Is tutor training worth it?
Acknowledging conflicting agenda

Michelle Kofod¹
The University of New South Wales, Sydney, Australia
m.kofod@unsw.edu.au

Rosanne Quinnell
The University of Sydney, currently The University of New South Wales, Sydney, Australia
rquinnel@bio.usyd.edu.au; rosanne.q@unsw.edu.au

Will Rifkin
The University of New South Wales, Sydney, Australia
willrifkin@unsw.edu.au

Noel Whitaker
The University of New South Wales, Sydney, Australia
n.whitaker@unsw.edu.au

¹ The authors are listed in alphabetical order as equal contribution to the research was made by each.

Our data supports the assertion that a tutor training program can successfully engage our “future colleagues” in reflecting on their teaching and shift their practices to a student-centred perspective. However, many sessional staff either do not undertake such training or do not complete it. We suspect that this lack of participation is caused by a raft of pressures and agenda in the career paths of the postgraduate students, many of whom serve as our sessional staff. Understanding the factors that are impeding participation is critical in creating a positive shift in attitudes with respect to teaching and learning practices not only among the trainees but within our discipline culture -- science. Reflecting critically on the institutional climate and our objective to change the way that science academics view teaching and learning has left us with serious questions about the value of what we are doing in this training program.

Keywords: sessional staff, professional development, science, conceptions of teaching

Introduction

Acknowledging the level and quality of training of sessional staff is not new. Sutherland (2002), for example, conducted an extensive audit of sessional teaching staff at Victoria University (NZ). Her findings revealed that many of the sessional staff were unqualified and unsupported thus highlighting the real need for staff training. In 2003, a report by the Australian Universities Teaching Committee (AUTC) demonstrated that sessional staff received only rudimentary training for their appointments. Since 2004, our team in the Faculty of Science at the University of New South Wales (UNSW) have developed,
implemented and evaluated a faculty-wide program to train science tutors and demonstrators in learning and teaching. The program has been successful in providing training and professional development for our sessional staff, but beyond that, we designed the program as a mechanism to focus both sessional and tenurable academic staff on student-centred approaches to learning and teaching. While we acknowledge that there are already pockets of outstanding student-centred learning practices in tertiary science – at our university and elsewhere, we aim to make headway against science curricula that are still content-heavy, where delivery is largely didactic with the focus on the lecturer.

Where the program *per se* has been successful in terms of introducing sessional staff to what we see as sound pedagogy, we are concerned about the lack of “buy in” by our academic colleagues. We are now at the point of reassessing the program as a cultural-change initiative within in a contemporary Australian tertiary institution. Our approach is to identify conflicting agenda – our own, those of the sessional staff and other stakeholders. Tensions between the institutional rationale for implementation of such a program and local, special requirements of a training program were noted by Smith and Bath (2004), in describing their tutor training program.

This paper poses a simple question “Is tutor training worth it?” It identifies some of the agenda that make answering this question complex.

**Who are our sessional staff?**
The sessional staff in the Faculty of Science at UNSW usually teach within their own discipline. A large proportion of these staff are recruited from postgraduate and honours students from within the Schools, and they often only teach for the term of their degree program (2-3 years). Postgraduate students have particular time constraints driving their agenda, with their principal focus being their own research, which is on a tight, government-mandated timeframe. A minority of sessional staff who come from vocationally-focused Schools tend to be external industry professionals. The highest proportion of participants in the training program is from the “enabling sciences” (e.g., biology, chemistry, physics).

While a significant fraction of training participants are international students and many intend to return to their home country, quite a few hope to stay in Australia. Like their Australian counterparts, these international students are immersed in their own research, which is their current career priority

**What are the roles of sessional staff?**
The roles of sessional staff can be as extensive as the teaching and learning role of any academic staff member. In the main, sessional staff are employed as tutors or laboratory demonstrators. To a lesser extent, sessional staff are called on to deliver lectures. Their roles generally extend to providing feedback on student assessment, specifically marking assignments and examinations. They are occasionally, though rarely, responsible for coordinating and teaching an entire course.
In reality at UNSW, it is estimated that over 60% of contact time with students is undertaken by sessional staff; hence the institution has a significant reliance on sessional staff.

