

2015

The Effectiveness of Peer Review of Teaching when performed between Early-career Academics

Richard J. Woodman A/Prof

Flinders University of South Australia, Richard.Woodman@flinders.edu.au

Maria B. Parappilly Dr

Flinders University of South Australia, maria.parappilly@flinders.edu.au

Follow this and additional works at: <http://ro.uow.edu.au/jutlp>

Recommended Citation

Woodman, Richard J. A/Prof and Parappilly, Maria B. Dr, The Effectiveness of Peer Review of Teaching when performed between Early-career Academics, *Journal of University Teaching & Learning Practice*, 12(1), 2015.

Available at: <http://ro.uow.edu.au/jutlp/vol12/iss1/2>

The Effectiveness of Peer Review of Teaching when performed between Early-career Academics

Abstract

The success of peer review of teaching (PRT) in shaping teaching practice during an academic's formative years may depend on the peers' teaching experience and the frequency of evaluation. Two Australian early-career University lecturers with no previous experience of peer review performed a single PRT on one another following a one week academic development program, a mandatory exercise for all new academic staff with teaching roles within the University. Their experiences were recorded and used in the development of a teaching philosophy. The same PRT was then repeated between the same 2 individuals for the purpose of mandatory peer evaluation some 5 years later and after gaining considerable teaching experience. This paper describes the perceived impact of the PRT process on their teaching philosophies and the potential limitations imposed by their inexperience in formative PRT and teaching itself. Despite this relative inexperience, both academics believed their initial PRT accelerated changes to their mainly teacher-focused knowledge-transfer approaches. This case study provides qualitative evidence that PRT programs can successfully shape teaching practice without the involvement of more experienced teaching faculty. Academic developers should highlight the importance of building collegiality and the scholarship of teaching and learning for early-career PRT participants.

Keywords

early-career, formative review, peer review of teaching, scholarship of teaching and learning, University

Cover Page Footnote

Acknowledgements We acknowledge the expertise and assistance of Dr. Leonie Maddox and Dr. Fay Patel from Flinders University Educational development for providing constructive review. We also thank the participants of the 2007 Flinders Foundation of Teaching program for their feedback and interaction during the course.

Introduction

In the initial stages of their career, lecturers without formal educational training lack knowledge and awareness of teaching-learning factors, and instead draw upon their own experiences as students and researchers (Johannes et al. 2012). Although there is a trend towards formalised postgraduate certificates of teaching as a requirement in some universities, only a small number of Australian universities demand them (Thomas et al. 2011). Peer review of teaching (PRT) programs are, however, contributing substantially to the reshaping of Australian higher-education academic development (Harris et al. 2008), and the common opinion here (Bell 2002) as well as in other English-speaking countries including the UK (Lomas & Nicholls 2005) Canada (Hubball & Clarke 2011) and the US (Kohut et al. 2007), is that formative PRT provides an effective and efficient form of teaching development. In particular, the process recognises that the sharing of professional experiences can enhance the quality of teaching and learning, provide feedback that affirms good practice, uncover areas for possible improvement and enhance academic staff members' commitment to and insight into teaching (Blackwell & McLean 1996; Bell & Cooper 2013). Importantly, staff members also show a general willingness to be involved in formative PRT programs if run within a supportive environment (Barnard et al. 2011).

The success of formative PRT may be influenced by the training and experience of the participants, the disciplines in which it is administered and the frequency with which it is performed. Academic-development experts suggest that the optimal framework for formative PRT includes pairing inexperienced and experienced teaching staff (Bell & Cooper 2013). This approach has also been recommended by developers across universities in different countries, including, for example, the University of British Columbia in Canada (Hubball & Clarke 2011), Monash University in Australia (Carbone 2011) and Liverpool John Moores University in the UK (Blackmoore 2005). Since performing a PRT can be considered as providing a service to the University, it fits well within most academics' required roles, but due to its time-intensive nature (Holt et al. 2011), it is often implemented between early-career staff without formal training (Bell 2002). Critics have gone as far as to describe such practices of academic development as "the blind leading the blind" (Johannes et al. 2012).

