

# PROMOTING REFLECTIVE DIALOGUE THROUGH GROUP ANALYSIS OF STUDENT FEEDBACK

Lorna Jarrett, Damien Field, Tony Koppi

Presenting author: Lorna Jarrett ([lorna.jarrett@sydney.edu.au](mailto:lorna.jarrett@sydney.edu.au))  
Faculty of Agriculture, Food and Natural Resources, The University of Sydney, Sydney NSW 2006, Australia

**KEYWORDS:** scholarship of teaching, survey, qualitative data analysis, teaching principles, discussion

## ABSTRACT

This paper describes an activity intended to promote scholarship of teaching through small-group discussion of feedback from students. There is a paucity of literature on group reflection of student feedback which this paper aims to address. Reflection on teaching is often a lone activity but this Australian Learning and Teaching Council (ALTC) supported project afforded the opportunity for group reflection by teachers from five institutions during our first project workshop. To provide the data for group analysis, students from the participating institutions completed a survey designed by the project team. A workshop activity was devised in which groups analysed the qualitative survey responses and derived principles for learning and teaching based on their reflection. Evaluation of the activity included workshop participant evaluation forms, feedback from the ALTC project team and evaluator; and the principles developed during the activity. A notable measure of the activity's impact is that most participants stated that as a result of the workshop, of which this activity was a significant part, they intended to change something about their own teaching.

Proceedings of the 16th UniServe Science Annual Conference, University of Sydney, Sept 29<sup>th</sup> to Oct 1<sup>st</sup>, 2010, page 53-59, ISBN Number 978-0-9808597-1-3

## INTRODUCTION AND RATIONALE FOR THE ACTIVITY

This paper describes the process and outcomes of an activity intended to promote scholarship of teaching and learning among soil science academics from five institutions. It involved structured group reflection on student feedback obtained from an online survey and the generation of principles for learning and teaching based on this reflection. The activity is part of a larger project which aims to produce curricular, and cultural change. According to Schön (1987) and Brookfield (1995), cultural change can be brought about through peer discussion and reflection on teaching practices.

The student data provided an authentic reason for a disparate, heterogeneous group of teaching staff from five institutions to reflect on and talk about teaching. The format of the activity gave structure and purpose to the conversations. The survey data was current and from the participants' own students, so it provided a way of bringing the students' voices into the workshop and getting participants to engage with their students' points of view. The minimal editing of students' comments gave immediacy to the activity, which deliberately did not include any conclusions drawn by the researchers in order to encourage active participation by the teachers. The activity also comprised part of the analysis of the qualitative survey data. While methods for analysis of quantitative data are relatively prescribed, qualitative analysis is a subjective and open-ended process (Bogdan & Biklen, 2002). This activity yielded multiple perspectives on the data set, enhancing the credibility of the qualitative survey data analysis.

## BACKGROUND

This activity is part of a larger project supported by the Australian Learning and Teaching Council (ALTC) involving the Universities of Adelaide, Melbourne, Queensland, Sydney and Western Australia. It aims to develop a national soil science curriculum in response to the needs of students, academic staff, industry and the wider community. The curriculum will be student-centred, encouraging students to take an active role and assume responsibility for their learning. This will involve cultural change for both staff and students. Fullan (1999) states that reflection by individuals, between groups and within organisations, is essential to effecting change in teaching practice. However, Fendler (2003) points out that reflection based only upon the teachers' own thoughts can fail to confront existing ways of thinking. Loughran (2002) asserts that in order for reflection to be meaningful, a method must be found to enable teachers to see their practice as others do.

