USING A DATABASE WEB SURVEY TO MANAGE STUDENT FEEDBACK ABOUT COURSES: BUILDING A LEARNING COMMUNITY AROUND QUALITY

Kathleen Gray & Garry Allan
Faculty of Life Sciences
RMIT University, Melbourne, AUSTRALIA
kathleen.gray@rmit.edu.au, garry.allan@rmit.edu.au

Abstract
The implementation of a Web-based survey of student feedback about courses using a database for storage, searching and retrieval of feedback data is reported in terms of its role in building a learning community around improving the quality of student learning experiences, enhancing academic teaching staff productivity and facilitating the scholarship of teaching and learning.

Keywords
Course feedback, evaluation of learning technology, learning communities, program quality, student feedback, Web database, Web survey

Introduction

RMIT Faculty of Life Sciences during 2001 and 2002 developed and tested a Web-based survey for use in collecting and analysing student feedback about courses. The intention was to offer a tool that would offer a professional, convenient way for students to give feedback about key aspects of their learning experiences in any course in any program of study offered by the Faculty. It was also intended to alleviate academic teaching staff workload associated with preparing and administering feedback surveys, and collating, interpreting and reporting on feedback. The survey is linked to the course Web site for any course which has a presence in the University's online learning system – thus accommodating the approximately 75% of all Life Sciences courses that involve some level of online learning. The survey is available for student input in the final weeks of each semester via a Web page interface; feedback data are updated in a database dynamically and available continuously to course coordinators via a different Web page interface offering a choice of output formats. The challenge of fostering a 'learning community' approach to improving program quality in Life Sciences is a fundamental rationale for this project. Angelo (1999) identified 'seven shifts' required to enhance the quality of student learning experiences and academic teaching staff productivity within such a learning community:

- from a culture of largely unexamined assumptions to a culture of inquiry and evidence
- from a culture of implicitly held individual hopes, preferences and beliefs to a culture of explicit broadly shared goals, criteria and standards
- from a teaching culture that ignores what is known about human learning to one that applies relevant knowledge to improve practice
- from a narrow, exclusive definition of scholarship to a broader, inclusive vision
- from an academic culture that tends to ignore costs to one that attempts to realistically account for direct, deferred and opportunity costs
- from a culture that emphasizes and privileges individual struggle for private advantage to one that encourages collaboration for the common good and for individual advancement
- from a model of higher education as primarily a quantitative, additive process to one that is fundamentally qualitative and transformative

This paper reports on the RMIT Life Sciences course survey in terms of these seven shifts – its ability to contribute and particular issues that the course survey project still needs to address, with respect to each of these shifts. This report reflects the experience of the project coordinator (first author), and includes student and staff comments on their use of the survey collected as part of project evaluation to date.

A culture of inquiry and evidence

This survey was developed as part of a student feedback implementation plan integrated within an overall program quality management system coordinated by the Faculty's Office of Program Quality (Wahr and Radloff 2002). Within this system each program team carries out a 'stocktake' annually, to identify evidence to verify achievement of program quality criteria, to confirm the quality of such evidence, to identify any gaps between the criteria and the current evidence, and to develop an action plan to address these gaps. Course feedback data from the course survey can be triangulated with a range of types of evidence about student satisfaction and student performance within a program's overall self-monitoring activities, as part of this quality management system. Some universities are interested in the role of student feedback as part of inquiry and evidence in relation to teaching staff performance. The University of Colorado at Boulder (2001), for example, routinely provides student feedback from its generic course survey to Department chairs and deans for use in course assignments and in promotion, salary and tenure decisions. This is not the case at RMIT; university policy recognises that staff involvement in collecting and using feedback can be undermined if feedback is collected or used without staff agreement, thus Life Sciences staff are invited and encouraged but not obliged to use the course survey.