**What is the intention of the training program?**
The Faculty-wide training program was introduced to help fulfill the professional needs of sessional staff working as tutors and laboratory demonstrators. Anecdotal evidence suggests that academic staff in science hire their own tutors and demonstrators and presume that their sessional staff are sufficiently skilled and informed to undertake the teaching aspects of these roles. Training or orientation programs, therefore, have tended to focus exclusively on the location of laboratory materials, occupational health and safety, and specific course content and assessment practices.

The training is, in part, meant to counteract forces that shift attention of university academics away from teaching (at least at research intensive universities). The fact that sessional staff account for an ever increasing amount of the contact time with students (e.g., Kift, 2002a & 2002b, Bassett, 1998) downplays the role of teaching and learning within the university among full-time academic staff. When the result is that academic staff see teaching as a smaller proportion of their duties, one can understand how their postgraduate protégés can put a lower priority on learning to teach well. However, in doing so, postgraduate students serving as sessional staff are ignoring their own professional growth, failing to develop as academic educators and failing to gain professional skills and insights that they can use beyond teaching situations, such as in team management and communication.

In serving as educators, sessional staff in science are dealing with disciplines that are content-rich and with new content being added constantly. The traditional response to this growing breadth is to teach more content and to teach more courses. An alternative, and some would argue more sustainable, approach is to enable students to acquire the skills required to make sense of the content, particularly “content” that is not predigested and introduced in a stream of lectures. Along these lines, introducing sessional staff to student-centred teaching practices can be seen as a small step toward more reflective approaches to teaching. Student-centred teaching also legitimizes a dialogue about learning with their academic and teaching supervisors.

Despite such pedagogical pressures and imperatives in science, interestingly, it is the increased level of casualisation in tertiary education, rather than improving the standards of university education, that can be seen as key drivers for implementing and, in our case, reviewing tutor training. In other words, as valuable as the education of undergraduates is, as precious as development of future academics and researchers is, tutor training is so essential today because it is more economical to have tutors handling the teaching.

We are left with the question then, if sessional staff must do an increasing amount of teaching while attending to career priorities dominated by supervisors who are eager to surrender teaching, what does it matter to them how well they do it – how content-driven or how student-centred? It matters to us, and this has influenced the design of the workshop series. However, does what some might see as – and data suggest is – a well-
conceived program achieve the cultural shift in attitudes toward learning and teaching in science that we desire?

**Premise for approach in workshops**
The tutor training program runs each session (semester) and comprises four workshops (equivalent to 2.5 days face-to-face) and associated assignments. It was designed to enable participants’ conceptions of teaching to shift from teacher-centred to student-centred. Biggs’s hierarchical conceptions of teaching provide a useful framework to contextualise this transition (Biggs, 1989). Biggs describes the initial level as having a conception of “teaching as the transmission of knowledge”, the second conceptual level as “teaching as the efficient orchestration of teaching skill,” and the third level as viewing “teaching as the facilitation of learning”.

Having our sessional staff approach their role as an educator from a student-centred, rather than a teacher-centred, perspective benefits the students, which indirectly benefits the institution (via improved evaluations, reduced failure rates, increased retention, etc). The workshops were thus designed to help participants to make the conceptual transitions to Biggs’s third level.

The program is offered as a series of four workshops that aim to:

1. **Address personal development:**
   - improve the level of confidence of our tutors in facilitating tutorials and laboratory sessions,
   - introduce the institutional community context,
   - discuss the extent of their responsibilities,
   - include sessional staff as part of the university community at large and build relationships among tutors and demonstrators, enabling them to share insights and provide peer-support in their teaching.

2. **Enhance professional skills:**
   - how to analyse group dynamics to develop a greater understanding of how students differ from (and resemble) one another in their personalities and styles of learning,
   - improve how sessional staff communicate assessment criteria to their students, and with other tutors and demonstrators, to ensure transparent, consistent, and fair marking; and increase awareness of the range of strategies available to address suspected plagiarism,
   - identify, through reflective practice, the areas where participants feel they need to develop as instructors and what resources and training opportunities they can access to achieve this development.

Parks’ (2007) report, *Redefining the Doctorate*, outlines that many postgraduate students will go on to careers outside academia. Thus, there is a need to emphasise the development of employability and other career development skills rather than just research-orientated skills.
Participant evaluations indicate that we have addressed the needs of sessional staff who are new to teaching at a tertiary institution. Feedback indicates that participants’ conceptions of teaching have shifting from unsure, potentially defensive and teacher-focused to more confident, creative, and student-centred. Despite achieving these desired outcomes, our question now is, why should we continue to invest resources in this program when data tell us that half of those who commence the program do not complete it and the number of participants starting the program is declining?