One of the early stages of curriculum change involves consultation with stakeholders to gather data about the current curriculum (Bath, Smith, Stein & Swann, 2004; Daniels & McLean, 2004; Harden, 2000). Students are key stakeholders in education; therefore consultation with students is vital in helping to ensure that the intended, delivered and received curricula are aligned, alternative viewpoints are heard, unexpected and unintended issues are less likely to be neglected, and misleading results are less likely (Bath et al., 2004; Bruinsma & Jansen, 2007; Plaza, 2007; Wachtler & Troein, 2003). Consultation with stakeholders can take the form of surveys, interviews or focus groups. Our consultation with students took the form of an online survey which generated both qualitative and quantitative data. It was developed by the project team and made available to all students currently enrolled in soil science courses in the participating universities. Our student survey thus served two complimentary purposes: to contribute to the picture of current practice which will form the baseline for curricular change; and to contribute to cultural change by forming the focus of reflective dialogue among teaching staff, thus promoting of scholarship of teaching (Trigwell & Shale, 2004).

Andresen (2000) asserts that the activities of intellectual development, inquiry and action must be personal but rigorous. A component of scholarly teaching is the provision of a process through which staff can assess the quality of their teaching. Such a process should be activity-oriented and student-centred; and should lead to a resonance between what teachers aim for and what students experience (Trigwell & Shale, 2004). Trigwell and Shale's scholarship model assumes a partnership between teacher and student rather than an instructional relationship and thus advocates the inclusion of the student voice as a means to participate in the disciplinary community. Reflecting on survey responses from current students meets these requirements but for this to contribute to scholarship there also needs to be the opportunity for teaching staff to identify how this can be used to effect change. Our activity addressed this need by making students' voices the focus of staff reflection and group discussion: requiring staff to think critically about the impact of their teaching practices on students and asking them to collaboratively generate learning and teaching principles based on their discussion and reflection.

## **METHODS AND RESULTS**

We did not want to adapt existing teaching principles from another discipline as this could be viewed as "preaching" to the participants and would therefore be unlikely to lead to ownership of the project or to result in lasting change. The workshop was attended by about 80% of teaching staff from all participating institutions and comprised several sessions intended to promote engagement and reflection. Sessions were intended to be "hands-on", with a minimum of passive listening to presentations. Stages in the activity reported here involved the development of the student survey; collation and preparation of the data; implementation of the workshop session; and its evaluation. The preparation and execution of this activity is illustrated in Figure 1 as a series of cycles forming an action learning process (Kemmis & McTaggart, 2001).