A culture of explicit broadly shared goals, criteria and standards

The course survey uses ten standard questions to which students in any course can meaningfully respond. It seeks quantitative feedback that would rate the perceived value of a course in vocational and general terms, asking students to respond with one of 'strongly agree', 'agree', 'disagree', 'strongly disagree', 'undecided or does not apply' to each of four statements:

- This course has offered me valuable knowledge
- This course has offered me valuable skills
- This course has been an important part of my degree program
- This course has been a worthwhile educational experience for me

It also seeks qualitative feedback through six open-ended questions regarding perceptions of learning in the course, and other aspects of course design and operation:

- What aspects of this course were the most successful in helping you to learn?
- What aspects of this course were the least successful in helping you to learn?
- What other comments would you like to make about your learning in this course?
- What advice would you give to other students about how to get the most out of this course?
- What suggestions would you make for improving the design and operation of this course?
- What other comments would you like to make about this course?

The use of ten standard survey items does not yet offer the ability to customise questions in order to target aspects of student learning of emerging interest or importance to a particular course coordinator. This may be overcome in future development of the survey by engineering the ability to add on to the basic question set to meet this need.

A culture that applies relevant knowledge to improve practice

Timeliness of student feedback and responses to it are facilitated by the course survey. As Hand and Trembath (1999, p.5) note of the Australian national generic Course [Program in RMIT terms] Experience Questionnaire, 'One of the main problems with the CEQ is that ... it doesn't tell us anything about the perceptions that currently enrolled students have about the quality of teaching and courses... the data can be two or three years out of date'. The Life Sciences course survey data are available to course teaching staff instantly upon being input to the database by students; with no delays for collation, they

can be used within short time cycles of course planning and preparation. The data can be graphically output for 'snapshot' style interpretation, or easily sorted or searched for feedback on a particular aspect of learning – feedback found to mention the word 'assignment' for example – where teaching staff may be contemplating changes in the same course or another one. Survey data need to be contextualised within the program's overall approach to gathering student feedback, and constitute only one form of evidence of student satisfaction. Efficient data handling is just one of many factors that affect teaching staff ability to respond in a timely manner to student feedback and to act to improve course quality.

A broader, inclusive vision

The survey is not intended to seek feedback about online learning specifically, but about all aspects of the student learning experience - classroom, workplace, independent, distance, etc. Course feedback management implemented via a Web-interfaced database models the effective and efficient use of technology to support teaching and learning, in line with the university's focus on the use of educational technology for sustainable, knowledge management oriented operations.
The significance of the Boyer scholarship of teaching is discussed by Angelo (1999); this has a key role to play in improving Life Sciences program quality. The course survey facilitates such scholarship, in that the data can be automatically collated at course level to provide feedback summaries for one or more offerings of the course, and can readily be aggregated across courses to provide program level feedback – enabling longitudinal and comparative research into teaching and learning within a Life Sciences community of practice. A challenge with such a tool is to assist staff to use it within a program team culture of continuous quality improvement.

A culture that attempts to realistically account for costs

Investment to achieve a functional testable survey tool was kept low, and future program extensibility and programmer availability were optimised, by developing the course survey using open source - HTML and JavaScript for the Web interface and PHP for the server side business logic. Staff time to design and develop was project-managed, and the survey program was constructed, using a 'wireframe' development approach (Future Now 2001) to keep the focus on essential deliverables and timelines, and to prevent project blowout. Staff time to implement and maintain the survey has likewise been closely controlled. As well, as students and staff noted, the survey 'doesn't waste paper or ink'. Two reality checks are being carefully factored into planning further development of the survey: the return on investment measured by the levels of survey utilisation by staff and students; and the ability to scale up to a survey that meets university-wide needs or inform the design of such an enterprise-level solution.