**Evaluating the tutor training program**

As part of standard teaching practice and quality assurance, evaluation data on this program have been analysed and outcomes reported to the Faculty of Science. The data allow us to consolidate what we have done to date and begin to assess the program’s strengths and limitations. It must be admitted, though, that they have only limited value to address the overarching “Why bother?” questions posed above.

**Method**

Eight cohorts of participants have been surveyed since the Science Tutor / Demonstrator training program commenced in 2004. We have been monitoring attendance and completion rates of participants as well as how many semesters it takes for participants to complete the program. In addition, participants were asked to rate their confidence in their own skills as a tutor or demonstrator on a self-report measure at several intervals during the workshop series using Likert-scale questions. At the end of their workshop program, participants were asked to comment on what had struck them most about the program. These anonymous, open-ended responses were analysed and common responses identified and described.

**Results**

**Improving participant confidence**

After the first of four workshops, the confidence of participants in their own skills had increased. When we look at the data in a pair-wise fashion, 45% of participants had a perceived increase in their level of confidence in their tutoring skills. By the end of the workshop series, there is a discernible shift away from participants being focused on their own abilities.

**Improving conception of teaching**

At the completion of the program, their comments are more focused on how to motivate students to become active during their learning. An analysis of the open-ended responses showed that participants (in order of frequency):

- have gained an appreciation of having the students in their classes participate in the learning process (i.e., encourage students to take an active role)
- have increased their levels of confidence
- now acknowledge the challenge and complexity of their role in a class, and that it will be an ongoing challenge to improve their teaching practices
- have increased the clarity of their communication with students
- recognise the need for students to have a supportive learning environment
now appreciate that students have different approaches to learning that need to be considered
• value peer support.

*Participation and completion rates*

The participation and completion rates have not increased since the program commenced (Table 1). The completion rate is an indicator as to how well the program is addressing the high-priority needs of our tutors. Because participation is voluntary (unpaid) participants can withdraw at any time. The participation numbers can also be seen to indicate “buy-in” from the Schools, as students’ supervisors can either encourage, discourage, or ignore their attendance. Approximately half of those participants who undertake the program can be said to find it sufficiently valuable to complete it (i.e., to gain confidence in their teaching or to earn a credential for completion of the program).

Although the series of four workshops can be completed in just over one session (semester), participants are increasingly skipping a workshop in one session and attending that workshop in a subsequent session, thus taking a year to complete all workshops. This increase in completion time may reveal areas of tension that exist between their role as postgraduate research student and their roles as casual employee. Anecdotal evidence supports this conclusion, as participants have explained how they must miss a workshop due to attendance at a conference or an overseas exchange opportunity.

Table 1: Participation and completion rate of Faculty of Science Tutor training program.

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td>Number commenced</td>
<td>45</td>
<td>59</td>
<td>48</td>
<td>31</td>
</tr>
<tr>
<td>Number completed</td>
<td>47%</td>
<td>56%</td>
<td>56%</td>
<td>48%</td>
</tr>
</tbody>
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In the program evaluations, our participants express conceptions of teaching very much in accordance with the Biggs’s (1989) hierarchy. Prior to the program, participants are very teacher-centric, i.e., they express concerns about not having enough confidence with being able to answer all the questions that their students may pose. Post-program, participants become more student focused i.e., they do not express dire concerns about confidence; rather their concerns are focused on the following elements:

• the needs of the students
• uncertainty as to how successful their teaching approaches have been.

These results are consistent with the program design, which was aimed at changing participants’ conceptions of teaching.

**Discussion**

The tutor training program in science has been proven to have benefitted the participants by increasing their confidence levels; so reasons for implementing a tutor training program are sound at an individual level. We now question how successful the program
has been at instigating engagement with reflective and student-centred teaching practices beyond the confines of the workshop, across the Faculty of Science.

Agenda and forces compelling engagement with tutor training and those for disengagement are varied, as we have noted. Speculating on what these forces are - and then assessing the degree to which they are impacting on the program – will be useful in critiquing the program so as to improve how it influences the science teaching culture.

