how this technology could be used to improve subject evaluation.

GroupSystems V is a face-to-face (same time, same place) meeting system, designed to enhance the quality of meetings. It provides every participant in a meeting with their own networked personal computer. Participants can enter comments, suggestions etc. about the topic at hand simultaneously and anonymously. These are then made available to other participants on both their own computer and on a front screen. Issues and ideas can be analysed, consolidated, voted on etc. In fact, the system provides a number of tools for the better conduct of face-to-face meetings.

An essential aspect of evaluation of subjects by students is anonymity. GroupSystems V provides this – comments can be entered without identification of their source [1, 2]. Our meeting room has fourteen nodes which enabled typically sized tutorial groups to participate as a class. The group is then large enough to ensure anonymity – it is almost impossible to pick out any one student, even if he/she may have individual ways of expressing themselves.
As well as the anonymity, however, the ability to share comments between students leads them to add to and develop ideas others have expressed. This building on ideas is one of the strengths of this method of subject evaluation – the combination of anonymity and sharing of ideas is not possible with questionnaire surveys. The simultaneity of input of ideas makes this interchange economic time-wise.

It is a requirement of University policy that students are informed of the outcomes of the evaluations, and what the lecturer intends to do about any shortcomings or ideas for improvement. Because use of GroupSystems provides instant printouts of the ideas entered by students, the lecturer is in a position to give immediate feedback to the students who participated.

The research has been qualitative – it has taken the form of evaluation of a series of subjects using this technology, and reviewing outcomes of these evaluations with the lecturers involved. Over time, it is intended to build up a data base of subjects which have been evaluated using this technology, including the questions asked, tools used and lecturers’ suggestions with outcomes etc.

The following cases describe the research and findings so far.

5. Case Study One

5.1 Objectives

To gain quantitative and qualitative data about student perceptions of specific aspects of the subject.

5.2 Process

1. A brainstorming tool (to encourage divergent thinking) was used initially to gather data about the subject as a whole – students were asked to “list what you believed you gained from this subject. This can include skills, knowledge, an understanding of issues, anything at all”. Students could enter what they believed they had gained from the subject, or comment on what other students had entered.

2. Feedback on a more convergent basis was then sought on specific aspects of the subject, eg., on the Lectures, Group Seminar Sessions, Textbook etc. Students were given a list of topics, and they could comment on any or all of them.

3. The lecturer then gathered quantitative information regarding students’ feelings about the subject. Students were asked to rate a series of items on a scale of one to ten. Typical items were “Lectures were useful”, “I thought the readings were boring” etc.

4. All students in the subject (approximately 150) were cycled through the process in their normal class times.

5.3 Results

1. A final list of 22 ideas, with many supporting comments, was gathered quickly. The result was that a number of enhancements have been made to the subject. Eg., “enhanced presentation skills” was named as one of the skills gained from the subject (students had to do presentations in class). This attracted a number of comments regarding the fact that not enough emphasis was placed on the background reading required from the student audience. This was rectified next time the subject was run.

2. Specific data about how lectures etc could be improved was gathered, resulting in a number of improvements.

3. The votes gave some statistical validity to qualitative data gained. The voting brought some surprises – in some cases the outcome was not what the lecturer expected, and in others there was no consensus. The ability of the system to produce mean and standard deviation immediately enabled discussion with the group to take place to clarify a number of these issues.

6. Case Study Two (a systems analysis subject)

6.1 Objectives

To obtain qualitative feedback on most aspects of the subject, with particular emphasis on student attitudes about some innovations in the subject, and seeking ideas for improvement to the subject.

6.2 Process

1. The lecturer had introduced some innovations into the subject. To gather data about students’ feelings about these changes, each change was presented as a separate brainstorming session. Initial comments were
sought ‘privately’, i.e., students could enter their own comments without seeing what other students had said. Then the session was opened up, and students could comment on what others had said, thus setting up electronic conversations.

2. Data was then gathered about specific topics. Groups of related topics were presented to students, who could choose a topic, comment on it, then move on to the next one, etc. Again, these comments were initially sought ‘privately’, and then the session was opened up so that ideas could ‘bounce around the room’.

All students participated in the session in their normal class time. To avoid influencing results, the lecturer was not present at the sessions.