Two other potential success barriers for PRT include the reluctance to introduce PRT programs within more research-focused disciplines such as the sciences (Atwood et al. 2000), and the basic nature of typical early-career training workshops within many universities, the usefulness of which has been questioned (Stes et al. 2013; Gibbs & Coffey 2004). Engagement in an academic-development program that includes a single PRT and the creation of an explicit teaching-philosophy statement are part of the probationary requirements for new teaching staff at Flinders University of South Australia. We describe here the experiences of two relatively inexperienced science lecturers who were paired together to undertake a single formative PRT on one another, but otherwise received no additional formal training or PRT over a five-year period. Given the above criticisms and barriers, we were interested to find the extent to which these two participants had changed their teaching styles and philosophies after five years, and, in particular, the perceived influence of their initial PRT in producing transformative change.

Methodology

The Flinders Foundations of University Teaching (FFOUT) Program

The FFOUT program is a compulsory teacher-training program for all new teaching staff at Flinders University. Its main objectives are to discuss the merits of various teaching approaches,

enhance knowledge and understanding of the scholarship of teaching and learning (SoTL) and encourage the development of a teaching philosophy. FFOUT comprises participation in a series of discussion workshops over one week followed by 1) a single PRT session with one other FFOUT participant, 2) presentation of their PRT experience to other FFOUT participants, 3) a half-day workshop to discuss the philosophy of teaching and 4) the submission of a Personal Learning Portfolio that includes a written PRT report and an explicitly stated teaching philosophy. Completion of the program requires approximately 50 hours. This paper focuses on the PRT process and its perceived impact.

PRT at Flinders University

PRT is a particular model of peer observation of teaching that exists in three broad forms: diagnostic, formative and summative (Table 1) (Cavanagh 1996; Costello et al. 2001). Flinders University uses a formative model based upon openness, in which PRT statements developed during the evaluation are shared between the two parties. The review is part of a focused evaluation in which the next phase is to explore and implement opportunities to improve teaching and learning. The aim is to establish a dialogue to develop critical yet constructive accounts of the teaching activities, and convey them the final reports. Although academic-development staff facilitate discussion on teaching methods during the FFOUT program and provided feedback on participant's teaching philosophy statement, they are not present at the PRT and there is no formal appraisal of teaching performance.

The Two Participants

The FFOUT PRT pairings were made randomly; in this instance the lecturers were from different faculties, but both taught sciences. Participant 1 taught epidemiology and biostatistics to medical students and health-science undergraduates, and participant 2 taught physics to undergraduates. Both had similar levels of university teaching experience (approximately two to three years part-time) but Participant 1 had greater research experience (four years post-doctorate versus two years). Participant 1 was male and Participant 2 was female. Neither had previously participated in a PRT.

Data-Collection Activities and Timeframe

An initial PRT was performed in September 2007 for the FFOUT program, and a second in November 2012 as part of the University's new Peer Evaluation of Teaching program, which is also used for formative purposes. Table 2 summarises the various activities undertaken by the two participants over the five-year time frame.

Table 1. Models of Peer Observation and Peer Review of Teaching (Lomas & Kinchin 2006)

Type	Model	Comments
Peer observation	Evaluation or management	Senior staff members observe others. Based upon authority of senior staff.
	Development PRT	Educational developers observe the lecturers. Expert diagnosis. Lecturers observe each other. More collegial and involves shared perceptions of the observer and the observed.
PRT		
Diagnostic PRT	Limited-term form	Identifies and addresses issues arising from an individual's or school's teaching practice. Performed by a more experienced academic.
Summative PRT	Assessment of teaching competency	Formal PRT focused towards academic promotion. Usually carried out by a more experienced academic or educational developer.
Formative PRT	An ongoing process of professional development	To continually develop the individual and their collective quality of teaching. Includes classroom observation and critical reflection and appraisal, and provides a mutual exchange of ideas. Both parties discuss teaching goals, practices and strategies for improvement.

Table 2. Data-Collection Activities and Timeframes

Activity	Description	Dates
FFOUT program participation	Four days of discussion on learning and teaching amongst academic colleagues	August 2007
First pre-peer-review discussion	Explanation of the PRT process Participants discuss and agree on evaluation criteria	September 2007
PRT lecture	Each participant observed once by the other Lectures recorded	October 2007
Initial feedback	Participants discuss relevant lecture	Approximately one week after PRT lecture
Formal report	Peer reviewer writes formal report	Approximately two weeks after PRT lecture
Formal teaching philosophy presented for completion of FFOUT	Participants formally describe their teaching philosophy and how the PRT process changed it	November 2007
Development of teaching styles and teaching philosophy	Lectures delivered regularly for five years	March 2008 to November 2012
Second pre-peer-review discussion	Participants discuss and agree on evaluation criteria.	October 2012
PRT lecture	Each participant is observed once by the other Lectures recorded	October and November 2012
Initial feedback	Participants discuss relevant lecture	Approximately one week after PRT lecture
Formal report	Peer reviewer writes formal report	Approximately two weeks after PRT lecture
Evaluation of changes in teaching styles and philosophies	Participants discuss	December 2012