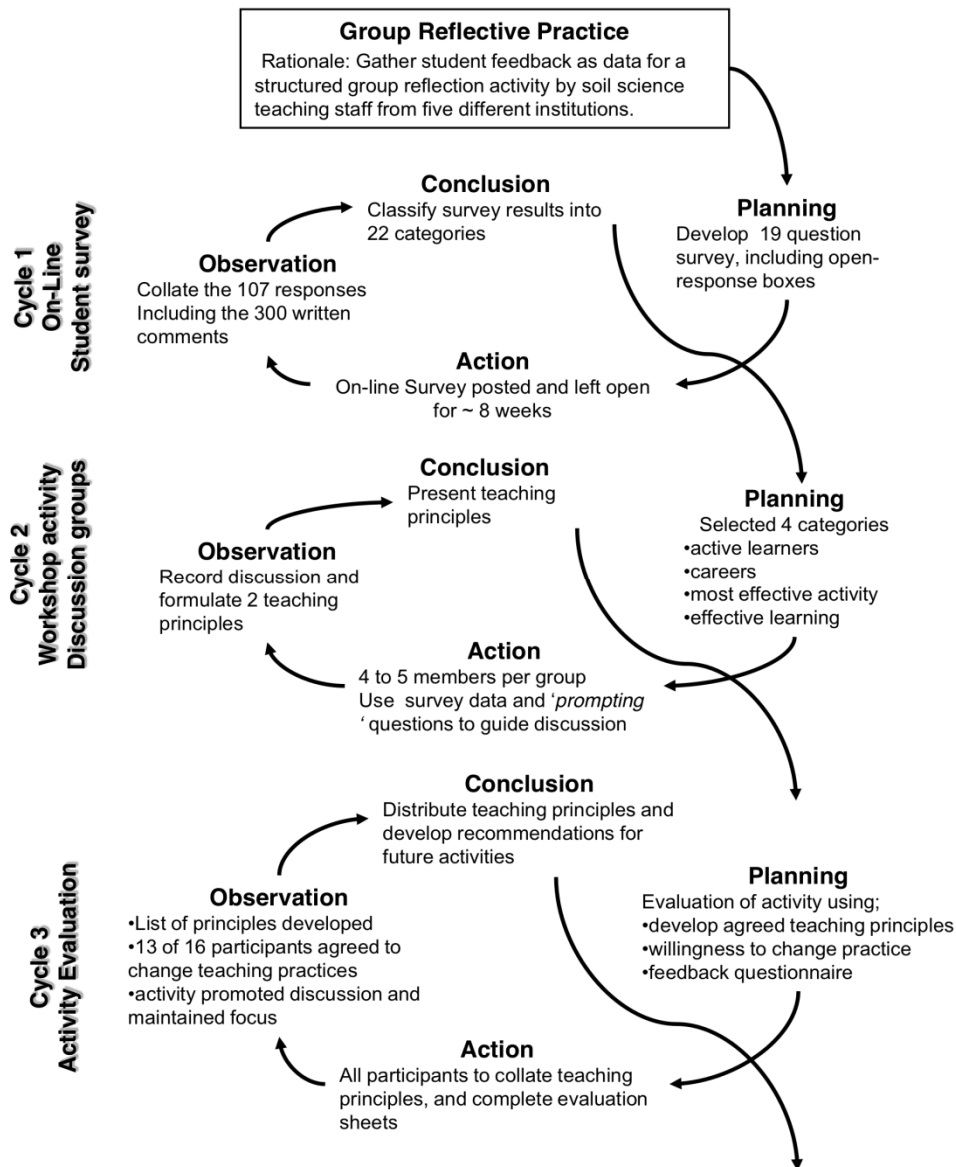


Figure 1: The workshop activity as an action learning process

## DEVELOPMENT OF THE STUDENT SURVEY

We obtained Ethics approval for all project activities including the student survey and participation of teaching staff. The authors and the project leader developed the survey which was trialed by members of the project team at the partner institutions. We did not pilot the survey with students because the total number of students available to complete the survey was relatively small (about 450), and a pilot group would not have been available to complete the final version of the survey. We designed the survey with open-response boxes in most questions to allow students to express their ideas fully and avoid constraint by the survey design (Figure 1, cycle 1). The survey was made available online and we received responses from all participating institutions. 107 students responded to the survey and made over 300 comments in total. This represents a response rate of approximately 24 percent. The survey design was informed by Fowler (2002) and the questions are given in Appendix 1.

## PREPARATION FOR THE ACTIVITY

Prior to the workshop the qualitative data, ie: students' comments and answers to extended-response questions, were assigned by the lead author to one or more of 22 categories (Figure 1, cycle 1).

Some of these categories were determined from the survey questions and some emerged from the data. This qualitative data analysis method was informed by the work of Bogdan and Bicklen (2002) and Boyatzis (1998). For example, the comment:

*"I prefer assignment or report based assessment, it allows me to explore a subject further and use other resources than learning guides etc."* was categorised under "assessment", "meaningful learning" and active learners"

The purpose of this was to sort the raw data into sets, each relating to a particular category, which could form the focus for discussion of that category. The next stage in the process involved choosing which of the 22 categories would be the focus of group discussions: our workshop activity had four groups, so we required four categories. Our selection criteria were: interest to participants; potential for contribution to the development of teaching principles; and alignment between the outcomes of the activity and the desired outcomes of the ALTC-supported project. The categories we chose were: "active learners", "careers", "most effective activity" and "effective learning" (Figure 1, cycle 2). Comments which had been placed into these categories were extracted to form a list for each category: each list contained between 18 and 25 comments. Any potentially identifying information was removed and spelling corrected but no other changes were made. The four sets of student comments were printed and the pages cut into strips, with each strip containing a single comment. This was to prevent the participants perceiving them as an ordered list with the associated primacy/recency (Jersild, 1929) effects; to help participants to focus on each comment individually; and also to allow participants to physically organise the comments into groups to aid their analysis.

