Enhancing learning experiences to improve outcomes through sessional tutor conceptual expansion

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Tutor conceptions about teaching vary, reflecting a range of awareness about learning. Overall variability in teaching practices on any given unit increases with the number of tutors, which in turn tends to diminish students learning experiences. This is an issue that is amplified in first-year and introductory units. An in-depth study describes the operation of a teaching development program that uses the Third Party Observation of Teaching (TPOT) method to review in-class teaching practices. The Marton and Booth (1997) awareness and learning theory informs the program design. Results show noticeable improvements in specific Course Evaluation Questionnaire (CEQ) measures, which support the view that less variability in teaching practices enhances learning experiences and may ultimately improve outcomes. The program extends across disciplines. Moreover, it is suitable for both early career tutors and experienced tutors, and even for experienced tutors teaching in a particular subject for the first time.

Introduction

It is widely recognised that sessional (adjunct or casual) tutors enrich students learning experiences (Bell & Mlandenovic, 2008; Percy & Beaumont, 2008), often by sharing their insights on workplace and professional practices, particularly in first-year and introductory units. While enhancement of the learning experience is a desirable result, it makes sense that an increase in the proportion of sessional tutors on any given unit can bring about increased variability in in-class teaching practices. This variability increases overall with the number of tutors and, therefore, it is an issue that is amplified in first-year and introductory units. Typically, these units have not only large and diverse student enrolments but also large and diverse tutor populations. Tutor populations made up of a high proportion of sessional and early career tutors with divergent conceptions about teaching can have adverse implications for learning and teaching - diminishing students learning experiences and may ultimately worsen outcomes (Akerlind & Jenkins, 1998; Percy & Beaumont, 2008).

Tutor conceptions about teaching vary, reflecting different degrees of awareness about the experience of learning in an academic setting (Akerlind, 2003, 2007; Bell & Mlandenovic, 2008, Courneya, Pratt & Collins, 2008; Gosling, 2002). Hence, teaching development is conditional on its referential and structural aspects, which provide a meaning and the outline to how it is experienced. Accordingly, McMahon, Barrett & O'Neill (2007) refer to studies that provide "…compelling evidence…" (p. 501) that teaching development programs do influence pedagogic understanding. Moreover, Akerlind (2007) refers to this process as "…conceptual change, or more precisely, conceptual expansion…" (p. 36). Devlin (2006) provides a different perspective "…development of COTs [conceptions of teaching] that focus on students and learning are two sides of the same teaching development coin and cannot sensibly be completely separated or prioritized" (p. 117) and calls for further empirical research to determine "…whether, and if so in what ways, COTs [conceptions of teaching] affect teacher behaviors and how these behaviors affect student learning…" (p. 118).

Using a unique data set, this study explores the sensitivity of specific Course Evaluation Questionnaire (CEQ) survey measures of students perceived learning experiences to the implementation of a teaching development program with the aim to increase tutor pedagogic understanding. The Marton & Booth (1997) awareness and learning theory informs program design. When considered together with observed improvements in learning outcomes, as shown in the subject-coordinator examiner reports over the study period, study results support the view that less variability in in-class teaching practices contribute to enhancement of students learning experiences and may ultimately improve outcomes. The program extends across disciplines. It is suitable for both early career tutors and experienced tutors, and even experienced tutors teaching on a particular subject for the first time.

Literature Review

Tutors can evaluate teaching strategies through trial and error (Martin & Double, 1998) and can learn from those who are already teaching in any given subject (Bell & Mladenovic, 2008). Both approaches involve building content knowledge, practical experience and a collection of functional strategies that over time incorporate in one's own teaching practice, thus they become internalised. Hence, the aim is to develop self-confidence in one's own tutorial in-class teaching practices. By its nature, a process of trial and error requires much time, which is in limited supply during teaching periods. More importantly, a trial and error process is likely to canvas only part of the wider range of potentially effective teaching practices. Accordingly, a trial and error approach as a means for teaching development may at best yield only a limited expansion of conceptions about teaching, and at worst, lead to erroneous and ineffective practices. Accordingly, observing teaching practices of one's peers may be a more efficient approach to accumulate a collection of functional and effective teaching strategies (Akerlind, 2007; Bell & Mladenovic, 2008).