The FFOUT PRT Process in Detail

1. Pre-review meeting

The process of PRT at Flinders begins with a pre-review meeting between the peers alone, in which they negotiate a set of criteria for the review. The participants in this study discussed the most important aspects to be considered, including their teaching philosophy, classroom constraints, course materials and resources, group facilitation and presentation skills, assessment methods and curriculum aims and content. The resulting criteria represented the views of both participants.

2. The PRT observation

Mutually convenient times are arranged for a single teaching activity for each partner, which in this instance was a lecture. The reviewer was introduced to the class before the lecture began. A camcorder was used for recording, and the reviewer made notes throughout but did not interact with the class at any stage. The video was referred to when necessary to assist in preparing the preliminary PRT report.

3. Post-review meeting

Initial feedback to each participant was provided by face-to-face discussion within a week of each classroom observation. Again, no other faculty members were present. Each reviewer prepared an interim review before the meeting, with feedback focusing on the agreed criteria. Any aspects outside these criteria were identified and mutually agreed upon before inclusion in the final written report.

4. Development of formal PRT report

A draft report summarised the observations of each reviewer, highlighting each lecturer's strengths and providing constructive criticism of any weaknesses. No formal template was used, but suggested areas for discussion from the educational developers included: How does the lecturer value-add to the material? How are students actively engaged in learning? How does the teaching cater for student diversity? and How does the lecturer seek feedback on students' understanding and act on this accordingly? Any misconceptions between the participants were resolved so that both were satisfied that the final reports were fair and accurate. The reports were then presented to FFOUT program staff, who provided further written comment if necessary.

5. Development of a teaching philosophy

FFOUT participants are required to submit a teaching portfolio that includes a brief summary of their own teaching philosophy at the time of FFOUT, as well as a description of how they currently implement this philosophy. The FFOUT program teaches participants the major teaching models on which teaching philosophies are typically based; for example, the transfer, shaping and travelling models (Fox 1983). Lecturers are reminded that their teaching philosophy statements should be viewed as living documents and changed in line with their changes in knowledge, attitudes and beliefs about teaching.

Results

1. First pre-review meeting

Aspects of teaching that the two participants agreed on for consideration in their reviews were:

- Presentation style – speed, variation, delivery
- Teacher-student discussion of the material
- Volume
- Engagement with students

- Response to questions
- Clarity
- Use of resources.

The agreed criteria by which to conduct the reviews were:

- Provide constructive criticism only; don't dwell on teaching aspects that are poor without providing positive suggestions.
- Be flexible with regard to one another's teaching styles unless deemed detrimental to learning.

2. PRT feedback from FFOUT peer review

In the face-to-face discussions, each reviewer made several important observations, some of which were common to both participants. The main suggestions were in those FFOUT program areas that the participants had not yet comfortably integrated into their lectures: engaging students, challenging students more often, maintaining enthusiasm and variety of delivery and relating subject content to the real world with appropriate and meaningful examples. Observations specific to each individual included the need to generate more audience participation and discussion by using more open-ended questions, providing sufficient opportunity for students to respond to questions, varying presentation style and tone, creating relaxed atmospheres, allowing time for reflection on content for both students and lecturer, encouraging students to do more of the work, engaging students more often and discussing individual student experiences.

3. Perceived benefits of the FFOUT PRT

The immediate benefits of the PRT were recorded as written documents for the purposes of the FFOUT program. In addition, the benefits of the PRT were discussed together at the FFOUT presentations and in the post-review workshops. The main perceived immediate benefits were the opportunity to share and critique different teaching practices and styles, the appreciation of the importance of internal reflection and consideration of their personal teaching philosophies, and the overall confidence gained from the process, which reflected their uncertainty in their abilities, albeit unwarranted. Both staff agreed that encouraging active participation is crucial to maintaining interest and focus, and both agreed on the need to experiment, discuss openly and to improvise with materials instead of relying on PowerPoint slides, and the importance of illustration using real-world scenarios.

