

## Micro-evaluation of teaching and learning in courses

Micro-evaluation is our term for the evaluation you conduct as part of your teaching – knowing your students and improving your teaching and their learning experiences. Micro-evaluation is integral to student learning; it is primarily aimed at improving the learning experience of your current students.

Some examples:

- ascertaining if some students are having difficulty learning and what they are struggling with – aimed to inform the teaching of those students.
- reviewing the impact and effectiveness a particular learning or assessment activity to inform subsequent student learning activities and improve the same activity for next cohort of students. For example you may have introduced a peer assessment task and want to know how to give it the greatest chance of success.
- quick reviewing of student learning as part of an activity. For example you have conducted a lecture and have assumed that the students 'got it'. But is that really the case?
- establishing key information about your students which can be incorporated in your teaching. For example if any of your students have had relevant work or community experience you can draw on this experience in your teaching.
- generally appraising the course so far. How have your students been finding it? Are there any issues?
- clarifying specific issues. You may have heard from some students there is a workload problem. Is that other students' views too? Where are the pressure points? What can be done about it?

We could include end of semester course level evaluation in 'micro-evaluation' – intended to improve teaching and learning the next time the course is run and with the next cohort of students. As we want to emphasise the role of evaluation as part of teaching in these notes we are focussing on 'within course' evaluation and improvement cycles. Naturally most principles and tips/ suggestions can inform end of course evaluations too!

### First and foremost – some key ideas

**Micro-evaluation is about knowing your students**, their learning experience and what they are or are not learning. It is about following up and improving their learning experiences and outcomes.

**Micro-evaluation is primarily about the outcomes, processes and experiences of student learning.** Are they in fact learning? Are they learning the outcomes we have in mind? Are they grappling with the key ideas to be learned? Are they approaching learning intent on the right things, for example, aiming to understand? Are they having difficulty with any aspect of the course?

**Micro-evaluation is an integral part of teaching** – it is not an add-on or a separate activity. In some cases it may not be visible to students. In many cases it needs to be made visible and open to students so students see the impact of their comments or suggestions.

**Micro-evaluation involves cycles of reflection, data gathering, decision and action** – sometimes called an action-inquiry approach to teaching. Data gathering is aimed at improvement of learning experience.

### Tips and suggestions

1. Many existing aspects of teaching and learning can be used to provide feedback to you about students learning. Clearly both formal and informal assessment tasks provide crucial evidence of student learning. Other triggers to watch out for include student questions, behaviour and requests. Simply observe students in action. For example, are

- students in studio, conducting an experiment, working in groups, completing a computer-based exercise, looking as if they are learning or more broadly on a track to learning?
2. To take advantage of these potential triggers we need to find moments of reflection to ask ourselves if the questions students raised in today's class (for example) reflect an underlying issue – are other students having the same difficulty? Did my explanation help their understanding?
  3. Look for signs that students are having difficulty. This may be as simple as lots of frowns in a class or errors in assessment tasks or requests for more time. You may well need more information to clarify the issues, including where the learning difficulty lies, so follow up with conversations with, or questions for, students.
  4. Sometimes the 'signs' may point to other aspects of the teaching; for example lack of attention or rowdiness in class. It is still worth following up with more investigation to get a better appreciation of what are likely causes.
  5. Always take time out to think what your purposes are when evaluating. What are you interested in 'uncovering'? Think about how you will use the information you discover. If you are unsure at any stage it usually helps to go back to your goals – it is a way of checking you are not wasting your effort.
  6. Engage in discussions with peers or students whose opinion you would respect. Discuss what you are wanting to evaluate, why and how – as well as how you expect to use the information. An independent voice in conversation helps you to clarify your ideas, approach and method.
  7. Consider engaging a peer as a mentor for your teaching in a specific class. For example you may have a class with very large enrolment for the first or second time. Identify a colleague or independent experienced teacher whose opinion you respect. Perhaps they can meet you once a fortnight (say) for a brief discussion about issues and possible solutions. With time you may have the confidence to ask that person to observe your teaching.
  8. You may hear what a student says but you may not be listening. What a student says may be only roughly pointing to an issue – it is up to you to give the benefit of the doubt to the student and through further investigation and reflection uncover the issue which needs to be addressed. A useful attitude is upon receiving student comments – especially if unsolicited – always assume that there is an issue to be further investigated.
  9. Talk to a few students from your class or program. You may or may not choose randomly – usually any conversation with students can be revealing – if you are listening. Conduct your conversation using the students to help you uncover the issues and suggest actions which could enhance learning. More formal interviews with students could be used to explore issues at greater depth.
  10. Establish an online discussion forum on strengths, weaknesses and improvements to the teaching or course. You could focus the conversation on specific aspects of the teaching – though be wary you don't close off key issues or suggestions from the discussion. Private emails to you or a confidential suggestion box are other ideas.
  11. Form a focus group of students to provide feedback including suggestions for improvement. You could conduct the focus groups as informal discussions or systematic reviews. Use an approach you are comfortable with – though being focused on outcomes to implement is usually a good idea.
  12. Conduct a one minute paper (Angelo and Cross, 1993). At the end of a class or lecture ask students to spend a minute writing responses to two questions: "What was the most important thing you learned during this lecture?" and "What important question remains unanswered?" An alternative to the second question is "What is the muddiest point in ....?" Collect responses and respond yourself in your next lecture. Another variation is to encourage student discussion in small groups. Consider asking small groups to suggest questions.