6.3 Results

1. The comments on the innovations in the subject were invaluable, and were consistent across all groups. Eg., one innovation had been the introduction of role playing exercises, where different staff members played the role of executives in an organisation, and students had to interview them to gather data to build up a system specification. The evaluation provided very rich data about this exercise, with the main result being that students considered it valuable, but that it was held too early in the Semester – if it was held later in the course, after students had a better knowledge of what they were required to gather, they would have gained more value from it.

2. Many valuable comments were obtained about specific aspects of the course. Eg., ‘hands on’ Practical sessions were run by giving the students a written set of detailed steps to follow, with virtually no input from the tutor in charge of the class (except for helping students with problems). Students could work through the exercises at their own pace, even outside of class time if they wished. Students liked this format, but the feedback was that the handouts did not specify the objectives of each session clearly enough, with the result that students often did not know clearly what they were attempting to achieve until near the end of the session.

3. The format of gathering comments ‘privately’ initially, and then opening the sessions up for cross-fertilisation of ideas worked well. Students initial comments were valuable, as was the ‘bouncing around’ of ideas. However, once the session was opened up, bawdy, personal etc comments started surfacing – hence the value of gathering the ‘private’ ideas first.

4. Interestingly, student ‘gripes’ came through, interspersed with good data. Eg., students in one class were unhappy with their tutor. While this gave useful data to feed back to the tutor in question, comments on all topics associated with the subject also tended to be tainted. This typically also happens of other methods of evaluation [5]. While the tone of comments was similar to that from other classes, they had a more negative emphasis. This illustrates that the whole outlook of the class can be influenced by a particular tutor. We learnt from this the value of students participating in their tutorial groups, so any such bias could be identified.

5. The next time this subject was run, GroupSystems V was again used to evaluate it using the same format. The issues raised previously by students did not come up at all (ie. the problems had been solved), but some ‘fine tuning’ issues in relation to the improvements made to the subjects were raised.

7. Case Study Three

The Faculty of Business and Management has six “core” subjects, taken by all students in the Faculty. Each of these has several hundred students enrolled in it at any one time. Traditional questionnaire evaluation from this number of students has made processing difficult and findings bland.

7.1 Objectives

To have formative, representative evaluations of the subjects from volunteer groups, given that it was impractical to cycle all students through the electronic meeting room.

7.2 Process

1. Students from late afternoon classes were asked to volunteer to attend sessions outside of class time. Late afternoon classes were chosen to enable a mix of full- and part-time students to be represented, to eliminate any potential differences between these separate populations.

2. Subject coordinators worked with experienced facilitators in designing sessions. In general, sessions were run with a mix of open brainstorming and sessions where students entered their ideas ‘privately’
at the beginning, after which the session was opened up for all students to comment on ideas entered by others.

7.3 Results

1. Volunteers coming in outside of normal class times did not provide such valuable feedback – those volunteering either felt sufficiently enthusiastic about the subject to come in during their own time, or they felt sufficiently unhappy to feel that they wanted to come in and protest. Thus the results were skewed by these extremes.

2. The experience of the lecturer in using the Electronic Meeting Room was also a factor – those who were familiar with the processes involved were able to frame more meaningful questions, and had more realistic expectations about outcomes. The clear conclusion is that the more experience in using this technology that the lecturer has, the more valuable will he/she find the outcome.

3. However, despite the above, lecturers gained many ideas for improvement of the subjects.

8. Case Study Four

Another of the large Faculty core subjects adopted a slightly different approach.

8.1 Objectives

To have formative, representative evaluations of the subjects from existing tutorial groups, given that it was impractical to cycle all students through the electronic meeting room.

8.2 Process

1. In an attempt to have as representative groups as possible, tutorial groups from late afternoon time slots were taken to the room in their regular class time. Late afternoon time slots were selected to achieve a mix of part time and full time students.

2. Subject coordinators worked with experienced facilitators in designing sessions. In general, sessions were run with a mix of open brainstorming and sessions where students entered their ideas ‘privately’ at the beginning, after which the session was opened up for all students to comment on ideas entered by others.

8.3 Results

1. Students coming to the sessions in their regular class times gave much more balanced and valuable feedback than the groups in Case Study Three.

2. Other results were the same as experienced in Case Study Three.

9. Case Study Five

Another of the large Faculty core subjects was used to research students’ learning processes.