Participant 1:

Without observing other colleagues in action, there are limited opportunities to experience and carefully observe different teaching styles. Although conference presentations provide an opportunity, there is little audience engagement and it's therefore difficult to assess learning. I was greatly encouraged with my feedback because I hadn't any great confidence in my lecturing, although no-one had ever formally critiqued me. After the review I immediately became more aware of teaching styles, and started to assess others' strengths and weaknesses as well as internally reflecting on my own teaching style when reviewing my peer partner.

Participant 2:

Working with an inter-disciplinary, inter-faculty colleague was especially beneficial because I believe we were forced to take a more objective approach. Neither of us knew each other's subject well so we learnt along with the students. I received very useful

constructive criticism on many key areas, and overall definitely gained rather than lost confidence. This encouraged me to improve my teaching even further. Knowing that my basic teaching approach was okay was important, as well as knowing what additional adjustments I could try to improve further. For example, I perceived immediate student benefit when I introduced more real-life examples with new content.

4. Pre-review meeting of second PRT (five years)

Similar to the first pre-PRT meeting, the two participants discussed and agreed on the criteria on which they wished to be reviewed. They agreed on the need to assess the extent to which the first review's recommendations had been successfully implemented; in particular, student engagement and course-content illustration. They also encouraged a more detailed appraisal of their strengths and weaknesses of specific aspects such as outlining the learning objectives, clarity, mode and pace of delivery and perceived student enthusiasm.

5. PRT feedback from second peer review (five years)

Many of the comments for the second PRT related to successful implementation of the suggested changes from the first reviews, including student engagement and better illustration. There were also more teacher-specific comments. Participant 1 was praised for his ability to explain the subject clearly in a step-by-step approach with a well-prepared list of aims. Slides were appropriate and verbal communication clear, and he successfully illustrated the concepts. Constructive criticism included being less static, not dwelling on difficult concepts and not rushing content if behind schedule. Participant 2 was praised for the progress she had made since the first review. Her confidence was visibly increased, there was frequent student engagement using several different approaches (direct questioning, open-ended questioning, use of an online interactive web site), good movement around the lecture theatre that created a relaxed environment, reviewing previous content using the whiteboard before outlining new content and well-balanced slides combining technical information with illustrations such as rainbows and mirrors. The pace was steady and the material well explained. The provision of basic, but not overly detailed, content together with references for further study catered for less- and more-able students alike.

6. Teaching philosophies at first PRT

At the first review, Participant 1's teaching-philosophy statement focused predominantly on a "transfer model" to foster knowledge transfer:

My primary aim is always to successfully impart knowledge, and to shape students in a somewhat standard manner by providing them with a fundamental knowledge of the subject. At the same time I recognise that the student should feel confident in being able to explore new areas on his own.

Participant 2 had similar views but also recognised the importance of problem solving:

My teaching philosophy is mostly based on encouraging thinking while still presenting the necessary information. Although I want my students to learn the fundamental content of the topic, I also try to foster critical thinking, preparing students to identify the problem effectively and then develop problem-solving strategies which relates directly to the student learning objectives of my topic.

7. Changes in teaching philosophies after five years

The desire to focus on imparting knowledge and reasoning was perhaps understandable, given the nature of the subjects (epidemiology and physics). However, in the subsequent five years, both participants realised the need to consider the student and not just the material. Participant 1 stated:

Rather than just providing knowledge, I force students to think harder by asking more open-ended questions. Besides, many students will quickly get bored if good marks just require increased knowledge. I can now see I have to inspire as well as impart knowledge to consider myself a “good” teacher. Changing the classroom into a dynamic environment is easier now [that] I have more confidence in my knowledge. If someone opens a discussion, I see it as an opportunity to get them more involved. It also teaches me about their backgrounds and abilities, their interests and goals and what they’re thinking.

Participant 2 revised her teaching philosophy to one that focused on student engagement to increase learning.

The first PRT convinced me that enhanced learning requires student interaction both with me and with each other. Classroom interaction increases their concentration, interest and awareness. Over the past few semesters our department have introduced several different methods of teaching that encourage learning and skill development via increased student engagement. My teaching now focuses on developing problem-solving skills by creating an engaging environment within the classroom [and] utilising diverse resources including an online learning system and web activities. Students’ progress is monitored through weekly assignments/quizzes focusing on the [needs of the] weaker students. To foster critical thinking I incorporated team-based learning (TBL), which helps motivate poor learners, and computer-based simulation labs (CBSL) and inquiry-based labs (IB labs), whereby students design their own experiments to investigate new phenomena, before applying their findings to other problems. Most (64%) students had a more positive attitude towards IB labs than traditional recipe-based labs, stating that it forced them to think more (72%) and that they learnt better.