We can see that these forces operate at the program level, at the stakeholder level, and at the institutional level. In addition to the pressures and questions already noted, we would like to reveal further complexity in the issues addressed by adding a “laundry list” of further aims, forces, and questions. We will start below with some strategic, program objectives and end with questions about what steps we should undertake next to resolve what value has been gained by our efforts in tutor training and what should be investigated in future research.

**Program objectives**
Can the program brief include ways of empowering tutors to question the lecturers for whom they work and propose alternative tutorial and practical activities, thereby catalyzing shifts in science teaching? Is it possible for the program to create a new generation of science academics who believe in student-centred methods of teaching, replacing a more lecturer-centred generation? Can the program enable postgraduates to be more “accessible” and become role models for undergraduates, enticing more to venture into postgraduate study, in the face of declining enrolments in science at all levels?

**Participants’ concerns**
How can we justify the time that participants spend in training that is not paid for - particularly when enhanced performance in the tutoring job is not well-remunerated or recognised and the immediate career path is limited?

**School-level agenda**
Does creating better teachers among sessional staff translate to: a) reduced failure rates; b) increased recruitment of students to study science at the undergraduate level; and c) increased retention rates for science majors? Does the tutor training program provide additional and important opportunities for peer interaction among postgraduate students to strengthen the School’s sense of community, which can be essential in supporting career development and the completion of a doctorate? Does engaging postgraduate students in teaching result in a diminished research output that may, in turn, not reflect well on their supervisor, or on the student themselves?

**Institution-level tensions**
In what ways is a tutor training program helping to build relationships between staff across Schools in the Faculty, and in what ways is it building resentment (about taking postgraduate students “off task”) or other barriers?

With regard to human resource development in general, why would anyone want to undergo training, except to escape from daily duties? And why would organizations
invest in training given employee mobility, particularly for casual staff (typically three years for a postgraduate student)?

If tutor training is seen in terms of in-service training for teachers: what sort of training provides the greatest long-term impacts, and what effects do they provide? Is there any correlation between the qualities of in-service training and the popularity of the subjects that trainees teach? That is, can good in-service training in science reduce the declining enrolments in science at high schools and universities? Are the teachers who undergo training and development more likely to become effective as role models for students?

**Cultural and organization tensions**

If one sees tutor training as a cultural change strategy, how effective is it as a means to change particular attitudes and beliefs within an organization? What theories and strategies of organizational change focus on casual staff or those on short-term contracts? How can a long-term, cultural change program address conflicting agendas within an organization, such as a university, where loyalty to one’s discipline can be stronger than service to an institution?

**Inspirational role of tutor in “science reproduction”**

In times past, undergraduate students have had tutors who stood out for them, who made content clear, who served as role models, or who merely represented the human face of their university classroom experience. One can ask whether enhancing the inspirational role of the tutor is a suitable aim for tutor training, suitable in terms of being achievable and in terms of being viable economically given other demands on those who train the tutors.

**Simultaneous career paths**

In actuality, we are not looking merely at how casual employees decide to approach their students. What we are seeing are the many stages involved in science career paths. The undergraduate is on that career path and may stay on it. The postgraduate is further along the path. The supervisor who sends their student to training and the one who demands that they stay in the lab are both even further along the career path.

This pathway has loops that enable those further along to interact with novices. It also courses through a range of environments, the undergraduate in the mass education setting; the postgraduate with the low stipend, time pressures, and engagement with a demanding intellectual project - their research; and the supervisor, who is assessed on how many postgraduates finish on time, how their work contributes to an ongoing intellectual agenda, their contributions to publications, which can lead to further research grants, etc.

The tutor trainer is involved in this science reproduction cycle in terms of their own research but also in intervening in others’ career paths – such as those of undergraduates – through the training scheme and engaging in other teaching and learning initiatives.

Can we assess how the current generation of science academics came to pursue a research career and how they obtained their insights into and attitudes toward teaching and learning? Is it worth asking more than one generation of academics in order to gauge if
typical resources and inspirations have changed over time? Can we track our previous participants and their evolving perspectives so that we can see a longitudinal progression through the science career path?

**Conclusion**

Is it worth the continued investment in sessional staff training programs, particularly in science?

The challenge for us now is to identify a) strategies that could reconcile the apparent tensions and b) indicators that demonstrate institutional engagement and long-term impact.

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**References**


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