9.1 Objectives

To research methods used by students in large First Year classes in coming to an understanding of course material. In addition, targeted feedback was sought on specific aspects of the subject.

9.2 Process

1. Volunteers from late afternoon classes participated in this exercise.

2. Students could comment on any or all of a list of questions presented to them. Examples included:

3. The best way to learn something is...

4. What techniques do you use to understand a topic?

5. What have you learnt about learning this Semester?

6. If you have a problem in understanding, what do you do?

7. Initially, comments were entered ‘privately’. Then group view was turned on, and students were encouraged to read and comment on other students’ ideas.

8. A series of open brainstorming sessions was used to get targeted data on aspects of the subject. In this case, all comments entered by participants were available to others immediately.

9.3 Results

1. The lecturer identified a number of different learning styles. As a result, the subject was offered in alternative formats in subsequent Semesters.

2. The process of getting students to enter ideas ‘privately’ initially, then opening the session up,
worked well, in that students could initially reflect on their own experiences without distraction, and then they could be stimulated by, and respond to, others’ ideas.

3. The quality of data gained from the open brainstorming prompted the lecturer to make a number of improvements to the subject.

10. Case Study Six

10.1 Objectives

To evaluate the content and structure of a course, and to get students’ feedback about the relevance and content of subjects in the course, as well as how the administration of the course could be improved.

10.2 Process

1. Representative groups of students from each year of the course were taken into the meeting room in regular class time at the end of the semester.

2. An open brainstorming session was held about the course overall.

3. Individual brainstorming sessions were then held about the relevance and content of each of the subjects students had just completed.

10.3 Results

1. Overall comments on the course were extremely valuable, and have led to a number of improvements, eg. significant changes have been made to the induction of first year students as a result of this evaluation.

2. Comments on specific subjects were valuable. However, ‘groupthink’ quickly developed despite the anonymity, and the course coordinator felt that some students were influenced by the comments of others. It was agreed that ‘private’ entering of ideas initially, before opening up of the session for comments on each others’ ideas, would have been preferable.

11. Conclusions

1. When the purpose of subject evaluation by students is to improve the quality of that subject, the data gathered by GroupSystems V has proven to be far superior to that gathered by any other method, in our opinion. The anonymity combined with the ability to achieve cross-fertilisation of ideas via electronic discussion makes this an ideal tool for obtaining rich, in depth comments and ideas.

2. When seeking specific data about a subject, volunteer groups gave skewed data of less value than when classes who had been together all Semester attended in the regular class time. However, when general data (not specific to the subject) was sought, volunteers gave as rich a set of information as regular classes. Possibly this would have some relevance to use of GroupSystems V in other focus group situations.

3. Because of the immediate feedback, action can be taken promptly in some cases. This gives students a much greater sense of ownership of the whole process.

4. Specific classes sometimes produce biased results, often because of less effective tutors. However, this becomes readily apparent when reading the comments and comparing them with those gathered from other groups.

5. The technique of getting students to enter their ideas initially without allowing them to see others’ comments, and then opening the session up so all comments can be seen, and ideas can flow freely around the room, was very effective. By limiting students to their own thoughts at first, ‘groupthink’ was avoided, and a good feel for student opinion was obtained. Then, the more open sessions generated ideas for subject improvement, as electronic conversations developed. This technique has more general applicability in other, more general meeting situations.

6. Voting was used infrequently. The data gathered from the ideas and comments was sufficiently consistent, and far richer than a set of numbers. However, when the Voting capability was used, its ability to produce immediate results enabled the facilitator to identify any anomalies, which can be sorted out while the group is still present.

7. As long as existing tutorial groups attended the sessions in class time, the data gathered was quite consistent between the groups. Hence, except when the purpose of the evaluation is to identify problems with specific tutors, about four or five groups provided all the data that was needed and useful. Therefore, despite the fears of some, we believe that lecturers in charge of large subjects were thus able to obtain all the information they needed without the problems
associated with getting large numbers of students into the room.

8. We found that the experience of the lecturer in using the room was an important factor in the value obtained from the process.

Overall, the use of this technology for subject evaluation in the University of South Australia has proven to be extremely promising. We confidently expect its use to increase, and we recommend it to others.

References


[4] Quality Assurance and Improvement: Subjects and Courses, Policy No A-35.0A.2, University of South Australia