8. Perceived benefits of the PRT and FFOUT program

After five years of additional teaching experience, both participants had greater skills and confidence in their teaching and were pleased that the second review confirmed successful incorporation of the recommendations from the first review. Both felt that the initial PRT had been important in laying the foundations for scholarly learning and teaching, and that this had accelerated their progress in the subsequent five years.

Participant 1:

The second PRT was again very positive and provided affirmation that I’d “progressed”. The overall message was “you’re a better teacher, your presentation style is clear, now just incorporate some minor changes”, which is very encouraging. Exactly how much I would have changed without the first PRT and FFOUT is impossible to quantify, but I certainly became more aware of my strengths and weaknesses more quickly. Both the workshop and the PRT made me aware of teacher- versus student-focused learning. I saw how

understanding student's experiences and goals aids successful learning, and therefore became more aware of the importance of personal development. I may still have learnt this eventually, but FFOUT and especially the PRT instilled me with the importance of aiming for excellence in teaching as well as research. I examine my performance from the student feedback; are they listening/motivated/interested? There is probably no substitute for teaching experience in gaining confidence in your ability, but PRT accelerates that whole process, even a single session, because it changes how you approach teaching via self-reflection. More regular PRT would probably have been even better, and being reviewed by someone more experienced may have offered different insights, but similarly we also empathised and developed a trust and collegiality that may not otherwise have arisen.

Participant 2:

The second PRT was very valuable. I was delighted to learn how my new approaches had transformed me into a more innovative and engaging teacher. Participation in the FFOUT program and the first PRT process had a strong impact on my teaching style. The discussion after the first PRT about the successes, weaknesses, approaches and strategies for enhancing the learning experience was a very valuable lesson. Most important was the simple realisation that questioning is such an easy but effective form of interaction. Perhaps five years of teaching experience would have also given me the necessary confidence and skills, but having that first PRT really was a powerful way of teaching me the benefits of student and teacher interaction. PRT also helped me identify other important aspects, including delivery. Almost immediately I started to relate concepts to the real world, encouraging students to make connections between the information and their own experiences so that it made sense to them. A TBL workshop replaced one of three lectures a week for one topic. Students view TBL as a fantastic and effective way to learn, enabling them to bounce ideas off one another and to receive immediate feedback from myself. The positive review from the first PRT gave me the necessary confidence to start trialling new approaches to teaching.

Discussion

In recognition of the importance of excellence in teaching and learning, many universities now deliver educational-development programs that include PRT for probationary academic staff. In this study, a basic teacher training program that included PRT and the development of a teaching philosophy statement was sufficient to provide some of the short- and long-term benefits previously ascribed to PRT programs including confidence in their teaching pedagogy, engagement in the SoTL and collegiality and personal development (Barnard et al. 2011; Schultz & Latif 2006). These benefits arose despite the potential limitations of a single PRT and the pairing of inexperienced staff, which has previously been questioned (Bell 2002; Kohut et al. 2007). Our study thereby provides qualitative evidence that even minimal PRT exposure performed between less experienced staff members is sufficient to develop several important changes in teaching practice that are recognised products of the PRT process. The FFOUT process developed reflective practice (Kohut et al. 2007), nurtured the required qualities for transformative change (Kandlbinder & Presta 2009) and successfully developed an appreciation of the SoTL (Schalkwyk et al. 2012).

The Australian Learning and Teaching Council funded a mapping of PRT activities in Australian universities in 2008 to develop a framework for PRT of teaching (Harris et al., 2008). They

observed that PRT was most frequently used for formative rather than summative review, and that programs were particularly designed for new and sessional staff as part of foundation courses. The FFOUT program is a compulsory requirement for new academic appointees with teaching roles, and is based upon these same principles with the aim to encourage staff engagement (McMahon et al. 2007). In contrast to other PRT programs, however, it does not require the pairing of experienced and inexperienced academics, and requires only a single PRT.