## THE ACTIVITY

Workshop participants were assigned to four groups, with at least one member of each institution in each group wherever possible (Figure 1, cycle 2). Each group was issued with a set of student comments, a set of instructions comprising two tasks and a list of possible questions to stimulate discussion. The instructions for the four groups were broadly similar, but the focus questions and tasks were tailored to the category being reflected upon. As an example, the instructions for the category "active learners" are shown below:

### TASKS - ACTIVE LEARNERS

1. Write down words and phrases to summarise what the data suggests about fostering active learners.
2. Can you formulate two teaching principles to support and encourage students to take responsibility for their learning?

### POSSIBLE QUESTIONS TO FOCUS DISCUSSION

How would you define an active learner?

Are our students active and self-motivated learners?

What factors are preventing them from taking a more active role in their learning?

What things are we doing to help them take responsibility for their learning?

Are there any contradictions in what the students say? Can you explain these?

What skills do students need to engage in active or self-directed learning?

What topics, activities and year groups is active or self-directed learning suitable / unsuitable for?

Although some groups felt that there was not enough time, all groups were able to develop teaching principles. Each group summarised their discussion on butchers' paper, generated two teaching principles for their category and presented their findings to the other participants.

## EVALUATION

The activity was evaluated in terms of:

- Principles derived from the student comments by each group
- The intention, expressed by most participants, to make changes to their teaching as a result of the workshop
- Feedback from the participants, ALTC project team members and project evaluator.

The most tangible outcomes of the activity were the principles drawn up by each group during the activity (Figure 1, cycle 3). Less tangible outcomes include focused reflection and discussion between teaching staff, engagement with and critical evaluation of students' feedback and a feeling of ownership of the project. Evidence of these was gathered through observation of participants during

the activity, participants' workshop evaluations and comments made by the ALTC project team and evaluator. Of the sixteen participants who completed workshop evaluations, thirteen agreed or strongly agreed that they would change something about their teaching as a result of the workshop. Given that this workshop was intended simply to begin the process of cultural change in teaching, this is a powerful result. Participants made the following comments on their evaluation forms:

*"Interpretation of student comments – good because we were interpreting / analysing actual feedback"*

*"Student feedback information and good teaching principles were very useful".*

*"It was excellent to share ideas about teaching with other soil scientists"*

*"Props were good, some thought had gone into "helping" us contribute at sessions"*

*"Students' feedback – too much to do in the given time"*

These comments demonstrate the value of both the activity's structure and use of recent student feedback but underline the importance of providing enough time for participants to engage fully with it.

The ALTC project team discussed the activity the next day as part of their workshop appraisal. This discussion was audio-recorded and the following remarks were made about the activity:

*"The group activities worked surprisingly well. What we did was effective and generated a depth of discussion that perhaps we wouldn't have achieved otherwise".*

*"I thought it went extremely well and I've been to many of these sessions. People were obviously genuinely engaged – it wasn't just a talk-fest".*

*"The preparation really made the day work. The structure made it so that people wanted to come. The structure was good – that was an important part of why it worked".*

These quotes confirm the depth of engagement and reflection that occurred and underline the importance of structure and purpose in the design of activities in helping to achieve this.