Effective tutorial in-class teaching practice is a necessary condition for enhancing learning experiences and may improve outcomes. Teaching that is grounded in content knowledge and practical experience, and draws from a comprehensive collection of internalised strategies is effective (Akerlind, 2007; Blackmore, 2005; Courneya, Pratt & Collins, 2008). When calibrated to interpret the cues and clues that students communicate about their learning, effective teaching becomes receptive to the ways and means of learning. In this way, effective teaching practices can more consistently support learning (Akerlind, 2003, 2004, 2007; Marton & Booth, 1997), expanding the pedagogic understanding of tutors makes sense, as a suitable means of teaching development.

A review of teaching provides a structured alternative to a trial and error approach to developing effective teaching practices in an academic setting. From the tutor's perspective, a review can involve three sequential activities (Donnelly, 2007; Jarzabkowski & Bone, 1998; Hammersley-Fletcher & Ormond, 2004; Hatzipanagos & Lygo-Baker, 2006; Lomas & Nicholls, 2005; Martin & Double, 1998): a meeting to set an aim and objectives, an in-class observation of teaching practices, and a feedback meeting. As shown in the in-depth study, for early career tutors, a review takes on the average about two-and-one-half hours. For experienced tutors, the average time is only about one-and-one-half hours.

The review of teaching purpose determines whether a peer observation (POT) or a third party observation (TPOT) method is used. POT is an informal review of own teaching practice that someone in one's professional peer group conducts, as a means for enhancing one's own teaching practice (Bell, 2002; Peel, 2005). Typically, this may be someone with equal

promotional standing but may also be a trusted but more senior colleague. POT is characterised principally by voluntary participation, frequent self-reflection and non-judgemental feedback (Akerlind, 2007; Bell & Mladenovic, 2008; Blackmore, 2005; Courneya, Pratt & Collins, 2008; Gosling, 2002; Hammersley-Fletcher & Ormond, 2004; Hatzipanagos & Lygo-Baker, 2006; Jarzabkowski & Bone, 1998; Lomas & Nicolls, 2005; and Martin & Double, 1998).

In contrast, a TPOT is a formal review employed for structured teaching development. Accordingly, someone who is not in one's peer group conducts the observation. Typically, this can be an academic line supervisor or a subject-coordinator (unit-coordinator or lecturer-in-charge). TPOT is commonly characterised as prescribed, evaluative, judgemental, competency oriented and, most importantly, an unequal power relationship between the participants (Akerlind, 2007; Bell, 2002; Bell & Mladenovic, 2008; Blackmore, 2005; Jarzabkowski & Bone, 1998; McMahon, Barrett & O'Neill, 2007; and Peel, 2005). Recent studies provide comprehensive literature reviews on TPOT, including: Bell & Mladenovic, (2008); Blackmore (2005); Hammersley-Fletcher & Ormond, (2004); Lomas & Nicholls (2005); and McMahon, Barrett & O'Neill (2007).

This exploratory study adds to the literature on tutor teaching development in four ways. First, it not only confirms that TPOT achieves its aim of improving teaching practices (Blackmore, 2005; Donnelly, 2007; Jarzabkowski & Bone, 1998; Hammersley-Fletcher & Ormond, 2004; Lomas & Nicolls, 2005; Martin & Double, 1998; McMahon, Barrett & O'Neill, 2007) but that it does so also in an Australian context. Second, the focus here is on teaching development for both early career and experienced tutors, on an individual unit level. In contrast, related studies focus on faculty based programs (Bell & Mladenovic, 2008; McMahon, Barrett & O'Neill, 2007). Third, program design is a composite of aspects from both POT and TPOT type models (Gosling, 2002; Bell & Mladenovic, 2008; McMahon, Barrett & O'Neill, 2007). Fourth, and finally, the Marton & Booth (1997) awareness and learning theory informs program design. Related studies do not use this framework.

