Teaching for Learning and Learning for Teaching

Peer Review of Teaching in Higher Education

Christopher Klopper and Steve Drew (Eds.)
Teaching for Learning and Learning for Teaching
Professional Learning
Volume 19

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Rationale:
This series purposely sets out to illustrate a range of approaches to Professional Learning and to highlight the importance of teachers and teacher educators taking the lead in reframing and responding to their practice, not just to illuminate the field but to foster genuine educational change.

Audience:
The series will be of interest to teachers, teacher educators and others in fields of professional practice as the context and practice of the pedagogue is the prime focus of such work. Professional Learning is closely aligned to much of the ideas associated with reflective practice, action research, practitioner inquiry and teacher as researcher.
Teaching for Learning and Learning for Teaching

Peer Review of Teaching in Higher Education

Edited by

Christopher Klopper and Steve Drew
Griffith University, Australia

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FOREWORD

It has been said that the only thing more challenging than authentic self-evaluation is a clear-eyed evaluation of one’s peers. This dilemma bedevils many professions—from politics and the judiciary to social work and scientific experimentation.

Academia sits in a distinctive posture in this regard. Peer review lies at the core of so much that occurs in universities: it underlies the awarding of all research grants; it is the basis for PhD examination and research publication; it underpins the selection of those who win academic prizes (including those awarded for learning and teaching excellence).

Yet when it comes to peer review of the core academic activity of teaching, the story is much more complex. This current collection, edited by Christopher Klopper and Steve Drew, reflects both that complexity and the shape of current debates which frame it. This book is a carefully-articulated methodological snapshot of peer review at Griffith University. It is a timely and well-documented collection. It is one which illustrates both institutional progress to a set point in time and which shows how much more still has to be done if peer review of teaching (or PRO-Teaching as it is in the local parlance) is to be accepted in comprehensive, research-intensive universities in this country.

Put simply, the national context really does matter. There is considerable variety in global approaches to the issue of peer review in teaching; Australia occupies a distinctive position in that connection. For example, in their recent, co-edited volume, Peer Review of Learning and Teaching in Higher Education: International Perspectives (Springer, 2014) Judyth Sachs and Mitch Parsell observe that:

There are a variety of approaches to peer review of teaching that can be mapped along the dimensions of the intention, purpose and implementation of management and its take-up and acceptance by academics…Broadly, perceptions map to national boundaries. In North America, peer review is an accepted part of academic life…In the UK, under the influence of [David] Gosling and a number of government-sponsored initiatives, peer review has gained a stronghold. In Australia, peer review is neither systematically supported nor generally perceived to be a high quality developmental activity. (Sachs & Parsell, 2014: 2)

Why is this so? And what is to be done about it? Both Sachs and Parsell and Klopper and Drew may give different answers to those questions, but they all demonstrate that the purely observational legacy of peer teaching reviews has real limitations. This is because for decades, peer observations of teaching have formed a key part of accreditation processes, quality audit procedures and academic tenure evaluations, particularly in the United States. As David Gosling and others have pointed out, this
so-called ‘Evaluation Model’ has often had a definitive edge to it, the result being a specified or codified report (such as a tenure-track assessment) which could be used either to advance careers rapidly or to curtail them summarily.

However, if a core aim of the peer review of teaching approach is the professional development of academic staff and the enhancement of their teaching prowess, more is definitely required. Otherwise, the potential to benefit students is not explored fully, nor are the possibilities for more effective cooperation and collaboration between academics; which is one of the foundational principles of peer review in the first place.

For these reasons, the title and topic of this collection of essays—Teaching for Learning and Learning for Teaching—could not be more timely. Equally apposite is the scope of this book, in which Klopper and Drew have assembled a wide range of disciplinary and contextual approaches to the question of peer review of teaching in universities. The span of disciplines—from computer science to aviation; from government and journalism to conservatory music—means that the potential narrowness of a single institution focus is mitigated. At the same time, the chapters contributed by the colleagues of the Queensland Conservatorium of Griffith University demonstrate just how far pedagogical experimentation and advancement has come in areas which were formally dominated solely by one-to-one conservatoire teaching.

Interestingly, not all of the contributors agree with each other. For instance, some assert that the lecture is functionally moribund; others that it is experiencing a new lease of narrative life. Some decry the forces of online education for ‘embodied’ teaching while others celebrate them. Some (such as the editors) advocate a most significant change (or MSC) methodology—which implies the ongoing measurement and monitoring of program and degree performance—while others argue for the liberation of creative professional opportunities for students.

Nevertheless, this points to the fertility of debates in this topical area, and to the fact that a number of alternatives are open to us. It is fascinating that it was in 2001 that Boud, Cohen et al. edited their influential volution, Peer Learning in Higher Education: Learning from and with Each Other (London: Kogan Page). In it, David Boud observed the major differences between cooperative learning and collaborative learning in the student-to-student university. Interestingly, nearly 15 years later we are debating the same terms in relation to the peer review of teaching in the academic-to-academic universe. Of course there are cross-overs aplenty between any developmental and collaborative models (to follow Shulman, 1999, Gosling, 2005). For instance, scholarship of teaching arguably pertains to both; as does appropriate feedback given by one colleague to another.

But the key point suggested by this book is this: change is afoot. The pressures to teach better, more responsively—with more digital inspiration and tools—are inexorable. They are coming from students, from governments, from employers. It is a collective challenge and is one which I believe has to have a collective solution. Peer review of teaching is one element of that solution, and it is important
to recognise it as such. In that sense, whether or not the settings are exactly those proposed in this collection is less significant than an agreement that the issue has to be addressed, for the good of all peers in academia.

Adam Shoemaker
Academic Provost
Griffith University
Embedding sustainable peer observation and peer assistance for improving teaching practice at Griffith University: Creating a culture and communities of practice to build capabilities, was a university-wide initiative which originated in 2009 and became known as the peer review and observation of teaching (PRO-Teaching). A name chosen for three reasons: to emphasise the professional nature of teaching; by engaging collegial support peer-review of teaching is for or pro teaching; and the acronym PRO as an abbreviation for “Peer Review and Observation of”. The designated acronym PRO-Teaching is used throughout this book in reference to this project and the associated methodologies. The premise was to explore the potential for the peer review of teaching to enhance teaching practice and student learning outcomes, to address the perceived need to improve teaching quality (teaching for learning), to provide opportunities for academic staff to improve their understanding of effective teaching (learning for teaching), and to embed a scholarship of learning and teaching.

Acknowledging academic dissatisfaction with student evaluations as sole arbiter of quality, PRO-Teaching offered another avenue for the collection of evidence of teaching quality and, at the same time, assisted in teacher development, using a scholarly process. This required a climate conducive for such a scheme to move beyond involving postgraduate, newly-inducted teaching academics, to the whole population of teaching academics. We created a series of results-oriented steps of supported engagement, in order to nurture a collegial ‘critical friend’ environment and to encourage uptake of the scheme.

The success of the PRO-Teaching project is demonstrated in the engagement to date of more than 350 academics in multidisciplinary collaborations, enhancing pedagogy and curriculum design. Positive impacts upon student experience of teaching (SET) were achieved with a number of mentoring relationships persisting beyond the official instances of engagement. Individuals from each university group have been named as champions and Directors of Learning and Teaching in their schools and elements. Academic managers were highly complementary and appreciative of reports presented by academics to support their progression. Said one: “The PRO-Teaching reports greatly assist in provision of peer-review of teaching that can be triangulated with student feedback, which in turn leads to effective improvements for course delivery.”

In addition to recorded improvements made in teaching and curriculum as a result of peer collaborations, the development of collegial networks, enhanced openness to discussing troubling learning and teaching issues, and successes in teaching have resulted. In a corollary effect, many of the contributing authors have gone on to engage with and document their experiences and outcomes as scholarship of learning.
and teaching pedagogical research and be the recipients of university and national teaching awards.

Our research confirms that teaching for learning through learning for teaching is both a process and an outcome for multiple stakeholders participating in the sequenced episodes of peer observation of teaching. The strong link between PRO-Teaching and enhanced student learning outcomes is evidenced through the multidisciplinary cases presented in this book. These are drawn from various schools and are illustrative of all stages of teaching experience. The qualitative methodology of appreciative enquiry coupled with action research, shows clear correlations for the practice of peer observation of teaching for learning to enhance student learning outcomes. Without a doubt this leads to an improved student experience, learning outcomes, evaluation of teaching and student satisfaction.
ACKNOWLEDGEMENTS

We would like to recognise Griffith University for funding the PRO-Teaching project and providing feedback on its implementation through the Excellence in Education Committee.

A project of this magnitude would not have been possible without the dedicated administrative support staff that provided on-going support and a ‘face’ to the project at all times:

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To the 350 academics who participated in the PRO-Teaching project and to the 7,500 students who have been a part of classes with over 4,400 providing evaluation surveys and learning outcomes tests: your involvement strengthened and enhanced the aims of the PRO-Teaching project.

Thank you to the team of peers who reviewed the chapters for inclusion in this collection and ensured quality reporting. Your intellectual input was greatly appreciated by both the authors and editors.

A special word of thanks to Kirsty Mallitt for her never-ending source of energy and enthusiasm for the PRO-Teaching project, in particular, for her involvement with the production of this manuscript. Kirsty’s eye for detail, consistency and ability to see into the future has been extremely beneficial to both the project and this manuscript.

To our partners and families who allow us to do what we do – thank you!
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INTRODUCTION

Teaching for Learning and Learning for Teaching focuses on the emerging global governmental and institutional agenda about higher education teaching quality. It emphasises the role that peer review of teaching can play through supporting improvements in teaching practice and student learning outcomes. This agenda is a pervasive element of the further development of higher education through the activities of governments, global agencies, institutions of higher education, discrete disciplines, and individual teachers. Over the past 15 years, there has been a rapidly expanding global marketplace for higher education to service a burgeoning demand for desirable forms of work (Klopper & Drew, 2013). In such a competitive climate, an imperative exists for education products and services to differentiate to market needs globally, regionally, and locally (Jones & Oleksiyenko, 2011; Marginson, Kaur, & Sawir, 2011); and to ensure that they are of an outstanding quality in terms of access (Morley, 2012; Rizvi & Lingard, 2011), processes and outcomes (Wong, 2012). Many universities have adopted student evaluations as a mechanism to appraise the quality of teaching. These evaluations can be understood as providing a customer-centric portrait of quality. When used as the sole arbiter of teaching performance they do not instil confidence in the system of evaluation by academic teaching staff. Providing peer perspectives as counterpoint, whether in a developmental or summative form, goes some way to alleviating this imbalance; that is the impetus for the resurgence of interest in peer review and observation of teaching. This book seeks to recognise contextual cases where the peer review and observation of teaching in higher education affirm best practices and identify areas that require improvement in establishing local, national and international benchmarks of teaching quality.

CHARACTERISTICS OF GOOD TEACHING

There are several examples of characteristics of good teaching (Drew & Klopper, 2014). A nexus between teaching and research created the new terms scholarly teaching (Glassick, 2000b) and scholarship of teaching (Boyer, 1990;
Hutchings & Shulman, 1999; Trigwell, Martin, Benjamin, & Prosser, 2000) that illuminate good teaching and suggest the means for its attainment. Many universities now recognise the scholarship of teaching as contributing to research output, and reward evidence of excellence in teaching. Evidence of a scholarly approach to teaching emerges as academic teaching colleagues engage in professional activities reflective of their teaching (Schon & DeSanctis, 1986). Academic staff engaged in action research (Kemmis, 2006; Zuber-Skerritt, 1992) to develop curricula and pedagogical techniques for their teaching can obtain outstanding results and create classes that are instructive to observe and engage with. This is the essence of the scholarship of teaching (Boyer, 1990) where pedagogical procedures must be carefully planned, continuously examined, and relate directly to the subject taught. (p. 23–24)

Many governments define a quality agenda and develop policy regarding higher education standards and how quality is measured, developed, and maintained (QAA, 2012; TEQSA, 2012). In some countries different industries (AACSB, 2012; ABET, 2012) or national and regional associations (AAHEA, 2012; BCEQA, 2012) accredit universities that meet their distinct quality needs. In the Australian context, the federal government’s Tertiary Education Quality Standards Agency (TEQSA) evaluates private and public higher education providers against its Higher Education Standards Framework. That framework provides and develops standards relating to provider organisations, the nature of learning underpinning the awarding of qualifications, the quality of teaching and learning, quality of research, and the quality of information provided to stakeholders (TEQSA, 2012). Hence, in a competitive field the need for developing enhanced practice and outcomes becomes a key driver, moving the agenda from quality assurance to quality enhancement. Biggs (2001) builds upon the notion of a reflective practitioner (Schön, 1983) to provide a model for prospective quality to promote a reflective organisation. Such an organisation instantiates a comprehensive quality model, a recognised process for continuous improvement and an environment in which quality enhancement is achievable.

TEACHING FOR LEARNING AND LEARNING FOR TEACHING

This book was conceived against a reflective background and showcases a university-wide initiative of peer review and observation of teaching (PRO-Teaching). This project explored the potential for the peer review of teaching to enhance teaching practice and at the same time enhance the learning outcomes of students. The university’s existing quality of teaching measurements were well established – student experience of teaching (SET) and its partner, student experience of course (SEC) – but where SECs data is publicly available, SETs information is for the individual teacher only, reinforcing the culture of a private teaching space. Even together, these do not take the next step of examining and connecting evaluation to
improved higher education. To build effectiveness in teaching requires the addition of reflective practice, and conversations about teaching – peer observation and review (Smith, 2008).

The PRO-Teaching methodologies addresses this observed and voiced need to improve teaching quality (teaching for learning), provide opportunities for academic teaching staff to improve their understanding of effective teaching (learning for teaching) and enact a scholarship of learning and teaching. The experiences of teaching staff, documented in this book confirm the value of the rich conversations and learning outcomes that ensue when teachers talk to each other about their teaching in a scholarly, directed way.

Scholarly teaching is defined in this book as the bridge from teaching to learning such that academic teaching staff members employ relevant educational literature as well as the pedagogical content knowledge to consistently enhance their teaching practice. Teaching includes the design and implementation of activities that promote learning, and includes classroom teaching, course design, the development of instructional materials, and the development of formative and summative assessment. Scholarly teaching and undertaking a scholarship of teaching do not necessarily indicate excellence in teaching for learning; but this book signals an approach that has demonstrated the capacity to enhance teaching practice in range of contexts and to apprise others as they seek to improve their own practice through learning for teaching.

The contributors present cross-disciplinary, participatory, action research case studies detailing significant domains of change in participants’ teaching practices. This captures the significant change points in understandings and operations and throughout readers will be engaged with the most significant change (MSC) technique (Dart & Davies, 2003). The domains of change promoting the generation of knowledge from this university wide project include: active participatory contribution associated with teaching for learning and learning for teaching, pedagogical methods and tools; and the sustainability of the PRO-Teaching mechanism within an organisation. These domains of change have provided the central architecture for this book as contributors detail respective domains of change pertinent to their own contexts.

The book begins by describing the environment and the competitive requirement for quality enhancements for teaching and learning in higher education. It previews the major perspectives of the book through the presentation of a process for the peer review and observation of teaching and the subsequent contributions made by each chapter to these perspectives. The next section of the book comprises a collection of chapters detailing explicit cases where peer review of teaching occurred. These chapters position both local and global perspectives in relation to quality assurance, quality feasibility and quality enhancement. They bring together the work of colleagues to affirm best practices and to identify the areas that require improvement in establishing local, national and international benchmarks of teaching quality. The next section of the book draws together the descriptions, discussions, imperatives
and processes outlined in the previous sections by furthering cases of context in a variety of pedagogical environments and settings. The final section of the book culminates with the presentation of an evaluation of the impact of the peer review of teaching in one Australian university through the utilisation of the MSC technique. This highlights both the outcomes of the university-wide project and the effectiveness of the technique for evaluative purposes. The book concludes with the presentation of the protocols for peer review of teaching to contribute to a global exemplar of practice to support national and international benchmarking of teaching quality in higher education.

CONTEXTUAL CASES

In Chapter 2 Drew, Klopper and Nulty discuss the main arguments that deal with defining, and developing an approach and framework for the peer review and observation of teaching. The purpose is to highlight the rich and extensive literature that informs the identification of characteristics of effective teaching. This has led to the subsequent formulation of a hybrid instrument for use in peer review and observation of teaching. The chapter presents the numerous design considerations that were taken into account to achieve a framework for implementation. The chapter concludes with the authors elucidating the literature that supports the identified characteristics of effective teaching described in the chapter.

Chapter 3 of this book (Drew & Klopper) is the collation of the protocols that were developed for the university wide initiative PRO-Teaching. The offering is not as suggested blueprints but rather as starting points for individuals or institutions exploring the potential of peer review of teaching in enhancing teaching quality and student outcomes. It is envisaged that this contribution to the global archive of practice will support both national and international benchmarking practices of teaching quality in higher education through peer review of teaching.

Klopper, Drew, and Power begin Chapter 4 with an overview of the enhancement of teaching and learning in a higher education setting, facilitated by two enhancement initiatives. The initiatives of the PRO-Teaching project and the peer assisted course enhancement scheme (PACES) are offered as complimentary, cross-disciplinary team-implemented initiatives designed for enhance the quality of teaching and curriculum design. The chapter concludes with the strong recommendation that the customisation of peer review of teaching projects to the needs of individual institutions and the call for further research is needed into the achievement of such implementations in additional university settings.

Chapter 5 presents and explores one possible model for encouraging one-to-one teachers in conservatoires to reflect critically on their pedagogical choices and practices. It is the purpose of the authors (Carey & Grant) to highlight possible ways to develop best practice models for one-to-one pedagogy that incorporate professional growth strategies for teachers. The chapter is structured as follows. After an overview
of the literature on peer-assisted reflection in higher music education, including the use of video as a reflective tool, the authors position their research in the context of a broader ongoing project, Transformative One-to-one Teaching and Learning, at one Australian music conservatoire. Next they report on a sub-project that used video as the basis for a collaborative reflective activity among teachers at this institution. In the last two sections of the chapter what the teachers learnt about their teaching practices through this process, and their experiences of undertaking the activity is reported on and discussed. They also consider several implications for teachers and institutions of similar ilk, and argue that peer-assisted reflective activities may progress teachers’ understandings of their own approaches to teaching, encourage those teachers to improve those practices, and foster a supportive environment for one-to-one teachers to explore and improve their teaching.

In Chapter 6 the main arguments that deal with the underlying factors challenging the delivery of online aviation education in the higher education sector are discussed (Kille, Bates, & Murray). This purpose is to highlight the needs of aviation students, teachers and industry in the delivery of online tertiary aviation education by pointing to experiences of a university teacher engaged in the PRO-Teaching initiative. The chapter provides an overview of the scope of the study, followed by an exploration of the issues and challenges affecting the delivery of online aviation education in university-level professional programs. A summary of the solutions and recommendations that emerged as a result of the peer observation process is then offered. While the solutions relate to the specific case study, the solutions were derived from a critical examination of professional pilot training more generally. Thus, this section aims to offer recommendations applicable to the development of online aviation courses, which include a cohort of professional pilots or training pilots. Kille et al. (this volume) contend that online tertiary aviation education courses need to be adjusted to consider the needs of both the student and industry by: (1) implementing action-based learning; (2) considering pedagogy before technology; and (3) embedding formative assessment. In the last section of the chapter research implications for the future delivery of online tertiary aviation education courses are considered and the need for the further development of appropriate teacher resources, with an emphasis placed on the importance of the PRO-Teaching initiative for online aviation educators.

Chapter 7 initiates a brief discussion of two competing teaching environments – the traditional lecture and flipped lecture. The peer review process is discussed in terms of its application to business law – a second year compulsory course in an undergraduate business program of study. Student and peer evaluation data is shared, all of which supports a change in teaching practice from the traditional lecture to the flipped lecture model. The chapter progresses to draw upon a case study approach to describe the flipped lecture, from its operation across three cohorts over a twelve-month period to its subsequent peer review. The narrative is complemented by an analysis of student and peer data as well as the authors’ (Cameron & Dickfos)
experiences with the flipped lecture. The case study provides preliminary evidence that the flipped lecture is considered the preferred learning environment for students in this context.

In Chapter 8, Wright and Main discuss the main arguments that explore how to develop high quality teaching practices through an action research cycle that is informed by a peer review and observation of teaching. The chapter highlights the importance of academic teaching staff improving their pedagogy by analysing available data from self-reflections, peer observations, and student feedback. Wright and Main assess the need for quality teaching in higher education, and review the particular strengths of an action research model executed collaboratively and draw on the peer review and observation of teaching as an improvement model.

Chapter 9 reflects on the challenges associated with the application of the peer review process from a performing arts perspective. The reflection is articulated from Hassall’s position; expertise that sits outside traditional teaching and learning contexts. The focus here is upon a professional studies introductory acting class as part of an arts undergraduate program of study. The chapter acknowledges the increasing global diversity offered to university student populations in the arts. Evaluation standards that identify and aim to enhance teaching delivery across diverse areas in creative practices are consequently essential to ensuring quality of teaching in the field. PRO-Teaching challenges a performance (theatre) technique delivery position. This specifically concerns the assessment of embodied experiential and instinctual behavioural learning practices. The chapter outlines the peculiarities of teaching into performance-learning disciplines wherein “mastery of material is uncertain and even impossible” (Anderson-Rabern, 2010, p. 91). The chapter proposes that performance training implies that formative approaches to learning are implicit in embodied expressions and performances where events can be considered as “already critical, political and marked by difference” (Dolan, 1993, p. 418). Overall the chapter summarises how performance-learning facilitation focuses on the doing of experiences and as such developing knowledge and understanding evolves as a “repetition of-the-never-the same” whereby “the task is taken up over and over, while the particulars keep changing” (Schechner, 2002, p. ix). It is in this conflicting liminal space where the peer observer may also encounter challenges with the evaluation criterion. The chapter summarises the implications for alternatives to evaluation criteria that might best accommodate assessment of facilitation and delivery within creative arts scholarship.

A brief discussion of the processes and value of mentoring relationships in relation to existing literature opens Chapter 10. The chapter follows with a report of the learning potential of a cross-generational, collegial collaboration within a specific mentor/mentee partnership: a pedagogical case which highlights quality enhancement methods in a music education course. The chapter is further developed by reporting how individual teaching experience, knowledge bases and skills were synthesised to produce outcomes beyond the partners’ expectations; particularly the collaborative development of a specific-purpose website. This was last used to engage an entire
cohort of students and teaching staff in real-time critique of students’ performances. Bartlett and Spicer conclude with a discussion of the ongoing refinement of this online system and the flow-on benefits for course monitoring and teaching-team involvement.

In Chapter 11, Tolmie discusses the main arguments pertaining to the issue of a recognised conservatoire teaching tradition within a contemporary university environment reinvigorated through an encounter with the peer review and observation of teaching methodologies. The purpose of this is to examine the ways in which early career music academics can incorporate auto-ethnographic examplars, while pointing to the large-class versus one-to-one teaching tradition. An overview of the scope of a musician-turned-academic career path, the conservatoire in context, the overarching music industry and My Life as a Musician (MLaaM) course is provided to contextualise the situation. The author then reviews the one-to-one teaching and large-class teaching environment via an auto-ethnographic account of her PRO-Teaching experience.

In Chapter 12 Williams discusses the main arguments that deal with the production of narrative pedagogy in large group teaching. It is his intention to integrate the false belief that the lecture is dead by pointing to research and strategies to reveal opportunities for deep and active learning in large group settings. The chapter provides an overview of the scope of large group teaching, which is reviewed with the particular characteristics, challenges and opportunities afforded by narrative pedagogy. Next a summary of the mechanics of delivering narrative pedagogy, including his original model is provided. Finally in the last two sections of the chapter, the author considers several implications for a case study of the use of Aesop’s Fables to teach a threshold concept of politics as power, and argue, first, that large group teaching offers unique scope for teacher-student and student-student engagement, and, second, that a narrative approach allows teachers to package potentially troublesome concepts in aesthetically pleasing parcels.

In Chapter 13 a case study exploiting PRO-Teaching as a vehicle for developing a scholarly approach to teaching for learning and providing a data gathering framework to facilitate a scholarship of learning and teaching is presented. It is anticipated that this chapter will illuminate the process by which a technological innovation was introduced into a first year computer science course and the role that peer observation of teaching played in this process. The authors (Venema, Drew, & Lodge) follow the development of the innovation and its impact on student learning to illustrate how interdisciplinary teams can work together to create innovative solutions. These in turn, enhance student learning by leveraging technological, pedagogical, and content knowledge. They conclude that engaging in cross-disciplinary peer observation of teaching provides a promising developmental process for educators.

Chapter 14 features the challenges facing science discipline teachers by pointing to the need for a balance between the time devoted to research and scholarship. In this chapter, Cresswell, Gregory and Watters discuss the main arguments that deal with the issue of the reluctance of scientists to undertake prescriptive peer review
and observations of teaching. The chapter delivers an overview of the scope of the disengagement of science discipline teachers with the peer review process and reviews, in particular, the contextual landscape of peer review of higher education within Australia. A summary of the hurdles preventing science discipline teachers in higher education in Australia from participating in peer review of their teaching is presented. In the concluding sections of the chapter the authors consider the many benefits of peer review and observation of teaching and also highlight the need for varied depth and quality of the peer review process dependent upon its intended purpose of application. They propose a more streamlined process that potentially facilitates the supplementary development of a culture of scholarly teaching and scaffolding future applications of PRO-Teaching.

In Chapter 15 Klopper and Drew discuss the main arguments that deal with the issue of evaluating a PRO-Teaching project by applying the MSC technique to this area of work. The chapter presents both the outcomes of the project, and the effectiveness of the MSC technique to evaluate projects, which cover such a diversity and complexity of data sources. The chapter concludes with the proposal that PRO-Teaching, combined with the MSC technique, provides a viewpoint for observers and observees to discern pedagogical methods, tools and approaches for professional development. Both the process and outcome of peer review and observation of teaching has the potential to revitalise teaching materials, teaching aids and learning environments through multiple lenses.

The PRO-Teaching mechanism recollected in the case studies contained in this book demonstrate the capacity to collect data to inform constructive alignment between teaching episodes, student perceptions of teaching quality and observer perceptions of teaching quality enhancement. Variations of the process have been developed and implemented in a range of teaching contexts including lectures, tutorials, workshops, one-to-one studio teaching instances and on-line course deliveries. Over the duration of the project several academics have been awarded teaching excellence citations and awards at group, university and national levels using PRO-Teaching methods as evidence of their impact on teaching and learning quality enhancement. Klopper and Drew (2013, p. 142) maintain that teaching for learning through learning for teaching is both a process and an outcome for multiple stakeholders participating in the sequenced episodes of peer observation of teaching.

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TEACHING FOR LEARNING AND LEARNING FOR TEACHING


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2. DEFINING AND DEVELOPING A FRAMEWORK FOR THE PEER OBSERVATION OF TEACHING

INTRODUCTION

Changes in funding and regulatory requirements for universities increases the need for teachers and institutions to be able to achieve and demonstrate the quality of learning and teaching. In addition, changes in the competitive landscape for local and international student places provide added pressure to institutions to be seen as effective education providers. Growth in the use of the Internet to publish rankings (e.g., The Good Universities Guide) and social networking, where students share experiences widely, demand a transparent approach to delivering quality that includes developing and supporting excellence in teaching.

At the same time, Governments and universities have recognised the importance of nurturing and developing the quality of teaching as a way of achieving better student outcomes. More academic appointments with an explicit teaching focus are beginning to emerge. In the research literature, starting with Shulman (1986, 1987) and Boyer (1990), attention to scholarly teaching and the scholarship of teaching has increased. The impetus for universities to value research into teaching practice, and to reward teaching quality, continues to grow.

A component of universities’ response to this quality agenda is the use of student evaluations of teaching and courses. These evaluations can be regarded as providing a student-centric picture of quality. However, if used summatively as the sole, or predominant, indicator of teaching performance in an institution they do not inspire academic confidence in the system. Further, their use in formative techniques is regarded to be relatively weak. This chapter advocates for, and outlines, an approach (methodology) based on providing a peer perspective as counterpoint. Whether it is used in a developmental or summative way, the approach developed can be understood by academics, and valued by the university, as a defensible way to alleviate over-reliance on student evaluations alone, and to achieve demonstrable improvements in the quality of teaching.
PART 1: THE CHARACTERISTICS OF GOOD TEACHING

Teaching Context

It is difficult to pronounce what good teaching is, as it can take many forms. The environmental context and objectives of a class partly determine the possible manifestations of good teaching. To illustrate this argument, it is to be expected that a lecture provide opportunities to exhibit different teaching behaviours to those that may be apparent in a tutorial, a workshop, a laboratory, or online. Similarly, the cardinality of the relationship of teacher to students (e.g., one-to-many in a lecture, one-to-one in research supervision) enables multiple forms of communication and instructional techniques to be applied to assist learning to different effect. Likewise, where complementary teaching and learning activities (e.g., lectures informing laboratory practice) focus on different aspects of learning or different steps in the learning process, there may be necessary differences in teaching behaviours that can be observed in the different settings.

It is for these reasons that this chapter focuses on describing characteristics of good teaching, rather than more specific statements that attempt to say what good teaching is. Nulty (2001) indicates:

[The] characteristics of good teaching do not change; what does change are the ways in which individual teachers manifest those characteristics. (p. 23)

Nevertheless, it is useful to have a broad view of what comprises good teaching. Among many useful descriptions, Boyer (1990) described teaching as:

[A] dynamic endeavour involving all the analogies, metaphors, and images that build bridges between the teacher’s understanding and the student’s learning. (p. 23)

And further observed that:

Great teachers create a common ground of intellectual commitment. They stimulate active, not passive learning and encourage students to be critical, creative thinkers, with the capacity to go on learning. (p. 24)

In order to achieve this goal, Boyer has advocated a scholarly approach to good teaching such that teachers must also be learners, and thus developers, of their teaching art. For the purposes of this chapter we adopt Boyer’s descriptions of teaching and great teachers as models of excellence.