Many experts argue that since valid and reliable teaching appraisal relies heavily on personal skills and attributes, such as the ability of the observer and observed to give and to receive objective and critical feedback, participants may require training in observational and analytical skills (Bell 2002). In a study of novice academics in North America, scores for observers' responses to the statement "I have been adequately trained to conduct peer observations" were uniformly distributed across the five response categories (Kohut et al. 2007) suggesting that many were not confident in their abilities. However, others believe that a fundamental concept of the review process is that the peer partner is not necessarily someone with all the answers, but someone who cooperates and offers opinion, explores new strategies with their peer and looks toward solving future challenges (Barnard et al. 2011). Similar levels of experience also reduce the potential for issues related to trust and superiority, and teaching philosophies are likely to be more closely aligned. Thus, although experience may be considered important, the partnership of equals is acknowledged as being valuable where the purpose of peer observation is to engender collegiality rather than merely develop face-to-face teaching skills (Bell & Cooper 2013). The development of collegiality in addition to the process of PRT was felt strongly by both participants in this study, very much supporting the premise that the benefits from PRT often transcend the initial goals of the activity. Thus, an enthusiasm for the process and the capacity to establish collegiality are likely to be more essential for the success of PRT than teaching experience.

The Flinders framework for peer review, which is designed to occur between well-matched peers, seems to be supported in other universities across the world. At the Riverbank University in Liverpool in the UK, although training was considered desirable for both the reviewer and observer in developing a framework for formative PRT, the proposal did not dismiss the possibility of inexperienced colleagues being paired together (Blackmoore). David Gosling points out that reviewers need not necessarily be experienced teachers, since the purpose of PRT is to facilitate reflection by the academic being reviewed. However, some degree of training may be necessary to achieve this; for example, skills in being able to "ask the right questions and move the conversation on" (Gosling 2009). Similarly, in New Zealand, although it was suggested that adequate training enhances the chance of success, the appraisal per se was found to be an educative process, based upon trust and openness between trainer and trainee (Piggot-Irvine 2003). Canada's British Columbia University requires reviewers to complete a short training course, but not to necessarily have experience in teaching (UBC 2011). Glasgow University's guidelines state, "Peers can be at varying stages or levels of experience as long as both parties are comfortable with the arrangement, but care may be needed where there is the possibility that differences in status or experience lead to issues of power getting in the way of genuine mutual support" (Bovill 2010). As a consequence of the time demands of PRT (Atwood et al. 2000; Holt et al. 2011), the FFOUT program involves only a single PRT session in conjunction with development of a teaching philosophy. Although it has been suggested that the process of PRT for formative processes should ideally be undertaken on more than one occasion (Brent & Felder 2004), as this increases reliability (Paulsen 2002), any constructive feedback provided to faculty in their first few years will likely increase the chances of successfully attaining minimum teaching standards in subsequent summative reviews (Chism 1999). Brent and Felder have suggested that for the purposes of formative PRT, a preliminary interview, two classroom observations and a course-

material review might be performed by a single reviewer (Brent & Felder 2004). Our results also support the more quantitative findings of long-term benefits accruing from a four-day teaching program at Stellenbosch University in South Africa, particularly amongst less experienced staff (Cilliers 2010).

Although it takes a variety of forms, a teaching-philosophy statement has been described as “a systematic and critical rationale that focuses on the important components defining effective teaching and learning in a particular discipline and/or institutional context” (Schonwetter et al 2002, p.84). One potential weakness of the PRT process is the potential for mismatch between peers in regards to the extent to which colleagues’ theories of teaching are compatible (Cates & Monk-Tutor 2010). Encouragement towards using a student-focused approach may not, for example, be appreciated by a colleague still focused on a simple transfer paradigm (McManus 2001). As with most early-career academics, and particularly those from science disciplines, both participants in this study had mainly teaching-focused “transfer theory” philosophies before embarking upon their training; however, by their second review some five years later, these “simple” theories of teaching had successfully shifted towards more “developed” theories (Fox 1983). Both had more student-centered theories as they increased their awareness of the personal experiences and personalities of their individual students. In line with others (Schonwetter et al. 2002), they perceived changes in many of their previous views and practices, including their preferred teaching models, views of student development (knowledge, skills and understanding), a recognition of the importance of the student-teacher relationship (both inside and outside of class), new teaching methods and methods for evaluating effective teaching. There was thus a strong shift towards a focus on “learning methods” versus ‘teaching methods’. Participant 2 in particular now strongly favoured “experiential learning”, with the use of lab simulations, rather than “recipe-based” standard classes.