## **CONCLUSIONS AND RECOMMENDATIONS**

Reflection by individual teachers on feedback from their students is a common practice (Hoban, 2000; Hoban & Hastings, 2006; Wickramasinghe & Timpson, 2006) but we believe that the cross-institutional group reflective activity presented here has the additional advantages of greater anonymity for students, feedback from a wider student group and staff collaboration. The on-line survey was clearly identified cross-institutional. This may have encouraged students to be more forthright in their comments as opposed to completing an evaluation in their 'classroom' because of the much larger number of students participating. Rather than reflecting on data from a group of students they had recently taught, the participants reflected on feedback from all participating institutions, representing (within sampling limitations) the perceptions of the whole student body. This may have had the effect of de-personalising the experience and making it less threatening. The collaboration of teachers from different institutions, each with their own experiences, culture and concerns, may have increased the opportunities for questioning assumptions and breaking out of entrenched ways of thinking (Hoban & Hastings, 2006).

Evaluating our action learning cycle, we are satisfied that each cycle produced information of sufficient quality to inform the subsequent cycles. Although not indicated in Figure 1, cycle 3 resulted in a list of 10 teaching principles that have been distributed to the participants in the project for comment. We emphasise that allocation of time is critical, as is the amount of stimulus material as some of the groups did not complete their discussion in the time available. We also recommend written and/or audio recording of the discussions which may be shared with other participants enabling them to observe the conversations held by other groups and the detail behind the principles they developed. Audio recordings would also reduce the burden on participants of simultaneously engaging in discussion and making notes. Finally, to develop the outcomes from cycle 3 there is potential to develop a strategy for follow-up: for example inviting participants to record changes that they wanted to make as a result of the workshop and soliciting feedback on whether they had made the intended changes. Trigwell and Shale (2004) caution that scholarship does not end with discussion but depends critically on putting ideas into action.

## FUTURE RESEARCH

The teaching principles developed during our workshop will be used in the next action cycles of our project. The workshop activity framework will be used to elicit feedback from employers in our next workshop and we will endeavour to determine whether the activity has resonates with them.

## ACKNOWLEDGEMENTS

We would like to acknowledge the Australian Learning and Teaching Council for funding the project of which this activity is a part, and also the invaluable contribution of the workshop participants.

## REFERENCES

- Andresen, L. W. (2000). A useable, trans-disciplinary conception of scholarship. *Higher Education Research & Development*, 19(2), 137–153.
- Bath, Smith, Stein, & Swann. (2004). Beyond mapping and embedding graduate attributes : bringing together quality assurance and action learning to create a validated and living curriculum. *Higher Education Research & Development*, 23(3), 313-328.
- Bogdan, R. C., & Biklen, S. K. (2002). *Qualitative Research for Education: An Introduction to Theories and Methods* (4th ed.). Allyn & Bacon.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage Pubns.
- Brookfield, S. D. (1995). *Becoming a Critically Reflective Teacher*. Jossey-Bass Higher and Adult Education Series. Jossey-Bass, Inc., 350 Sansome St., San Francisco, CA 94104
- Bruinsma, M., & Jansen. (2007). curriculum mapping: integrating multiple perspectives on the curriculum. *curriculum and teaching*, 22(1), 25-45.
- Daniels, & McLean. (2004). Integrating Technology into Teacher Education Through Curriculum Mapping: An Update on Year Two. In *Proceedings of Society for Information Technology and Teacher Education International Conference 2004* (pp. 2089-2094). Presented at the Society for Information Technology and Teacher Education International Conference (SITE) 2004, Atlanta, GA, USA.
- Fendler, L. (2003). Teacher Reflection in a Hall of Mirrors: Historical Influences and Political Reverberations. *Educational Researcher*, 32(3), 16-25. doi:10.3102/0013189X032003016
- Fowler, F. J. (2002). *Survey research methods*. Sage.
- Fullan, M. (1999). *Change forces: the sequel*. Routledge.
- Harden, R. (2000). Curriculum mapping: a tool for transparent and authentic teaching and learning. *Medical researcher*, 23(2), 123-137.
- Hoban, G. (2000). Making practice problematic: Listening to student interviews as a catalyst for teacher reflection. *Asia-Pacific Journal of Teacher Education*, 28(2), 133–147.
- Hoban, G., & Hastings, G. (2006). Developing different forms of student feedback to promote teacher reflection: A 10-year collaboration. *Teaching and Teacher Education*, 22(8), 1006-1019. doi:10.1016/j.tate.2006.04.006
- Jersild, A. (1929). Primacy, recency, frequency, and vividness. *Journal of Experimental Psychology*, 12(1), 58-70. doi:10.1037/h0072414
- Kemmis, S., & McTaggart, R. (2001). Participatory action research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of Qualitative Research* (Second ed., pp. 567-605). Thousand Oaks: Sage.
- Loughran, J. J. (2002). Effective reflective practice: In search of meaning in learning about teaching. *Journal of Teacher Education*, 53(1), 33.
- Plaza. (2007). Curriculum Mapping in Program Assessment and Evaluation. *American Journal of Pharmaceutical Education*, 71(2).
- Schön, D. A. (1987). *Educating the reflective practitioner*. Jossey-Bass San Francisco.
- Trigwell, K., & Shale, S. (2004). Student learning and the scholarship of university teaching. *Studies in Higher Education*, 29(4), 523. doi:10.1080/0307507042000236407
- Wachtler, C., & Troein, M. (2003). A hidden curriculum: mapping cultural competency in a medical programme. *Medical Education*, 37(10), 861-868. doi:10.1046/j.1365-2923.2003.01624.x
- Wickramasinghe, S., & Timpson, W. (2006). Mid-Semester Student Feedback Enhances Student Learning. *Education for Chemical Engineers*, 1(1), 126-133. doi:10.1205/ece06012