One other contextual matter is also noteworthy: there are two terms frequently used when discussing teaching quality, and they are: good teaching and effective teaching. For us, good teaching relates more to the quality of what the teacher does in the preparation, execution and analysis of their own practice. Many teaching observation instruments have a focus on the teacher, but this is only part of the picture in any classroom learning system. If, as Boyer states, teaching
is about building bridges between the teacher’s understanding and the student’s learning, then there also needs to be some concentration on how well the teacher engages the students in the processes, objects, and interconnectedness of learning. The term effective teaching connotes this greater focus upon the effects that teaching and learning activities have on the students. Although the literature uses the terms interchangeably, from this point in this chapter we give preference to the term effective teaching as this re-counts a suite of behaviours by the teacher that encompass not only what the teacher does, but also what the student does (Shuell, 1986), and that, as Biggs (2003b) has emphasised, is ultimately more important.

**Characteristics of Effective Teaching**

An extant of literature provides numerous accounts that describe characteristics of effective teaching (examples include: Biggs, 2003b; Chickering & Gamson, 1987; Nulty, 2001; Ramsden, 1992; Young & Shaw, 1999). Where we begin in this chapter is with eight characteristics of effective teaching presented originally as “dimensions of good teaching” (Nulty, 2001) (Figure 2.1). These dimensions provided us with a structured framework that has been the basis for student evaluation of teaching surveys in many Australian universities over more than a decade, and consequently an appropriate starting point from which to develop a serviceable peer review of teaching instrument.

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<th>Does the teacher clearly convey the learning aims and objectives?</th>
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<td>2</td>
<td>Does the teacher exhibit advanced content knowledge and pedagogical skills?</td>
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<td>3</td>
<td>Does the teacher exhibit suitable personal characteristics?</td>
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<td>4</td>
<td>Does the teacher display concern for students and their learning?</td>
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<td>5</td>
<td>Does the teacher engage with and commit to the use of formative assessment procedures?</td>
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<td>6</td>
<td>Does the teacher focus on encouraging deep learning outcomes?</td>
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<td>7</td>
<td>Does the teacher exhibit effective curriculum design?</td>
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<td>7.1</td>
<td>Does the teacher make appropriate use of the learning environment?</td>
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<td>7.2</td>
<td>Does the teacher make use of appropriate teaching materials and aids?</td>
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<td>8</td>
<td>Does the teacher demonstrate a commitment to improving their teaching?</td>
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**Figure 2.1. Dimensions of good teaching (Adapted from Nulty, 2001)**

Collectively, these eight dimensions comprise a comprehensive list of characteristics that have a high degree of consensus with the aforementioned sources. Further, they have been deliberately sequenced in a logical order such that the level of performance in one is, to some extent, dependent on performance in those appearing earlier. Articulating the temporal sequence and co-dependence between characteristics is important for creating an efficient instrument for recording and analysing observations of teaching, particularly if those observations are to be used in any shape or form for diagnostic and/or developmental purposes. What
follows hereafter are each of Nulty’s (2001) original characteristics (he called them dimensions) followed by consideration of further literature sources underpinning each, and consequent refinement undertaken for each.

**Dimension 1 – Does the Teacher Clearly Convey the Learning Aims and Objectives?**

Clarity of aims and objectives is useful from a teacher’s point of view, because it means that the act of teaching can then be purposeful, deliberate and planned. It means that the teacher is empowered by means of active agency. It affirms their position of pedagogical authority, at least insofar as the teacher may exert control over their choice of both content and strategy. In addition, framing any instructional act by stating its aims and learning objectives is also the first opportunity to engage students, providing clear purpose, relevance and a focus for their learning efforts (Lizzio, Wilson, & Simons, 2002). Ultimately, effective teaching must be student centred because if teaching is to count as ‘effective’ then it must support learners’ learning.

There is a strong literary base to support this characteristic of effective teaching. For example, Glassick’s (2000b) first standard of scholarship as applied to teaching is the provision of clear goals that: provide a basic purpose for a class; define learning objectives; are realistic and achievable; and identify the important questions in the field that the lesson addresses. Likewise, Ramsden’s (1992) fourth principle of effective teaching promotes the provision of clear goals and intellectual challenge, suggesting that the learning objectives should clearly extend students’ current understandings and abilities.

Angelo and Cross’s (1993) work on classroom assessment recommends the statement of explicit goals and objectives so that comprehensible feedback on their attainment is possible. Clear learning objectives at the outset of each class ensure that students are aware of learning expectations, the requirements for assessment, and leverages strategic approaches to learning (Entwistle, 2001) that many students adopt in higher education. Providing a definite link from learning objectives, at the course and class levels, to assessment through purposefully designed classroom activities is the foundation of Biggs’ system of constructive alignment (1996, 1999, 2003b). In this regard, precise objectives are vital, furthermore Stenhouse (1970) cautions against setting generalised, high-level objectives. For example, he states that the wording “to gain a better understanding of …” is too general and is therefore counterproductive.

Considering this appraisal the following rewording for the first characteristic of effective teaching is advocated:

*Does the teacher clearly define and convey explicit, realistic and challenging yet achievable aims and learning objectives?*
DEFINING AND DEVELOPING A FRAMEWORK FOR THE PEER OBSERVATION OF TEACHING

Dimension 2 – Does the Teacher Exhibit Advanced Content Knowledge and Pedagogical Skills?

This characteristic of effective teaching has two distinct and equally important aspects: discipline content knowledge, and pedagogical skills. Content knowledge and effective pedagogy are inextricably linked. The term “pedagogical content knowledge” was first described by Shulman (1986) as

[Going] beyond knowledge of subject matter per se to the dimension of subject matter knowledge for teaching. (p. 9)

Shulman (1987) later deconstructs good pedagogy into: knowledge of subject; knowledge of method (e.g., questioning); knowledge of organisational techniques (e.g., grouping); and knowledge of communicative devices (e.g., metaphor). Rubin (1989) relates teacher experience with these complementary aspects as contributors to a “pedagogical intelligence” that helps teachers decide how to formulate effective instruction. Rubin (1989) also draws the distinction between teaching technicians who slavishly follow a lesson plan, and the professional teacher who adjusts and adapts strategy depending upon the circumstances that unfold during a class:

… it is not what expert teachers do, but rather the ways in which they decide what to do that makes the difference in instructional effectiveness. (p. 31)

In respect of the first aspect of this characteristic, Boyer (1990) says that the scholarship of teaching is founded on what the teacher knows and the intellectual engagement with their field of study. Aristotle is attributed with the statement that “teaching is the highest form of understanding” (Boyer, 1990, p. 23). What the teacher demonstrates is the ability to relate and explain their knowledge in a way that helps others to understand. In this way teaching devolves to a mixture of understandings that cover the conceptual universe of discourse, appropriate methods for relating and constructing understanding within the learner, and the nature of learning itself (Shulman, 1987; Trigwell et al., 2000). Shulman (1987) also captured this aspect of teaching through the assertion that depth of understanding is important to be able to manage ideas within discourse.

Glassick’s (2000b) second standard of scholarship to teaching can be applied to both aspects. Specifically, advanced content knowledge and appropriate pedagogical skills relate to undertaking adequate preparation for the task of teaching. This standard requires understanding of existing scholarship in the field(s), bringing the necessary skills to the task, and applying the resources required to complete the activities. Ramsden (1992) also covers this characteristic in his first principle for effective teaching, requiring the teacher giving clear explanations of complex subject materials, and in his fifth principle which promotes the importance of being able to engage students with learning tasks in a way that will promote understanding.
A basic design for a particular audience is essential (Swetz, 1995) but confidence from experience provides an armoury of techniques to call upon as needed. Technique however, as indicated by Palmer (1990), is only part of the effective teaching equation:

Good teaching cannot be equated with technique. It comes from the integrity of the teacher, from his or her relation to subject and students, from the capricious chemistry of it all. (p. 11)

In survey studies, students consistently rate the high importance of discipline expertise to effective teaching (Hill, Lomas, & MacGregor, 2003; O’Toole, Spinelli, & Wetzel, 2000; Voss, Gruber, & Szmigin, 2007). Studies of student evaluations of excellent teaching also highly rate pedagogical skill (Faranda & Clarke, 2004; Grunenwald & Ackerman, 1986; Voss et al., 2007). However, contrasting perspectives on pedagogy indicate that while teachers indicate subject knowledge as being the most important, students perceive a teacher’s communication skills to be most important (Grunenwald & Ackerman, 1986).

Considering this review of dimension 2 it is clear that both aspects are well reinforced by the literature and as such for the purposes of observing teaching and collecting useable data, we divided it into two separate parts:

- Does the teacher demonstrate that they have advanced content knowledge by creating clear explanations and addressing student questions?
- Does the teacher demonstrate a teaching style supported by appropriate strategies for creating interest and effectively engaging students in learning activities?

**Dimension 3 – Does the Teacher Exhibit Suitable Personal Characteristics?**

It is important to note that this dimension should be focussed on particular personality traits and not a general appraisal of the teacher’s personality. It is also important to ensure that this dimension cannot be interpreted as an opportunity for character assassination. While this may only be a simple matter of politeness in the Western world, in some Asian cultures there are serious implications for personal or family honour and dignity if feedback generates a requirement for a teacher to save face (Leung & Cohen, 2011). In a study of the characteristics of good teachers Hamachek (1969) notes:

We would probably agree that it is quite possible to have two teachers of equal intelligence, training, and grasp of subject matter who nevertheless differ considerably in the results they achieve with students. (p. 341)
Some personality and personal traits, as they are perceived by an observing peer and/or by a student, are unmistakably correlated with a teacher’s perceived teaching effectiveness (Sherman & Blackburn, 1975). In this same study, teachers who were observed to possess the qualities of being dynamic, pragmatic, amicable, and intellectually competent received statistically significant higher teaching competence ratings than those tending toward the opposites of these traits. Sherman and Blackburn further suggested that greater gains are made toward improving teacher effectiveness by addressing personality factors over procedural ones. Accordingly, these characteristics make a difference to student engagement with learning and so to learning outcomes. If, as suggested by Biggs (2003b), we create a contract for learning between the teacher and each individual student in a class (even if only implicitly) then the personal qualities of the teacher are going to play a part in its fruitful negotiation. Considering this review of dimension 3 the following revised wording is advocated:

Does the teacher exhibit personal characteristics that engage, stimulate, encourage and inspire students to learn?

Dimension 4 – Does the Teacher Display Concern for Students and Their Learning?

This characteristic overtly elevates the focus from the teacher and their personality traits, to addressing the needs of the student – that is exhibiting a student-centred approach to teaching. Ramsden’s (1992) second principle for effective teaching relates to concern and respect for students and involves a teacher’s generosity of person, benevolence, humility, apparent interest in teaching, and their availability to students for assistance. The first of Chickering and Gamson’s (1987) seven principles of good practice also promoted student-teacher contact so that the stronger relationship encourages students’ intellectual commitment to the learning contract that is created. Their seventh principle urged academics to respect the diverse range of talents among students and ways of learning of each student, to allow students to develop a foundation of success in learning before building upon it. Porter and Brophy (1988) observed from a synthesis of literature that effective teachers teach students meta-cognitive strategies to assist them in finding their most effective learning approaches. Effective teachers are knowledgeable about their students, adapting teaching and anticipating misconceptions as needed.

Extant literature refers to a range of concerns for students, with the most frequent being a concern for student learning. Key areas of concern for students include their: achievement; mastery of course materials; outcomes; progress; development; welfare; futures; enrichment; understanding; access and equity; motivation; dispositions; and well-being. Unsurprisingly various survey studies report concern for students as being a key factor that contributes to perceived teacher effectiveness (Goldsmid,
Gruber, & Wilson, 1977; Slate, LaPrairie, Schulte, & Onwuegbuzie, 2009; Waters, Kemp, & Pucci, 1988; Young & Shaw, 1999). In each case a mixture of a small cluster of teacher characteristics emerges as correlating to perceived effectiveness, e.g., comfortable learning atmosphere, concern for student learning, and student motivation (Young & Shaw, 1999); or concern for students, and conscientiousness (Goldsmid et al., 1977).

In essence this dimension devolves to capturing the nature of the university teacher’s apparent attitude towards their students. Relating teachers’ personality traits to their effect on student learning, Ramsden’s words create the most effective expression of this dimension:

Does the teacher exhibit a generosity of person, benevolence toward students, humility in their role, interest in teaching, and availability to students to render assistance?

Dimension 5 – Does the Teacher Engage with and Commit to the Use of Formative Assessment Procedures?

Ramsden’s (1992) sixth key principle for effective teaching in higher education was that university teachers should learn from their students by continuously assessing the effect of their teaching on student learning and modifying their approach based on that evidence. In this portrayal, formative assessment is about finding out what the student understands and then, as necessary, providing developmental feedback or devising suitable activities to reform that understanding. Ramsden’s third key principle concerns the provision of appropriate assessment and feedback to students. Consequently, formative feedback serves to inform both the teacher and the student and is, at the same time, critical to both the teacher’s effectiveness and the learner’s. Thus, both these views are reflected in the literature.

The role and strategies of formative assessment in assisting student learning is widely published and there are a broad selection of articles devoted to this (for example: Black & Wiliam, 1998; Carless, 2007a, 2007b; Harden & Crosby, 2000; Keppell, Au, Ma, & Chan, 2006; Knight, 2006; McConnell, Steer, & Owens, 2003; Rust, 2002; Sadler, 1989; Shepard, 2000). Likewise, Chickering and Gamson (1987) emphasised the importance of prompt feedback. Studies of students have revealed their requirements of students for high quality of feedback from their teachers (Gibbs, 1995; Orsmond, Merry, & Reiling, 2005; Worthington, 2002). Quality of feedback more than quantity of feedback is the key factor for assistance in elevating learning (Sadler, 1989, 1998). Careful design of formative assessment practices is more likely to ensure that effective formative outcomes are reached (Shepard, 2005). Creating a uniform approach to formative assessment techniques amongst faculty creates a culture for both teachers and students that engender a higher level of effectiveness (Sadler, 1998).
The critical evaluation of learning outcomes has the potential to indicate new teaching strategies (that can be formulated to further assist students with learning). The application of formative assessment practices as a way of developing teaching styles and reactive approaches to student learning needs is an important aspect covered in the literature (Taras, 2002; Yorke, 2003). The sixth standard of Glassick’s (2000a) standards of scholarship promoted reflective critique and, in particular, relates to the question: “Does the scholar critically evaluate his or her own work?” It follows that while the work of teaching is to facilitate student learning, the use of formative assessment to evaluate student learning can also be used to indicate (and improve) effectiveness of teaching strategies (Sadler, 1989, 1998). Development of a Just-in-Time Teaching strategy (Gavrin, Watt, Marrs, & Blake, 2004) is a constructivist teaching form that has been found to make effective use of formative assessment.

Considering this review of dimension 5, being more specific about the activities that make up formative assessment in the classroom creates an observable dimension:

Does the teacher engage with activities that test student understanding and then adapt or adopt teaching strategies to further develop that understanding?

**Dimension 6 – Does the Teacher Focus on Encouraging Deep Learning Outcomes?**

Deep learning outcomes are those that collectively comprise understanding, and the ability to apply that understanding, rather than just memorising (Marton & Saljo, 1976). A deep learning outcome is then regarded as a high quality-learning outcome. Achieving such outcomes occurs as the result of adopting a deep approach to learning (Biggs, 1987; Entwistle, McCune, & Walker, 2001; Marton & Saljo, 1984), and engendering this is part of the role of an effective teacher.

It might be argued that not every teaching and learning activity is meant to engender higher order learning outcomes. There are many examples in different disciplines where it is appropriate to concentrate on developing lower order learning outcomes in order to prepare for the higher ones. In some instances this is an essential part of scaffolding learning (Jonassen, 1999).

However, students moving beyond surface approaches to learning have been found to engage in internal reflective questions such as: What do I know about this topic? How does this relate to what I know already? What are the implications and significance for this new knowledge? (Smith & Colby, 2007). These are clearly desired traits. Accordingly, effective teaching focuses on encouraging deep learning outcomes and is characterised by the constructivist structuring of lessons, setting of learning tasks, creation of challenge, and provision of quality feedback that leads to students’ engagement with such questions.

Constructivist learning environments (Jonassen, 1999) encompass learning resources and activities that engender student engagement with learning in ways that allow student understanding to be constructed and tested (Yager, 2000). By deliberate
design, these environments encourage students to adopt deeper approaches. They are characterised as: active learning (Bonwell & Eison, 1991; Ebert-May & Brewer, 1997); experiential learning (Boud & Miller, 1996; Kolb, 1984); cooperative learning (Panitz, 1997); problem-based learning (Savery & Duffy, 1995; Simons & Klein, 2007); and others.

In Ramsden’s (1992) principles for effective teaching, the characteristics above relate directly to principle 5 that promotes learner independence, perceived control over focus, and engagement with learning. They are also represented in Chickering and Gamson’s (1987) principles for good practice where they promote active learning strategies, cooperation amongst students, and high concentrations of time-on-task.

To reformulate the expression of this dimension so that it becomes an observable characteristic of effective teaching, and to focus on activities that promote deep learning outcomes and what they look like, the following lengthy but descriptive wording is advocated:

Does the teacher engage students in activities that provide authentic learning experiences, with high levels of active student participation, with learning outcomes that are relevant, that involves significant interaction with the academic, sustains student interest, and allows students to collaborate to generate outcomes?

Dimension 7 – Does the Teacher Exhibit Effective Curriculum Design?

Curriculum can be considered broadly as a syllabus or program of study that is made up of four important connected elements: content; teaching and learning strategies; assessment processes; and evaluation processes (Prideaux, 2003). It also encompasses the structure and sequence (Kember & Wong, 2000) of activities and assessment items – in a single lesson or class; across a course or unit as it unfolds; and in consort with curricula of associated courses within a program or degree.

Notwithstanding that ‘effective’ curriculum design can be conceptualised in different ways, Biggs’ (2003a, 2003b) description of constructive alignment has possibly the greatest following. In this approach, activities are designed to meet learning objectives, and assessment is designed to determine how well those objectives are being met, and what if anything needs to be done to assist in meeting them. Within this approach a level of coherence amongst the teaching and learning activities is needed such that they guide and build student understanding though structured stages. This is what Jonassen (1999) refers to as scaffolding learning.

An elaboration on the expression of this dimension emphasises the elements of structure and coherence that generate a sense of organisation to the teaching and learning activities in a class:

Does the teacher organise learning activities and assessments in a structured and coherent manner that assists students to achieve the stated learning objectives?
DEFINING AND DEVELOPING A FRAMEWORK FOR THE PEER OBSERVATION OF TEACHING

Dimension 7.1 – Does the Teacher Make Appropriate Use of the Learning Environment?

The environment in which a class is executed provides constraints and affordances for effective teaching. Making appropriate use of the learning environment speaks to the teacher’s understanding of the limitations that the environment places on the effectiveness of different teaching strategies. To be most effective, the teacher must understand how to make optimal use of the range of tools and affordances available in that environment to complement teaching strategies and to enhance student learning.

The dimension as stated is clear and observable. However, an explicit emphasis on considerations of potential limitations and augmentations in the learning environment provides further enhancement. There are two levels:

7.1a – Does the teacher use techniques and strategies that adjust to any limitations of the learning environment?

7.1b – Does the teacher make effective use of the available features of the environment to enhance their teaching and the student learning experience?

Dimension 7.2 – Does the Teacher Make Use of Appropriate Teaching Materials and Aids?

This dimension speaks to the effective presentation of ideas and concepts in a classroom. In Glassick’s (2000b) fifth standard of scholarship, dealing with effective presentation, it may be interpreted as: Does the teacher use effective forums for communicating the work to its intended audience? Does the teacher present his or her message with clarity and integrity? In his second standard, regarding adequate preparation, it can be paraphrased: Does the teacher bring together resources necessary to move the project forward? The first of Ramsden’s (1992) six key principles relates to student interest and effective explanation. With appropriate teaching materials and aids the intent is to improve the quality of explanation and stimulate student interest in teaching and learning activities. In this matter teaching materials and aids offer some facilitation as they offer multiple channels of information for learners with a range of learning approaches and styles. With large portions of humans’ brains devoted to the processing of visual and auditory information (Grady, Svitil, & Meehan, 1993; Landesman, 2008) it makes sense at the very least to find ways to engage those senses for the student in creative ways.

There are different expressions of resources and aids available in different teaching and learning environments. In a classroom environment they might range from books, films, and images (Morley & Savage-King, 1984); to expert guests (D. Carr, Oliver, & Burn, 2010), students (Rubin & Hebert, 1998), physical objects, and online resources (Kurilovas & Dagiene, 2009; Watson, 2010). Using them appropriately is a matter of adequately understanding them and the desired means...
of reaching the learning objectives. Design and preparation of the teaching materials is part of designing the activity that uses them appropriately. In the online learning environment many of the same materials and aids can be employed albeit in a different representation virtually.

Teaching materials and learning aids can be used in different ways to different effect. That effect can be limited by the approach (Trigwell, Prosser, & Waterhouse, 1999) and pedagogical content knowledge of the teacher (McNamara, 1991; Trigwell, 2011), combined with the given set of affordances and constraints within the learning environment. Constraints can be imposed due to the mandate of curriculum or examination modes (Wang & Paine, 2003); available communication modes (Grebner, 1997; Park & Son, 2009; Vonderwell, 2003); communication abilities of teacher or student (Mann, 2005; Park & Son, 2009); poor access to peer mentoring (Azita, 2002; Carroll & Goldberg, 1989); understanding of teaching technologies (Ginns & Ellis, 2007; Koehler & Mishra, 2009; McKenzie, Pelliccione, & Parker, 2008); and limitations of the learning environment itself, as mentioned above.

For an observer there are two discernible and observable aspects generated from this dimension.

\[\text{Does the teacher choose appropriate teaching materials and aids?}\]

and,

\[\text{Does the teacher make effective use of teaching materials and aids?}\]

\textit{Dimension 8 – Does the Teacher Demonstrate a Commitment of Improving Their Teaching?}\n
This characteristic speaks to a teacher’s scholarly approach to their teaching and to some extent, the scholarship of teaching. A scholarly approach to teaching is about being a reflective practitioner (Biggs, 2001; Boud, 1999; Kane, Sandretto, & Heath, 2004; Leitch & Day, 2000; Schön, 1983) and about engaging with scholarly literature to inform teaching practice (Shulman, 1986, 1987). Scholarship of teaching builds upon the scholarly approach by making practice public and opening it up to peer review and critique against accepted standards (Hutchings & Shulman, 1999). Engaging in developmental peer review of teaching fulfils key aspects of this as it provides impetus for sustainable change that: is owned by the university lecturer; is informed by literature and quality focused discussion; uses peer review amongst university teaching as the driving force for change; and provides opportunity to exhibit leadership in the development of peers (Boyer, 1990; Kreber, 2002a, 2002b).

While engaging with peers is central to the development of one’s teaching, the key stakeholder in the exercise remains the student and their experiences and outcomes of learning, so a student centred approach to teaching and its development is fundamental (Trigwell et al., 2000; Trigwell & Shale, 2004). To this end Ramsden’s (1992) sixth principle states that good teaching is open to change and constantly tries
to find out how it affects student learning so that it may be modified to maximise its effectiveness. For the university teacher, Glassick’s (2000a) sixth standard of scholarship is about engaging with reflective critique of one’s work. The hallmarks of this standard are critical evaluation of teaching practice that is informed by an appropriate breadth of evidence and importantly, is used to improve the quality of future work.

It follows from this review that the wording of the original characteristic can be refined in the following way:

*Does the teacher demonstrate a scholarly approach to teaching and seek to improve performance?*

**Conclusion**

The literature reviewed above demonstrates that Nulty’s (2001) original dimensions of good teaching are well supported by a broad base of research literature. This section has both refined the expression of those dimensions, and informed their (re)-conceptualisation as *characteristics of effective teaching*. Refinement has principally involved moving the focus from the teacher to the effect of the teaching upon the students. (Re)-conceptualisation has primarily involved the amplification of the theoretical justification for each characteristic.

**PART 2: A HYBRID INSTRUMENT FOR USE IN PEER OBSERVATION OF TEACHING**

The review of literature was used as the basis for formulating a hybrid peer observation of teaching instrument. This instrument (described below) is the result of more than 36 months of (ongoing) development, which has been undertaken in the style of action research (Altrichter, Kemmis, McTaggart, & Zuber-Skerritt, 2002; Carr & Kemmis, 2005; Zuber-Skerritt, 1992). This work has been undertaken as a learning and teaching development project funded by Griffith University, known as the PRO-Teaching Project – a name chosen for three reasons: to emphasise the professional nature of teaching; by engaging collegial support peer-review of teaching is for or *pro* teaching; the acronym PRO as an abbreviation for “Peer Review and Observation of”. The aim of the PRO-Teaching project aimed to develop and implement an approach for engaging teaching academic colleagues in the developmental peer observation of teaching of their practice.

In order to develop and implement an instrument that supported the peer review of teaching, several design considerations were taken into account. To help make the process of recording evidence during an observation more efficient it was helpful to revisit Nulty’s (2001) original work to reconsider his proposed ordering of dimensions. Consequently, it was realised that the ‘new’ peer review instrument (as a whole) would also benefit from being sequentially structured – not only to reflect
the temporal co-dependencies between characteristics of effective teaching as Nulty (2001) had done, but also to reflect the temporal flow of observation activities. And as such, the PRO-Teaching instrument was initially divided into four sections:

- **Identification**: used to record all of the particulars of the teacher, course/unit, school, observation date, number of students, and names of observers;
- **Observation**: comprises focus questions: “What worked?”, “What didn’t work?”, and “What ideas or changes would you recommend?” To remind the observer of the characteristics of effective teaching being considered, and to negate any need to refer to the next section, this section includes a condensed list of characteristics of effective teaching printed in the page header.
- **Analysis**: presents the list of characteristics in the consequential or dependency order proposed by Nulty (2001). Helps both observers and teachers to reflect on the interdependencies between characteristics and to express their reasoning for their teaching strategy with greater sense of design and deliberate purposefulness.
- **Feedback**: structured as a three-part *sandwich*. It starts with positive aspects representing the apparent strengths of the teacher’s practice from the observer’s perspective. The list of things that worked well helps to establish and support trust between observer and university teacher especially if the strengths correlate with items raised in teacher reflection. The middle layer of the sandwich consists of a list of points for consideration or characteristics of effective teaching for which more evidence would have been possible or appropriate. The third part finishes with a positive developmental focus by listing suggested development ideas that are discussed and agreed between observer and university teacher.

It was identified that the peer review of teaching instrument needed to assist observers in the practice of observing teaching. While it is important to ensure that this is informed by the literature, early trials indicated that further refinement of the way these characteristics of effective teaching were expressed was needed. These refinements retained the literature-based focus of each of the characteristics, but expressed them in ways that observers found easier to consider during an observation. For example, the division of Nulty’s (2001) second dimension into two (one relating to content knowledge, the other relating to pedagogical skill) was found to be effective. This separation was also clear in the literature – further supporting such a design decision.

Similarly, Nulty’s (2001) dimension 7 focused on the curriculum design but included consideration of the learning environment and the use of teaching materials and aids. The literature reviewed provides sufficient distinctive evidence for each of these areas to justify treating them as separate but related characteristics. Conversely, the separation of teacher characteristics and the display of concern for students’ learning were not found to be helpful, and so were integrated into one. Finally, in keeping with the scholarly and developmental intent of the PRO-Teaching process,
the position of the final characteristic (regarding commitment to improving teaching) is sustained. The revised wording of the characteristics appears as Figure 2.2.

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>1</td>
<td>Does the teacher clearly define explicit, realistic and challenging yet achievable aims and learning objectives?</td>
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<tr>
<td>2</td>
<td>Does the teacher demonstrate advanced content knowledge to create clear explanations and address student questions?</td>
</tr>
<tr>
<td>3</td>
<td>Does the teacher demonstrate a teaching style supported by appropriate strategies for creating interest and effectively engaging students in learning activities?</td>
</tr>
<tr>
<td>4</td>
<td>Does the teacher exhibit a generosity of person, benevolence toward students, humility in their role, interest in teaching, and availability to students to render assistance?</td>
</tr>
<tr>
<td>5</td>
<td>Does the teacher engage with activities in class that test student understanding and adapt or adopt teaching strategies to further develop that understanding?</td>
</tr>
<tr>
<td>6</td>
<td>Does the teacher encourage students to reflect and share what they already know about the topic, discuss how it relates to other things that they know, and hypothesise about its implications for particular problems and cases?</td>
</tr>
<tr>
<td>7</td>
<td>Does the teacher organise learning activities and assessments in a structured and coherent manner that assists students to achieve the stated learning objectives?</td>
</tr>
<tr>
<td>8</td>
<td>Does the teacher make effective use of the available features of the environment to enhance their teaching and the student learning experience?</td>
</tr>
<tr>
<td>9</td>
<td>Does the teacher use appropriate teaching materials and aids and make use of them in an appropriate manner that assists students to reach the learning objectives?</td>
</tr>
<tr>
<td>10</td>
<td>Does the teacher reveal a scholarly approach to teaching and seek to improve teaching performance?</td>
</tr>
</tbody>
</table>

**Figure 2.2. A revised set of (observable) characteristics of effective teaching**

To assist observers further, each characteristic was also accompanied by a list of relevant evidence examples and types that have also been defined in the literature. In addition, to assist in determining the amounts of evidence apparent in observed teaching, these relevant evidence examples were accompanied with space to record simple tick marks that an observer would make if/as the example practices are observed. Importantly, in this (observation) section, evidence focuses explicitly on the amount of evidence that was observed – not an evaluation of whether that is appropriate. The analysis section allows for the observed data to be evaluated. Not Applicable in the evidence section may, on analysis, be found to be an entirely appropriate outcome in a particular circumstance, while in others it may be found to be desirable to increase or develop additional evidence in collaboration with peers.