Theoretical framework

The Marton & Booth (1997) awareness and learning theory provides a framework that accommodates observation of teaching practices as a means for teaching development. The framework displays in Figure 1 and 2. A discussion of its mechanics follows below.
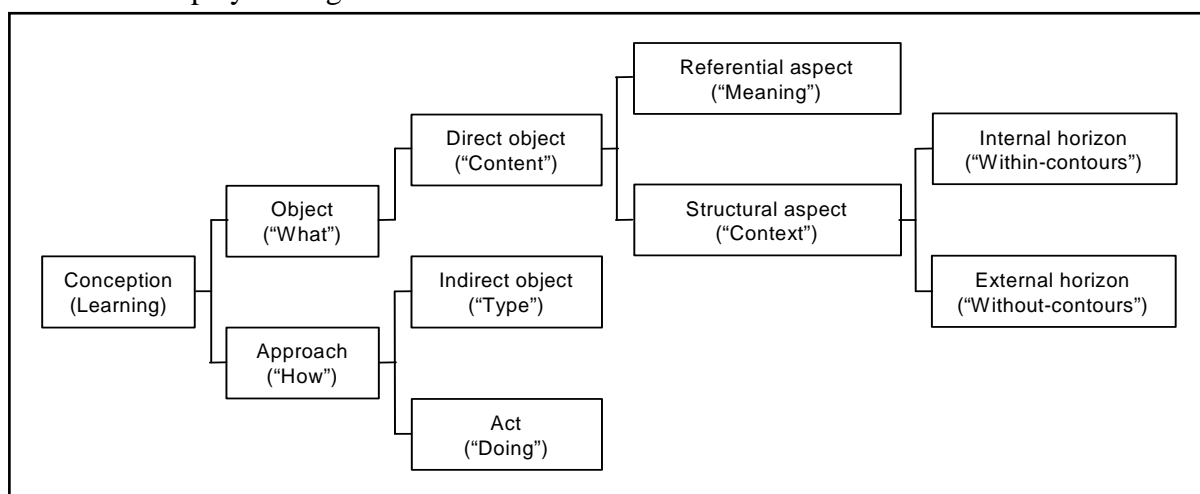
Figure 1: Conception of Learning
(Derived from Merton & Booth (1997), p. 91, Fig. 5.5)

Conceptual expansion of teaching practices presupposes an understanding of the experience of learning. Marton & Booth (1997, p. 208) define learning as "…a change in someone's capability to experience something in certain ways". As shown in Figure 1, the experience of learning is set in its direct (primary) object, or the made sense of content. To illustrate, assume that the direct object (content) is to improve attainment of a units learning outcomes. To understand the unit material or content, two events must occur at the same time. The first event is an attribution of meaning to the content. This is the referential aspect. The second event is recognition of context (structural aspect), which is done by identifying the delineations of the phenomena or experience, both the internal (within-contours) and the external (without-contours) horizons.

As shown in Figure 2, a teaching development program may set as its indirect object (type) the attainment of more effective teaching practices: building content knowledge, practical experience and a collection of strategies that over time become internalised. These are the competencies. The outcome is to improve the attainment of learning outcomes. The act (doing) is the teaching development required to attain the indirect objective and, thus, the direct objective. Reflecting on results on student assessment tasks is an example of a developmental strategy to increase teaching effectiveness.
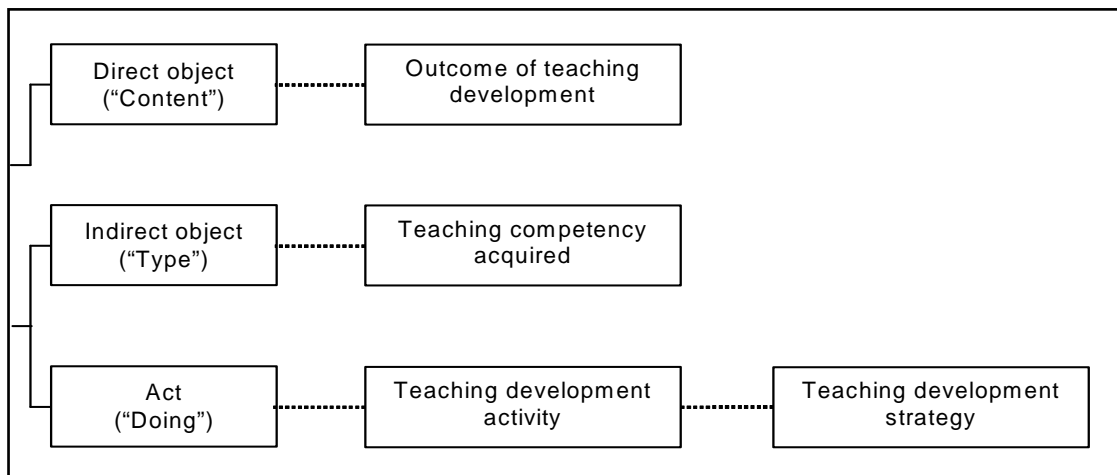
Figure 2: Experience of Teaching Development
(Derived from Merton & Booth (1997), p. 91, Fig. 5.5, and
Akerlind (2007), pp. 33-34, Table 1 and 2)

In-depth Study

This in-depth study describes the operation of a teaching development program that uses the TPOT method to review tutors in-class teaching practices. Program templates are available from the author.