13. Another approach which focuses on 'critical incidents' in learning has been proposed by Brookfield (1995). Take five minutes at the end of a week's class to get student responses to five questions:
  - a. At what moment in class this week did you feel most engaged with what was happening?
  - b. At what moment in class this week did you feel most distanced from what was happening?
  - c. What action that anyone (teacher or student) took in class this week did you feel most affirming and helpful?
  - d. What action that anyone (teacher or student) took in class this week did you feel most puzzling or confusing?
  - e. What about the class this week surprised you the most? (Brookfield refers to this as a Critical Incidence Questionnaire, CIQ, 1995, p115)
14. If you want to use the CIQ but have large classes consider forming small groups to summarise each individual's response – this means you will have one completed CIQ for every 5 or 6 students. Alternatively read a sample of the final set of all students responses.
15. Conduct a questionnaire with your students – either all or a subset. When preparing your questionnaire consider first having a few informal conversations with students to help clarify the questions you need to ask and options you need to canvas. List the issues you would like to raise with the students before compiling your questions. Use open questions if possible as they are less likely to restrict students. If you want to use questions with a closed set of responses refer to the CEQ questionnaire and RMIT's course survey instrument for useful ideas. See also Further Reading below including Ramsden and Dodds, 1990.
16. When assessing student work keep a notebook with your summaries of the weaknesses and strengths as well as conjectures about underlying issues of learning and teaching. Most importantly note ideas for your teaching. For example you may be able to identify a common mistake or a misconception which can be addressed in your next lecture or in the tutorials by your tutors. Clearly this is an important part of reviewing drafts of completed tasks.
17. Introduce interactive activities into parts of your teaching as they help you monitor student learning difficulties and progress. For example, short small group activities into lectures; draft submissions or progress reports for essays, projects, laboratories and the like; voluntary self/ peer-assessment activities; voluntary multiple choice question quizzes.
18. If others are helping you teach and/ or assess student work allow time to reflect together about areas for improvement of learning and teaching and discuss ideas for implementing.
19. If you are leading a teaching team for a large course, involve the team in a genuinely collaborative approach to course design, implementation and review. The team can be more effective than an individual in keeping 'a finger on the pulse' as well as resolving issues that arise. More minds to the task can help decide the actions to take and will be more committed to improving through follow-up in teaching and assessing.
20. It will help you evaluate to clarify your thinking about effective learning. What do you expect the students to be doing at a specific point in time? What does good learning in this topic or task involve? If you can push yourself to answer these questions then the next step is clearly – are your students actually doing this?
21. An extension of the previous tip is to identify your views of learning in terms of authoritative theories (of student learning). This helps you clarify your questions of students and your observations of their practices. It is also central to deciding the actions you need to take. In some cases researchers have developed questionnaires

which can be used by teachers to recognise productive and unproductive learning patterns.

22. When reflecting on data you have collected try and avoid immediately fixing on a solution – interrogate the data, look at information from different sources (students, peers, your observations), canvas different underlying problems, put up and test various options for action. Sometimes you come to the data analysis with the problem and even the solution already in mind. Try and put them to one side to be open to new ideas at this stage.
23. Test your ideas for action with colleagues, mentor or a critical friend and even a few students. This will help you determine a plan for effective implementation.
24. When you have decided what you are going to do, inform your students. Point out how their feedback has helped you decide what you will be doing – even if their comments were ‘just’ a trigger. Explain discrepancies, for example, if students comments were about workload but you decided there was a misunderstanding of the requirements of the work – make this clear. Above all else, students want to see that you are listening!
25. Document the issues and summarise the feedback and your decision as part of your teaching portfolio. It helps you later recall your experiences, the lessons you have learned and puts you in a better position to get to the nub of the issue as soon as possible. Keep evidence of the impact of your teaching as part of your portfolio to use later if necessary as part of promotion or job applications.