The evolution of design supported the refinement of the observation section, considering the merit of a triangulated data set using data from students. In particular, evidence from peers’ observation notes could be correlated with student evaluations of the same observed class, and also with subsequent teacher reflections – ideally all using the same characteristics of effective teaching as a focus. Thus, we reasoned
that observing teaching is not just observing the teacher but also observing apparent impact that the teaching has upon the student learning experience. To accommodate this broader perspective a set of shadow characteristics of effective teaching were also created to focus observation and analysis on to the students taking part in class. For example, the first observable characteristic of effective teaching asks: Does the teacher clearly convey the learning aims and objectives? And the corresponding observable shadow characteristic of effective teaching asks: Do the students appear to understand the learning aims and objectives?

In order to ensure that the use of the instrument created verifiable evidence for reporting purposes, the procedure adopted required the collection of contemporaneous data from four sources: a discipline observer; an expert learning and teaching observer; student evaluations; and teacher reflection. This was collected and triangulated over two separate observation sessions. At each session the teacher and observers took part in a short briefing to outline the lesson objectives; participated in the observation of teaching using the observation instrument; and then debriefed. The debriefing comprised three stages: the teacher reflected on the strengths and weaknesses of their lesson; the teacher received and discussed observer feedback; and the teacher and observer finished by seeking an agreement on ideas and approaches to develop their practice. Both the observation and the final agreement were recorded in writing – together comprising a PRO-Teaching report.

CONCLUDING COMMENTS AND FURTHER WORK

With increasing pressure for universities to improve the quality of their teaching and to exhibit relevant quality assurance and quality improvement processes in the face of increasing regulation and market-driven student demand, there is a resurgence of interest in and for the peer-review and observation of teaching. A range of instruments is available for collecting evidence of good and effective teaching through peer review; very few of which validate the observable dimensions or instrument design. Nulty’s (2001) dimensions of good teaching provided a structured framework that has been the basis for student evaluation of teaching surveys in many Australian universities, and consequently a good departure point from which to develop a usable peer review of teaching instrument. This chapter describes the validation and adaptation of Nulty’s (2001) dimensions to create an instrument suitable to record evidence from peer observation of teaching. The process of iteratively trialling this instrument in Griffith University’s PRO-Teaching project has allowed feedback from numerous university teacher observers to guide the ongoing revision of this instrument and associated methodologies for its effective use.

Beyond the initial project, various incarnations of PRO-Teaching have been adapted and adopted by the different schools at Griffith. The revised 10 dimensions continue to be the pivotal instrument to inform the structure and conversation of peer review. Beyond Griffith, the dimension instrument offers a clear and effective framework for gathering data on scholarly conversations and enhanced pedagogical
DEFINING AND DEVELOPING A FRAMEWORK FOR THE PEER OBSERVATION OF TEACHING

practices for both domestic and international institutions wishing to develop their peer observation communities.

The review of literature made clear the comprehensive support for the applicability of the specific characteristics of effective teaching described in this chapter to peer review of teaching. It is equally clear that many other concurrent considerations must be accommodated if these characteristics are to remain the basis of a rigorous and literature-based approach to peer review of teaching. In particular, to assist observers with a range of education knowledge and experience it is paramount that the instrument is usable and understandable. Academic feedback on the usability of our early instruments revealed that for some university teachers with little background in education theory some of the terminology was unfamiliar and as a result confusing. Similarly, these observers needed examples of the ranges and sorts of evidence that might be captured under each characteristic to be explicitly detailed. In this chapter we have not only provided the theoretical literature base for our approach, but have also expressed the ways in which we have developed a usable peer review of teaching tool. Importantly, it is generally agreed that the observer, not just the observed teacher, benefits highly from the observation process (Bell & Mladenovic, 2008; Martin & Double, 1998; Shortland, 2004; Swinglehurst, Russell, & Greenhalgh, 2008), as the observer must be analytical about the lessons that they are observing.

On-going developmental work of this tool and the associated procedures is maintained to ensure that it is equally usable across multiple disciplinary contexts found in any university; and to ensure that the growing popularity of this approach (when used as a formative tool) can be extended to include a summative use.

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3. PRO-TEACHING

Sharing Ideas to Develop Capabilities

INTRODUCTION

The PRO-Teaching project was first piloted in 2009 at Griffith University, Australia with six academic teachers from the School of Education and Professional Studies and one from the School of Information and Communication Technology. This pilot assisted in streamlining the process and documentation, prior to implementation in the then Science, Environment, Engineering and Technology (SEET) Group in 2010. Two years later and more than 125 teachers involved, the Griffith PRO-Teaching project was awarded a university grant in 2012, to support offering PRO-Teaching to all academic teachers across the university wishing to focus on the Griffith principles of teaching to promote excellence in teaching.

PRO-Teaching was designed to make use of a developmental form of peer review and observation of teaching with the intent to create a collaborative and supportive relationship for teachers to discuss and share ideas around their teaching practice. Using a sequenced approach, data collection was designed to draw from a range of sources to build evidence of teaching quality that may supplement or contrast the current university’s student experience of teaching (SET) questionnaires that are currently the dominant determinant of teaching quality. In this instructional chapter, we have set out to provide you, the reader, with an overview of the PRO-Teaching mechanism, with a step-by-step guide using the very worksheets, templates and checklists employed during its implementation.

BACKGROUND AND CONTEXT

In an environment with time pressures and the pressure to balance teaching with research performance output, the current climate of peer review addresses academic dissatisfaction with student evaluations as a sole arbiter of quality and it assists with the collection of evidence of quality and of development using an accepted scholarly process. To complement student evaluation of teaching Smith (2008) proposed a model of peer review, whereby academics observe and provide constructive feedback on one another’s teaching. There are also affordances for quality enhancement (QE) in an increasingly regulated sector and to compete on league tables comparing
universities in the quest for international and local students. The literature in this area provides many accounts that are aspirational, espousing position and ideology. Of these, the concentration is on qualitative anecdotal reporting within schools or disciplines. Coupling this rich historical narrative of the pursuit of excellence in teaching, with PRO-Teaching we pursued a design solution which would also result in tangible, measurable outcomes; improved student outcomes, enhanced student experience, and professionalism in teaching.

DESIGN PROCESS

A participatory action research methodology was selected to cyclically evaluate the overarching research question: “How can peer review of teaching be used to enhance the quality of teaching within the university?” Participatory action research is cyclical in nature and the relationship between action and reflection can be understood as a self-reflective spiral that involves multiple “cycles of, planning, acting, observing, and reflecting” (McTaggart, 1997, p. 38). In order to operationalise the project, administrative hubs at each of the four academic groups were established to facilitate engagement, training and to foster a university-wide culture of professional development and quality enhancement opportunity. Cresswell (2012) explains that participatory action research strives for,

Open, broad-based involvement of participants by collaborating in decisions as consensual partners and engaging participants as equals to ensure their well-being. (p. 583)

Over time, the methods and manners of action are formed through a “dialectic movement between action and reflection” (Kidd & Kral, 2005, p. 187). In the PRO-Teaching project stakeholders were regularly consulted. These included academic reviewers and reviewees, project team members, student focus groups, senior teachers making up the project reference group, members of the academic development unit, Deans (Learning & Teaching), and Heads of Schools. Analysis of input and development of interventions were undertaken in collaboration with the project team.

The first design decision was the fundamental choice of a formative rather than summative focus for the peer review process. As we were investigating how the process might be used to improve teaching quality within an organisation, the developmental model was well justified. Given a generally narrow academic understanding of education principles, and mixed capabilities as reflected by student evaluation, a cyclic experiential development approach with small attainment steps to provide small successes was needed to create positive experiences for participants. At the organisational level, by embedding formative peer review a means to advance organisational maturity around teaching quality was provided. A judgment step occurs in both developmental and summative processes however the notion of judging or being judged by a peer in a persisting culture of closed classroom doors
can be confronting and risks alienating academic staff. Creating the perception of power distance has potential for unduly affecting a teacher’s performance. In the university hosting this study there were no agreed standards of effective teaching that relate to contexts or appointment levels so a summative focus under those circumstances risks accusations of arbitrariness and unreliability that may affect trust in the process.

In this planning (start up) stage many conversations arose regarding how to navigate the potentially tricky issues of trust, buy in, and recruitment. Although a three stage strategy of announcements, directed emails, and telephone calls was implemented, the majority of participants were engaged as a result of *door knocking* and the on the spot conversations with academics, on their home ground. The early adopters were those with a preexisting relationship with the academic development unit and therefore more accepting, but they still represented a mix of attitudes and styles of teaching across the university.

Decision points for the design of an embedded, institutionally sensitive model of peer review of teaching championed by the Australian Learning and Teaching Council (Harris et al., 2008) assume a purpose of quality enhancement for teaching and thus focus on developmental processes. Within that context and considering the university’s needs, the design questions and answers were as follows:

- **Whose teaching will be reviewed?** The student learning experience relies on interactions with teachers from every experience level and so it was decided that PRO-Teaching would be accessible to all teachers with teaching responsibilities. This fits with the ethical design principle of not excluding any teachers from participation. Indeed, as a means of dissemination of exemplary practice it can be most effective having less experienced teachers observing and reviewing the practice of their more accomplished colleagues. However this was not necessarily the case for all, in many instances the experienced teachers themselves acknowledged learning so much more about their own practices and gained teaching renewal by learning from those less experienced.

- **What will be the policy regarding participation?** PRO-Teaching was conceived by discipline-focused teachers to assist colleagues in a supportive way to share and try new teaching ideas. Falling back to ethical design principles it was decided that participation should be optional, voluntary and based on informed consent by all involved.

- **What will be reviewed?** Good teaching is based as much on preparation of structured curriculum and resources to aid student learning as it is on the face-to-face component that is the most frequently observed. Given the existing organisational culture it was decided that it was important to first introduce colleagues to a somewhat new culture of open classroom doors and to generate positive experiences through collegial discussion and supportive, developmental feedback.
Who will the reviewers be? In introducing a new and potentially confronting process to the organisation, it was deemed important to be attentive to the quality and impressions of the process that participants were experiencing. To that end the term reviewer was replaced with observer to reflect a balanced power differential between the roles. Having one of the reviewers as a discipline colleague ensured confidence in the explanation of approach and in the appropriateness of feedback. Having a second observer from a different discipline and with a recognised learning and teaching expertise expanded the range of techniques and approaches that could be discussed (Neumann, 2001; Neumann & Becher, 2002).

What form will the process take? Reciprocal partnerships were encouraged at all times, but where appropriate non-reciprocal or one-way observations were also accommodated. The same two or more peers were involved as observers for two teaching sessions for each observee. Timing of observations was limited by delivery mode and timetabling of all three teachers so it was left at the discretion of the colleagues involved and facilitated by the administrative staff assigned to the program. Recognising that there is often much to be learned in the observer’s role and that practicing the analysis of teaching is important to successful reflective practice (Lomas & Nicholls, 2005) it was decided to have all participants involved as both observer and observee where possible.

What reporting will take place? As part of the ethical design and to gain trust amongst those involved in the peer review process the only people outside of the triad with knowledge of the outcomes of each teacher’s participation were the peer review program team members. Again, as part of ethical design the observation notes and final reports generated by the process remained in confidence with the only copies going to the observee and observers concerned. Use of these documents for other reporting purposes remains under the discretion of the observees involved.

What type of follow-up will occur after the peer review process? After each observation a debrief session with peer-led reflection, professional feedback and collegial discussion is conducted at a time and place determined appropriate and convenient by the peer review team.

MODEL DESCRIPTION

The creation of an observation triad allowed for discussions to be moderated through peer consensus, reducing risk of misunderstandings while contributing to the supportive and collaborative manner intended. From the perspective of ethical design having three or more participants in a professional debrief ensures limiting possible implications of impropriety or insensitivity and ensures that professional, personal, and process integrity is maintained. To formulate observation triads discipline colleagues were encouraged to form a dyad so that part of the choice of reviewer was in their hands. The project administrator sourced external reviewers by consulting a list of learning and teaching university award winners and teacher education
discipline experts whom made themselves available to undertake reviews. In order to reduce some of the system variables affecting reporting it was decided to engage the same observers for each observation of a particular teacher. This allowed for a community of trust and practice to grow with a continuity of approach, perception, and awareness of change of development possibilities between observations. Through shared history of experience it offered a more accurate determination of any performance differential between sessions. Consistent advice with respect to interventions was traded against access to a potentially richer pool of developmental ideas from different observers.

Significant innovations were introduced to this process design with the inclusion and triangulation of student evaluation and learning outcome data with peer observation. With a perspective shift, the peers use the same quality criteria used by students to evaluate the teaching during the observation session. Similarly, the observers record students’ responses to the teaching and learning activities during the observation so that data can be correlated in an observation triangle, as shown in Figure 3.1. An important aspect of observation of teaching is to focus on the student as learner and beneficiary of teaching. The nature of student engagement and participation in learning activities reflects the effectiveness of communication of the stated learning objectives and their understanding of the associated activity requirements. By explicitly observing the students it ensures that their engagement for learning remains in focus.

![Figure 3.1. PRO-Teaching observation triangle (Drew & Klopper, 2013, p. 754)](image)

The Harvard one-minute paper method, where two questions are posed at the end of a session to provide real time written feedback, was used as a proxy for student learning outcomes and performed as part of the student evaluation of teaching survey
at the end of the observed session. The two questions considered by students were: “What were the most important things that you learned in this lesson?”, and “What questions still remain?” Before each observation the teacher was asked to provide a briefing document listing the learning objectives for the lesson. If the lesson was constructively aligned (Biggs, 2003), that is if lesson activities effectively helped the students realise the stated learning objectives, then there would be a match between objectives and learning outcomes in the one-minute paper. Characteristics of effective teaching that influence constructive alignment are: clearly explained learning aims and objectives; approaches to teaching and curriculum design that engage students with learning activities; and formative assessment of achievement of learning aims. These are three of the suite of 10 dimensions of effective teaching that both peers and students evaluate during an observed lesson. These analysed together, indicate where improvements could be considered and or made.

A common characteristic of many teaching and learning activities is that, for various reasons, they are designed without a full developmental loop. In the classroom this may mean that a concept is explained but no formative assessment to determine and develop student understanding before advancing is gathered. In the context of peer review of teaching and the design of the PRO-Teaching process a single observation session did not provide a full developmental loop for the observee and as such was deemed ineffectual to capture evidence of development. For this reason, two observations were adopted as a minimum to capture evidence of development and to allow the teacher to gain feedback on the execution of agreed development ideas from the first observation to the second observation. In short it provides the benefits of two sets of formative assessment, provides opportunities to observe teaching in multiple concept areas, offset the occasional bad day, and for the observers to gain a broader exposure to the teacher’s skillset.

In Figure 3.2 the cycle of activities that participants were engaged with in the PRO-Teaching process is displayed. To initiate the cycle, a briefing which shares with the observers the nature of the lesson, its aims and objectives, and particular areas of teaching that might be concentrated on. At the start of the first observation the students are informed of the peer review process and invited to take part in evaluating the teaching with informed consent. Observers, remaining unobtrusive and neutral, find a position amongst the students where the teacher and students are visible. As the lesson unfolds observers make notes of what pedagogic strategies work and what do not seem to. As soon as possible after the observed lesson the triad meet as a group to debrief and complete the session observation report. At the initial stage of debrief, before any feedback is offered, the teacher is asked to reflect and supply answers to the same holistic questions that the observers considered: “What worked?” “What didn’t work?”, and “What would you do differently?” This is done so that teacher reflections concentrate solely on their experience of the effectiveness of the lesson and is unaffected by observer influence. It is also done to provide areas of agreement so that observers can develop a positive and supportive rapport that renders professional feedback
trust worthier. Feedback starts with agreement then seeks the teacher’s response to questions relating to approach and purpose of particular strategies and techniques observed in class. From here feedback devolves to constructive discussion and sharing of ideas for enhancing practice and ending with collaboration on a set of agreed items to try in the next observed lesson. The second observation in the cycle starts with a new set of learning aims and objectives and the agreed development ideas that will be trialled. All other aspects of the process are identical to the first observation.

TIMETABLE OF ACTIVITIES

The PRO-Teaching activities (see Figure 3.3) were developed to provision the process of critical self-reflection, as well as engage with peers and students, for the purpose of sharing ideas around teaching practice. The activities are identified in three distinct phases: pre-observation tasks, observation tasks and post-observation tasks.

THE PRO-TEACHING PROCESS

The general format of a peer observation process for the PRO-Teaching involved an observee in two teaching sessions in the same course at least two weeks apart (see Figure 3.4). They might have been any type of teaching and learning activity, including but not limited to lectures, workshops, tutorials, and laboratories; but both sessions were to be of the same type (i.e., both lectures or both tutorials, etc.) of the same course.
An observation team, or triad, was made up of a discipline expert from the same discipline as the observee, and a learning and teaching expert from a different discipline of the university. The mix of relevant discipline knowledge and recognised learning and teaching expertise aimed to provide a balanced range of views and ideas to construct an observation report containing developmental counsel and ideas that could be considered and in some instances attempted by the observer.
After the first observation session where peer, student, and self-reflection data was collected, a consolidated report containing feedback and ideas from observers was created, accompanied by the compilation of student evaluation results. These were returned to the observee so that they could implement strategies to execute those ideas in the following observation session.

After the second (and possibly final) observation session an identical process was undertaken and the feedback report was accompanied by a spreadsheet with compiled student evaluation results from both sessions. This could then be correlated with peer observations and self-reflection data for future reference and development ideas.

A final step, to further understand the impact the PRO-teaching process can have on the student experience of a course, was the inclusion of a student focus group conducted after the conclusion of the second observation.

Pre-Observation Tasks

Task 1: Finding a peer to work with and attending an experiential workshop. First task was to identify a willing peer from within the same discipline and with whom the observee felt comfortable working with throughout the process. Ideally, as buddies, both in turn were to be observed. To ensure that everyone who participated in PRO-Teaching was familiar with the processes, resources and deliverables, it was
essential that an experiential workshop be attended. These usually occurred at the commencement of each the semester and included:

- an overview of the PRO-Teaching methodology and what to expect;
- attending a “live lecture” which provided the opportunity to work through an observation sheet first hand; and
- a debriefing session with either the teacher just observed or workshop facilitator to discuss and consider the various aspects of the observation and answer any questions.

**Task 2: Confirming the triad.** Next task was to arrange the observation dates that worked for all members of the triad. It was recommended to have at least two weeks between observation dates so that interim reports could be disseminated and considered for implementation.

Upon finalisation of confirming observation dates and times, a suitable time was arranged for a member of the Project Team to conduct a student focus group after one of the observed class times. The focus group, typically held at the end of the semester (when possible and if applicable to the teaching schedule) was formed on a voluntary basis by the students, and was an informal 10–15 minute conversation to collectively understand how the PRO-Teaching process directly impacted the student experience of course (SEC).

**Task 3: Preparing for the observation.** It was important for all involved in the project to have read and completed the academic participant consent document. This maintained the approved protocol by the university ethics committee to gather data with the potential to analyse and disseminate findings. The observable evidence of high quality teaching document was a useful reference source as it provided examples of what might be looked for in an observed class – represented as ‘evidence’ under each of the dimensions.

At this point, collaboration became key to ensuring that the observation process ran smoothly. There were several key tasks which needed organising. Before each observation, the observer needed to complete an observer Briefing document (see Figure 3.5) and share it with the observers. This focused the observers on aspects of teaching of interest for evaluation and development. Observers also arranged a pre-observation briefing meeting to further discuss these aspects where needed. Next, was to agree on a suitable debriefing time.

Completion of the pre-observation preparation required a sufficient number of student surveys including student’s informed consent and student evaluation of teaching and learning to be copied and taken by the observer to the observation episode for completion. A template for the survey has been provided in Figure 3.6. Student feedback was anonymous and was collated after each observation. After the second observation, change data was also examined and used for further reflection.
Observation Tasks

**Task 4: Engaging the students.** Another opportunity to gain further insight into one’s learning and teaching performance was to engage students in providing feedback. Student feedback is currently sought at Griffith University through the formalised SET and SEC instruments. What PRO-Teaching aimed to do, was to provide another opportunity to check-in with the students, using an anonymous, non-compulsory survey format (see Figure 3.6).

The information collected during the observed class was used to ‘triangulate’ the data, offering valuable insight into how well the objectives were being communicated to the students, as well as the effectiveness in the learning and teaching environment. The standard SET questionnaire was utilised to frame many of the questions on the survey, as well as some open-ended questions including whether they left with any unanswered questions. See Figure 3.6 for the tool employed.

**Task 5: Being observed by colleagues.** Possibly one of the most important steps of the peer observation process was the opportunity to engage with colleagues. Within the triad, there was a familiar peer (colleague) from the same discipline, as well as
Course:
Teacher:
Session Type: Lecture, Tutorial, Other
Date/Time:

Please briefly explain the most important things that you learned during today’s class.

What important questions remain unanswered?

<table>
<thead>
<tr>
<th>How effective is this teacher in:</th>
<th>Please circle the appropriate number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Making clear the learning aims and objectives of this lesson?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Demonstrating their advanced discipline knowledge and using it to assist your learning?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Using pedagogical/teaching techniques and strategies to engage you in today’s class?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Demonstrating personal characteristics that engage, stimulate, encourage and inspire you?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Regularly testing your knowledge, giving feedback, and adapting their approach to help develop your understanding?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6. Encouraging you to reflect on what you already know and how it relates to other new areas of knowledge?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. Organizing learning activities in a structured and coherent manner?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. Using features in the learning environment (temperature, lighting levels, noise levels, etc.) to enhance your learning experience?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. Using appropriate learning materials and aids in a way that assists your learning?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. Revealing a scholarly approach to teaching, seeking to improve his/her performance?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11. What other comments do you have about the effectiveness of teaching during this activity?</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 3.6. Student survey*
Figure 3.7. Observation sheet

**Teacher's name:**

**Teaching Profile:**  (Sessional, Continuing, Fixed Term, Other)

**Group/School:**

**Course name:**

**Year level:**

**Session type:**

**Number of students in course:**

**Number of students in class:**

**Date and time of session:**

**Length of session:**

**Part of session observed:**

**Observers' Names and Faculties:**

Learning and Teaching expert: **Group/Faculty:**

Discipline expert: **Group/Faculty:**

**Form completed by:**

**Observation Notes**

- What are your impressions as the session unfolds?
- What activities seem to work well?
- What suggestions do you have to make activities work better?
- How do students appear to be engaging with activities?

**Evidence is not about “good” or “bad” it is about amount of evidence that was observed. “Not Applicable” may be an entirely appropriate outcome in a particular circumstance. In others it may be able to be increased or developed in collaboration with peers. This metric should be justified with qualitative statements in the comments section following.**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Evidence</th>
<th>Moderate Evidence</th>
<th>Significant Evidence</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observation dimension 1: Clear learning aims and objectives</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 2: Advanced content knowledge and expertise</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 3: Effective pedagogy</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 4: Personal characteristics and approach to teaching</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 5: Use of formative assessment practices</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 6: Encourages deep learning outcomes</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 7: Coherent, structured curriculum design</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 8: Effective use of features of the learning environment</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 9: Use of teaching materials and aids</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Observation dimension 10: Scholarly approach to teaching</strong></td>
<td>Some Evidence</td>
<td>Moderate Evidence</td>
<td>Significant Evidence</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**NOTES:**

**Things that worked well**

**Points for consideration**

**Agreed development ideas**

47
one whom was not known, but who brought experience of teaching and learning and another perspective.

Peer observation worked to encourage strong, collegial partnerships, and benefitted not only the observee, but also the observers. Each party potentially increased their portfolio of teaching strategies, focused on their own development and critically reflected on their performance as a teaching and learning professional through the provision of honest, positive and constructive feedback.

During the chosen learning and teaching episode observers would sit close enough so that aspects of observations could be discussed (briefly and unobtrusively) from discipline and learning and teaching specific perspectives. This discussion was shared with the observee during the debrief post-observation.

At the appropriate time during the learning and teaching episode, observers would complete their own copies of the observation sheet (see Figure 3.7) and made notes where applicable to the survey criteria and briefing feedback request, in line with the observable dimensions of quality teaching. This provided data and was used by the project team to create a composite report to send back to the observee prior to the next observation session.

Post-Observation Tasks

Task 6: Critically reflecting on teaching performance. After the observation concluded, it was deemed important to spend some time to critically reflect on the teaching and learning activity individually. It was useful to record these reflections by editing the observee reflection sheet (see Figure 3.8).

<table>
<thead>
<tr>
<th>Name of Teacher:</th>
<th>Date of Lesson:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What do you think worked well?</td>
<td></td>
</tr>
<tr>
<td>2. What do you think did not work well?</td>
<td></td>
</tr>
<tr>
<td>3. What would you change in order to improve the lesson?</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.8. Observee reflection sheet

Task 7: Debriefing with colleagues. Observers met briefly before the debriefing, to share notes and collaborate key themes to discuss. This in turn generated data and contributed to the composite report document which was sent back to the observee before the next observation session. Once collaboration was completed the observers met with the observee to seek and record perceptions and satisfaction with the execution of the teaching and learning activity. Key questions colleagues used as prompts during these discussions were:

• “What do you think went well?”
• “What do you think you would do differently?”
• “How do you think you might improve…?”
• “Were there any aspects that you did not feel confident about?”
• Follow up expansion questions like “Why?”, “How?” and “What?” can provide detail through targeting self-analysis and reflection.

The triad now had the opportunity to discuss generalised observations in a factual, yet sensitive and meaningful manner. A commonly accepted and used approach was:

• to summarise what were seen as the strengths of the observed session;
• to identify any perceived points for possible improvement. Questions like: “Have you considered …?” or “You might be able to tweak this aspect if you considered …” or “We really like this point/aspect and thought that you might effectively build on this by …”

The key point to retain was that this was a peer-to-peer interaction, and the focus was on sharing knowledge. Enthusiasm and the interplay with discipline and learning and teaching specific observers needed to be central to reducing any perceived uneasiness or criticism that may have been feared; and facilitated the adoption or adaptation of any suggestions. Finally, restating the perceived strengths reinforced a positive high note to promote reflection, development and agreement of areas for future focus.

**Post-Session Tasks**

*Task 8: Engaging with students.* The last task following from the observations was the collection of student feedback by means of a focus group session. The focus group was an informal 10–15 minute chat, hosted by one of the project leaders (where possible) and utilised the combined “focus group student impact” document (see Figure 3.9) to further understand the impact that PRO-Teaching had on the student experience.

<table>
<thead>
<tr>
<th>Course name and code:</th>
<th>Activity (circle one):</th>
<th>Number of students in focus group:</th>
</tr>
</thead>
<tbody>
<tr>
<td>--- Lecture – Tutorial – Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q1: Did you notice any differences in teaching practices while peer observation of teaching was being conducted? If so what were they?

Q2: Did you notice any ongoing positive teaching practices after the peer observation sessions had concluded? If so what were they?

Q3: What other changes to teaching could be made to enhance your learning in this course?

*Figure 3.9. Focus group student impact document*
Task 9: Critically reflecting on the peer observation process. In order for the Griffith PRO-Teaching Project to continue to evolve and assemble the ever-changing needs and demands of those it benefits most, all participants were encouraged to complete a PRO-Teaching process evaluation (see Figure 3.10).

| 1. Indicate the role(s) that you are basing these reflections upon: |
|-------------------------|---------------------|---------------------|
| ☐ Discipline observer   | ☐ L&T observer      | ☐ Observer          |

<table>
<thead>
<tr>
<th>2. How did you hear about PRO-Teaching?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ School meeting</td>
</tr>
<tr>
<td>☐ Poster</td>
</tr>
<tr>
<td>☐ Learning@Griffith</td>
</tr>
<tr>
<td>☐ Project administrator</td>
</tr>
<tr>
<td>☐ Colleague</td>
</tr>
<tr>
<td>☐ Other: _________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. What was your main motivation for engaging with the peer review process this semester?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Gain evidence for promotion, citation or award</td>
</tr>
<tr>
<td>☐ Gain feedback on your teaching</td>
</tr>
<tr>
<td>☐ Opportunity to work with colleagues outside of your discipline</td>
</tr>
<tr>
<td>☐ Other: _________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. What aspect(s) of the peer review of teaching process do you think worked well?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Workshop/Information session</td>
</tr>
<tr>
<td>☐ Administration support</td>
</tr>
<tr>
<td>☐ Website</td>
</tr>
<tr>
<td>☐ PRO-Teaching workbook</td>
</tr>
<tr>
<td>☐ Interim observation reports</td>
</tr>
<tr>
<td>☐ Other: _________________</td>
</tr>
</tbody>
</table>

| 5. How did it improve your teaching?                                                 |

| 6. What did you learn?                                                               |

| 7. What suggestions do you have to improve the peer review of teaching process?     |

| 8. Do you feel that this approach offers something worthwhile in the development of teaching and learning? (Please elaborate) |

Figure 3.10. PRO-Teaching process evaluation
**Task 10: Finalising the paperwork.** To ensure that both the interim report and the final analysis report were received in a timely way, it was important that all of the documents be finalised after each observation. This was undertaken by electronic form (except for the student surveys which were paper-based), and made the PRO-Teaching process seemingly efficient and effective.

After each observation the observee received a combined report of the observer’s feedback, outlining their strengths, points for consideration and any agreed developmental ideas. The observee also received an observation data template in the form of a spreadsheet, which captured all of the student data collected, change data from the observers and alignment scores, comparing student feedback with the assigned objectives for each class.