Context

The university's recently issued Learning and Teaching Plan (2008-2012) lists as its Goal 1 "Developing and supporting quality teaching practice" (p. 7). A corresponding major objective is to encourage and support innovative teaching practices that are learning oriented. Strategies identified to obtain this result include review of teaching practices. The corresponding attainment indicator is improvements in end-of-semester CEQ survey results.

The introduction of a structured program for tutor teaching development was an innovation in learning and teaching in the Department of Accounting and Finance. In second semester 2007, the author implemented this program in the context of an introductory core finance unit with the aim to increase tutor pedagogic understanding. This unit had not only a large and diverse student enrolment, and a history of high fail rates, but also a large and diverse tutor population with a high proportion of sessional and early career tutors. The author was also the subject-coordinator of this unit in first semester 2004. Table 1 displays descriptive statistics on the unit.

Semester Year	Enrolment	Tutorial classes	Sessional/ All tutors	New sessional/ All sessional
S1 2004	935	36	8/13	4/8
S2 2007	1,355	53	9/13	3/9
S1 2008	1,330	56	8/14	6/8
S2 2008	1,450	62	14/18	6/14

[a] At Census date

Table 1: Unit Descriptive Statistics[a]
S1 2004 - S2 2007 - S1 2008 - S2 2008

As shown in Table 1, the first semester 2004 enrolment was recorded at 935 students, requiring 36 tutorial classes per week, the average number of students per tutorial was about 26, taught by 13 tutors, of which eight (about 62% of all tutors) were sessional tutors, of these four (or 50%) were new sessional tutors. By second semester 2008 enrolments were at 1,450 (an increase of about 55% on first semester 2004), 62 tutorial classes per week, average number of students per tutorial at about 23, total tutors at 18, 14 (or about 78%) were sessional tutors, of these six (or about 43%) were new sessional tutors. In the period second semester 2007 through second semester 2008, the proportion of sessional tutors teaching on the unit for the first time, as a proportion of all sessional tutors teaching on the unit, doubled from three (or about 33%) to six (or about 43%). Hence, sessional and early career tutors made up a large proportion of the tutor population. With hindsight, the above statistics support the decision to implement a teaching development program.

Program operation

The program consists of two parts: a sequence of mandatory TPOT of in-class tutorial teaching practice, and a sequence of activities for conceptual expansion of tutors own awareness of learning. The timing of activities is set to tie-in with two surveys of student perceptions of tutor teaching practices, prescribed by the faculty and centrally provided and processed by the university's Learning and Teaching Centre (LTC).

Observation of teaching sequence

Tutor participation in the program was as follows: second semester 2007 - six tutors; first semester 2008 - three tutors; second semester 2008 - eight tutors. Hence, 17 tutors completed the program. From the reviewer's perspective, a review sequence (cycle) follows a pre-determined systematic procedure of four activities, each conducted on a one-on-one basis. The first activity, a pre-observation meeting of about 15-30 minutes, explains the program and sets aims and objectives. Tutors receive program information and templates on handouts,

including a template that sets out a comprehensive set of descriptions of practices associated with effective in-class teaching aptitudes and skills. Tutors use this template for self-surveys throughout the semester, and to prepare for the in-class observation of their teaching practice.

In preparation for the second activity, an in-class observation of teaching practice, tutors administer the first of two LTC surveys on student perceptions of their tutor's teaching practices. Survey feedback provides a timely first source of information. Student participation is voluntary and anonymous. Students are asked to give frank but constructive comments that are genuine, and with the best interest of the tutorial group in mind. The survey is administered once in each tutorial class, ideally by the third or fourth week of tutorials. In the week following the survey, tutors report to their groups on survey results, offer their own interpretation and, if required, discuss a plan that addresses any concerns about their teaching practice. Thereafter, the in-class observation occurs ideally in the week before the mid-semester break. A note of caution: teaching practices observed in a 20-40 minute observation are likely to be limited to a sample of a wider range of skills and aptitudes. This is especially the situation when observing early career tutors.