A culture that encourages collaboration

The program quality assurance management system is designed so that ensuing team management and decision-making can occur within an informed and considered context. The tradition of courses being wholly taught by individual staff members has been superseded by a situation where teams of staff including sessional staff, guest lecturers, demonstrators and tutors under the coordination of one academic now commonly share responsibility for the success of a course. The Web interface for data analysis enables ready sharing of student feedback both within a teaching team, and also among various teams responsible for contributing to the student learning outcomes at a particular year level, or in a particular discipline stream. Inviting students to participate in a Faculty-wide survey sends a message that they are valued collaborators in a systematic approach to course and program improvement. Response rates to date have varied between 10% and 75% of enrolled students in a course depending to some extent on the course coordinator's strategy for promoting the survey. Increasing student survey response rates is critical, especially in courses with enrolments of fewer than 20 students, to get statistically meaningful data. The most effective way to maximise the response rate has proved to be a course coordinator-arranged and supervised class session in a computer learning centre for students to give time and attention to completing the survey. Response rates have been lowest when students are simply notified that the survey will be available but no further encouragement to complete it is provided. This finding is consistent with experiences reported elsewhere – see Ballantyne (2000) for example, who notes that "the need to know that the feedback they provide is actually used" is a key to improved participation rates – the way staff communicate with students about the role of feedback may need further attention.

A model that is fundamentally qualitative and transformative

The course survey elicits qualitative feedback in the form of open-ended comments regarding perceptions of learning in the course, and other aspects of course design and operation, in order to reveal aspects of the student learning experience that other surveys may not – Dillman, Tortora and Bowker (1998) note that Web surveys may elicit more extended responses to open-ended questions that paper questionnaires typically do. Staff and students used the concepts 'honest', 'not restricted' and 'thoughtful' to convey the distinctive quality of feedback in response to such questions, especially when able to utilise the input and output tool in their own time via the Web.

Conclusion

Evidence of the contribution of the course survey to fostering a learning community in RMIT Life Sciences can be seen in voluntary uptake of the course survey by staff – in semester 2 2001, 15 course coordinators used the survey in a total of 20 courses; in semester 1 2002, 25 course coordinators used the survey in a total of 35 courses. Increased participation by staff and students is anticipated in semester 2 2002. Staff have reported a productivity gain, noting that the survey 'benefits both the quality and the quantity of my work'; long-term gains for improving student learning through the use of the course survey will need further evaluation.

References

Angelo, T. (1999) The campus as a learning community: seven promising shifts and seven powerful levers, in Pescosolido, B. ed, *Social worlds of higher education: handbook for teaching in a new century*, Thousand Oaks, CA: Pine Forge Press, pp. 111-116.

Ballantyne, C. (2000) *Why survey online? A practical look at issues in the use of the Internet for surveys in higher education*, paper presented at the Annual Conference of the American Evaluation Association, Honolulu, November [7pp.] (http://cleo.murdoch.edu.au/evaluation/pubs/confs/aea-2000.html) Accessed 30 July 2002

Dillman, D., Tortora, R. and Bowker, D. (1998) *Principles for constructing Web surveys,* Pullman, Washington: Washington State University Social and Economic Sciences Research Center Technical Report 98-50 (http://survey.sesrc.wsu.edu/dillman/papers/websurveyppr.pdf) Accessed 30 July 2002

Future Now, Inc. (2001) (Wire)Frame Yourself, *Grok Dot Com Newsletter* 07-01 (http://www.grokdotcom.com/wireframing.htm) Accessed 30 July 2002

Hand, K. and Trembath, T. (1999) *Course Experience Questionnaire Symposium 1998,* Evaluations and Investigations Programme report 99/2, Canberra: Department of Employment, Education, Training and Youth Affairs Higher Education Division (http://www.dest.gov.au/archive/highered/eippubs/99-2/ceq.pdf) Accessed 30 July 2002

University of Colorado at Boulder, Office of Planning, Budget and Analysis (2001) *Faculty Course Questionnaire (FCQ) Student Ratings of Courses and Instructors* (http://www.colorado.edu/pba/fcq/index.html) Accessed 30 July 2002

Wahr, F. and Radloff, A. (2002) Using quality assurance to drive a teaching and learning agenda: taking a risk, meeting the challenge, in Goody, A., Herrington, J. and Northcote, M., eds, *Quality conversations*: 2002 Annual International Conference of the Higher Education Research and Development Society of Australasia, 7-10 July, Perth, Western Australia, pp. 687-694 (Research and Development in Higher Education Volume 25).