**IN CLOSING**

In this chapter the action research driven design of a context relevant, developmental peer review of teaching model, and its implementation strategy at an Australian university was presented. PRO-Teaching is a highly structured peer review of teaching model that realises an innovative process that triangulates contemporaneous teaching quality data from a range of stakeholders including students, discipline academics, learning and teaching expert academics, and teacher reflection to create reliable evidence of teaching quality. The reflective process of participative Action Research fostered a community of practice where problem solving in teams, generated improved strategies and practice. By being part of the change process the participants were able to feedback into the PRO-Teaching process and discover a new investment in enhancing teaching. As the project has been disseminated into the wider university, evaluation has led to further iterations.

Data collected over multiple classroom observations allows objective reporting on development differentials in constructive alignment, peer, and student evaluations. Further innovation is realised in the application of this highly structured developmental process to provide summative evidence of sufficient validity to support claims for professional advancement and learning and teaching awards. It provides an effective and credible foil to the reliance on student evaluation as the sole arbiter of teaching quality that is acceptable to managers and more balanced to academics as teachers.

**REFERENCES**


Christopher Klopper
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Griffith University

Steve Drew
Griffith Sciences
Griffith University

Kirsty Mallitt
Arts, Education and Law Group
Griffith University
INTRODUCTION
This chapter provides an overview of the enhancement of teaching and learning in a higher education setting, facilitated by two enhancement initiatives. The PRO-Teaching project and the peer assisted course enhancement scheme PACES are complementary cross-disciplinary team-implemented initiatives aimed at enhancing the quality of teaching and curriculum design. These projects were funded by Griffith University to engage staff in peer review initiatives focused on embedding sustainable, collegial development opportunities and quality teaching culture beyond formal professional development programs, in support of the university’s aim to provide a staff-enabling culture that supports its staff to create a high-quality, student-centred experience.

The university’s peer assistance programs are distinctive in that they link with a range of cross-disciplinary, learning network initiatives to complement and reinforce the university’s teaching quality enhancement agenda. Furthermore, the programs demonstrate highly effective collaboration between teaching and professional staff to deliver support tailored to staff and School needs. Professional personnel play a key role in recruiting peer review teams, scheduling observations, disseminating review protocols and collating and maintaining confidential records for individual development purposes. The enthusiasm and commitment of professional administrative staff and their importance to the success of the PRO-Teaching and PACES projects have been recognised through embedding part-time positions in all four academic groups.

BACKGROUND
Higher education in Australia consistently ranks at around the country’s fourth highest export earner (Hall & Hooper, 2008). For more than 15 years however, there has been a rapidly expanding global marketplace for higher education to service a burgeoning knowledge economy in many regions (Marginson, 2011). In such a
competitive climate it is imperative that the education products and services are clearly differentiated to market needs globally, regionally, and locally (Jones & Oleksiyenko, 2011; Marginson, 2011); and that they are of an outstanding quality in terms of access (Morley, 2012; Rizvi & Lingard, 2011), processes, and outcomes (Wong 2012). To maintain competitive advantage it is also imperative that there is a quality agenda supporting development of higher education from the national level (Lomas, 2004) through to the provider organisation (Barnard et al., 2011), disciplines (Healey, 2000), and individual teachers.

Many universities rely on student fees to subsidise the operations and growth of the organisation, and as such, competition exists amongst universities in any region for student enrolments. Various national surveys provide data that is made available to institutions and their stakeholders – including potential students – to enable them to make informed choices. In Australia the MyUniversity website (Government, 2012) provides data about courses of study and each university. Around the world there are variants on The Good Universities Guide (Guide, 2012), which acts as an independent vehicle, providing similar information for comparing and ranking organisations. Such mechanisms are well used by students and parents, and as such, improving university ranking on these open and transparent information systems is becoming an effective quality driver (Alderman, 2010; Shah & Nair, 2011).

Within Australia, the recent introduction of a prescriptive regulatory system administered by the Tertiary Education Quality Standards Agency (TEQSA) is of particular importance to Universities, as the framework provides and develops standards relating to the nature of learning underpinning the awarding of qualifications, the quality of teaching and learning, the quality of research, and the quality of information provided to stakeholders (TEQSA, 2012). This broad standards approach combined with government funding policy and the uncapping of student numbers has placed pressure on regions, organisations, departments, and individuals to align their own quality agendas (Sachs et al., 2011). As a result there is increasing pressure for universities to exhibit quality processes that enhance the quality of teaching as this has explicit links to student success and retention (Biggs, 2003; Tinto, 1993; Gibbs, 2010).

The peer review of teaching in higher education has received considerable interest over the last decade for both summative and formative purposes. Berk (2005) states:

If teaching performance is to be recognized and rewarded as scholarship, it should be subjected to the same rigorous peer review process to which a research manuscript is subjected prior to being published in a referred journal. In other words, teaching should be judged by the same high standards applied to other forms of scholarship: peer review. (p. 50)

A number of authors (e.g., Arreola, 2000; Berk, 2005; Gosling, 2014; Millis & Kaplan, 1995; Sondergaard & Mulder, 2012) advocate the use of peer review for formative purposes. In addition to this, the national Office for Learning and Teaching (OLT), and the previous Australian Learning and Teaching Council [ALTC], has funded
at least six major projects related to the peer review of teaching in Australia. This chapter provides one example of doing so. PRO-Teaching and its complementary offshoot, PACES, have built on the findings of these six major projects to deliver initiatives customised to the university’s context and teachers’ specific needs. PRO-Teaching is a program that engages colleagues to focus on the enhancement of quality in their teaching using a highly structured form of developmental peer observation, while PACES facilitates collegial collaboration on course design and execution. The development of PACES was initiated to capture and include those academic groups who wanted to work on peer review with a focus on curriculum renewal and curriculum design. Experience showed that the inclusion of teaching in the title of the PRO-Teaching project precluded some participants who had an expectation of a punitive or remedial approach to teaching development in the project. With this in mind PACES was created on the peer assisted teaching scheme (PATS) model of Carbone (2013). In PACES the participants enlisted their own review peer, and had more flexibility in the level of engagement with the process. PACES engages colleagues to collaborate on the analysis of student feedback, goal setting, design of classroom activities, addressing pedagogy, assessment, and culminating in a course improvement plan (CIP) for the following semester offering.

**METHODOLOGY**

Underlying both the PRO-Teaching and PACES projects is Vygotsky’s socio-cultural theory (Vygotsky, 1978) that social interaction plays a fundamental role in the development of cognition, together with Lave’s theory of situated learning (Lave & Wenger, 1991), which emphasises that learning is constructed collaboratively in social situations and takes place in authentic contexts – in this case, the classroom social setting. The underlying arguments for providing processes that focus on teaching and teachers are that enhancing quality in teaching improves students’ experiences of learning, their learning outcomes, and influences their retention in programs (Tinto, 2005). Methodology specific to each of the projects is outlined below.

**PRO-Teaching**

In the PRO-Teaching project, observations are conducted by cross disciplinary/cross group observers creating collegial communities of inquiry and interest. Embedding administrators in the groups created collaborations between PRO-Teaching team and group staff, extending the link between the academic groups.

PRO-Teaching was designed to allow for a formative process to guide and record each participant’s progress through a full developmental loop involving a sequence of two observations from which to draw pedagogical development ideas. Teams combine an observer who has discipline expertise with an observer who has learning and teaching expertise. Student learning outcomes, recorded using Harvard one-minute papers, are compared against teachers’ stated learning objectives for
each lesson. After both observations and reports for each have been returned to the observed teacher, a final report relating changes in data between observations is compiled. Figure 4.1 provides an overview of the PRO-Teaching process.

Figure 4.1. The PRO-Teaching process

The design of the PRO-Teaching project recognised that student evaluations, although providing important information about students’ perception of quality in teaching, do not stand alone as an indicator of quality in teaching or learning. By collating data from multiple observers alongside contemporaneous student evaluations and learning outcomes from the observed episodes, a comprehensive data set was constructed from which defensible evidence of quality teaching for learning can be inferred. PRO-Teaching enables teaching for learning through learning for teaching:

• Teacher learns from students about how they learn; teacher learns from observers about how learning and teaching techniques might be made more effective; teacher learns from their own self-reflection; and,
• Observers learn from observing teacher techniques; learn through processes of analysing how teaching works for cohorts of students; and observers learn from students how they learn from teaching.

PACES

PACES is based upon Carbone’s (2013) PATS, providing a framework that supports teachers to engage in all four elements of Brookfield’s reflective processes (1995) – autobiographical; student; peer; and theoretical lenses – as a foundation for good
teaching, and as the means for developing excellence in teaching. The self-lens, the student-lens and the peer-lens are all strongly aligned with PACES, by engaging critical reflection, addressing student feedback, peer observation, learning and discussion. PACES extends Brookfield’s (1995) framework by grounding the critical reflective process in a collegial peer relationship over multiple informal meetings throughout a semester-long process. Leveraging PRO-Teaching’s existing network and proactive engagement strategy, the PACES in the first semester of engagement involved 44 teachers, which is three times the highest teacher engagement at any other university implementing this scheme.

IMPACT OF IMPLEMENTATION

The impact of implementation of the PRO-Teaching and PACES projects was evident for all stakeholders – students, staff, and university management. Results are discussed here as applicable to impact for each of these three groups, and in relation to external impact also.

Student Impact

In the process of implementing PRO-Teaching more than 7,500 students have been a part of classes observed with over 4,400 providing evaluation surveys and learning outcomes tests completed. More than 1200 students took part in classes where PACES was being undertaken with most providing informal feedback early in the course to which responsive adjustments to curriculum design were made. Student evaluations for each associated course at the end of the semester in which PACES was run provides an indication of generally positive impact. Using student realisation of teachers’ intended learning outcomes as an indicator then 36.4% out of 110 valid observation sequences registered an improvement in learning outcomes for the students involved (“There was a change in the clarity of the information provided” – Student, 2012; “There was an improvement to the flow of information through the lecture and an increase in the number of breaks to record the material” – Student, 2012; “The lecture incorporated more prior learning” – Student, 2012).

Two areas of student learning that this program has influenced are learning outcomes and the student experience of learning. At each observation student evaluations of teaching and a Harvard Minute Paper (learning outcomes proxy) were executed. In a sequence of observed classes a differential analysis of these constructs was conducted to capture impact on students and teachers. Matching teachers’ intended learning outcomes statements from pre-observation briefing documents to students’ perceived learning outcome statements in surveys provide an indication of constructive alignment (Biggs, 1996) for each lesson. This is an alignment of learning aims with engagement in appropriate learning activities to reach those aims and appropriate assessment of learning outcomes. Student evaluations conducted contemporaneously with peer observation also captured student impressions of
clarity of learning aims, effective engagement with learning, and conduct of formative assessment. Improving the clarity of learning aims and enhancing engagement with learning activities are the easiest elements of a lesson to effect change upon speedily. Analysis of 2010–2012 observational, interview and survey data revealed that of 110 valid observation sequences (147 in total) constructive alignment was increased in 36.4% (40 sequences), with 39.4% enhancing the clarity of learning aims and 39.4% enhancing the level of engagement in class (52 of 132 valid sequences out of 147). “In preparation for my teaching [and second observation] I thought again about the structure of my lectures, objectives, the ways I need to reinforce achievements and summarise at the end” – Teacher, 2012. Formative assessment, particularly in lectures is mostly poorly performed and suggests an area of future academic learning that may be fruitful.

Analysing the frequency distribution graphs of each semester’s mark allocations has the capacity to track relative performance of each student group. Improved student engagement with learning should be reflected in an elevated median mark indicating that more students achieved better learning outcomes; and, a reduction in the number of failures in the tail of the distribution indicating better outcomes for students experiencing limited levels of achievement.

De-identified SET and SEC data were compared for each course before peer assistance (PRO-Teaching and PACES) and after, revealed that 39% (43 out of 109 – SECs) and 38% (29 out of 76 – SETs) of courses showed an improvement in their overall score. In Semester 1, 2013, SET data revealed 14 out of 25 valid PRO-Teaching participants (42.9%) displayed improvement on their past performance, with an average improvement of 7%. 85% (6 out of 7 valid courses) of SECs conducted for teachers undertaking PACES in 2012 showed an improvement, with 66% (4 out of the 6 courses showing positive improvement) demonstrating a greater than 0.5 point improvement in overall scores.

Student evaluations conducted in observed classes indicated that 55.1% registered an improved perception of engaging activities or approach to teaching. “More real life examples were included” – Student, 2012; “More interactive question and answer techniques were used” – Student, 2012). Evidence from observers of purposeful student engagement in activities also indicated that 40% of classes evidenced improvement. “The observee slowed down to wait for student responses after asking a question; they left silence for reflection and perhaps a response” – Teacher, 2012.

**Staff Impact**

During the pilot of the PRO-Teaching process 14 teachers took part in the observation of 22 lessons. During 2010 and 2011, 124 teachers with representatives from each group took part in observing 316 lessons. 80 of those lessons involved observation of 40 Sciences teachers, the remainder were generated by learning and teaching observers from a range of disciplines across Business School, Health, and Arts Education and Law, wishing to use observation data to gain ideas for developing
their own teaching. From 2012 a further 128 lessons have been observed in
PRO-Teaching involving more than 160 teaching staff from across the university
(64 observers and 30 discipline observers and 60 learning and teaching observers –
42 of these teachers had been previously involved with the project). Analysis of data
from PRO-Teaching revealed a case for also focusing peer assistance on curriculum
development (PACES). In 2013 more than 80 teachers attended training workshops,
with 40 teachers participating in semester 1 (34 formally completed) and 35
(29 formally completed) in semester 2.

Management Impact

As the project developed, instances of recognition of peer derived evidence in
official documentation and process grew. Learning and teaching portfolios used for
academic staff review and promotion applications include peer review of teaching
as a valid source of evidence to complement student evaluations. Observer status in
peer review engagements is now recognised as leadership in learning and teaching in
the academic portfolio. University briefings of staff in preparation for the promotions
rounds now explicitly encourage academics to gather evidence using peer review of
teaching. CIP documentation encourages staff to consider peer assistance as part of
development strategies. University awards for excellence in teaching guidelines now
incorporate peer review as appropriate evidence to complement other sources.

External Impact

Engagement with the OLT Senior Fellowship on PACES (PATS) to embed and
develop peer enabled course enhancement at Australian universities has provided
collaboration opportunities to develop approaches and instruments for peer assistance
that are goal focused and easier to use. Engaging with colleagues from five different
universities running PATS has enabled collaborative research to develop processes
for academic goal-setting, receiving and acting upon student feedback (Phelan et al.,
2013), enhance student satisfaction with courses and teaching (Carbone et al., 2015),
and goal-oriented peer observation of teaching. Speaking at OLT Fellowship and
Senior Fellowship symposia; as well as Higher Education Research and Development
Society of Australasia (HERDSA) conferences (2011, 2014) has created a level of
dissemination with national and international audiences.

DISCUSSION AND CONCLUSION

An overview has been provided of the enhancement of teaching and learning in a
higher education setting, facilitated by the peer review of teaching (PRO-Teaching)
and peer assisted course enhancement scheme (PACES) projects. The program of
activities undertaken by the PRO-Teaching/PACES team is two-fold, but ultimately
shares a single purpose: engaging and supporting teachers through a developmental
process, with information and processes that facilitate effective embedding of the system within the university. The university’s peer assistance programs are distinctive in that they link with a range of cross disciplinary, learning network initiatives to complement and reinforce the university’s teaching quality enhancement agenda. It aligns closely to academic staff enabling plans and is a potent tool to help meet learning and teaching quality and culture development objectives.

An analysis of approaches to peer review of teaching at Australian universities indicates that PRO-Teaching is the most comprehensive and structured in providing both a framework for development and mechanisms for collecting validated evidence of strengths, challenges and development progress with respect to teaching. This is achieved by combining data collected from multiple sources (self-reflection, discipline observer, learning and teaching observer, student perceptions and learning outcomes) through a sequence of observations of teaching. Other peer review of teaching designs engage teachers in one observation facilitating only a part of the cycle developmental growth. Most do not collect contemporaneous data from multiple sources to create rigour and justification of interventions. By focusing on objective reporting on collected data, peer review reports have been accepted at the university as evidence supporting promotions, performance reviews, and award applications.

Through these innovative programs evidence of impact on teaching quality and, through that, student learning, is gaining momentum. Furthermore, in addition to the improvements made in teaching and curriculum as a result of peer feedback, the development of collegial networks, enhanced openness to discussing problems, and successes in teaching, enhanced engagement with learning and teaching grant and award schemes and increased interest in the scholarship of learning and teaching have resulted. There is a new energy around learning and teaching that can be attributed directly to the sense of professional pride and interest engendered by peer feedback and support. A number of mentoring relationships have persisted beyond the ‘official’ instances of engagement and individuals have stepped forward to be named as champions of learning and teaching in their Schools – a strong indication of the lasting positive impact of these PRO-Teaching and PACES projects – enhancing learning by enhancing teaching. Implementation of peer review of teaching projects customised to the needs of individual institutions is highly recommended. Further research is needed into the success of such implementations in additional university settings.

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5. PEER ASSISTED REFLECTION FOR STUDIO MUSIC TEACHERS

Toward Transformative One-to-One Teaching and Learning

INTRODUCTION

Scholars continue to identify and describe various concerns about traditional approaches to one-to-one learning and teaching of music. These include the limited adaptability, relevance, and generalisability of the learning that often takes place (e.g., Mills, 2002; Carey & Grant, 2014); student submissiveness and dependence, teacher dominance, and other issues of power that can arise between teacher and learner (Burwell, 2013; Carey, 2008; Long, Creech, Gaunt, & Hallam, 2014); and the lack of formal accreditation for one-to-one pedagogy (Gaunt, 2009), meaning that standards of teaching across and even within institutions may be erratic. Notwithstanding recent calls by sector bodies like Association Européenne des Conservatoires (AEC) for teacher professional development, skills renewal, and improved quality assurance and enhancement processes (AEC, 2010), in many conservatoires around the world, there remains ‘the tendency to maintain time-honoured practices that continue to be exempted from scrutiny’ (Carey, Grant, McWilliam, & Taylor, 2013b, p. 151). As such, the ‘intense critical scrutiny’ (Long et al., 2014) of traditional one-to-one pedagogy in recent research has not yet filtered through to practice, which remains relatively unchanged (Perkins, 2013). This situation seems poised to shift, partly because music institutions are facing such high pressure to be more accountable and transparent to their parent universities and through them, their clients (the students).

In addition to the external pressures, ongoing critical reflection by conservatoire music teachers on their pedagogical approach and style is essential simply to ensure good teaching practices and concomitant optimal learning outcomes for students. Functionally, reflective practice holds promise to disrupt a self-perpetuating inertia in which teaching approaches and styles remain ‘regulated through dominant norms and expectations in the educational community…with certain rules, standards, and expectations related to what it means to be a teacher or a student in this particular educational context’ (Nerland, 2007, p. 400).

This chapter presents and explores one possible model for encouraging one-to-one teachers in conservatoires to reflect critically on their pedagogical choices and practices. It reports on a pilot project at an Australian music institution that used video as the basis for a collaborative activity in which instrumental and vocal teachers
reflected critically on their teaching approaches and practices. The overarching aim of the project was to further the development of ‘best practice’ models for one-to-one pedagogy that incorporate professional growth strategies for teachers (Burwell, 2005; Gaunt, 2007). This aim was driven by three objectives within its institutional context. (1) to progress teachers’ understanding of their own one-to-one pedagogical practices and approach; (2) to encourage teachers to build upon and improve these existing practices; and (3) to foster a supportive and collaborative environment for one-to-one teachers to explore and progress their teaching practices.

PEER ASSISTED REFLECTION

Reflection on teaching practices is an acknowledged and common way for teachers to foster professional skills development and improve teaching standards across the gamut of educational contexts, from primary to tertiary, one-to-one to group, and discipline to discipline. In a pedagogical context, reflection may be defined as:

a natural process of active self-evaluation, often coupled with effective communication (Harris et al., 2001). Reflection can help teachers see things in new ways, leading in turn to growth as professionals both in and outside of the classroom. It often requires teachers to hear and consider a variety of perspectives. (Glazer, 2004, p. 33)

Reflection is an authentic, self-directed, non-prescriptive approach to development that encourages teachers to take responsibility for their own professional growth (Glazer, 2004). Habits of reflection can deepen teachers’ understanding of their own practices and foster the development of an authentic teacher identity (Sellars, 2013). In the conservatoire, as in other educational settings, reflective activities (such as journaling, online discussions, and peer observation workshops) may help one-to-one teachers to ‘see’ and make use of alternative pedagogical approaches (Carey et al., 2013b, p. 151). In turn, this may begin to catalyse a shift in pedagogical practices – both at the individual and collective (institutional) levels – from those based on longstanding tradition and lore (Persson’s ‘commonsense teaching’, 1996) to those derived from sound empirical models and knowledge (‘trained’ or ‘expert’ teaching; Persson, 1996).

Although reflection on pedagogical practices is a process teachers may undertake individually, collaborating with a colleague, termed in this chapter peer assisted reflection, is an approach that has proven valuable across a range of contexts. Several studies indicate that the effectiveness of reflective practice is heightened if teachers work together: the collaborative aspect helps teachers to gain a variety of perspectives; can initiate changes in teachers’ perceptions of themselves and their teaching; and can add to feelings of autonomy and confidence in their own professional development (e.g., Van Gyn, 1996; Beatty, 2000; Glazer, 2004). Martin and Double (1998) have argued that as an action-based approach to
developing teaching skills in higher education, peer observation with peer assisted reflection:

- can directly benefit the individual teacher, can enhance collegiality and can have a significant effect on changing departmental culture. It is acknowledged that insights into personal practice are gained both from the act of observing as well as from being observed. (p. 161)

In the area of music pedagogy in higher education, the range of possible approaches to peer assisted reflection is vast, and well represented in the literature. McPhail (2013) describes a process by which he conducted a violin lesson in front of teacher-colleagues (‘critical friends’, p. 168) in the context of a professional development session; he reports that the session helped make explicit various aspects of his teaching approach, while also providing him the opportunity ‘to gain immediate feedback from colleagues in a Community of Inquiry’ (McPhail, 2013, p. 164). Other collaborative approaches to developing reflective practice and professional growth, including mentoring, advising and coaching (Renshaw, 2009), have been more often described in relation to the teacher-student (or even student-student) dyad (e.g., Gaunt, Creech, Long, & Hallam, 2012 on mentoring), rather than in relation to the professional development of teachers. These approaches encompass characteristics of peer assisted reflection, in that another person acts as a sounding-board for ideas and approaches, and can ‘hold a mirror’ to one’s own practices. Another approach with powerful potential to contribute to teacher reflection and development is peer co-mentoring, defined as ‘a collaborative developmental process, with a mutual exchange of knowledge, skills and experience aiming towards shared learning and helping individuals to place their own development within wider cultural and educational contexts’ (Gaunt et al., 2012, p. 40).

Several studies theorise and explore the use of video as a reflective tool for teacher professional development. McCurry (2000), for example, constructs a framework ‘to inform the practical use of video in new models of critical inquiry and reflection in professional development’ (p. 6); and using a case study approach, Calandra, Brantley-Dias and Dias (2006) describe one preservice teacher’s experience of capturing teaching episodes on video and reflecting on them as part of her professional development, an activity that reportedly helped develop her identity as a teacher. A major benefit of using video in a reflective way is the opportunity for retrospective and repeated viewing, both from the teacher (allowing deeper insights) and from others (allowing alternative perspectives) (Wang & Hartley, 2003). Calandra et al. (2006) propose that using video recordings can bring ‘a more unbiased authenticity to reflective dialogue among peers and teacher educators’ (p. 138). Video technologies also have the potential to document the richer, more complex events and situations of teaching and learning, [and] provide … teachers with the necessary context to observe, and
reflect carefully on different issues of teaching and learning in action. (Wang & Hartley, 2003, p. 112)

While few music-specific studies have described the use of video as a medium for reflective practice, the use of video has substantial precedent in music research. Gustafson (1986) used video footage of music lessons to analyse factors that may influence behaviours and interactions; Rostvall and West (2003) used videotaped lessons to describe and analyse instrumental teaching and learning; Young, Burwell and Pickup (2003) drew on video recordings of lessons to analyse instrumental teaching strategies in a higher education institution; Daniel (2006) used video footage to compare piano teaching in one-to-one and group settings; and Carey et al. (2013b) used video recordings of one-to-one lessons to create a scheme characterising teacher-student interactions in the conservatoire context. In addition to these music-specific studies, much other research describes the use of video as a research tool across other contexts, and generally (e.g., Bowman, 1994; DuFon, 2002).

BACKGROUND TO THE PROJECT

Context

This research took place in the context of a broader ongoing project, Transformative One-to-one Teaching and Learning (“TOTAL” outlined in depth in Carey, Lebler, & Gall, 2012; Carey, Bridgstock, McWilliam, Taylor, & Grant, 2013a; Carey et al., 2013b; Carey & Grant, 2014a, 2014b; see also www.transformative121.org). In the first phase of the project (2011–2013), the research team developed a descriptive scheme to characterise specific pedagogical practices and interactions between teacher and student that commonly take place in one-to-one tuition. In this way, the scheme provided an evidenced-based way to describe and code the nature and quality of those pedagogical practices that are visible and able to be altered or controlled by the teacher. The aim of the second phase (2013-ongoing) is to put this scheme to use in supporting teacher development across institutional and international contexts.

All instrumental and vocal teachers at Queensland Conservatorium Griffith University (QCGU), the Australian institution leading the TOTAL project, were invited to participate in its development and implementation. From a pool of around twenty one-to-one teachers who responded positively, six were selected for close engagement in the pilot research and practical activities, on the basis of considerations of representativeness across instrument specialisations, employment status, and gender (see Table 5.1). (From 2014, this was widened to participation of around a dozen full-time and part-time teachers across all institutional specialisations: strings, keyboard, voice, woodwind, brass, percussion and jazz).
Students at QCGU typically attend one individual lesson per week as a part of their studies, with only the teacher and student present. Over one semester, each of the six participating teachers video-recorded their lessons with two undergraduate students, one first-year and one in a later year of study. For the recording, teachers used a Zoom Q3 Video Recorder mounted on a tripod, or a similarly unobtrusive, relatively inexpensive, high-quality, and easy to use device. Using the descriptive scheme referred to above, the research team then coded and analysed the resulting approximately 78 hours of raw video, teacher by teacher – not in order to evaluate the teaching, but rather to identify, characterise and map what could be observed of it (see Carey et al., 2013a; Carey et al., 2013b).

This analysis formed the basis for a qualitative characterisation of the pedagogical practices employed by each of the six teachers. These characterisations revealed two broad approaches to pedagogy, which may be labelled transformative and transfer (for reasons argued in Carey et al., 2013a). These approaches are not black and white, but rather lie along a continuum. Key characteristics of each are outlined in Figure 5.1.

![Figure 5.1. Key characteristics of ‘transfer’ and ‘transformative’ approaches to teaching](image-url)
Characterisation of Pedagogical Styles

Each of the six teachers in this study adopted characteristics of both transfer and transformative pedagogy in their lessons, but the transfer style of teaching was more prevalent on average (see Figure 5.2). Those three teachers who adopted predominantly transformative pedagogical strategies (including reciprocity, exploration of ideas, contextualisation, and personal and artistic development) tended to do so even more with advanced students than first-year ones. Likewise, the three teachers who displayed more transfer characteristics also increased their use of transformative pedagogical strategies with advanced students. All six teachers emphasised personal and artistic development to a greater degree as students advanced in their studies. It is important to note, then, that transfer and transformative are not labels that are usefully applied to teachers, but rather describe teaching practices and strategies. While each may be appropriate in certain contexts and at certain stages of a student’s development, generally speaking, the transformative approach has been shown to have better learning outcomes for students (Carey & Grant, in press; see also Biggs, 2003; Cranton, 1994; Lysaker & Furuness, 2011; King, 2005; McGonigal, 2005; Mezirow, 1991, 1997, 2000; Taylor, 1998, 2007).


At this stage of the TOTAL project, each of the teacher-participants received from, and discussed with the research team, an individual and confidential report that summarised and interpreted the outcomes of the analysis of their videoed lessons. It tabled their strengths in pedagogical approach, as well as potential areas for growth. A follow-up focus group was held to invite feedback from teachers on their experiences and perspectives on the project to date, and stimulate discussion.
about possible future direction. The teachers reported feeling better equipped to reflect on their teaching having received individual feedback, and several expressed an intention to continue self-recording their lessons as a possible way to further their own reflective practice.

METHODOLOGY

Based on the discussions from this focus group, the six teacher-participants and researchers collaboratively designed the next phase of the project. Individually, teachers reviewed segments of their own videoed lessons. Working from a simple framework outlining the characteristics of transfer versus transformative teaching (a slightly more detailed version of Figure 5.1 above), the teachers looked for characteristics of each style within their lessons, and reflected on the choice and appropriateness of that approach within the context of the lesson. Teachers then formed pairs and carried out the reflection again, together watching a part of each other’s recorded lessons, and discussing what they saw and heard against the framework. Each teacher chose their own lesson segment(s) that would form the basis of the reflection; this encouraged teacher ownership as well as prioritising ‘safety’ in the collaborative aspect of the activity.

Teacher pairings were decided informally during the focus group, though participants were encouraged to work with a teacher from outside their own broad instrumental area (e.g., vocal with brass, keyboard with wind). The intention behind this was to encourage focus on broader issues of pedagogy – the ‘how’ of teaching (McPhail, 2013), rather the ‘what’ (like instrument-specific technical issues). As it happened, pairings were such that more transfer-style teachers (Teachers 4–6) partnered with more transformative-style ones (Teachers 1–3) (see Table 5.2 and cf. Figure 5.2 above).