The third activity, an about 30-60 minute write-up of observer impressions, typically summarises observer impressions in the context of the template of effective teaching practices (provided in the first activity), including suggestions for development of teaching practice, as required.

The fourth, and final activity, is an about 30-60 minute feedback meeting. The written observation report, tutor questions, observer answers and suggestions, and discussion content at the meeting itself constitute the feedback. Subsequent observations are possible, as requested by the observer or the tutor. Another note of caution: a timely write-up of the report and a timely feedback meeting gives tutors time for self-reflection, and time to prepare for any change to teaching practices before tutorials resume (after the mid-semester break).

Actual review cycle times were recorded as follows. In second semester 2007, the total time tallied was eight-and-one-half hours - for six tutors; in first semester 2008 - four-and-one-quarter hours - for three tutors; and in second semester 2008 - 19 hours - for eight tutors. Accordingly, the average time per observation cycle in second semester 2008 was about two-and-one-third hours. The progressively longer review cycle times reflect incremental changes to activities, brought about by the subject-coordinator's (observer) learning.

Awareness of learning sequence

While competency is the focus of TPOT, conceptual expansion of tutors' own awareness of learning is encouraged through self-reflection, and discussion with the observer, which is an optional program feature. For this reason, this teaching development program is a composite program that incorporates aspects from evaluative, developmental and peer observation focused programs (Gosling, 2002). Structure and guidance is principally through a contextualised self-administered inter-temporal survey (the template handout from the first TPOT activity). One-on-one discussion with the observer can complement the survey, but this option is at tutors' discretion to exercise.

Tutors use the self-survey, tutorial group and the observation of teaching feedback as a guide to inform their own teaching practice. The template of effective teaching practices is comprehensive, with alternative sources provided in a reference list. Therefore, the self-survey is in itself a resource. Ideally, tutors take the survey periodically throughout the

semester; once before the first tutorial, and then in tutorial weeks five and nine. A third note of caution: allow time to pass between surveys, so that self-reflection and testing in tutorials of incremental change to teaching practice may occur.

By the end of a semesters' tutorials tutors would have compiled evidence on the effectiveness of their in-class teaching practices, and any changes made. This evidence can be included in a teaching portfolio, which now can draw content from five sources as follows. The first source is the self-reflection survey that captures thinking about tutors' own teaching practice, taken before the semester's first tutorial. The second source is the LTC survey of student perceptions of tutor teaching practice administered early in the semester. The third source is the feedback on the in-class observation. The fourth source is the result of the LTC end-of-semester CEQ's on student perceptions of tutor teaching practice. The CEQ survey feedback is available shortly after the university releases the semester results to students. The fifth, and final, source is the end-of-semester self-survey that captures tutors' thinking about own teaching practices that now is informed by all of the semester activities. In addition, the teaching portfolio can contain responses to this feedback, including any change planned to teaching practices.

Discussion And Results

The university appraises students learning experiences principally through CEQ surveys, which are voluntary and typically administered in a semester's last lecture. These surveys capture specific aspects of students perceived learning experiences through responses to about one dozen or so statements, and to a few questions eliciting open- ended responses. This study examines the aggregated responses to statements on three aspects, namely: "Tutorials", "Clear Goals and Standards", and "Intellectual Challenge". Survey statements for these three aspects, and a presentation and discussion of their descriptive statistics appear below. In addition, this study comments briefly on the direction of change in learning outcomes as shown by the proportion of students whom passed the unit over the study period, according to the unit's subject-coordinator examination reports.

The first of the three specific measures used to determine perceived learning experiences in this study is "Tutorials". Its five survey statements on attainment of learning outcomes are: "The tutorials for this unit helped me understand the lecture material"; "The tutorials for this unit assisted my understanding of the subject"; "The tutorials for this unit were well integrated with the rest of the course"; "The amount of work required for the tutorials was reasonable"; and "I felt comfortable expressing my opinion and/or asking questions in the tutorials". The second measure is "Clear Goals and Standards". Its two survey statements are: "The unit provided clear aims and objectives"; and "The criteria for success in this unit were made clear". The third measure is "Intellectual Challenge". Its two survey statements are: "The material was covered at the right depth with regard to my previous learning"; and "Intellectual enquiry was encouraged in this unit".

The CEQ survey results appear in Table 2 and 3, and show noticeable semester-on-semester improvements in measures for both second semester 2007 and first semester 2008.