A limitation of this study is the inability to generalise our findings to other university early-career academics, other faculties and other establishments. Not all academics will embrace the ideas of PRT and development of a teaching philosophy to the extent observed here. In addition, although we have described the participants as being early-career, both had had several years’ part-time post-doctoral teaching experience at the time of their first PRT. It is also difficult to compare the success of pairing two inexperienced lecturers with that of one inexperienced and one experienced peer.

Our study illustrates that a single PRT performed between early-career academics with relatively little teaching experience can influence teaching practices and philosophies. While not all early-career academics will gain the same benefits as those observed here, the study provides academic developers with qualitative evidence that many of the positive benefits of peer evaluation can be gained between relatively novice participants, provided there exists adequate engagement and motivation. The PRT and development of teaching philosophies allowed the participants to accelerate their understanding of the teaching and learning process via careful reflection on their teaching practices. This internal reflection, rather than advice from experts, was the important process in helping them develop their awareness of teaching as a scholarly activity, engendering an enthusiasm for excellence in teaching that may have otherwise been ignored. Given the time constraints and limited availability of experienced academic staff (Holt et al. 2011), academic developers should emphasise the importance of the PRT process, including the development of collegiality between peers and skills that contribute to fruitful self-reflection.

References

Atwood, G, Taylor, J W & Hutchings, P A 2000. Why Are Chemists and Other Scientists Afraid of the Peer Review of Teaching? *Journal of Chemical Education*, vol. 77, no. 2, pp. 239-243.

Barnard, A, Croft, C R I, Cuffe, C, Bandara, W & Rowntree, P 2011. Peer Partnership to Enhance Scholarship of Teaching: A Case Study. *HERDSA*, vol. 30, no. 4, pp. 435-448.

Bell, M 2002. *Peer Observation of Teaching in Australia*. University Of Wollongong: Centre for Educational Development and Interactive Resources. Viewed 5 April 2014, http://Www.Heacademy.Ac.Uk/Assets/York/Documents/Resources/Peer_Observation_Of_Teaching_In_Australia.Pdf.

Bell, M & Cooper, P 2013. Peer Observation of Teaching in University Departments: A Framework for Implementation. *International Journal for Academic Development*, vol. 18, no. 1, pp. 60-73.

Blackmore, J A 2005. A Critical Evaluation of Peer Review via Teaching Observation within Higher Education. *International Journal of Educational Management*, vol. 19, no. 3, pp. 218-232.

Blackwell, R & Mclean, M 1996. Peer Observation of Teaching and Staff Development. *Higher Education Quarterly*, vol. 50, no. 2, pp. 156-171.

Bovill, C 2010. *Peer Observation of Teaching Guideline*. University Of Glasgow. Learning And Teaching Centre. Viewed 5 April 2014, <http://Www.Gla.Ac.Uk/Services/Learningteaching/Goodpracticeresources/Peerobservationofteaching/>.

Brent, R & Felder, M 2004. A Protocol for Peer Review of Teaching. Proceedings of the 2004 American Society for Engineering Annual Conference And Exposition.

Carbone, A 2011. Building Peer Assistance Capacity in Faculties to Improve Student Satisfaction with Units. In Krause, K, Buckridge, M, Grimmer, C & Purbrick-Illek, S (eds.), *Research and Development in Higher Education: Reshaping Higher Education*, 34, pp. 83-94. Gold Coast, Australia, 4-7 July.

Cates, M E & Monk-Tutor, M R 2010. Peer Reviews Can Be Problematic. *American Journal of Pharmaceutical Education*, vol. 73, no. 5. p. 79.

Cavanagh, R R 1996. Formative and Summative Evaluation in the Faculty Peer Review of Teaching. *Innovative Higher Education*, vol. 20, no. 4, pp. 235-40.

Chism, N V N 1999. *Peer Review of Teaching: A Sourcebook*. Anker Publishing, Bolton, MA.

Cilliers, F 2010. Impact of an Educational Development Programme on Teaching Practice of Academics at a Research Intensive University. *International Journal for Academic Development*, 15, no. 3, pp. 253-267.

Costello, J, Pateman, B, Pusey, H & Longshaw, K 2001. Peer Review of Classroom Teaching: An Interim Report. *Nurse Education Today*, 21, no. 6, 444-54.