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Gender</th>
<th>Instrument group</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher 1</td>
<td>F</td>
<td>Jazz voice</td>
<td>Full-time</td>
</tr>
<tr>
<td>Teacher 4</td>
<td>M</td>
<td>Brass</td>
<td>Full-time</td>
</tr>
<tr>
<td>Teacher 2</td>
<td>F</td>
<td>Woodwind</td>
<td>Part-time</td>
</tr>
<tr>
<td>Teacher 6</td>
<td>M</td>
<td>Strings</td>
<td>Full-time</td>
</tr>
<tr>
<td>Teacher 3</td>
<td>F</td>
<td>Classical voice</td>
<td>Full-time</td>
</tr>
<tr>
<td>Teacher 5</td>
<td>F</td>
<td>Keyboard</td>
<td>Part-time</td>
</tr>
</tbody>
</table>

Table 5.2. Pairing of teachers for collaborative reflection

After the activity, teachers were invited to submit a short reflection on their experience of watching the videos, as well as a brief meta-reflection on the activity itself. Guidelines to teachers for this feedback included the following stimulus questions:
Feedback fell into two main areas: (1) what the teachers learnt about their teaching practices and approach through the process of peer assisted reflection; and (2) the teachers’ experiences of undertaking this activity (‘meta-reflection’). Thematic analysis (Glense, 2006) was used to code and analyse the data within each of these two areas. In the final stages of analysis, the authors provided the six teachers with a draft of this article and invited comment. Feedback gathered in this way fed into the final version of the paper, engendering the circularity between data collection and analysis phases that is characteristic of qualitative research (Corbin & Strauss, 2008).

FINDINGS AND DISCUSSION

Peer Assisted Reflection

For some teacher-participants, the process of carrying out the activity of peer assisted reflection inspired a rethink of their teaching practices and approaches. Teacher 1 felt specifically ‘that [she] could structure the beginning of each lesson more formally’, and Teacher 2 reported, ‘I am concerned I talk too much. I would like to be more concise with my communication thus allowing for greater impact.’ More broadly, Teacher 5, whose individual profile had suggested a tendency towards transfer pedagogy, observed some characteristics of this approach in her teaching:

… I felt my style was driven by the 20th century model of efficiency and best value for the customer with no time ‘wasted.’ … The videos suggest I think of myself as a teacher, a role which is rapidly disappearing … In 2013 we don’t want to be taught or led … The very words teacher and lecturer seem outdated, and mentor or associate much more relevant. This is provoking more re-evaluation for me.

Teacher 3 ‘observed mostly positive traits although I was struck by the at times overbearing nature of my teaching persona!’ Consistent with the individual profile of all teachers in this study, this teacher could identify aspects of both transfer and...
transformative teaching in her videos, the latter being more salient in the case of the more advanced student:

Watching the lesson with my first year student it was quite evident that I utilised a lot of characteristics of transfer teaching in the approach to the lesson … It seemed a little overly authoritative however I recall finding it necessary to adopt a fairly dominant persona with that particular student … It seemed however a fairly ‘controlled’ environment perhaps overly prescriptive … I appear to give strong advice regarding practice methods, behaviour, protocol etc.

In the case of my advanced student … it was evident that my teaching had moved much more strongly towards a transformative style. My actual teaching has more musical and interpretive elements … The student demonstrates more independence and it is clear that we have established a type of communication which has moved beyond vocal mechanics. My persona reflects that of working with an emerging professional and the interaction between student and teacher represents the voice of the more experienced colleague as opposed to a distant authority.

For Teacher 2, whose profile had suggested a predominantly transformative approach, watching the videos helped her better understand the reasons for this. It confirmed, for example,

… that I tend to teach in a sympathetic/empathetic way. Both [observed students] are relatively conservative in nature and I adjust my own character and teaching delivery according to their personalities…. It did appear that I was a collaborative teacher for the most part and willing to experiment with ideas rather than dictate…. I was very surprised that the students seemed to respond positively to this style…. Both students have since graduated and are living very enriching musical lives of which I am still a part of as mentor and colleague.

Teacher 6 reported that nothing especially surprised him in watching the videos, adding:

It was very nice to watch these lessons with the 2 students, especially a couple of years later as they are both about to graduate now…. It was immediately apparent to me what I was doing in those lessons and the videos helped me to recall those very lessons in time.

Meta-Reflection

Overall, most teachers appeared to find the activity of peer assisted reflection useful. Teacher 2 felt it ‘was a good process to do to make yourself feel not alone in the 1:2:1 world of teaching. It would be great if there was more of this shared knowledge’. Teacher 4 commented:
I did very much enjoy watching [Teacher 1] work with her students and I would also like to view lessons of some other teachers as I found the experience quite rewarding and enlightening.

His partner, Teacher 1, also had a positive experience:

It was very interesting to watch [Teacher 4’s] lessons and to see the similarities in our approaches to our respective instruments... This has been a very positive experience and I also would be happy to support more cross-area communication and consultation.

Teacher 3 and Teacher 5, a pair, had a somewhat less favourable experience, partly due to a misunderstanding about the framework to be used as the basis for discussion (they used a significantly more in-depth version, provided initially with the individual teacher reports, which led to some confusion and complication). Further, Teacher 5 felt the process of video reflection should be ‘only for personal observation of one’s own videos. Making comments on another’s teaching is distasteful and I would think counter-productive.’ Both these teachers also suggested that pairing two teachers of the same instrument would enable more meaningful comments and a more useful exchange overall; Teacher 3 explained, ‘We both felt “unqualified” to make any informed comments on one another’s teaching’.

Soon after sending this feedback, however, Teacher 3 informed the lead author that her perspective had shifted, after reading a certain excerpt from a pedagogy text (namely Watkins & Scott, 2012, p. xiv). The excerpt, she reported by email, was:

part of a discussion re the benefits of a ‘well-conceived’ pedagogy class and what it has the potential to achieve and produce including:

“A heterogeneous class of outwardly unrelated instrumentalists, singers, and conductors will begin to see themselves as a unified group of fine musicians with very similar goals, who can benefit from considering each other's approach.”

I was remembering this in light of [my] negative feedback regarding pairing of different instrumental disciplines such as me with [Teacher 5] when in fact we all need to take another step back and view the whole through a much more holistic lens – at least I do! (Teacher 3, personal communication, 6 February 2014)

The mixed experiences of these two teachers in carrying out this activity point to a number of factors for future consideration, including the possible benefits of introducing teachers to the proven benefits of undertaking reflective activities collaboratively, as well as some strategies for how to do so ‘tastefully’ and a clearer articulation of the reasons for pairing teachers from different disciplines, as articulated in the methodology section of this chapter.
Feedback from teachers on the actual experience of watching back the videos was mixed. Some of the teachers were used to seeing themselves teach on video, and were relatively comfortable with the nature of the activity. Teacher 1, for example, reported that she generally encouraged all her students to record their lessons, sometimes subsequently watching sections back with them to clarify a point. Teacher 6 felt it was interesting to watch the videos ‘both alone and together and to have some time to discuss what we both thought was going on in those lessons’. Not all teachers were as comfortable with the use of video as a reflective tool, like Teacher 2, who reported that the experience of watching her own lessons was ‘excruciating. This was something very new for me. It was very evident that I was quite concerned about the video camera in the room’. If watching themselves teach on video is an unfamiliar or even unpleasant experience for teachers, this may affect their engagement with this approach to peer assisted reflection. One remedy may be to encourage teachers to regularly video-record their lessons as a matter of course, both to familiarise themselves with the process and experience in an informal context, and to support their own learning and reflection.

Opinions also varied on the helpfulness of the transfer-transformative continuum and individual teacher analyses, in relation to the reflection. Teachers 1 and 4 only indirectly referred to the transfer-transformative characterisation: ‘it did come up in discussion but it wasn’t a focus of our activity’ (Teacher 1). Teacher 3 ‘found the statements contained within the [individual analysis] to be strongly representative of what I viewed in the videos’, and Teacher 2 ‘identified with [her] analysis, however understanding this knowledge and then seeing it in action (playback) was very powerful.’ In contrast, Teacher 6 reported that both he and his partner (Teacher 2):

felt somewhat confused… as to why it was that each of us respectively was characterised by this analysis as being predominantly of one style or the other, when from our observations, we seemed to be saying and doing very much the same kinds of things… in short, I think we both observed more similarities in our teaching than differences.

This teacher also conceded that further or repeat viewings of the videos may reveal ‘other things’ in relation to the transformative-transfer characterisation, and that watching videoed lessons from other teachers again may help place these characterisations in more perspective. Both these valid suggestions may be considered for future implementations of the activity. Further opportunity for discussion between teachers and the researchers on the individual characterisations and what they mean practically in terms of observed and observable pedagogical approach (as outlined in Carey et al., 2013b) may also be helpful.

Teacher 6 also provided detailed suggestions about future iterations of this activity, including videoing more lessons over an extended period to reveal possible changes in pedagogical practices. He also noted some practical changes he would make in his own approach to carrying out the video task:
Some improvements could be made with regards to camera angle and microphone levels. While I have some experience with videoing lessons, … including where to stand and to make sure that conversations are clearly audible and that demonstrated physical actions are always within view, I noticed in particular that when I was teaching a male student, we both mumbled quite a bit in a fairly bass register and somewhat monotone in quality making it hard to always tell what was being said exactly. While I can guess the words with some accuracy due to the observed context, I very much doubt that an outsider could, especially a non-musician or even a non-string specialist… A similar issue was apparent in [my partner’s] lessons, perhaps even more so.

These comments may point to the need for some simple guidelines or brief training for teachers in video recording techniques, in future iterations of this activity.

IMPLICATIONS AND CONCLUSIONS

Recent literature firmly suggests that at least some one-to-one music teachers (and, arguably, institutions) retain a notion of conservatoire pedagogy that aligns with the historical master-apprentice approach (Burwell, 2013). Culturally and historically, this ambiguous and complex term implies pedagogy in which teaching and learning ‘relie[s] on expert practitioners conveying experiential knowledge to students through demonstration and description of the results to be achieved and the accompanying sensations’ (Callaghan, 1998, p. 25 in relation to bel canto vocal training; cited in Burwell, 2013, p. 279). From their individual profiles (developed in advance of the research reported on in this chapter), this seems likely to be true, to some extent, of some of the teacher-participants in this study. While this is not a bad thing in itself, the strong evidence that transformative pedagogy generally improves student engagement, ownership, and learning outcomes may create ‘particular challenges for instrumental music teachers who have a considerable body of pre-determined technical and musical knowledge to impart’ (McPhail, 2013, p. 161).

In a previous publication (Carey & Grant, 2014b), we suggested that professional development activities for one-to-one conservatoire teachers should focus on exploring opportunities for making pedagogical practices more transformative. Peer assisted reflection on videoed lessons offers one such opportunity. Especially for teachers who incline towards more ‘transfer’-style pedagogy, ongoing reflective practice may assist in professional development and growth strategies that foster a more transformative pedagogy – as evidenced in this case study, where the process of peer assisted reflection at times catalysed teachers’ further reflection and action. Through iterative processes like this, instrumental and vocal teaching and learning in the conservatoire may gradually start to shift away from the traditional and now rather questionable characteristics of what it entails in its master-apprentice incarnation, such as ‘the use of demonstration and imitation; [and] the master positioned as representative of the practice, with a high level of expertise’ (Burwell, 2013, p. 297).
Based on the feedback provided by teachers, the peer assisted reflective activity reported on in this chapter seems to have met its local aims within the host institution: first, to progress participating teachers’ understandings of their own approaches to one-to-one pedagogy, and second, to encourage those teachers to build upon and improve these existing practices. Although the activity was intended to be exploratory rather than interventionist in its current scope, longitudinal research with these same teachers into the future would help indicate whether, or to what extent, the reflective activity feeds back into those teachers’ long-term pedagogical and/or reflective approaches. A third aim of the activity was to foster a supportive and collaborative environment for these teachers, in which they may safely explore and improve their teaching practices with colleagues. The ongoing conversations about pedagogy among the teachers, and their expressed intention to continue working together to reflect on their own and each other’s teaching, suggests that this aim was also met, at least to some degree. In this way, the peer assisted reflective activity described here responds to the recent call by the ‘Polifonia’ Working Group for Instrumental and Vocal Teacher Training in Europe (see Lennon & Reed, 2012) to increase dialogue and collaboration at all levels, including the local, on the diversity of approaches to one-to-one pedagogy.

Aside from these outcomes, the process of peer assisted reflection described in this chapter incidentally but by no means unimportantly addresses two imperatives in the broader context of one-to-one music education. First, by providing a structured platform for teachers to share conversations about their teaching practices, it contributes to assuaging the professional isolation often experienced by one-to-one teachers (Triantafyllaki, 2010). Second, by encouraging peer-to-peer dialogue within the institutional context (and perhaps particularly by drawing on videographic data to do so), it responds to a call for greater transparency in the practices of teachers in the one-to-one setting. This call comes not only from within the research literature (see Carey & Grant, 2014a) but also from the media and even the public: widespread media reportage from early 2013 ‘revealed an endemic culture of harassment and abusive behaviour at all five of the UK’s specialist music schools’, leading to public scrutiny of these institutions and raising serious questions about the culture within music institutions generally (Tregear, 2014, p. 28).

Peer assisted reflection using video may help improve the practice of one-to-one pedagogy not only at the level of the individual teacher, but also within the institutional and even broadly disciplinary context, by systematising the ongoing improvement of pedagogical skills among teachers (Gaunt et al., 2012). In addition to its direct effect on students through changes in pedagogical practices, it may have an indirect effect on them, the next generation of teachers, who in seeing their teacher engage in reflective processes (from the presence of the video camera in their lessons) may be encouraged to engage in a similar process themselves – whether as student, or later, as teacher. Thus, small-scale reflective activities hold potential to generate ‘big K knowledge’, that is, knowledge generated ‘cumulatively … and
passed from one generation to the next through the institutions of formal education’ (Garvey & Williamson, cited in McPhail, 2013, p. 164).

The activity detailed in this chapter is by no means sufficient in scope to claim generalisability across teachers, institutions, or international contexts. Yet for the participating teachers, it seems to have stimulated sufficient interest in the process and value of peer assisted reflection for them to wish to continue engaging in it, at least for now. Future research may investigate how best to develop, embed and progress reflective activities within the wider movement towards transformative teaching in music institutions. This is a movement with real political value in a tertiary education sector under increasing financial and social pressure, in which demands are rising for the highest possible quality and contemporary relevance of music education (Tregear, 2014). Expanding this small-scale activity to other music institutions, and more widely at the same institution, may help us understand the contribution peer assisted reflection may make in impelling us towards this goal.

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6. PEER OBSERVATION IN THE ONLINE LEARNING ENVIRONMENT

The Case of Aviation Higher Education

INTRODUCTION

Distance education has emerged as an issue of high importance in the field of aviation higher education (Prather, 2006; Scarpelline & Bowen, 2001). Fullingim (2011) suggests that training needs in the aviation industry are expected to grow by more than 40 percent over the next two decades. Online learning offers great potential in meeting this increased demand (Raisinghani et al., 2005).

In this chapter, we discuss the underlying factors challenging the delivery of online aviation higher education. We argue the need for teaching skills in higher education associated with online delivery methods. We review the transition to online education in aviation by considering the underlying pedagogical approaches to learning and teaching in the years of technical training that preceded professional pilot training in the higher education environment.

‘E-learning applications’ is a term used to describe a range of online and internet based platforms used by tertiary educators to deliver e-learning. This includes (but is not limited to): a) online resources to support teaching and education (e.g., Google Apps and Youtube); b) social, collaborative communication and content-creation tools (e.g., Blogging functions, Facebook, Flickr and Twitter; c) virtual classroom and synchronous communication tools (e.g., Wimba Live Classroom, Blackboard collaborate or Skype which are often provided through online Learning Management System software such as Blackboard or WebCT); d) tools to support evaluation and assessment activities (e.g., online quiz functions, SafeAssign and Turnitin); and e) tools to support recording of sound and visual content (e.g., lecture capture applications, Echo360 personal capture and Powerpoint voice over functions).

There is general agreement amongst scholars and key industry stakeholders on the benefits of online education. However, in this chapter, we contend that these advantages cannot be realised unless e-learning applications are bolstered by sound instructional design principles, specifically adapted to ensure the student is placed at the center of the learning process.

This chapter critically examines a case study where the role of the aviation teacher is reviewed. In this case, the teacher is required to transition a course from a face-to-face delivery method, to a delivery method that utilises the online environment only.
The case study offers an examination of the environmental impacts on the delivery of aviation higher education. As a result, three issues are discussed which highlight the challenges affecting the delivery of online education in university professional pilot programs. These issues include: teacher education; the nature of work as a pilot; and pilot student expectations. The issues are drawn from an international literature review with specific application to the Leadership in Aviation course delivery at the centre of the case study.

This chapter explores the experiences and activities of the teacher as they seek to provide quality teaching and learning outcomes in the provision of online aviation higher education. In an effort to address some of identified challenges, this chapter offers some recommendations and solutions. We contend that higher education aviation online courses need to be adjusted to consider the needs of the teacher, the student and the industry by: (1) implementing action-based learning; (2) considering pedagogy before technology; and (3) embedding formative assessment. Ultimately, this chapter aims to highlight the positive learning transformation of the teacher as they discover these critical elements in the context of aviation online education. The key to the discovery was the teacher’s involvement in a peer observation of teaching sequence.

The development of online learning has emerged across a broad spectrum of disciplines in higher education. This includes business, humanities, education, arts, medicine and law. While this chapter focuses on the learning requirements of aviation students, many of the concepts are applicable to other disciplines aiming to enhance learning and teaching quality with the application of online learning tools.

BACKGROUND

The Leadership in Aviation course is a third year undergraduate level course within the Bachelor of Aviation and the Bachelor of Aviation Management program of study. The cohort includes professional pilots upgrading their qualifications, undergraduate student pilots and a small percentage of professionals working within the aviation industry in non-pilot roles. In previous years, the course was delivered on-campus, with some blended learning applications. To assist students enrolled in the on-line offering, lectures were recorded from the on-campus offering and power point slides were uploaded to the learning management system. Students attending on-campus lectures were exposed to some in-class activities. In previous years, students enrolled in the online offering were unable to participate, but could only listen to the activity and recordings of in-class discussions.

As Griffith University placed emphasis on enhancing online delivery and improving the learning experience for online students, the Leadership in Aviation course was selected to transform from face-to-face delivery using blended learning techniques to a completely online delivery mode. The teacher maintained significant subject matter knowledge, yet held little knowledge, understanding and skill in the development and delivery of distance education in the online environment.
Defining Distance Education and Online Delivery

The application of distance education in higher education has become a point of great interest over the past two decades (Kirkwood & Price, 2013). Larreamendy-Joerns (2006) highlights two important movements that have triggered this attention including the emergence of online teaching into the everyday practice of university business and the growing number of distance education programs offered across the higher education sector. It is these movements that have prompted a change in the delivery of higher education, and will continue to have, an effect on student learning now and into the future (Simmons, 2007).

The primary trigger for change in distance education delivery has been the emergence of new technology (Moore & Kearsley, 2012) which has been accompanied by the rise of the internet as a global medium for telecommunications. Many aspects of the learning process, ranging from information delivery, interactivity and communication, to the evaluation and assessment of learning outcomes, can now be offered through vastly accessible online and internet-based platforms (Thomas, 2003). Educational delivery utilising these aspects in the learning process is now widely marketed as ‘e-learning’ or ‘online learning’ (Moore & Kearsley, 2012).

Distance education is defined as:

teaching and planned learning in which teaching normally occurs in a different place from learning, requiring communication through technologies as well as special institutional organization. (Moore & Kearsley, 2012, p. 2)

This definition underscores the challenges facing distance learning in aviation higher education. Firstly, this definition stresses the important requirement for interactivity in distance education with respect to communication. Secondly, the definition highlights the important consideration of pedagogy and the need for e-learning platforms to support the underlying pedagogical approach. And finally, the new definition alludes to an important, yet often-unappreciated aspect of distance education delivery, which is the teacher being supported by adequate time, resources and guidance.

This chapter discusses the experiences of the teacher as they transitioned a courses mode of delivery in the higher education sector. The challenges, experiences and discovery of solutions are discussed in the case examination.

PRO-Teaching Initiative

The teacher had sound experience teaching in the higher education environment. However, the teacher held little knowledge of technology-enhanced learning. In an effort to address the deficiencies in knowledge, understanding and skill associated with tertiary learning and teaching in the online environment, the teacher engaged in a PACES, in addition to the PRO-Teaching program.
The PRO-Teaching program provided constructive peer observations, while collecting evidence of development and of teaching excellence. The program considered student learning outcomes, student evaluations, peer observations of teaching and personal reflection to critically assess teaching quality and development.

In higher education, peer observation is one mechanism to evaluate teaching. The process offers formative feedback to assist in the development of the teacher’s own reflective processes and provides qualitative evidence to support student evaluations (Hammersley-Fletcher & Orsmond, 2004).

The PACES offered an additional mentoring program, which paired high performing teachers with teachers seeking assistance with curriculum enhancement, teaching quality, and improved SEC results.

PACES, an adaptation of the PATS (Carbone et al., 2014), together with PRO-Teaching offered a sound platform from which to develop the transition to the online delivery mode for the Leadership in Aviation course. Both systems also offered the teacher a mechanism for constructive mentoring with assistance from experienced staff with discipline specific knowledge, in addition to access to experts in learning and teaching.

CHALLENGES FOR ONLINE LEARNING IN AVIATION

In this section, we explore the issues and challenges affecting the delivery of online education in university professional pilot programs including; teacher education; the nature of work as a professional pilot; and pilot student expectations. By reviewing the literature associated with international perspectives of professional pilot programs in the tertiary environment, we evaluate the challenges with respect to the online delivery of the course.

Teacher Education

One of the criticisms of aviation distance learning programs is the lack of academic quality in the online learning environment (Prather, 2006). This is partly due to a lack of teacher education associated with the online delivery modes. Hentea, Shea, and Pennington (2003) support this argument, suggesting that poor teaching quality is the result of issues including:

- a lack of staff training and support, inadequate course design, lack of software, improper use of emerging technologies…and flawed assessment methods. (p. 160)

While these organisational aspects remain relevant to aviation tertiary education, the individual perspectives of the teacher transitioning to online delivery modes must also be considered. Some aviation teachers tended to resist the emergence of online learning (Scarpelline & Bowen, 2001). Others felt intimidated by the online
environment, concerned that their role might be superseded by it (Cho & Berge, 2002; Kearns, 2010).

Both organisational issues and individual concerns thus, impact on the delivery of quality aviation online learning programs. However, Eaton (2000) comments that teachers were commonly thrust into online delivery without appropriate training or time to develop the new teaching methods leading to feelings of anxiety.

This anxiety is often inflated when combined with the increased workload of many teachers. In response, many search for templates or discipline specific guidance to assist in the transition. Unfortunately, there is a significant lack of empirical evidence in the literature specific to aviation that provides this necessary guidance (Kille, Bates, & Murray, in press).

The teacher of the Leadership in Aviation course accepted that the transitioning from a face-to-face course to an on-line course would be complex. For this reason, the teacher willingly engaged in mentor based systems aimed at limiting the risks posed by these teacher education issues and focused on enhanced teaching quality with a student-centered pedagogical approach, in the online learning environment.

The Nature of Work as a Pilot

The teacher’s intention to promote a student-centered approach to the online learning environment stemmed from an understanding of the nature of work as a pilot. Considering the skills and behaviors required of pilots, aviation education has witnessed the advent of two key developments in the last two decades. The first development relates to the necessary skills required of professional pilots. The second development relates to the techniques used to deliver the educational program necessary to achieve those skills.

Firstly, safety research during the 1980s, uncovered that pilot error was one of the primary causes of aircraft accidents (Nagel, 1988), compared to machine causes. Most notably, Nagel (1988) found that pilot error was not caused by poor performance in technical skills (such as manual flying skills and associated technical knowledge). Instead, pilot error was caused by a lack of ‘non-technical skills’ such as communication, decision making, leadership and management skills (Mavin & Dall’Alba, 2011).

While these non-technical skills have been highly considered over the last two decades (Helmreich, Merritt, & Wilhelm, 1999; Nagel, 1988), airline recruiters reconsidered the roles of airline pilots and the skills and training necessary to enhance safe and efficient operations (Page & Clynick, 1995). With ‘graduate employability’ a key focus for many universities, the changing nature of the role of an airline pilot required the higher education sector to seek industry advice regarding complimentary training needs.

With respect to pilot training, higher education has provided an effective supplement to technical training (generally provided by flight schools) with a focus on emerging safety trends, which affect decision-making and action in the cockpit.
In addition, the need for ‘industry-ready graduates’ has implied that professional pilots require skills that assist in the efficient and effective operation of the whole airline business (Scheck, 2012). In the turbulent and highly competitive environment of the airline industry, the day-to-day business decisions of a professional pilot can have a dramatic impact on the success or failure of an airline business (Pettitt & Dunlap, 1994). For this reason, higher education for pilots has extended to include business management subject matter.

While the Leadership in Aviation course was designed to bolster the emerging training and industry needs of the professional pilot, the second development relates to the evolution of training delivery methods associated with the non-technical skills in the tertiary environment. This is an important challenge in understanding the educational needs of a training pilot and the professional pilot.

Airlines and tertiary institutions followed the non-technical skills training need with the provision of classroom-based training approaches. The preference for this approach is best explained by the military origins of aviation technical training where the traditional face-to-face classroom teaching method is combined with in-flight one-on-one practical training. The dominant pedagogy in aviation training has thus been entrenched in a traditional transmission-based model. With this dominant pedagogy in mind, the transition to distance and online education has been awkward and troublesome.

Computer based training (CBT) was introduced to aviation training colleges and airlines at the end of the 1980s (Kearns, 2010). Generally this was presented as a series of slides with the activity of ‘read and click next.’ CBT students became bored and unhappy with the lack of human interaction (Raisinghani et al., 2005). Rosenberg (2001) explains that one of the major challenges in the delivery of early CBT was the general lack of understanding of e-learning instructional design concepts.

Over the last two decades, technology continued to advance rapidly. The need for distance and online education to support the changing skill requirements of professional pilots was challenged by the nature of their work. Professional airline pilots are considered a remote work-force. They are often domiciled in bases all over the world, across a wide range of time-zones. Twenty years ago, the vision of a pilot using the Internet to assist in the development of professional knowledge seemed wildly futuristic. However, the nature of work of a professional pilot combined with training requirements has seen more pilots transition from the traditional ‘brick and mortar’ style classroom and into the online learning environment.

Even so, dominant transmission-based pedagogy in aviation distance education continued. As tertiary institutions embraced the rapid advances in technology, aviation distance education has been depicted by the use of summative assessment practices, lecture recordings, podcasts and printable versions of power point presentations (Harrison, Smith, & Yates, 2011).

The Leadership in Aviation course had previously used a blended-learning delivery method. This attempted to meet the needs of on-campus students while providing an opportunity for professional pilots to enroll in an ‘online’ delivery
mode. However, the peer observation system that reviewed the previous teaching methods, student learning outcomes, assessment strategy and the student evaluations highlighted that transmission based pedagogy was not appropriate for the students or the curriculum. This aspect of pedagogy was even more important in light of the changing delivery modes of this course. Most notably, the teacher’s mentor in the PRO-Teaching campaign focused the teacher on the student-centered approach to learning, with a careful consideration of the student’s needs in the online curriculum design.

Pilot Student Expectations

The advice of the mentor through PRO-Teaching encouraged the teacher to consider the student enrolled in the course at the core of learning. In the student-centered approach to learning, Race (2010) suggests that we need to understand and appreciate the student, their ‘needs’ and their ‘wants’ in the learning process. Thus, the third challenge in the context of online aviation education is an understanding of the drivers behind the behaviors of student pilots and professional pilots (Raisinghani et al., 2005).

A recent study found that a significant majority of pilots preferred to learn experientially (Raisinghani et al., 2005). These ‘experiential learners’ enjoy learning by ‘doing’ (Kolb, 1984; Race, 2010). In examining professional pilot training to date, this driver is best explained by the pedagogy of ‘constructionism’ (Harel & Papert, 1991), specifically with respect to the accomplishment of technical knowledge or skills. Professional pilot qualification is driven by the need to acquire a licence, endorsement or certification. Hence, assessment is based on achieving a stated objective that generally articulates to a specific skill requirement.

The Kolb learning cycle (Kolb, 1984) and Race’s ‘ripples’ model of learning (Race, 2010) describe this process. Throughout professional pilot training, prior to qualification and during their career, further training is encouraged once a milestone has been obtained. This effectively scaffolds student learning in an effort to achieve the overarching desired and intended learning outcomes (Biggs & Tang, 2007). The traditional face-to-face classroom setting, which is typically seen in pilot training, provides much of the auditory and visual channels of information. However, this setting has limited opportunity for experiential learning (Karp, 1998).

Considering e-learning environments, Raisinghani et al. (2005) also found that pilots prefer training content to be modularised. Harrison et al. (2011) agrees, adding that pilot students prefer summarisation and modularisation through the use of podcasting. Gobert et al. (2001) describe this mechanism for unifying information-processing as ‘chunking.’ Originally derived by Miller (1956), the need for modularisation is related to containment depicted by high coherency within and loose coupling between the modules.

In previous years, the course was delivered with weekly lectures (recorded) following the textbook chapters. Occasionally, lectures were supplemented with in-
class activities to engage the students. While these techniques of reading and listening offered the auditory and visual information channels, there was little opportunity for online learners to engage in ‘experiential learning.’ This complaint was raised by students in previous SEC and SET surveys.