Semester-Year / Measure	S1 2004 Mean & S.D.[b]	S2 2007 Mean & S.D.[c]	S1 2008 Mean & S.D.[d]	Change S1 2004 - S2 2007	Change S1 2004 - S1 2008	Change S2 2007 - S1 2008
Tutorial	-	3.63/.98	3.73/0.93	-	-	+.11/-.05
Clear Goals/Standards	3.45/.88	3.60/.89	3.70/0.85	+.15/+.01	+.20/-.03	+.10/-.04
Intellectual Challenge	3.34/.89	3.38/.90	3.49/0.94	+.04/+.01	+.15/+.05	+.11/+.04

[a]Likert scale 0-5, where 5 is the highest value. [b]N=935; n=633. Response rate 67.7%. [c]N=1,355; n=735. Response rate 54.2%. [d]N=1,330; n=767. Response rate 57.7%.

Table 2: Student Learning Experiences[a] – CEQ Survey
Mean and Standard Deviation S1 2004 - S2 2007 - S1 2008

As shown in Table 2, while not included in the first semester 2004 CEQ survey, the most noticeable semester-on-semester upward shift is in the measure "Tutorials". Specifically, from a second semester 2007 mean value of 3.63 and dispersion of *0.98* to a first semester 2008 mean value of 3.73, and a dispersion of *0.93*. Next, the measure "Clear Goals/Standards" recorded the most noticeable upward shift of +.20/-.03 in the period first semester 2004 through first semester 2008. Finally, for the same period "Intellectual Challenge" recorded a shift of +.15/+.05. Accordingly, all measures of students learning experiences have improved over the study period.

Response / Measure	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)	Semester
Tutorial	16	47	24	9	4	S2 2007
	18	51	22	6	3	S1 2008
Clear Goals/Standards	7	49	31	10	3	S1 2004
	11	51	27	9	2	S2 2007
	13	56	22	7	2	S1 2008
Intellectual Challenge	6	41	38	11	4	S1 2004
	8	40	38	11	3	S2 2007
	11	43	33	9	4	S1 2008

[a]Likert scale 0-5, where 5 is the highest value. [b]N=935; n=633. Response rate 67.7%. [c]N=1,355; n=735. Response rate 54.2%. [d]N=1,330; n=767. Response rate 57.7%.

Table 3: Student Learning Experiences[a] – CEQ Survey
Distribution of Responses S1 2004 - S2 2007 - S1 2008

As shown in Table 3, for the measure "Tutorial", 63% of respondents in second semester 2007 either strongly agreed or agreed with the survey statements. By first semester 2008, 69% of respondents either strongly agreed or agreed with these statements. For the measures "Clear Goals/Standards" and "Intellectual Challenge", a similar pattern of semester-on-semester changes appears, from 62% to 69% and from 48% to 54%, respectively. Accordingly, in first semester 2008 a larger proportion of respondents either strongly agreed or agreed with the survey statements, than in the semester of program introduction. In addition, for the same measures, in the period first semester 2004 through first semester 2008, changes are 53% to 69% and 47% to 54%, respectively. This suggests the presence of an accumulation effect, were program benefits compound over subsequent semesters.

A brief comment follows on the observed change in learning outcomes over the study period. The direction of change in learning outcomes is noticeable and is positive, as shown by consecutive increases in the proportion of students whom passed the unit, according to the author's (subject-coordinator) examination reports. While these statistics do not display in this version of the paper, they do provide additional but anecdotal evidence in support of the view that reductions in the variability in in-class teaching practices contribute to enhanced learning experiences and may ultimately improve outcomes.

Conclusions

This study explores the sensitivity of three specific survey measures of learning experiences to the implementation of a teaching development program that has the aim to increase tutors pedagogic understanding. An in-depth study describes the operation of the program. The results support the view that less variability in tutorial in-class teaching practices contribute to enhancement of student learning experiences and may ultimately improve learning outcomes. Observed improvements in learning outcomes, shown in subject-coordinator examination reports provide additional but anecdotal evidence in support of this view.