Micro-evaluation raises ethical and confidentiality issues which need to be addressed – particularly in conversations, interviews, surveys and group discussions with students. Students could feel they cannot be honest as you are also responsible for assessing their work. Students could be worried you may reveal the feedback each as provided. They may feel there is no point providing comments and suggestions as they are not acted upon.

Microevaluation needs to be characterised by:

- respect for individual and collective student views and opinions,
- maintenance of confidentiality,
- open and honest interaction between students, teachers, peers,
- recognition that the power of teachers, particularly through assessment, threatens openness and honesty,
- fairness of treatment of students and teachers,
- acceptance of the diversity of impacts, experiences and views,
- responsibility of the teaching team and course coordinator for leadership.

### **Doing and learning more**

Here are some suggestions to further extend your skills and knowledge on this topic.

1. Review the references, other literature you know and search the WWW for examples of good practice in evaluation in teaching.
2. Discuss with other teachers their approaches to evaluation – self, student, peer as well as ways they go about making sense of the data they collect and implement follow-up actions.
3. Reflect on the teaching approach with others from industry, discipline or the profession – particularly if they have some teaching experience.
4. Reflect on the evaluation and improvements with students who have completed the course including with students who have completed the program. Honours and research students can perhaps offer valuable insights reflecting on more than one of your courses.

The Library databases are available via the Library website and are listed according to the different discipline areas. Key educational databses include ERIC (international), ProQuest Education Journals (international) and A+ Education (Australian). As with searching the web consider carefully the key words and phrases you use when searching. The databases will require you to combine key words with boolean operators (AND, OR, NOT) to form search expressions. See the online guide at <http://www.rmit.edu.au/library/info-trek> (Source Gary Pearce).

## Searching the Web

You will find many resources on evaluation on the Web. Searching best incorporates 'evaluation' with other keywords narrowing the focus to higher education, university, your discipline or profession or teaching and learning more generally. Remember that 'evaluation' in Australia is usually seen as 'assessment' in United States. Specific well known techniques can be the basis of a search and will reveal examples and variations of use – for example "one minute paper" or "minute paper" and "critical incident questionnaire".

## Further reading and references

Angelo T.A. and Cross, K.P. (1993) *Classroom Assessment Techniques: A handbook for college teachers*. 2<sup>nd</sup> Edn Jossey-Bass, San Francisco

This reference describes many evaluation techniques for incorporate in face to face teaching situations, including large lectures. Each example is described at length with variations and examples of the techniques in practice.

Brookfield, S.D. (1995) *Becoming a Critically Reflective Teacher*. San Francisco, Jossey-Bass  
Chapter 6 describes the critical incident questionnaire. The book presents a coherent view of reflective, student-centred teaching with a range of broad suggestions for practice.

Centre for the Enhancement of Learning, Teaching and Scholarship (2004) *Evaluation as Academic Practice* University of Canberra, Canberra

<http://www.canberra.edu.au/celts/evaluation/evaluation> [Visited April 29<sup>th</sup> 2005]

An introduction to evaluation as action-inquiry with useful links to other resources.

Harvey, J. (Ed) (1998). *Evaluation Cookbook*. Institute for Computer Based Learning, Heriot-Watt University, Edinburgh. <http://www.icbl.hw.ac.uk/itdi/cookbook/contents.html> [Visited April 29<sup>th</sup> 2005]

A comprehensive resource on evaluation – on each stage of an evaluation from planning to analysis and action. One of its strengths is a solid introduction to various methods of evaluation including focus groups and questionnaires. A little difficult to find your way around but stick at it!

Learning and Teaching Unit (2005) *Gaining and responding to feedback on your teaching*. University of New South Wales, Sydney. [http://www.ltu.unsw.edu.au/ref3-4-5\\_feedback.cfm](http://www.ltu.unsw.edu.au/ref3-4-5_feedback.cfm) [Visited April 29<sup>th</sup> 2005]

Briefly describes a number of methods for gaining feedback.

Ramsden P. and Dodds, A. (1990) *Evaluation of Teaching and Courses at RMIT*. ERADU, RMIT, Melbourne

[Chapter 2, Evaluating Courses is available from Library eReserve

<http://digital.lib.rmit.edu.au/copyright/vb.php?ereserve/notes05/general/31259007732790.pdf>]

Ramsden and Dodds describe evaluation with simplicity and clarity along with a number of suggestions for practice.

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