In an effort to enhance the quality of teaching in the online environment and the overall learning experience of students, PRO-Teaching encouraged the teacher to reflect on previous experiences, methodically review student feedback and discuss solutions and strategies with discipline academics and learning and teaching experts. The mentor program focused the teacher on improving the learning experience with more emphasis on student needs.

SOLUTIONS AND RECOMMENDATIONS

Examining curriculum design and delivery through the peer observation process, encouraged the teacher to shift their focus from what the teacher does, to what the student does. The application of this understanding allowed the teacher to embrace the concept that teaching is not concerned with sending information. Rather, teaching is concerned with engaging students in active learning and scaffolding their knowledge by building on what they already know (Biggs & Tang, 2007).

In this section we discuss the solutions and recommendations that emerged as a result of the peer observation process. Specifically, the solutions relate to the transition of the Leadership in Aviation course to the online learning environment. However, as the solutions were derived from a critical examination of professional pilot training more generally, this section aims to offer recommendations applicable to the development of online tertiary courses which include a cohort of professional pilots or training pilots. However these recommendations could also be used for professional programs similar to aviation across higher education. We contend that higher education aviation online courses need to be adjusted to consider the needs of the student and industry by: (1) implementing action-based learning; (2) considering pedagogy before technology; and (3) embedding formative assessment.

Implement Action Based Learning

In previous sections, we indicated that professional pilots were experiential learners who enjoy learning through activity. This is highly relevant when considering the design of distance education in professional pilot training. According to Sherry (1995), distance learning must be supplemented with ‘active learning’. Active learning encourages students to participate in the learning process rather than simply reading a book or listening to a lecture.

Raisinghani et al. (2005) found that pilots value online learning as long as it has efficacy, compatibility and perceived usefulness in their professional careers. One of the critical success factors in TransAsia Airways’ implementation of e-learning for pilot training was that the course content included current knowledge and skills,
and the teaching materials matched the daily routine of the pilots (Chuang, Chang, Wang, Chung, & Chen, 2008).

In an effort to design high quality ‘industry ready graduates’, aviation higher education providers have sought advice from key industry stakeholders to ensure curriculum is relevant. Important feedback from industry is that when pilots are hired into an airline, they need to be able to smoothly transition to their role within a multi-crew operation, apply their technical and non-technical skills, use their knowledge and actively make decisions within a team environment (Pettitt & Dunlap, 1994). It is evident that pilot students need real life experiences to supplement the theoretical knowledge requirements and fulfill the needs of the industry (Aceves & Aceves, 2008).

The PRO-Teaching process encouraged the teacher to consider these graduate requirements within the context of curriculum design. The learning and teaching expert advice, matched with university supported e-learning workshops, allowed the teacher to consider innovative ways in which to apply active learning to the online environment. By attending e-learning workshops, the teacher was engaged in their own ‘active learning’ developing the confidence to construct and deliver learning content and appropriate learning activities in the online environment. The workshops were attended by teachers of varying e-learning aptitude from a wide range of disciplines with diverse teaching careers. The forum offered the teacher an additional opportunity to discuss successful online activities and understand (from the experience of others), how these activities could be mapped and linked to key learning objectives and outcomes within the curriculum design process. As a result of these forums, the teacher was able to offer a range of student activity based curriculum design options to the mentor, who offered discipline specific advice.

In the case of the Leadership in Aviation course, the teacher integrated active learning using a multi-pronged approach. Firstly, students were asked to read the course theoretical material and listen to recorded lectures. However, key points within the lectures were discussed with the use of current industry based examples that had relevance to the future careers of the student cohort. At the completion of each lecture, students were provided with an online activity, which tested their understanding of key topics and offered appropriate feedback to the learning process.

While these weekly online activities did not contribute to the student’s overall mark, the activity provided value as the questions offered students the ability to practice similar scenarios posed in the weighted assignment and the exam. The activities were scenario based, and asked students to consider their actions based on the weeks learning. Although students were provided with standard automated responses (through the online learning management system) to meet the sporadic study times of the cohorts, the teacher monitored individual responses and provided personalised responses (via email) to each student. This action encouraged students to reflect on their understanding of the topics in real-world contexts that were related to them as individuals. The automated feedback pointed them to further areas of studies, while the teachers personalised response provided students the ability to interact and develop a relationship with the teacher.
In previous evaluations, students expressed dissatisfaction in response to the question: “This course engaged me in learning”. At the conclusion of the new online course, however, students expressed their great appreciation of the lecture content with application to real-world scenarios.

Quantitative and qualitative responses also revealed improved satisfaction with the online learning activities clearly related to the learning outcomes and relevant to their future careers. One student commented: “the material has direct effect on everyday life as well as work life. The tools I learned in this course give a lot of insight into people’s behavior, tools I should be trying to practice every day”.

Consider Pedagogy before Technology

The Scarpelline and Bowen (2001) study found that frequent evaluation procedures were critical to the long-term success of traditional as well as e-learning aviation programs. The study highlighted the important combination of student evaluations and the teacher’s own self-evaluation in the provision of rich data associated with the educational experience. The implementation of these evaluation programs effectively gave the teacher the ability to adjust and improve techniques and methods to ensure the student-centered approach to learning (Scarpelline & Bowen, 2001).

In the e-learning context, the Motschnig-Pitrik and Standl (2013) study investigated the relationship between student-centered education and web-based technology. The study questioned whether “humanistic” approaches required of education could be matched with technology. However, there appears to be collective agreement that the best-practice approach to ensuring successful graduate outcomes (and the attainment of necessary skills) is a learner-centered approach, grounded in constructivist pedagogy, as it draws the experiences, goals and the values of the student to the centre of the learning process (Hager, Holland, & Beckett, 2002; Kirkwood & Price, 2013; Rigby et al., 2009; Selwyn, 2012).

The process of evaluation and the consideration of pedagogy for online learning was effectively employed by the teacher through the PRO-Teaching program. A careful review of previous student evaluations, combined with the teacher’s own reflections and peer discussions encouraged a considered investigation of the student needs. We need to think about ‘what it takes to learn’ as we question how the technological tool can ‘enhance’ the student learning environment with the effect of improving student learning outcomes (Laurillard, 2009).

In the Leadership in Aviation course, the teacher transitioned the curriculum from a transmission-based delivery mode to a constructivist approach. Every learning activity was specifically mapped to the course objectives and the learning outcomes and these links and reasons for engaging were clearly articulated to the students. With peer assistance, the teacher considered all the learning activities from the student perspective and engaged blended learning experts to find online learning tools to assist this process.
For example, every lecture was advertised prior to publication with a short comment titled “Why you should study this week.” The comment, prepared by the teacher, asked students pointed questions highlighting possible gaps in their knowledge, then related the learning to real-life job tasks the student would be expected to undertake as a professional in the industry. “Why you should study this week” was emailed to students two days before the lecture was uploaded.

During the lectures, key points were prefaced with carefully considered examples that the majority of students would have personally experienced (not necessarily through industry experience). That experience was then drawn on later in the lecture to explain the similarities in the work place. At the conclusion of the lecture, online scenario based non-weighted activities allowed students to confirm their understanding of the topic as the teacher provided personalised feedback to their responses.

These small adjustments were carefully integrated with appropriate e-learning tools to effectively deliver a student centered approach to learning. Students were encouraged to act, in an effort to learn. In previous evaluations, students were neutral in their response to the question: “The teaching (lecturers, tutors, online etc.) on this course was effective in helping me learn.” At the conclusion of the new online course, students expressed their great appreciation of the learning process.

Quantitative and qualitative responses revealed the appreciation of student-centered learning process with one student commenting that what they found particularly good about the course was “the little exercises given for a good understanding of the content.” Another student reported their satisfaction with the inclusion of “the lecturers own experiences and suitable examples were used to illustrate the relevant theory.”

**Embedding Formative Assessment**

Emerging over the last two decades, the field of aviation is a relatively recent discipline to enter the higher education sector. As such, assessment in the context of online education is in its fledgling stages. As discussed in previous sections, educational design in online education has tended to take a transmission-based approach. This approach has led to the application of summative assessment practices (Kille et al., in press). However, assessment, as a solution to the challenges discussed earlier, is inextricably bound to the needs of pilots in the online learning environment in terms of active learning and constructive pedagogy.

When consistently embedded in the teaching and learning processes of curriculum, formative assessments aim to boost learning achievements by providing feedback to the students as they develop their abilities (Lin & Lai, 2013). However, feedback is particularly valuable to the learning process when it is highly integrated and well-articulated with the learning objectives. This ensures that effective formative feedback not only monitors the developmental progress of the student according to those specific objectives, but also encourages students to develop learning strategies
that encourage lifelong learning (Hattie & Timperly, 2007; Nicol & Macfarlane, 2006). Processes such as these typify formative assessment, which encourage and support learning. Thus, assessment lies at the core of pedagogy (Gikandi, 2011).

There are two elements of inquiry that teachers designing aviation online and distance education programs need to be mindful of. The two elements of inquiry (i.e., reflection and discourse) as described by Garrison and Vaughan (2008) provide the foundation for a meaningful educational experience. Reflection and discourse can be demonstrated in a blended learning method with the use of technology in the application of formative assessment.

With respect to the first element of inquiry, aviation teachers must be mindful that students are engaged in a discourse that is rich and relevant, with careful consideration in the maintenance of a sense of belonging. Yet, the very nature of the role of a pilot (i.e., remote workforce, isolated and distant) means that balancing the social and cognitive presence in an online environment can be complex. However, this challenge can be easily overcome with a strong teaching presence and an understanding of when and how to question and challenge the students (Garrison & Vaughan, 2008).

The second element of inquiry is concerned with self-reflection. One of the essential principles of adult education is deliberate allocation of time for reflective activities (Brookfield, 1989). Karp (1998) comments that the technique of self-reflection is slowly being adapted into the teaching and learning activities of some university aviation programs with success. Self-reflective activities may include quizzes, scenario-based questions or philosophical statements associated with the key topics being investigated. These activities assist students in taking responsibility for monitoring and achieving progress through the course, and encourage students to keep up to date with the course content (Walser, 2009).

The elements of inquiry also need to be supported with attention to teaching presence and feedback. Aviation teachers engaged in the provision of distance education programs also need to appreciate the value of timely and thorough feedback in the formative assessment process. Ultimately, the formative nature of assessment items relates to the aspect of feedback that promotes the developmental nature of learning. It is the feedback that allows students the opportunity to appreciate the level of their knowledge. Appropriate feedback also gives students the opportunity to improve their abilities towards meeting the intended learning objectives.

As the Leadership in Aviation course transitioned to an entirely online environment, the assessment strategy formed a key part of the teaching quality improvement process. The key learning objectives of the course were critically addressed to reflect the necessary learning outcomes of the course. Learning activities and assessments were also reviewed to ensure students were offered the opportunity for iterative and developmental feedback.

For example, in an effort to encourage higher cognition of the core elements of the course, students were expected to complete an essay. The question was constructed to encourage students to reflect on their personal experiences with respect to the
theory, and then offer an analysis of industry related examples considering the core
theories discussed in the course. Essentially, the teacher aimed to scaffold student
knowledge by building on what they already know (Biggs & Tang, 2007).

Feedback was offered in a number of ways. In week 1 of the semester, the teacher
had published the assignment question including the marking criteria as well as a
complete exemplar. In addition, the teacher prepared a one-hour assessment lecture
recording, which emphasised the key elements of the question, discussed strategies
through which students might prepare their response and demonstrated how the essay
would be marked by the examiner in accordance with the published marking criteria.
This recording was also uploaded to the learning management system in week 1 and
students were able to review the recording at any time convenient to them.

In week 1, students were also asked to complete an “About me” survey, posting
their photo and what they hoped to gain from the course. In week 4 and week 6 of
the semester, the teacher emailed each student individually, offering assistance and
an opportunity to discuss the work completed on this assessment item to date. Every
student responded with a note of thanks and confirmed that the assessment lecture
recording and exemplar were of great assistance. Over fifty percent of the students
responded to the teacher with further questions.

As an additional item of feedback, students were also asked to complete their own
evaluation of their work according to the marking criteria, attached to their essay
submission. This act allowed students to understand what was expected of them to
achieve the learning objectives. A realisation of lower marks also encouraged students
to improve their knowledge understanding and application before submitting their
final document.

The student essays were marked in accordance with the marking criteria. In 9 out of
10 cases, student marks were within 5% of the examiner mark applied. Students already
knew their areas of difficulty. However, the teacher provided individual comments to
support further development. In addition, the teacher reviewed each students “About
me” survey with respect to the students learning expectations of the course and
provided encouragement regarding the essay with respect to those expectations.

This assessment strategy and teaching presence was highly appreciated by the
students. The non-weighted weekly online activities encouraged students to take
responsibility for their learning while engaging in a rich and relevant discourse.
Early notification of the essay question, combined with thorough pre-emptive
information, offered students the opportunity to engage in a reflective activity which
challenged their understanding of the key concepts and gave them the opportunity to
demonstrate the required learning outcomes.

In previous evaluations, students expressed dissatisfaction in response to the
questions: “the assessment was clear and fair” and “I received helpful feedback on
my assessment work.” At the conclusion of the new online course, students noted
significantly improved ratings associated with these questions. Qualitative responses
also revealed the appreciation of the learning and assessment strategy with one
student commenting:
excellent communication by the lecturer to the students. The lecturer made it clear what was required, but also made a concerted effort making students feel included in the course (which is difficult in an online environment).

Another student commented:

the course content and the lecturer engaged me in my learning. Lots of good assessment. Feedback on assignment was good.

Finally, one student commented on the effect the assignment had had on their life expressing:

I have to say that the assignment has opened my eyes and even changed the way I view people’s behaviors in certain situations and [I] can’t help but think about those leadership qualities. More so I think it has enabled me to look at myself and my personal behaviors.

FUTURE RESEARCH DIRECTIONS

Development of Appropriate Teacher Resources

Gold (2001) examined the pedagogical role of the teacher in online education and found the transition from in-class instruction to online instruction is complex. Teachers adapting to online delivery modes need special technical training focusing on delivering high quality educational products to students combined with special training in the practice of fostering effective learning processes within the online environment. Moore and Kearsley (2012) support this, by adding that teachers applying technology to distance education also need to be supported by appropriate systems in terms of time, resources and guidance.

Unfortunately, empirical evidence in the literature specific to aviation suggests that guidance is scarce. The research and published literature in online learning and teaching appears to be growing in support of other disciplines. It is appreciated that much of this research can be harnessed to improve the quality of online aviation higher education. However, in a future that firmly positions students at the center of the learning process; we need to understand more of our discipline specific environment and the students we are intending to engage. Thomas (2003) called for more empirical research associated with the use of internet-based communication tools, which enhance learning. Whilst the literature supports the application and integration of technology based communication tools, we need to be assured that the online communication techniques applied by aviation teachers support the social and cognitive presence necessary for effective professional pilot distance education.

It is not only guidance that is lacking. The dearth of empirical evidence extends to systems and processes of evaluation that seek to monitor and measure the performance and delivery of online aviation tertiary programs. The literature reveals limited objective and historical assessment in the field. If this gap is appropriately
addressed, assessment may lead to the development of instruction standards and satisfy the needs of students, industry and the tertiary institution. Eaton (2000) advocates the frequent and methodical evaluation of both student and teacher in an effort to enhance the quality of tertiary and distance education.

Bowen, Scarpelline, and Fink (2001) commenced a benchmark study that compared and evaluated the delivery of distance education across a range of tertiary institutions in the United States. This study is now over a decade old, and more research is recommended which aims to benchmark and evaluate aviation distance education programs around the world.

Support for the PRO-Teaching Initiative for Online Aviation Educators

We have emphasised and described the importance of teacher education throughout this chapter. The need for support from the individual and organisational perspectives has also been discussed. The chapter aimed to demonstrate the positive effect of PRO-Teaching initiative in enhancing teaching quality and improving learning outcomes for students. Over the last two decades, researchers have revealed that peer review of teaching is an effective mechanism for evaluating quality and distilling constructive information for enhancing teaching (Bell, 2001; Donnelly, 2007; Lomas & Nicholls, 2005).

However, more organisational support is needed to assist teachers expected to transition to online learning platforms. Organisational support comes in the form of appropriate facilities, resources, systems, campaigns and experts, which neatly integrate with the demanding duties of a teacher while meeting the educational, emotional and time sensitive needs of teachers.

A PRO-Teaching initiative provides a range of benefits to the teacher, the student and the tertiary institution. While researchers have demonstrated the importance of teachers learning from each other to improve teaching and learning outcomes, it is important to note that the inappropriate implementation of such programs can also have a negative effect on teaching performance. Chamberlain, D’Artrey, and Rowe (2011) found that when a peer review of teaching process is decoupled from formal professional development programs, it can question the purpose and usefulness of such programs. Thus, it is recommended that initiatives of this nature are further researched and well considered prior to implementation. Critically, institutional support and commitment is needed to appropriately resource such a program as well as an appropriate understanding of how the program can fit suitably within the duties of teaching staff.

CONCLUSIONS

Over the past two decades, many tertiary education providers have experienced a change in direction. Challenged by an increasing focus on the need to provide ‘industry ready graduates’, combined with the need to deliver flexible education
platforms, many tertiary institutions have aimed to integrate e-learning methods into distance education. Online distance learning provides a potential solution to meet the dramatic growth predictions for training needs in the aviation industry (Raisinghani et al., 2005).

In this chapter, we have discussed some of the underlying factors that challenge the delivery of online education in higher education by reviewing the case of aviation education. Regarding the challenges associated with teacher education, our case study examination revealed solutions that included both institutional and individual inputs. We suggest that well-resourced peer review programs need to be strategically integrated to formal performance review programs. Systems of this nature offer teachers a learning opportunity to improve teaching quality by engaging in: mentor relationships with high performing teachers within discipline; and mentor relationships with learning and teaching experts in the field of online education.

As we considered the challenges associated with the nature of work as a pilot, our case study examination called tertiary institutions providing aviation online education to focus on ‘graduate employability’ by seeking industry and expert advice to ensure course content is current and relevant. As we suggested the consideration of a learner-centered approach grounded in constructivist pedagogy, the case illuminated the need for aviation online educators to also include ‘active learning’ in curriculum design.

With respect to the third challenge associated with expectations of the pilot student, our case highlighted the need for curriculum to be designed in manageable ‘chunks.’ While considering the ‘experiential’ learning needs of our students we discussed the importance of offering online learning activities that place the student at the centre of the learning experience.

While the challenges discussed were drawn from international research and literature, the specific issues were analysed with respect to the Leadership in Aviation course addressed by the case study. We have explored the experiences and activities of the teacher as they made use of the peer review program to effectively enhance the quality of teaching and learning outcomes in the provision of online aviation distance education.

In doing so, we contend that higher education aviation online programs need to be adjusted to consider the needs of the teacher, the student and the industry by: (1) implementing action-based learning; (2) considering pedagogy before technology; and (3) embedding formative assessment. The chapter aimed to highlight the learning transformation experienced by the teacher as they uncovered specific requirements associated with aviation online higher education. Essentially, the discoveries were illuminated by the teacher’s involvement in a peer observation of teaching program. It is anticipated that this chapter will assist in the enhancement of teaching practice and learning outcomes associated with the effective delivery of online learning in aviation higher education.
PEER OBSERVATION IN THE ONLINE LEARNING ENVIRONMENT

REFERENCES


Tarryn Kille  
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Legal education presents a formidable challenge for both business students and their teachers. Unlike their law colleagues, the business student generally has no intention of studying the law. In fact the student may only study one introductory law course within their entire business program of study. The law represents a new language that the student must somehow grasp in the space of one semester, not within the duration of a multi-year law program of study. It is therefore understandable that business students initially perceive their introductory law course to be boring, difficult, and only relevant to lawyers. The aim of the law teacher is to challenge this perception and, through effective teaching and learning strategies, transform student perceptions by creating an engaging learning environment in which students can understand the law and appreciate its relevance to business. Legal education for non-law students is focused on acquisition of a substantial legal literacy to participate in the decisions that will affect them in their careers … to achieve their professional goals and solve their professional problems. (Morris, 2007, p. 284)

Following a peer observation and review of a traditional lecture environment, a flipped lecture model was implemented in an introductory law course to incorporate additional learning activities that were relevant and proposed to engage students in deep learning experiences.

The purposes of this chapter are two-fold. First, to describe the peer observation and review of a traditional lecture and flipped lecture environment in Introduction to Business Law, a second year compulsory course in an undergraduate business program of study (‘peer review’). The peer review was a catalyst for implementing a tool for evaluating the flipped lecture model. In particular, the chapter reveals the potential for peer review to stimulate self-reflection of teaching practices and as an impetus for enhancing teaching practice and improving learning outcomes. The second purpose is to describe the flipped lecture and to examine its impact on student learning as part of a case study. The case study itself makes an original
contribution to the literature in legal education by evaluating and analysing student experiences with the flipped and traditional lecture environments within the same student cohort.

This chapter commences with a theoretical background to two competing teaching environments – the traditional lecture and the flipped lecture. The next section describes the peer review and observation process applied to the Introduction to Business Law course as part of the Griffith University PRO-Teaching project. The student and peer evaluation data that supported a change in teaching practice from the traditional to the flipped lecture model is also presented. A case study approach is then used to describe the flipped lecture, from its operation across three cohorts over a twelve-month period to its subsequent peer review. The narrative is complemented by an analysis of student and peer data as well as the authors’ experiences with the flipped lecture. The case study provides preliminary evidence that the flipped lecture is the preferred learning environment for this particular cohort of students. The limitations of the case study are considered along with suggestions for future research, followed by concluding remarks.

THEORETICAL BACKGROUND

Teaching Law to Business Students: The Traditional Lecture

Many non-law students perceive legal study to be tedious, difficult and only relevant to lawyers. For instance, students can feel disengaged arising from their confusion with legal language (Tanner, 2010) overwhelmed by the reading required, uncertain about how to study law and unconvinced of its relevance to the student’s chosen discipline (Allen, 2007). These perceptions are not limited to introductory law courses but also other core law courses within the business curriculum (Cameron, 2012). The traditional lecture format in law courses is unlikely to quell such student disenchantment because it does not promote active student learning (Johnstone, 1992; Le Brun & Johnstone, 1994) or address the variety of student learning styles (Madison, 2008). Students are usually passive during lectures and dependent on the lecturer for their learning (Ramsden, 1992). There are few opportunities to ask questions, engage in discussion or think critically (ACER, 2011). Notwithstanding this, the lecture remains the dominant method of teaching in Australian universities, representing 35% of total teaching activities (ACER, 2011).

An effective learning environment encourages students to engage in deep, as opposed to surface, approaches to learning (Biggs & Tang, 2007; Ramsden, 1992). Deep learning involves critically analysing new information, looking for evidence of logical argument, and relating such information to existing knowledge and personal experience which leads to understanding and long term retention (Le Brun &
Students who adopt a deep approach to learning strive to understand ideas and seek meanings, possess an intrinsic interest in the learning task, enjoy completing it and adopt a variety of strategies to satisfy their curiosity (Prosser & Trigwell, 1999). So how can the lecture, which in its traditional form may be considered the antithesis of deep learning, be reconceptualised as an effective learning environment, which facilitates deep learning? In his study of teaching strategies for effective learning, Ramsden (1992) suggests that a good lecture requires teachers:

- to engage the audience’s interest, to stimulate their thinking and their desire to find out more about the subject, to pass on knowledge to a large group, to explain phenomena at the audience’s level, to select illustrations that are memorable, to restrict the amount of material contained in a single lecture, and to show respect for and sensitivity to one’s students in so doing. (Ramsden, 1992, p. 156)

Ramsden (1992) acknowledges however “it is a rare occurrence to see these things combined” (p. 156). The ‘flipped lecture’ can reconceptualise the traditional lecture format by reducing the amount of material delivered in the lecture. As a consequence, time can be devoted during the lecture for activities that encourage students to engage in deep learning.

The Flipped Lecture

The flipped lecture, also known as the inverted or flipped classroom, involves the delivery of content outside the lecture through traditional and/or blended learning resources such as assigned readings, video lectures and power point presentations (Findlay-Thompson & Mombourquette, 2013; Mason, Shuman, & Cook, 2013; Strayer, 2012). The lecture is ‘flipped’ because the delivery of content characteristic of the traditional lecture is replaced by activities that apply prior knowledge attained by students outside the lecture. Unlike the traditional lecture model, the students’ first exposure to technical knowledge is before, not during, the lecture and the application of knowledge takes place during lectures (in addition to workshops and tutorials).

The perceived advantages of flipping the lecture are many and varied and have been publicly documented in numerous areas of education world-wide. Course material can be presented in different formats, thereby addressing students’ various learning styles (Lage, Platt, & Treglia, 2010; Mason et al., 2013). For example, podcasts may appeal to auditory learners (Ralph, Head, & Lightfoot, 2010) whereas flowcharts, diagrams and animations support visual learners. Podcasts and instructional videos also allow students to progress through the content at their own pace (Fulton, 2012). The required viewing of content delivered prior to the lecture encourages students to take responsibility for their learning and become
self-learners (Mason et al., 2013). Within the flipped lecture, class time is freed up for interactive activities which provide additional opportunities for teacher-student interaction (Vaughan, 2007) and to reinforce course material without sacrificing content (Lage et al., 2010). Most importantly, anecdotal and empirical evidence suggests that the flipped lecture has a positive impact on student learning when compared to traditional instruction (Butt, 2014; Crouch & Mazur, 2001; DesLauriers, Schelew, & Wieman, 2011; Hake, 1998).

The literature reveals two main criticisms with the flipped lecture from a student learning perspective. First, it is unclear whether the flipped lecture results in better student academic performance (Findlay-Thompson & Mombourquette, 2013; Mason et al., 2013; Tselios, Daskalakis, & Papadopoulou, 2011). The second criticism is a lack of student accountability to complete out of class activities (Tselios et al., 2011). For instance, students may be asked to watch a video recording covering legal knowledge and take notes in preparation for the lecture but the question remains: will the students actually do the work? Unperturbed, the authors implemented the flipped lecture in *Introduction to Business Law*, a second year compulsory course within an undergraduate commerce program of study at Griffith University in 2013. The catalyst for implementing the flipped lecture was participation by Craig Cameron (‘the teacher’) in the peer review and observation of teaching project (‘PRO-Teaching project’) in May 2011 during which two traditional lectures in *Introduction to Business Law* were observed and student and peer feedback provided. The next section describes the process and outcomes of the peer review.

PEER REVIEW OF THE TRADITIONAL LECTURE

*Traditional Lecture Design: Introduction to Business Law*

A peer review and observation program was applied in *Introduction to Business Law* during May 2011 as part of the PRO-Teaching project. *Introduction to Business Law* is a compulsory introductory law course for students completing the finance, financial planning, economics or accounting major as part of their undergraduate business degree. An introductory law course is a traditional component of the business curriculum in Australia, designed to meet the technical knowledge requirements of accreditation bodies and program learning and teaching objectives. The course comprises five learning modules: introduction to law; contract law; consumer protection law; tort of negligence; and partnership law. The majority of the assessment requires students to adopt the ILAC (Issue, Law, Application and Conclusion) method when answering hypothetical questions that are designed to test their understanding of one or more areas of the law. ILAC represents a problem-solving framework for answering the hypothetical question. The authors explain to the students that this framework is not “just for lawyers.” As an accountant,
financial planner, economist, manager, business advisor or consultant, students will be required to identify problems from a set of facts and interpret and apply rules or data to properly advise their client (e.g., company policies and procedures, economic and financial data, accounting standards and/or legislation). Thus the framework can be applied to assist students with solving problems in the “real world.” Under the ILAC method the student must:

- identify and state the relevant legal issue(s). The issue is the particular legal problem that the student must solve;
- identify and state the relevant law to answer each issue. The law is the principle(s) from case law and/or section(s) of statute that will assist students in answering the issue;
- apply the law to the relevant facts of the hypothetical to answer the issue. The facts are relevant if the student can use them with the Law to answer the Issue. This is the most difficult part of ILAC for students because written communication and analytical skills must be employed to justify their arguments with relevant law and
- conclude by summarising the answer to each Issue and the remedies available to the “innocent party” (if applicable).

As such, the assessment focuses on the students’ legal knowledge and analytical and problem solving skills.

**Peer Review**

The peer observation team was present at two lectures (one hour and forty minutes duration plus 10 minute break) spaced two weeks apart. One lecture covered the tort of negligence and the other addressed partnership law. The traditional lecture in both weeks entailed the delivery of legal principles derived from case law and statute associated with each topic (at least seventy five minutes) with occasional breaks in the delivery (up to twenty five minutes) to discuss the facts and outcomes of real life cases or ask students questions about the content just delivered. From a cohort of 225 students, approximately 90 students attended the first lecture (‘Lecture 1’) and 75 students attended the second lecture (‘Lecture 2’). The peer observation team members were a business discipline expert from the Griffith Business School and learning and teaching expert from the School of Engineering. Data collected across both observation sessions included, but was not limited to, peer observation notes, student evaluations of teaching and teacher reflection on their performance. After Lecture 1, the teacher received a report containing feedback and ideas for improvement for possible implementation in Lecture 2. A description and analysis of the peer and student data related to student learning and engagement, as well as the teacher’s reflections in response to the data, are presented in the sections which follow.
Peer Observation Data

The observers completed a template document at both lectures identifying how much evidence they perceived from observing both the teacher and students of each of the ten dimensions of effective teaching adapted from Nulty (2001). A numerical value was assigned for each dimension (0 = not applicable; 1 = some evidence; 2 = moderate evidence; 3 = significant evidence) with the wording of the dimensions modified slightly to reflect whether the focus of the observation was the student or teacher. Four of the ten dimensions were selected by the teacher as proxies for ‘engagement’ and ‘learning’. The observation data for those four dimensions are presented in Table 7.1 below, with the proxies for each dimension included in brackets.