**Appendix 1: Survey questions**

No.	Question text	Qualitative or quantitative?	Answer format	Comment box?
4	Activities and materials involved real-life or realistic scenarios and/or case-studies.	Both	Likert scale: strongly disagree → strongly agree	Yes
5	Subject activities and materials involved input from industry	Both	Likert scale: strongly disagree → strongly agree	Yes
6	The subject activities involved me applying my knowledge to give explanations, justify decisions, make predictions or suggest solutions to problems.	Both	Likert scale: strongly disagree → strongly agree	Yes
7	I was able to contribute to the learning agenda e.g. by choosing experiments or essay topics or giving feedback during lectures so the lecturer could focus on what I needed to learn.	Both	Likert scale: strongly disagree → strongly agree	Yes
8	The assessments allowed me to demonstrate the knowledge and skills I had learned.	Both	Likert scale: strongly disagree → strongly agree	Yes
9	I think the subject helped prepare me for future employment in a soil science related area	Both	Likert scale: strongly disagree → strongly agree	Yes
10	How much of the subject content involved rote learning (memorising facts and figures)?	Both	Likert scale: Percentages in 20% steps	Yes
11	Apart from laboratory work and fieldwork, how much of your subject activities involved group work or group discussions?	Both	Likert scale: Percentages in 20% steps	Yes
12	How much of the time did you spend in a passive role such as listening to lectures, following set procedures in laboratories, solving set problems in tutorials?	Both	Likert scale: Percentages in 20% steps	Yes
13	The way the subject is taught suits the way I like to learn	Both	Likert scale: strongly disagree → strongly agree	Yes
14	If there are differences between how the subject is delivered and what you want, please tell us more.	Qualitative	Extended response	N/A
15	I learn best from:	Both	Likert scale: strongly disagree → strongly agree	Yes
16	It's easy to discuss my work with the teaching staff	Both	Likert scale: strongly disagree → strongly agree	Yes
17,18	Please tell us about the learning activity that was most effective for you and why it was so effective	Qualitative	Extended response	N/A
19	Is there anything else you would like to tell us about your experience with soil science?	Qualitative	Extended response	N/A