Several limitations reduce the generalisability of the results. First, while the results confirm results of related studies but in an Australian context; a multitude of variables can explain the observed improvement in learning outcomes. Variables may include content, assessment tasks, attributes of the student population, or attributes of the populations of lecturers and tutors, and even a second semester 2007 introduction of a peer assisted learning (PAL) program for students at risk of not meeting program requirements, and so on. Further, the nature of the statistical techniques used is a second limitation. The results derive through analysis of descriptive statistics. Therefore, associations that are more complex are not included and analysed by way of multivariate regression techniques thus perhaps excluding statistically more powerful and meaningful explanations. A third limitation is the set of observations. In particular, data on learning outcomes is not included in the statistical analysis in this version of the paper. A fourth, and final limitation, is the absence of testimonials from program participants. Tutors whom completed the program can reveal information on the degree of conceptual expansion attained. Presently, the papers relies on students perceived experiences. Subsequent work can address these limitations.

Despite limitations, the results have implications for the enhancement of student learning experiences across disciplines. In particular, this applies to first-year and introductory units. Moreover, as program design is flexible, it is suitable for early career tutors and experienced tutors, and even experienced tutors teaching on a particular subject for the first time.

To sum up, the observed tension between institutional funding criteria, systemic recent and heralded changes to academic work, increased use of sessional academics, learning and teaching policy, and faculty resource allocations for review of teaching practices, varies over time. Accordingly, it follows that the recognition that faculty workload models give to review of teaching practices varies over time too, which in turn affects students learning experiences and may ultimately affect outcomes.

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References

Akerlind, G. S. (2003). Growing and developing as a university teacher – variation in meaning. *Studies in Higher Education*, *28*(4), 375-390.

Akerlind, G. S. (2004). A new dimension to understanding university teaching. *Teaching in Higher Education*, *9*(3), 363-375.

Akerlind, G. S. (2007). Constraints on academics' potential for developing as a teacher. *Studies in Higher Education*, *32*(1), 21-37.

Akerlind, G. S. & Jenkins, S. (1998). Academics' views of the relative roles and responsibilities of teachers and learners in a first-year university course. *Higher Education Research & Development*, *17*(3), 277-289.

Bell, A. (2002). Peer observation of teaching in Australia. *LTSN Generic Centre.*

Bell, A. & Mladenovic, R. (2008). The benefits of peer observation of teaching for tutor development. *Higher Education, 55*(6), 735-752.

Blackmore, J. A. (2005). A critical evaluation of peer review via teaching observation within higher education. *International Journal of Education Management*, *19*(3), 218-232.

Courneya, C-A., Pratt, D. D. & Collins, J. (2008). Through what perspective do we judge the teaching of peers? *Teaching and Teacher Education, 24*(1), 69-79.

Devlin, M. (2006). Challenging accepted wisdom about the place of conceptions of teaching in university teaching improvement. *International Journal of Teaching and Learning in Higher Education, 18*(2), 112-119.

Donnelly, R. (2007). Perceived impact of peer observation of teaching in higher education. *International Journal of Teaching and Learning in Higher Education*, *19*(2), 117-129.

Gosling, D. (2002) Models of peer observation of teaching. *LTSN Generic Centre.*

Hammersley-Fletcher, L. & Orsmond, P. (2004). Evaluating our peers: is peer observation a meaningful process? *Studies in Higher Education, 29*(4), 489-503.

Hatzipanagos, S. & Lygo-Baker, S. (2006). Teaching observations: promoting development through critical reflection. *Journal of Further and Higher Education*, *30*(4), 421-431.

Jarzabkowski, P. & Bone, Z. (1998). A "How-to" guide and checklist for peer appraisal of teaching. *Innovations in Education and Training International*, *35*(1), 177-182.

Lomas, L. & Nicholls, G. (2005). Encouraging teaching quality through peer review of teaching. *Quality in Higher Education*, *11*(2), 137-149.

Martin, G. A. & Double, J. M. (1998). Developing higher education teaching skills through peer observation and collaborative reflection. *Innovations in Education and Teaching International*, *35*(2), 161-170.

Marton, F. & Booth, S. (1997). *Learning and awareness*. Mahwah, N. J.: Lawrence Erlbaum Associates, Publishers.

McMahon, T., Barrett, T. & O'Neill, G. (2007). Using observation of teaching to improve quality: Finding your way through the muddle of competing conceptions, confusion of practice and mutually exclusive intentions. *Teaching in Higher Education*, *12*(4): 499-511.

Peel, D. (2005). Peer observation as a transformatory tool? *Teaching in Higher Education, 10*(4), 489-504.

Percy, A. & Beaumont, R. (2008). "The casualisation of teaching and the subject at risk". *Studies in Continuing Education, 30*(2), 145-157.

Macquarie University. (2008). Teaching and Learning Plan 2008-2012.