Table 7.1. Observations of effective teaching

<table>
<thead>
<tr>
<th>OT No.</th>
<th>Observing the teacher (OT)</th>
<th>Lecture 1</th>
<th>Lecture 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demonstrating personal characteristics that engage, stimulate, encourage, inspire, etc? (engagement)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Implementing effective formative assessment techniques or procedures? (learning)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Explaining the requirements and standards of work for excellence? (learning)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Encouraging students to engage with learning activities? (engagement)</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OS No.</th>
<th>Observing the students (OS)</th>
<th>Lecture 1</th>
<th>Lecture 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Responding positively to the teacher’s approach by being engaged, stimulated, or enthused? (engagement)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Appearing to be learning through formative assessment techniques or procedures? (learning)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Appearing to understand the requirements and standards of work for excellence? (learning)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Actively engaging with learning activities in a manner that will aid understanding? (engagement; learning)</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Student Evaluation of Teaching

Students volunteered at both lectures to complete a student evaluation of teaching form with 11 questions related to effective teaching measured on a five point Likert scale. Three open ended questions on the evaluation form also addressed teaching effectiveness and student learning. Average results from four of the eleven questions were aligned by the teacher to the four dimensions of effective teaching from the peer observation data and are set out in Table 7.2.
Teacher Reflection

The teacher made three key observations from the peer review and student evaluations. First, learning and engagement within the lecture appeared to be somewhat disconnected. Whilst peers observed that the teacher was engaging when delivering content (OT1; OS1) and was encouraging students to engage with the content (OT4), there was only moderate evidence that students were engaging with learning activities in a way which supported their learning (OS4). Thus, the teacher may be entertaining but not necessarily stimulating deep learning. Ramsden (1992) acknowledges this concern in his study of teaching in higher education:

… a good performance is not necessarily good teaching. In fact an entertaining lecturer may leave students with a sense of having been entertained, but with little advancement of their learning. (p. 74)

The second observation related to formative assessment and feedback. The teacher, in his haste to deliver content (albeit in an engaging way) within the lecture each week, had ignored the importance of learning activities directed at assessing student understanding of legal concepts and giving feedback. In fact, the lowest results from all 11 questions in the SET and 10 dimensions in the peer observations related to formative assessment (refer OS2, OT2 and SET2). Whilst the teacher responded to observer feedback from Lecture 1 by implementing an additional legal hypothetical for class discussion in Lecture 2, content delivery still overshadowed formative assessment. More time was needed to be devoted in the lecture to activities which would assess student learning and facilitate timely feedback.

The third observation was that students did not understand the requirements and standards of work for excellence (OT3, OS3, SET 4). Excellent work is demonstrated in Introduction to Business Law by utilising technical knowledge, problem solving and analytical skills to solve legal problems using the ILAC method (refer discussion above). Although ILAC was discussed and assessed in tutorials, it was clear students did not

<table>
<thead>
<tr>
<th>SET No.</th>
<th>How effective is this teacher in:</th>
<th>Lecture 1 (n = 17)</th>
<th>Lecture 2 (n = 25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Motivating and inspiring you to learn? (engagement)</td>
<td>4.44</td>
<td>4.62</td>
</tr>
<tr>
<td>2</td>
<td>Assessing your prior knowledge before explaining new material? (learning)</td>
<td>3.83</td>
<td>4.31</td>
</tr>
<tr>
<td>3</td>
<td>Ensuring that you received feedback which helped you to learn? (learning)</td>
<td>3.76</td>
<td>4.42</td>
</tr>
<tr>
<td>4</td>
<td>Explaining the requirements and standards of work for excellence? (learning)</td>
<td>3.82</td>
<td>4.42</td>
</tr>
</tbody>
</table>
understand the teacher’s expectations about the ILAC method. In other words, “what represents an excellent answer to a legal problem?” For example, both peer observers noted that the teacher could “have students discuss ILACS in group” following Lecture 1. One student also noted that “the format of ILAC and how to properly answer hypothetical questions” was an important question which remained after Lecture 1.

Peer and student data supported a change in teaching practice to incorporate learning activities in the lecture which provided more formative assessment and feedback and explained the requirements and standard expected when answering hypothetical questions using the ILAC method. After a period of collaboration between the authors, a decision was made to pilot the flipped lecture in company law, a specialist law course, in Semester 2 2012 with a view to its implementation in Introduction to Business Law in Semester 1 2013. A discussion of the pilot is beyond the scope of this chapter.

The next section presents a case study of the flipped lecture, from its operation across three cohorts of Introduction to Business Law students over a twelve month period to its subsequent peer review. The narrative is complemented by an analysis of student and peer data as well as the authors’ general observations about the flipped lecture. Craig Cameron was the lecturer in Semester 1 2013 (145 students – ‘Cohort 1’) and Trimester 2 2013 (63 students – ‘Cohort 2’), with Jennifer Dickfos the lecturer in Semester 2 2013 (110 students – ‘Cohort 3’).

FLIPPED LECTURE CASE STUDY

Flipped Lecture Design: Introduction to Business Law

The flipped lecture model was implemented in the first six lectures in Introduction to Business Law, representing one half of the coursework. Students in Cohorts 1 and 3 attended one lecture each week, being weeks 1 to 6 of the semester. Students in Cohort 2 attended the first two lectures in week 1 as part of the trimester mode of delivery. The two learning modules affected by the flipped lecture were introduction to law and the law of contract. Table 7.3 summarises the flipped lecture design, being: the pre-lecture recording topics from lectures 1 to 6 in the course; additional pre-lecture materials provided to students to assist their learning (other than textbook readings and the pre-lecture recording); and the learning activities during the flipped lecture for that week. The flipped lecture design is the same for all three cohorts unless otherwise specified.

To flip the lecture, the authors removed the content delivery from each traditional lecture and placed it in a series of lecture video recordings (‘pre-lecture recordings’) varying in length from seven to 17 minutes. The teacher recorded the lecture from a personal computer using Echo360 personal capture software. The software captures the voice of the teacher plus any power point slides, flowcharts or documents displayed on the teacher’s screen during the recording. These visual aids were the same visual aids used by the teacher during traditional lectures delivered in previous
Table 7.3. Flipped lecture design

<table>
<thead>
<tr>
<th>Lecture No. (L) / Part (P) and topic</th>
<th>Additional lecture materials</th>
<th>Lecture learning activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1 P1: What is the law and sources of law</td>
<td>Hypothetical Q &amp; A in ILAC format prepared by the lecturer with additional comments and tips on ILAC</td>
<td>Role play exercise (adversarial and inquisitorial system)</td>
</tr>
<tr>
<td>L1 P2: Sources of law (judges)</td>
<td></td>
<td>Study of Soper v Gold Coast City Council [2002] QCA 118 on how to read a case and identify ILAC in a case</td>
</tr>
<tr>
<td>L1 P3: Classifications of Law and ILAC</td>
<td></td>
<td>Two separate short answer exercises based on a YouTube video and a hypothetical set of facts respectively</td>
</tr>
<tr>
<td>L1 P4: Statutory interpretation</td>
<td></td>
<td>J-Poll online multiple choice test (cohort 3)</td>
</tr>
<tr>
<td>L2 P1: Court hierarchy</td>
<td></td>
<td>Short ILAC exercise based on hypothetical set of facts</td>
</tr>
<tr>
<td>L2 P2: Precedent</td>
<td></td>
<td>Three separate short answer exercises based on case law and hypothetical set of facts.</td>
</tr>
<tr>
<td>L3 P1: Intro to contract</td>
<td></td>
<td>J-Poll online multiple choice test (cohort 3)</td>
</tr>
<tr>
<td>L3 P2: Offer</td>
<td></td>
<td>Two role play exercises (how a contract is formed; auctions)</td>
</tr>
<tr>
<td>L3 P3: Acceptance</td>
<td></td>
<td>Short ILAC exercise based on a hypothetical set of facts</td>
</tr>
<tr>
<td>L3 P4: Legal intention</td>
<td></td>
<td>Two short answer exercises based on YouTube video and hypothetical set of facts respectively</td>
</tr>
<tr>
<td>L4 P1: Consideration</td>
<td></td>
<td>J-Poll online multiple choice test (cohort 3)</td>
</tr>
<tr>
<td>L4 P2: Promissory estoppel</td>
<td></td>
<td>Six separate short answer exercises based on a hypothetical set of facts</td>
</tr>
<tr>
<td>L5 P1: Terms and representations</td>
<td>Three student ILAC answers to tutorial question with feedback</td>
<td>Three separate short answer exercises based on hypothetical set of facts and Griffith University parking ticket system.</td>
</tr>
<tr>
<td>L5 P2: Express and implied terms</td>
<td></td>
<td>J-Poll online multiple choice test (cohort 3)</td>
</tr>
<tr>
<td>L5 P3: Exclusion clauses</td>
<td></td>
<td>Short ILAC exercise based on a hypothetical set of facts</td>
</tr>
<tr>
<td>L6 P1: Termination of contract</td>
<td></td>
<td>Short answer exercise based on an Ebay auction listing</td>
</tr>
<tr>
<td>L6 P2: Contract remedies</td>
<td></td>
<td>J-Poll online multiple choice test (cohort 3)</td>
</tr>
</tbody>
</table>
iterations of the course. The same pre-lecture recordings were used for all three
cohorts. The pre-lecture recordings for each week were divided into parts with each
part corresponding to a topic that would ordinarily be delivered in the traditional
lecture (refer Table 7.3). At the end of each recording, and if applicable, students’
attention was drawn to the upcoming lecture activity relevant to the topic and
whether any student preparation was required. Students accessed the recordings on
their online course site within the university learning management system. Students
also received a weekly reading guide setting out the learning objectives and whether
the objective would be covered in the pre-lecture recording and/or as a learning
activity in the lecture. Additional lecture materials were provided in the form of
ILAC exemplar answers of the teacher (lecture 1) and students (lecture 5) designed
to foster greater student understanding of what was expected when answering legal
hypotheticals using the ILAC method.

At the beginning of the lecture, the teacher in Cohorts 1 and 2 summarised key
legal concepts from the lecture objectives, asking students questions designed to test
their knowledge obtained from the pre-lecture recordings. This process normally
took 20 to 30 minutes. The structure of the lecture in cohort 3 was slightly different.
The teacher used a blended learning tool known as J-Poll at the beginning of the
lecture. J-Poll is a student response or clicker system, which allows students, using
their mobile phones, to anonymously access and answer multiple choice quizzes.
Upon completing the quizzes, student answers are then immediately tallied and
displayed via a website. Students completed five to six short revision questions
based on the previous week’s legal content designed to test their legal knowledge,
after which time the answers were reviewed and students asked to explain their
answers. The J-Poll activity took 20 to 25 minutes. Following the J-Poll activity,
the teacher provided a very short summary of the lecture objectives (five minutes)
before addressing the short answer and ILAC exercises (refer Table 7.3).

For all cohorts, the short answer and ILAC exercises usually involved a set of
facts between four and 12 lines in length. A short answer exercise required the
student to identify and apply a limited number of laws in the one answer, whereas
an ILAC exercise involved more relevant law and for students to follow the ILAC
method when answering the question. Students formed small groups or pairs at the
instruction of the teacher to discuss their answer (if preparation was required) or
worked together to come up with an answer in a 5 to 15 minute period. During that
time the teacher moved around the lecture theatre, approaching a number of groups
seeking their answers and responding to any queries about the exercise. The teacher
then co-ordinated a discussion and explained the answer to the question using one
or more of the following methods: verbally; through visual aids used during the
pre-lecture recording such as flowcharts and tables; and a summary answer document
provided to students following the lecture. In the case of Cohort 3, the teacher used
a blended learning tool, known as Google drive, to provide feedback. Google drive
is a file storage and synchronisation service which enables students to post their
answer to the question, using an electronic device during group discussion, with the teacher providing feedback and explaining the correct answer by referring to student input on Google drive.

In lecture 1, the teacher defined the flipped lecture, explained that it would only operate for the first six lectures and outlined the benefits of the flipped lecture environment for students based on student feedback and the authors’ experience from the pilot study in company law. Most notably, the teacher reiterated that the flipped lecture provided more time in the lecture for interactive activities that apply students’ legal knowledge, rather than the traditional delivery of legal content. Teachers also emphasised that the flipped lecture format should be viewed by students not as an add-component of the course which creates unnecessary student workload (a criticism expressed in the pilot study), but a different way of dividing up the minimum study requirement of 10 hours (inclusive of lectures and tutorials) per course per week.

RESULTS AND DISCUSSION

A standard university SEC and SET survey were administered online at the end of the semester for each cohort. The SEC and SET contain a list of standard questions assessed on a Likert scale (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). However, for the purpose of examining the impact of the flipped lecture, the authors added two customised questions to the SEC questionnaire as to whether student learning was assisted by the flipped lecture and traditional lecture format respectively. The benefit of having the same students experience the flipped lecture and traditional lecture format in the same course is that it provides a more objective means of evaluating the impact of the flipped lecture on student learning. The two customised questions (Q1-2) as well as the two open ended questions from the SET (Q3-4) and SEC (Q5-6) are listed in Figure 7.1 below. For Cohort 2 (who completed the course in trimester mode) the SEC custom questions referred to Weeks 1–5 and 6–10 respectively.

| Q1: The flipped lecture format (pre-lecture recording of legal content: weeks 1–6) in this course assisted my learning |
| Q2: The traditional lecture format (delivery of legal content in the lecture: weeks 7–12) in this course assisted my learning |
| Q3: What aspects of this staff member’s teaching were most valuable to your learning? |
| Q4: How could this staff member’s teaching be improved? |
| Q5: What did you find particularly good about this course? |
| Q6: How could this course be improved? |

*Figure 7.1. SEC custom and SET and SEC open ended questions*
Summary survey results for the two SEC questions across the three cohorts are contained in Tables 7.4 and 7.5. A discussion of the survey results and the qualitative data follows.

Table 7.4. The traditional and flipped lecture formats in assisting student learning

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Flipped Lecture</th>
<th>Traditional Lecture</th>
<th>Change</th>
<th>+ / – responses to flipped lecture</th>
<th>+ / – responses to traditional lecture</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (n = 70)</td>
<td>4.6</td>
<td>4.2</td>
<td>+ 0.4</td>
<td>86% +</td>
<td>80% +</td>
<td>6</td>
</tr>
<tr>
<td>Cohort 2 (n = 42)</td>
<td>4.5</td>
<td>4.2</td>
<td>+ 0.3</td>
<td>83% +</td>
<td>76% +</td>
<td>7</td>
</tr>
<tr>
<td>Cohort 3 (n = 43)</td>
<td>3.9</td>
<td>3.8</td>
<td>+ 0.1</td>
<td>75% +</td>
<td>67% +</td>
<td>8</td>
</tr>
</tbody>
</table>

The results provide preliminary evidence that the flipped lecture format assisted student learning, and provides greater assistance to some students than the traditional lecture format. Overall 83% of students across the three cohorts agreed or strongly agreed that the flipped lecture format assisted their learning, with only 6% of students responding with ‘strongly disagree’ or ‘disagree.’ The percentage of positive responses to the flipped lecture was between six and eight points higher than the traditional lecture across the three cohorts. The only negative result is the five students in Cohort 3 (12%) who disagreed with the notion that the flipped lecture assisted their learning. In fact four factors may explain the difference in overall scores between Cohorts 1 and 2 and Cohort 3. First, the pre-lecture recordings were not prepared by the teacher of Cohort 3. Students may prefer pre-lecture recordings prepared by their teacher for reasons of consistency in lecture style and/or delivery. Second, students who had failed the course in Cohorts 1 and 2 and enrolled in Cohort 3 may not have been particularly impressed by encountering the same pre-lecture recordings which may not have assisted their learning in the previous attempt to pass the course. The third potential factor is the demographic of the cohorts. For example, Cohort 2 is a smaller cohort of students who undertake their business degree in an accelerated mode and, from the authors’ experience, are more motivated and engaged to learn. The final factor relates to experience with flipping the lecture. Whereas the teacher of Cohorts 1 and 2 had previously piloted the flipped lecture in company law, the teacher in Cohort 3 had no previous experience.

The most significant result is the number of students who strongly agreed with a lecture format assisting their learning as a percentage of total positive responses to
that lecture format. Table 7.5 provides a summary of the results. Whilst the change in Likert scores at Table 7.4 may be partly explained by some students who responded positively to the flipped lecture and neutral to the traditional lecture, the change in strongly agreed responses to the flipped lecture appears to be the primary reason for the improved Likert scores. Students were more emphatic than the flipped lecture assisted their learning than the traditional lecture. Overall 78% of students, across the three cohorts, strongly agreed that the flipped lecture assisted their learning, whereas that figure was 53% in response to the traditional lecture. The student enthusiasm for the flipped lecture is also demonstrated by their response to the open ended questions about how the teaching and course could be improved (Q4 and Q6 in Figure 7.1). For instance in Cohort 1, 16 of the 31 responses which suggested improvements to the course and teaching referred to having the flipped lecture for the entire semester. As one student commented:

The flipped online lecture capture we used from week 1–6 could have been used for the whole semester. This would create more engagement as lectures are in short and separate parts while actual lectures are slower and less engaging.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Flipped Lecture</th>
<th>Traditional Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (n = 70)</td>
<td>93%</td>
<td>58%</td>
</tr>
<tr>
<td>Cohort 2 (n = 42)</td>
<td>83%</td>
<td>63%</td>
</tr>
<tr>
<td>Cohort 3 (n = 43)</td>
<td>45%</td>
<td>31%</td>
</tr>
</tbody>
</table>

The qualitative data offers insight as to why (emphasis added) the flipped lecture assisted student learning. Time, preparedness, application of knowledge and interactivity (a proxy for engagement) were the common themes in student responses to why the flipped lecture supported student learning. The flipped lecture gave the teacher more time to do case studies and learning activities and the student “more time to discuss and work on practical examples relevant to what we were going to be assessed on.” Further, the pre-lecture recordings prepared students for the lecture because they had prior legal knowledge. It “was a perfect way to really cement the information in my head.” Students were in a position to interact during the lecture and take away deep learning experiences because they had an opportunity to apply the legal knowledge obtained in the pre-lecture recording. Two student comments are insightful in this respect:

I felt it really helped me remember more content, in the first half of the course, to listen to pre-lecture recording, because when I got to the lecture I already had an idea what is the theory behind the case examples and I could focus on Craig’s acting out the cases and applying the theory I knew from listening to the audio at home.
The pre-recording assists in lowering the anxiety felt when in an interactive learning environment as you know the material that will be discussed and you are more willing to participate in the in-class discussions as you already have the base knowledge.

The main criticism with the flipped lecture was a perception by some students that it caused “information overload.” The variety of learning tools used during the course such as reading guides, J-poll quizzes, online law resources and pre-lecture recordings produced too much information that students were unable to process each week. Simply put the flipped lecture “created extra work on an already heavy work load” and that it was “very frustrating adding the pre lecture recordings.” However the negative comments should be placed in context. From the SET and SEC open ended questions across all three cohorts (Q3-6 in Figure 7.1) there was a total of 63 positive comments about the flipped lecture format and only 8 negative comments, suggesting overwhelming support for the flipped lecture format in assisting these students with their learning.

**Author Reflections**

The authors’ experiences support student responses about the positive impact of the flipped lecture on learning. The time normally set aside for content delivery in the lecture was replaced by formative assessment items including short answer and ILAC exercises and J-poll activities which applied students’ legal knowledge and stimulated student interaction with colleagues and the teacher. This heightened level of interaction produced a number of benefits to student learning. For example the J-Poll activities in Cohort 3 facilitated two-way feedback – for the student regarding their understanding of the material and their progress in class and for the teacher the identification of common gaps in legal knowledge. The teacher had the time to revise the legal content to close that gap. J-Poll also encouraged peer to peer teaching with students answering the question, “why did you select option x?” By allowing students to work in groups to determine the correct option to the J-Poll questions and to convince others of the correctness of their choice an engaging learning community was created within the flipped lecture. The flipped lecture also enabled the authors to spend time deconstructing the ILAC method to make clear the requirements and standards of work for excellence in introduction to business law. This time would not have been available during the traditional lecture as the lecture time was predominantly spent in delivering legal principles in case law and statute associated with each topic. For example in lecture 2 (refer Table 7.3), the teacher was able to spend nearly one hour of class time discussing the ILAC exercise. Students received a handout with a hypothetical set of facts in contract law with four questions, those questions being aligned to each element of ILAC – Issue, Law, Application and Conclusion. Students then formed groups and devised answers to the four questions. ILAC exercises were then added to lectures 3, 4 and 6 to reinforce the standards expected of an excellent answer to a hypothetical question.
Peer Review of the Flipped Lecture

The flipped lecture in *Introduction to Business Law* was then the subject of peer review and observation as part of PACES in Semester 1, 2014. This peer review took place following the implementation of the flipped lecture in 2013. The PACES is a “system that uses a mentored approach to each step of course review, design, development and evaluation” (Griffith University, 2014) and is one of many recommended systems available to teachers in the Griffith PRO-Teaching project. PACES is a local instantiation of the PATS designed by Angela Carbone at Monash University and developed through two Australian government teaching fellowships. Griffith University was a partner in the embedding of PATS (as PACES) (Carbone et al., 2013). A peer who teaches a specialist law course within the business discipline (“discipline expert”) was paired with Craig Cameron, who was the lecturer at the time, and both parties observed each other’s lectures. The discipline expert observed Lecture 5 (refer Table 7.3). The purpose of the observation, as discussed with the discipline expert prior to the lecture, was to seek a level of assurance from an experienced peer that the flipped lecture was engaging students in active learning and to identify areas in which the flipped lecture could be improved. Peer review had been utilised in the traditional lecture format back in 2011 to identify areas of improvement in teaching and had been the catalyst for employing the flipped lecture model in 2012 and 2013. Student data and teacher reflections suggested that the flipped lecture did assist student learning. Now, peer observation was being utilised in 2014 to review the flipped lecture. In particular, the two focus areas for observation were:

- the teacher’s use of appropriate teaching materials to engage students in active learning through the flipped lecture format; and
- the students’ level of interaction with the learning activities provided by the teacher.

The discipline expert observed that the short answer exercises captured students’ interest because the students could relate the hypothetical set of facts in the exercise to their personal lives. Examples included Sandra, the 19 year old, purchasing a motor vehicle which assessed student understanding of terms versus representations in contract law (refer Table 7.3 L5 P1) and the Griffith University car parking ticketing system which assessed legal knowledge of exclusion clauses (refer Table 7.3 L5 P3). About eighty percent of the students participated in the small group discussion of the short answer questions. However, it was observed that only twenty percent of students took notes during the discussion. The discipline expert suggested that the teacher encourage students to write down their answers during the small group discussion. This would ensure that small group discussion was focused on the task at hand, provide evidence that students were applying their prior legal knowledge and the notes could then be used as a revision tool. For example, small groups could also use Google drive or other interactive software, which displays student answers...
onto the computer screen. One member of the group can then answer the question on behalf of the group. This observation was most insightful as it validated Jennifer Dickfos’ use of Google drive in Cohort 3 for some of the hypothetical exercises.

Notwithstanding the lack of note taking, the discipline expert observed that students were engaged and prepared to “have a go” at presenting their answers to a question when small group discussion ended and attention returned to the teacher. The discipline expert commented that: “Craig is to be commended for creating this interactive atmosphere, because students generally do not like to interact and simply want the “answers” to all problems.’ The lecture environment was such that students were comfortable to interact with each other and with the teacher. Whilst the discipline expert acknowledged that the flipped lecture “gives students an additional “workshop” or open forum to reinforce their learning on weekly topics”, her only concern with the flipped lecture was its premise that students had viewed the pre-lecture recordings. A student who failed to prepare may also be discouraged from attending the lecture. This lack of accountability associated with the lecture has also been identified in the literature (Tselios et al., 2011). Whilst this is a concern, the authors suggest that the short answer and hypothetical questions attached to the pre-lecture recordings, which are completed by students within the flipped lecture, may encourage accountability (Boyer, 2013; Enfield, 2013; Frydenberg, 2012).

LIMITATIONS AND FURTHER RESEARCH

The results of the case study must be considered in light of several limitations including the short time frame of the analysis, the preliminary nature of the evidence, the lack of demographic data attached to the SEC and SET and the fact that not all students who completed the survey engaged fully in the flipped lecture format, thus potentially skewing the results. With respect to the latter point, students may not have attended class or watched the pre-lecture recordings. The main limitation is that the impact of the flipped lecture on student learning was based on perception and not objective data such as student performance (Bishop & Verleger, 2013; Mason et al., 2013). For example Bishop and Verleger (2013) and Butt (2014) recommend further investigation into the effect of a flipped classroom structure on the attainment of learning outcomes by employing controlled studies that objectively examine student performance throughout a semester. According to Carini, Kuh, and Klein (2006), the signature of higher levels of student engagement with learning would be a contraction of the ‘tail’ of failures and a slight rise in the medial mark of a cohort. Once the flipped lecture is rolled out over the entire semester in introduction to business law, the authors plan to compare the academic performance of cohorts in the flipped and traditional learning environments as part of future research. Further research could also compare the impact of the flipped lecture in an introductory law course to non-law students with other law courses – is the flipped lecture more or less effective? Interviewing students as part of a mixed methods research design would also provide greater detail as to why the flipped lecture assists student learning.
CONCLUSION

This chapter has described and evaluated the flipped lecture and its catalyst, the peer review of teaching as part of the Griffith PRO-Teaching program. Preliminary qualitative and quantitative evidence in an introductory law course supports the notion that the flipped lecture assists the students in learning because it equips students with legal knowledge before the lecture and provides time for students to apply their legal knowledge through interactive learning activities during the lecture. The first peer review revealed that such activities needed to include formative assessment and feedback and provide clarity about standards of excellence. Peer review was not only the catalyst for changing teaching practice to the flipped lecture, but it was utilised to evaluate the effectiveness of the flipped lecture environment by a discipline expert. As a stimulus for change in teaching practice, which enhances learning outcomes, the peer review of teaching is an innovation worthy of participation by higher education educators and implementation by academic administrators.

REFERENCES


Enfield, J. (2013). Looking at the impact of the flipped classroom model of instruction on undergraduate multimedia students at CSUN. TechTrends, 57(6), 14–27.


8. ANALYSING PEER PEDAGOGIC PRACTICES AS A POSITIVE CONTRIBUTION TO ACADEMIC PROFESSIONAL DEVELOPMENT

A Strategic Approach to Improving Faculty Teaching

INTRODUCTION

Over the past two decades, the landscape of higher education teaching has been changing from the historical paradigm of a teacher-centric to a more student-centric experience. Calkins and Light (2008) reported a number of critical issues and debates that have been the impetus behind the evolving nature of higher education. Key issues include an increasing number of students entering higher education institutions, an increase in the diversity of student populations, and a changing global demand for specific knowledge and skills. These changes have also seen a greater emphasis on effective teaching practices that not only develop 21st Century skills related to new technologies but also globally recognised skills such as creative and innovative thinking, oral and written communication skills, and collaborative skills (Calkins & Light, 2008). In a competitive higher education market, there have also been increased demands for greater accountability in higher education teaching to produce more “job ready” graduates as well as improving student satisfaction ratings.

High quality teaching (scholarly teaching) has been intrinsically linked to student satisfaction and retention (Biggs, 2003; Tinto, 1993; Zimitat, 2006). As such, universities in Australia and across the world are focusing more on improving teacher quality as a critical means to improve student engagement and outcomes. Teachers across all disciplines in higher education focus strongly on keeping up-to-date with their discipline knowledge to maintain currency and credibility in the classroom. However, maintaining a high degree of discipline knowledge has, in many cases, taken a privileged position over teaching in the work-life of academics. Yet, this knowledge and skill set can no longer be seen as a distinct commodity but, rather, as the foundation for a dynamic social process of sharing and communicating with students. This source of knowledge should be “used to guide and enhance teaching and learning” (Krause et al., 2008, p. 22). Effective teaching of discipline knowledge requires not just an understanding of content but also an understanding of skilful pedagogical practices within contexts, a sense of self-efficacy and personal qualities, as well as metacognition by way of being a reflective practitioner.
Where teaching staff are from disciplines with a non-education background, on-going professional development in pedagogical practices to enable them to engage, motivate and meet the demands of changing student cohorts is essential. Skeltin (2009) argued that teaching excellence in higher education settings requires a “serious commitment to the reflective development of a value-laden and morally defensible practice” (p. 109). This serious commitment is demonstrated by examining one’s practice through the scholarship of teaching (Boyer, 1990). The scholarship of teaching has the potential for practices in research and teaching to pull together in a symbiotic cycle of continual improvement through reflection and evaluation (Pratt, 1997).

In higher education, standard student evaluation mechanisms are limited when informing teaching performance (Kahn & Walsh, 2006). A more effective method for evaluating teaching performance is through a peer review of teaching process that assesses quality and generates developmental information to improve teaching and learning outcomes (Bell, 2001; Brinko, 1993; Donnelly, 2007; Lomas & Nicholls, 2005). This situated learning (Brown & Duguid, 2000) can be facilitated through a peer review of teaching arrangement where an expert (in discipline) novice (in teaching) is reviewed by a novice (in discipline) expert (in teaching). Reviewing the effectiveness of one’s pedagogical practice through the lens of a teaching discipline expert can provide valuable feedback on areas for improvement. This observation process generates a range of critical interpretations and possible improvements for implementation (Bell, 2001). Taking part in peer reviews encourages the observee to actively consider basic principles of good teaching (Griffith University, 2013) and improve structural facets of the teaching-learning process to more effectively engage students (Trigwell, 2001).

In this case, the implementation of the peer review of teaching (PRO-Teaching) program followed by participation in the peer assisted course enhancement scheme (PACES) brought together the teaching expertise of a novice (discipline) expert (teacher) into a traditional business school framework and supported the implementation and evaluation of a series of action research cycles in two business courses. Peer-generated feedback was combined with student and self-reflections to triangulate data and highlight directions to improve teaching practices to engage and meet the learning needs of contemporary students (Glenn et al., 2011). See Figure 8.1 representing this process.