- Fox, D 1983. Personal Theories of Teaching. *Studies In Higher Education*, 8, no. 2, pp. 151-163.
- Gibbs, G & Coffey, M 2004. The Impact of Training of University Teachers on Their Teaching Skills, Their Approach to Teaching and the Approach to Learning of Their Students. *Active Learning In Higher Education*, 5, no. 1, 87-100.
- Gosling, D. 2009. A New Approach to Peer Review of Teaching. Paper 124. In Gosling, D & O'Connor, K M (eds.). *Beyond The Peer Observation Of Teaching*. Staff And Educational Development Association, London.
- Harris, K-L, Farrell, K, Delvin, M & James, R 2008. *Peer Review of Teaching in Australian Higher Education: A Handbook to Support Institutions in Developing Effective Policies and Practices*. Centre For The Study Of Higher Education, Melbourne.
- Holt, D, Palmer, S & Challis, D 2011. Changing Perspectives: Teaching and Learning Centre's Strategic Contributions to Academic Development in Australian Higher Education. *International Journal for Academic Development*, vol. 16, no. 1, pp. 5-17.
- Hubball, H & Clarke, C 2011. Scholarly Approaches to Peer-Review of Teaching: Emergent Frameworks and Outcomes in a Research-Intensive University. *Transformative Dialogues Journal*, vol. 4, no. 3, pp. 1-32.
- Johannes, C, Fendler, J & Seidel, T 2012. Teachers' Perception of the Learning Environment and Their Knowledge Base in a Training Program for Novice University Teachers. *International Journal of Academic Development*, 1-14.
- Kandlbinder, P & Presta, T 2009. Key Concepts in Postgraduate Certificates in Higher Education Teaching and Learning in Australiasia and the United Kingdom. *International Journal for Academic Development*, vol. 14, no. 1, 19-31.
- Kohut, G F, Burnap, C, & Yan, M G 2007. Peer Observation of Teaching. Perceptions of the Observer and the Observed. *College Teaching*, vol. 55, no. 1, pp. 19-24.
- Lomas, L & Kinchin, I 2006. Developing a Peer Observation Program. *International Journal of Teaching & Learning In Higher Education*, vol. 18, no. 3, pp. 204-214.
- Lomas, L & Nicholls, G 2005. Enhancing Teaching Quality through Peer Review of Teaching. *Quality In Higher Education*, 11, no. 2, pp. 137-149.
- 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 and Mutually Exclusive Intentions. *Teaching In Higher Education*, vol. 12, no. 4, pp. 499-511.
- McManus, D A 2001. The Two Paradigms of Education and the Peer Review of Teaching. *Journal of Geoscience Education*, vol. 49, no. 423-434.
- Paulsen, M B 2002. Evaluating Teaching Performance. *New Directions For Institutional Research*, vol. 2002, no. 114, pp. 5-18.

Piggot-Irvine, E 2003. Appraisal Training Focused on What Really Matters. *International Journal Of Educational Management*, vol. 17, no. 6, pp. 254-61.

Schalkwyk, S V, Cilliers, F, Adendorff, H, Cattell, K & Herman, N 2012. Journeys of Growth Towards the Professional Learning of Academics: Understanding The Role Of Educational Development. *Int Journal for Academic Development*, vol. 18, no. 2, pp. 1-13.

Schonwetter, D J, Sokal, L, Friesen, M & Taylor, K L 2002. Teaching Philosophies Reconsidered: A Conceptual Model for the Development and Evaluation of Teaching Philosophy Statements. *International Journal for Academic Development*, vol. 7, no. 1, pp. 83-97.

Schultz, K & Latif, D 2006. The Planning and Implementation of a Faculty Peer Review Teaching Project. *American Journal of Pharmaceutical Education*, vol. 70, no. 2, p. 32.

Stes, A, De Maeyer, S, Gijbels, D & Van Petegem, P 2013. Effects of Teachers' Instructional Development on Students' Study Approaches in Higher Education. *Studies In Higher Education*, vol. 38, no. 1, pp. 2-19.

Thomas, K, Mcnaught, C, Wong, K-C & Li, Y-C 2011. Early Career Academics' Perceptions of Teaching and Learning in Hong Kong: Implications for Professional Development. *International Journal for Academic Development*, vol. 16, no. 3, pp. 257-268.

UBC 2011. *The Peer Review Program Coordinated by the Centre for Teaching, Learning and Technology, University of British Columbia*. Viewed 5 April 2014, http://Wiki.Ubc.Ca/Documentation:Ctlr_Programs/Prt/Peer_Review_Of_Teaching#Reviewers.