Figure 8.1. Combined techniques to achieve scholarly teaching
(Adapted from Pratt, 1997)
Teachers are being encouraged to improve their teaching practices through institutional professional development activities. As a research process, Couper and Stoakes (2011) articulated that research in learning and teaching falls into four main forms: primary, creative, applied, and action. The research approach which focuses on ‘action’ encourages an interweaving of teaching and research whereby a continual cycle of improved teaching practices becomes the research question and outcome. Further, the action research on practice is underpinned by the teaching design, the research framework (an action research cycle), and through the collaborative efforts of peers (Harvey, 2013).

The procedure utilised for this approach is an action research orientation. The origin of action research can be traced back to the mid-1940s in Lewin’s (1947) seminal work. The subsequent divergent academic perspectives contextualise action related research as social and community ‘action’, developmental approaches to organisation, and transformational agendas and practices, through to paradigmatic-theoretical debates inserted into social scientific epistemology (French, 2009; Peters & Robinson, 1984). A commonly accepted definition of action research is proposed by Kemmis and McTaggart (1988, p. 5):

Action research is a form of collective, self-reflective inquiry that participants in social situations undertake to improve: (1) the rationality and justice of their own social or educational practices; (2) the participants’ understanding of these practices and the situations in which they carry out these practices. Groups of participants can be teachers, students, parents, workplace colleagues, social activists or any other community members, that is, any group with a shared concern and the motivation and will to address their shared concern. The approach is action research only when it is collaborative and achieved through the critically examined action of individual group members.

This definition mediates elements of the disparate perspectives discussed in action research literature (Altrichter, Kemmis, McTaggart, & Zuber-Skerritt, 2002). So, action research must contain these shared requirements (Marshall, 2011; Peters & Robinson, 1984). They are:

- involvement-in-change characteristics: must be problem focussed and directed toward the improvement of some existing social practice (in this case academic professional development in teaching and learning practice);
- organic process characteristic: teaching and learning processes consist of a series of systematic cyclical or iterative stages of fact finding, reflection and planning, strategic action, and evaluation;
- collaborative characteristic: teaching and learning is carried out as a joint, cooperative endeavour among participants;
a combination of first, second and third person inquiry (although one could argue this falls under the collaborative characteristic. However, Marshall (2011) highlights discrete choices of ‘territory’ are common).

The action research cycle is a four-stage continuous learning cycle where actions or plans are used as the foundation of the research and are actively tested through observation and reflection. The four stages include (a) identifying the specific skill or process that is the focus/priority; (b) planning a strategy for intervention/improvement as well as tools for data collections and analysis; (c) acting/implementing the plan (incorporating the skill or process and collecting and analysing data around its effectiveness) and; (d) reflecting and analysing where improvements/changes/learnings have been made and asking, ‘What is the next step for planning?’ (Kemmis & McTaggart, 2000). Figure 8.2 outlines the action research model. Using this research methodology to improve teaching quality has the teacher as both the subject and agent of change. Action research:

facilitates practitioners to study aspects of practice – whether it is in the context of introducing an innovative idea or in assessing and reflecting on the effectiveness of existing practice, with the view of improving practice. (Koshy, 2005, p. xii)

A direct relationship exists between learning and teaching practice, action research and academic professional development. In this context the action research processes proved useful when developing the cyclical dynamic of pedagogy, especially when combining theory with practice. Fundamental to improving teaching and learning strategies is a process of critical evaluation and reflection (Brookfield, 1995;
ANALYSING PEER PEDAGOGIC PRACTICES AS A POSITIVE CONTRIBUTION

Palmer, 1998). By adopting a structured evaluation framework, teaching strategies can be improved by understanding students’ perspectives in the learning-teaching experience and integrating other methods (presumably improved methods) gained from evaluating others (e.g., the PRO-Teaching – see next section) as well as advice from the novice (discipline) expert (teaching). A structured process is required from which a deeper understanding of the student/teacher interaction (and teacher as change agent) can be achieved (Biggs & Tang, 2011; Biggs, 2003; Biggs & Collis, 1992; Brookfield, 1995; Entwistle & Ramsden, 1983). Thus, critically evaluating one’s own teaching, through self-reflection, the evaluation of others’ teaching and, in turn, having one’s teaching evaluated assists in understanding how students learn and forms an important base for future teaching development (Hounsell, 2009). Stage 1 (input) of this action research process was identified as the PRO-Teaching Evaluation Project explained in the next section (Griffith University, 2009).

IMPROVEMENT PROCESS

The general framework of a peer observation program for the PRO-Teaching involved two peers observing two teaching sessions in the same course at least two weeks apart (Griffith University, 2009). The observation team was made up of a discipline observer from the business faculty, and a learning and teaching observer from the teaching faculty. The mix of relevant discipline knowledge and recognised learning and teaching expertise, in conjunction with student feedback, provided a balanced range of views that formed an observation report with developmental advice and ideas that could be implemented by the observee (Pill & Brown, 2009).

The activities to be observed could involve lectures, workshops, tutorials or laboratory sessions, however, both sessions must be the same type of activity. In this case lectures were chosen to be observed as they remain the primary delivery method of formative knowledge in tertiary education and were also an area of identified weakness highlighted in the SET. This formed the identifying stage of the action research cycle.

Two lectures were selected in a second year marketing major, compulsory course for a Bachelor of Business program of study. Two hundred and seventeen students were enrolled in the course. Lecture delivery occurred in a large (250 seat) lecture theatre with content delivered face-to-face utilising a PowerPoint presentation. In the first session, the majority of content was delivered asymmetrically with some feedback/interaction opportunities for students. This question/answer time was made available throughout the lecture.

A pre-meeting with the observers and observee was conducted to better understand the teaching/learning activity and the objectives for the session. This formed the planning stage of the action research cycle. Objectives for the lecture included lecture objectives (content) and pedagogical (teaching) objectives. These are summarised as follows:
Lecture (Content) Objectives

- understanding of surveys/experiments and typical problems
- types of surveys/experiments
- pre-testing surveys and test marketing (using experiments)

Pedagogical Objectives

- teaching style (presentation style)
- adherence to teaching materials
- relevance of teaching materials to the topics covered
- crowd control
- advanced methods of delivery for complex concepts (in large classes)

The delivery of the lecture formed the implementation phase of the action research cycle. The first observation session was conducted with peer, student, and self-reflection data collected at the end of the lecture. As part of the PRO-Teaching strategy observers were required to assess the most important piece of knowledge students should gain from the session. This was identified as a general understanding of surveys and experiments in marketing research combined with the ability to select an appropriate design in an applied context. Peer observers were also asked to complete a structured report giving feedback on each of the content and pedagogical objectives observed during the lecture.

A report containing aggregated as well as direct feedback on both content and pedagogical aspects of the lecture together with recommendations from both observers was prepared and provided to the observee. An analysis of this feedback together with a self-reflection was used by the observee to consider and implement changes in the lecture scheduled two weeks from the initial session. Balanced feedback contained evident strengths from both reviewers, identified as:

- interesting content, questioning students, relevant examples, clear aims and objectives, nice personal manner/humour/relationship with students, knowledge about topic, good use of graphics and increased use of a range of pedagogical strategies, good strong use of examples – easy to follow and understand content, good questioning techniques.

However, a range of recommendations for improvement were also made which included:

- use title slides for objective related sections, balance the lecture with better time management of lecture sections, sprinkle all of the lecture with multimedia content to improve student engagement, more use of technology – Youtube etc. – put it up and use it to add variety, also linking more closely to students’ everyday experiences, using think/pair/share strategies to encourage
substantive conversations among students and facilitate more reluctant students to participate, clearer graphics and examples.

Student qualitative feedback was gathered to identify potential issues in lecture content and delivery. Representative comments were either “valuable and interesting” or “no clear understanding for the assignment and confusing” highlighting polarised student perspectives. Reinforcing these outcomes were data collected through a standard eleven question teaching evaluation survey implemented at the end of the lecture. The survey used a 5 point Likert scale (1 = not effective to 5 = very effective). The combined mean of means (3.55) emphasised that students were reasonably satisfied with the learning outcomes but improvements were required (for example, inspiration and motivation to learn; receiving feedback; using approaches that helped students learn).

This combined feedback from students was representative of a solid, but not ‘brilliant’ teaching performance. An imperative of change was required to overcome conflicting student attitudes and ensure a spectrum of student learning dimensions were catered to. Comments from the observers, when objectified, represented the means by which polarisation could be overcome with the following changes to content and delivery for the second session being made:

• treat slides for reading differently to slides for presentation. Reduce overall content of slides for presentation;
• clearly state learning objectives for each section;
• add multimedia/visual content in presentation slides where applicable;
• set timing format (not timed slides) to follow in lecture time; and
• introduce think/pair/share to three or four sections of the lecture (not every learning objective can be covered but if some of the more complex areas are successfully learned by students one can expect other areas to follow).

This action formed the reflection/analysis stage of the action research cycle. However, not all aspects of feedback were adopted. Changing too many areas of the content and delivery process had the potential to erode teaching confidence. In the next section, phase two of the action research cycle is outlined, highlighting areas where performance improved and areas that required further development.

PRO-TEACHING: PHASE 2 OF THE ACTION RESEARCH CYCLE

In the second observation session, an identical process was undertaken that included a pre-meeting to establish objectives/outcomes (planning stage) based on observer and student feedback, the observation process and combined feedback of observer and student evaluations (quantitative and qualitative) from both sessions.

The observers were informed of the reviewed lecture (content) and pedagogical (teaching) objectives that were to be implemented, as follows:
Lecture (Content) Objectives

- understanding sampling terminology
- why and how to sample (a step by step process)
- probability versus non-probability sampling
- appropriate sample design
- sample size
- random sampling and non-sampling errors

Pedagogical objectives

- comparison of observed lectures
- adherence to time, teaching materials and learning objectives
- suitable methods of delivery for complex concepts (in large classes)

The pedagogical objectives were drawn from feedback from the first action research cycle and formed the implementation stage of the second cycle. Again, as part of the evaluation process, observers were required to assess the most important piece of knowledge students should gain from the session. This was identified as, “A general understanding of how sampling fits into the overall research process.” Further observer feedback (from session 2) was summarised as follows:

Objectives were clear but need to be learner-centred; be aware that majority of students are ‘Gen Y’ and respond best to graphics and limited text; timing is still a problem; some of the last points were either rushed or omitted; consider wireless microphone so that you can come out from behind the lectern; your eye contact was mainly with students directly in line with the lectern; when using YouTube expand the screen to full size and dim lights to aid with viewing; questioning students occasionally throughout lecture would contribute to more formative assessment of students.

Student qualitative feedback was generally less polarised, though many students remained uncertain about the value and connection of lecture content to course assessment requirements. This was supported by an overall mean of 3.80, representing an incremental improvement from the first session. The feedback from the first observation showed improved student perceptions of lecture delivery and coverage of content. The majority of students reported that they appreciated the clearer objectives set out in the slides but further clarification was required to embed learning objectives more effectively with broader assessment requirements (Krathwohl, 2002). Refinement of lecture content (including more visual content) is ongoing. Improvement in pedagogical practices was again reported.
PRO-TEACHING: PHASE 3 OF THE ACTION RESEARCH CYCLE

In this section the rationale and summary of a third peer evaluation are detailed. This observation formed part of the requirements for an assessment item in a scholarship of learning and teaching course (as part of a Graduate Certificate in Higher Education). The recommendations from the earlier PRO-Teaching evaluations were implemented as part of the on-going implementation and review procedure so areas for improvement could be identified and acted upon (Sherman & Torbert, 2000).

Evaluation was based on a modified version of the PRO-Teaching evaluation model and conducted about 18 months after conclusions of the initial peer evaluation (Griffith University, 2009). Both reviewers received the previous evaluation summaries and briefing notes providing an objective framework for substantive and technical feedback. This was based on how well the associates understood the material even though they have no experience in the discipline (AAHE, 1995; Pratt, 1997). The observers were asked to focus on three areas:

- substantive evaluation of the learning objectives: did engagement with the students effectively pass on knowledge directly related to the objective?
- technical aspects of teaching methods: what techniques worked/not worked?
- comparison of video versus lecture capture (the lecture was video recorded: a video of the presentation and lecture captured – audio and PowerPoint only).

The reviewers evaluated a two-hour lecture. Both associates were identified as teachers of quality and both had been awarded teaching citations by Griffith University with one from Griffith Business School (GBS) and the other from the faculty of Arts, Education and Law (AEL), specifically the School of Education and Professional Studies. Both peers possessed high-level knowledge of the pedagogical framework required in higher education and significant peer evaluation experience. Pratt (1997) identified a peer reviewer as a “respected academic” (p. 32). These discussions from within and outside of the relevant faculty, again, generated different teaching and learning approaches valuable to the development of teaching practice (Moon, 2004).

One lecture was selected in a second year marketing major course for the Bachelor of Business program of study. 81 students were enrolled in the course. Lecture delivery occurred in a medium sized (100 seat) lecture theatre with content delivered face-to-face utilising a PowerPoint presentation. In this session the majority of content was, again, delivered asymmetrically with some feedback/interaction required from students. This question/answer time was made available throughout lecture time.

A pre-meeting with the observers/observee was conducted (planning stage) via email to better understand the teaching/learning activity and the objectives (implementation stage) for the session. Summarised objectives were:
Lecture (Content) Objectives

- the nature (definition) of franchising and its development in Australia
- an understanding of franchising as a distribution method in retailing
- an understanding of retail co-branding
- the relationship between retail co-branding and the retail mix
- franchising as a determinant of co-branding strategy

Pedagogical Objectives

- adherence to time, teaching materials and learning objectives
- suitable methods of delivery for complex concepts
- discussion of innovative techniques to reduce lecture time (and therefore attention span of students) – the main example was a merger of lecture and tutorial time into one seminar

As part of this evaluation process observers were again required to assess the most important piece of knowledge students should gain from the session. This was identified as, “a general understanding of franchising and its relationship with a complex version of the retail mix (co-branding).”

A video recording of the lecture was made and distributed to both reviewers as both were unavailable to attend a lecture in person. Access was also provided to relevant lecture/lecture capture material posted to the course website pre- and post-lecture to assist the reviewers in the evaluation process. Following is a summary of reviewer feedback:

- engagement can be measured through both student attention and student interaction. There were limited opportunities for student engagement and the opportunities involved lower level thinking (i.e., remembering content from the last section);
- not reading from slides on the board – having your back to the board – standing to the side more when you put up a new slide so that you can side glance rather than turn around – so positioning;
- look for more opportunities to engage and involve students actively – e.g., look for something in the videos, quizzes around content; find out what they know already through questioning.
- students seemed to comprehend the concepts developed in the lecture and presented intelligible feedback when questioned. The majority of the lecture presented significant improvement from your previous PRO-Teaching evaluation.

Suggested Development Ideas

‘Grab’ students’ attention at the beginning of the lecture by either

- posing a question and have students brainstorm possible answers; or
- inviting students to challenge an idea.
Encourage student participation through

- quizzes; games; puzzles;
- punctuating your lecture with questions;
- interrupting your lecture with a sample exam question; or
- asking students to interpret a statistic, a graph, a chart, or another visual image.

*Varying your questions and responses.* Instead of simply asking questions that involve recall or definitions or opinions, ask questions that involve higher-order thinking skills such as using:

- Diagnostic questions: How would you interpret or explain this?
- Challenge questions: Why do you believe that? What’s your evidence?
- Role-playing questions: What would you do in _____’s shoes?
- Evaluation questions: How do you evaluate so-and-so’s actions?
- Prediction questions: What do you predict would be the consequence of this?
- What inferences can we make?
- Generalising questions: Are there any generalisations that we can formulate?

Feedback from students to ascertain their interest in the lecture and their general level of understanding was gathered through a survey administered at the end of the lecture. The overall mean of mean, 4.27 (again, on a scale of 1 to 5) was a significant improvement from the previous peer/student evaluations.

Generally the teaching methods deployed in the session improved through the PRO-Teaching process forming an integral step in scholarly teaching development (Pratt, 1997). Nevertheless, substantive areas for technical improvement in teaching were identified and remain an ongoing part of teaching and learning development. (NB: future comparison of the video material with lecture capture may also provide some innovative methods to improve student engagement).

While there was evidence of incremental improvement to teaching practices and student outcomes, personal satisfaction levels had not been achieved. So further improvement of technical aspects of teaching delivery were required to increase engagement of students and hone the skills required for scholarly teaching. More efficient and pragmatic approaches to curriculum structure and content delivery (for example the contemporary ‘flipping’ the classroom technique and shorter/singular face-to-face seminars) were required to meet the requirements of the modern student and produce a sense of achievement in the scholarly teaching process.

Through further detailed reflection, weaknesses in the teaching and learning nexus were identified to develop applicable strategies. Examples of these reflections are presented here as extracts from the personal diary kept for this process.

Students find the traditional method of delivery difficult to manage as work, home life and university demands restrict their ability to attend contact sessions regularly. This is exacerbated by traditional teaching methods not connecting with the contemporary student’s cognitive abilities and preferred learning
styles. By limiting face-to-face contact to one session students’ attendance levels should improve by reducing the ‘need’ to be on campus and promoting a certainty of knowledge through a single contact point each week (students regularly asked what happens at tutorials and/or lectures). (Wright, Diary Notes, 2012)

From this reflection the traditional method of a two hour lecture, one hour tutorial was replaced with a weekly two hour seminar. This reduced the students’ on-campus hours and also eliminated potential wait time between a lecture and tutorial.

Students often do not prepare for lectures and tutorials. Whether this is laziness, or otherwise is unimportant. Students, however, ‘wish’ to learn but sometimes are overwhelmed by the process – perhaps a cause of perceived laziness? The problem is how can students learn? What are the processes and how can they work with the tools at hand. Reading remains a problem (apparently) with many complaining that even the simplest journal articles or textbooks are difficult to follow or comprehend. Scaffolded and structured learning of material is a potential solution… that is; students are guided through materials in stages whereby they can read, watch and reflect on material, and then repeat the process in a different manner within a short time frame. The question is how to structure the learning to make it interesting? (Wright, Diary Notes, 2013)

In order for students to approach a scaffolded and structured learning process, each week’s activities needed to be broken down into a range of tasks designed for completion prior to each seminar. These structured activities included (a) readings (generally a single chapter or article in soft copy); (b) lecture notes (comprehensive PowerPoints presentations and notes, and/or a personal video capture of the presentation – generally presented as two or three, ten minute videos); (c) a brief (YouTube) video pertaining to the reading from a reliable source; and (d) two or three exam style questions to assist with development of abstract concepts for a particular topic.

All activities were uploaded to the course website at least one week prior to the seminar. Tasks combined visual and cognitive learning tasks specifically related to all assessment. For example, the exam style questions formed the basis of the final end of semester exam responding to students’ comments regarding the relevance of weekly work in relation to assessment. The combined activities (prior to/during the seminar and for assessment) formed a carefully scaffolded and structured learning routine. The same information was read, re-read (or viewed) and then written in response to specific questions or assessment requirements. While some activities may be seen as ‘distant’ from the marks gained through assessment (the contemporary student remains fundamentally pragmatic about all activities related to assessment – non-hedonic), the combined weekly tasks were designed as incremental learning stages within each topic that then led to scaffolding of knowledge to all course assessment.
ANALYSING PEER PEDAGOGIC PRACTICES AS A POSITIVE CONTRIBUTION

In-class sessions remain a mystery. ‘Polarisation’ continues… some students like my teaching style – others do not. I receive peer feedback stating I must use activities to ‘break up’ the session and create an opportunity for students to discuss issues. The fear in this process is whether or not students will possess the necessary information in both content and depth of content knowledge to conduct meaningful conversations. Perhaps the pre-seminar activities will help. But must be prepared with a secondary plan in case students are not ready!! (Wright, Diary Notes, 2013)

‘Flipping the classroom’ techniques were implemented from early in the semester in conjunction with observation exercises pertinent to each topic and assessment item. That is, students were required to exit the seminar, observe specific phenomena through the theoretical ‘lens’ developed through pre-seminar activities and discussions in-class (a short series of PowerPoint presentations were separately created for each seminar. These were mostly visual to reinforce specifics of the topic and were kept to twenty minutes maximum. Students were to report their findings to the remainder of the group within a specified timeframe. Other activities (specified in the previous section) were utilised throughout the course.

These changes were implemented in the delivery of the same course, in the following year (2014) with greatly improved results. Attendance at each seminar increased significantly (though this is only anecdotal) from previous years. Each lecture was electronically ‘captured’ so if attendance was not possible, students felt they could rely on these recordings more effectively (as the only contact session). More importantly, students engaged in the learning activities suggesting more effective formative learning. As this course was delivered recently much of the data requires further analysis, but early indications are positive. Student evaluations of teaching and course design were significantly higher than previous offerings (4.5 and 4.4 respectively) with the qualitative feedback defining a very positive student experience.

CONCLUSION

Teaching is an experiential profession and improving one’s teaching practice takes time. To achieve scholarly teaching, clear goals are needed to set a proper trajectory for improvement (Boyer, 1990; Glassick et al., 1997). However, in a contemporary University environment it is not enough to view scholarly teaching only from a professional (perhaps traditional) perspective (Barnett, 2000). Experimentation is fundamental to achieving scholarly teaching and is representative of being a ‘good learner’ (Trigwell, 2001). With this understanding, extensive peer evaluations were conducted against pre-defined objectives and compared with previous evaluations by teachers of excellence from within and outside of the discipline. These perspectives were combined with extensive data collected through qualitative and quantitative methods from students. Self-reflections were conducted using the combined data
within a framework of current institutional requirements and the modern university (Skelton, 2009). The self-reflection process provided a method for redefining the teaching philosophy (planning) (combining a student and teacher focused approach) and developing specific methods (implementing) to improve teaching delivery and the resulting student learning outcomes (assessing) (Trigwell, 2001). These steps, while onerous and sometimes ‘scary’, have given a sense of greater ‘job’ satisfaction and provided a significant step toward a scholarship of learning and teaching (Biggs & Tang, 2011; Trigwell et al., 2000).

As a result of the PRO-Teaching project, the following observations were made in order to create a curriculum and teaching style that fits pedagogic and institutional requirements and student needs within the business courses being taught:

- a highly structured approach to seminars was required to overcome technical deficiencies in the current teaching style with suggested development ideas directly inserted into teaching delivery. This included the organisation of seminars around a ‘few’ important points (as basic requirements of knowledge in the course). Regular discussion of these points needed to take place throughout each session in conjunction with exercises directly related to constructing assessment items (Hodgson, 1997; Fry et al., 2003);
- a more judicious use of the think/pair/share (or similar) exercises to encourage team building, engagement in the lectures/tutorials/seminars and to provide a sense of some achievement that “we have learnt something!” (Lyman, 1981);
- the introduction of shorter face-to-face sessions (replacing the traditional two hour lecture/one hour tutorial) with preparatory tasks required prior to attendance, were essential to meeting student needs in a contemporary tertiary environment. The modern student perceives themselves as having less time and approach tertiary studies in a hedonic fashion, so meeting time restricted needs is fundamental to improving student experiences.

The involvement of a peer novice (discipline) expert (teaching) from a School of Education to improve teaching dynamics was critical to the success of this action research cycle and progressive improvements in course delivery (Krause et al., 2008). The PRO-Teaching project provided ongoing peer evaluations and feedback from both a novice (discipline) expert (teaching) and an expert (discipline) novice (teaching) together with student evaluations that could be used to inform the planning and implementation cycle of the action research approach to the scholarship of teaching. What was evident throughout this process was the incremental improvements that were suggested during iterations of the cycle that built towards a trajectory of continual improvement. Recognition that being overly critical would not only erode the teaching confidence of the participant observee but also provide too many areas to try to improve all at once. The guided approach of planning and setting specific content and pedagogical goals to be implemented and assessed proved to be very effective. As part of the evaluation process, peer, student, and self-evaluations of
teaching were triangulated within a framework of contemporary tertiary education to achieve a pathway toward scholarly teaching (Pratt, 1997). What was also noted as being important was that the observee’s growing sense of efficacy as a teacher was an equally important outcome of the process as improved student feedback. An increased sense of efficacy provided the confidence to experiment and make the necessary changes to improve teaching practice.

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9. CHALLENGES ASSOCIATED WITH ASSESSING TEACHING DELIVERY IN AN EMBODIED, EXPERIENTIAL AND EXPRESSIVE LEARNING ENVIRONMENT

Performance Practice Training and PRO-Teaching

The peer review and observation of teaching (PRO-Teaching) discussed in this chapter is based on my facilitation of a professional studies introductory acting class for first semester first year students – Introduction to Performance Skills. I reflect on the PRO-Teaching model from a performance (theatre) technique delivery position that advocates the implementation of embodied experiential and instinctual behavioural practice as learning. Embodied learning is ‘the enactment of knowledge and concepts through the activity of our bodies and as Nathan (2012) posits is a powerful tool for learning’ (p. 445). Experiential learning in performance training is in many ways linked to 20th century theories espoused by scholars such as Dewey, Jung, Paiget and others. Learning is discovery oriented and as such explores processes that draw out individuals’ beliefs and ideas. Learning is creative process based and advocates that individual and collective conflicts drive learning and development. Learning occurs when students are able to adapt to imagined or created worlds and in the ‘synergetic transactions between person and environment’ (Kolb & Kolb, 2005, pp. 194–195). Experiential learning in performance scholarship posits that experiencing and expressing individual behaviours and emotions is central to performance practice. Performance learning is a process of creating then re-creating social and cultural knowledge in the performance paradigm and as such knowledge in and of performance results from a blending of knowledge that is an acquisitive, active and transformative experience. Diverting from traditional methods of higher education delivery, performance scholarship accesses more interactive, experiential and embodied approaches in comparison to other fields. As Kolb and Kolb (2005) suggest, arts training is professional learning that ‘integrates theory and practice into showing’ (p. 833).

Quality assurance in higher education practices worldwide has become a rapidly growing concern, ‘yet defining and measuring quality usefully’ has as Altbach, Reisberg, and Rumbley (2009, p. 51) claim, become more difficult. Peer review and observation of teaching aims to address quality assurance in teaching practice, its main aim to enrich the quality of teaching offered to students in an increasingly
diverse student market. It aims to do so by supporting transparent analysis and discussion of delivery techniques and practices while improving institutional values and stimulating intellectual growth for both teacher and learner (Thompson, 2013; Pereira, 2014). It is evident that there are increasing pressures on institutions to put in place new systems ‘for academic support and innovative approaches to pedagogy’ (Altbach et al., 2009, p. x). Increasing diversity of scholarship offered to global university student populations suggests that teaching in professional creative studies and vocational arts educational fields are growing (Biggs & Tang, 2011). Evaluation standards that identify and aim to enhance teaching delivery across diverse areas in creative practices are therefore essential to ensuring quality of teaching in the university. Akin to teaching evaluation conducted in educational fields, peer observation of creative practice delivery should incorporate systems and approaches that are ‘distinctive and match the characteristic of the academic endeavour’ (Ellis, 1993, p. 20). In responding to major shifts in student realities such as demographics, needs and learning outcomes, a wide range of institutional and systematic adjustments continue to be, as Albach, Reisberg, & Rumbley (2009) suggest, necessary to supporting the nature of the student experience in higher education (p. 97). Devising strategies to accommodate evaluation of creative arts teaching will contribute to, as Drew and Klopper (2013) discuss a progressive culture of improved delivery and practice within the university. The following reflection is based on my experience of being the observed teacher across two performance classes. The reflection hopes to extend discourse relating to the model from a performance art training perspective. By posing questions and possible solutions applicable to performance training review, the discussion aims to contribute to the development of the PRO-Teaching criterion. The chapter outlines the peculiarities of teaching into performance-learning disciplines wherein ‘mastery of material is uncertain and even impossible’ (Anderson-Rabern, 2010, p. 91) and as such hypothesises the difficulties inherent to peer review and observation in this area.

IDENTIFYING POTENTIAL PEER REVIEW CHALLENGES

Altbach et al. (2009) acknowledge that trends in peer review practices being implemented in institutions in developed countries suggest a break from traditional patterns of assessing quality in higher education practices (p. 54). The peer review process in which I was a participant provided a supportive opportunity for direct communication between the observers and myself about review expectations, outcomes and observed delivery practices. My participation in the program provided me with an invaluable opportunity to develop teaching delivery practices that introduce studio laboratory performance behaviours within the Bachelor of Arts in Contemporary and Applied Theatre (CAT) program of study. The CAT program of study is unique in the training it offers as it combines two professional areas of theatre expertise; the first – contemporary performance practices that react against recognisable twentieth century acting techniques (e.g., psychological realism)
in favour of post-dramatic experimental behaviours, the second – applied theatre performance practices that utilise social justice issues as provocation for cultural and community development. Aligned with international studies in drama, performance, theatre and contemporary professional practice, CAT training supports a matrix of key performance and theatre concepts. Embedded within the training is an embodied, experiential investigation of performance forms, styles and behaviours that analyse the possibilities of *unknowing* by examining the limitations of how we think and act in imagined circumstances. As such, learning is framed in investigative activities wherein there is no foregone conclusion (Kozzin & Sandford, 2010) or, right way of doing. Student learning is flexible to the point where they will actively seek the unexpectedness of discovery and surprise and as Eisner (1992) suggests, they become open to ‘the vicissitudes of the unpredictable’ (p. 76).

Distinctive to performance practice is the notion that performers succeed in spite of their learning, as artistic experiences do not occur in a ‘dimension of corrective descriptive statements’ (Dewey, 1934, p. 85). Mamet (1998) reiterates that theories about performance aren’t useful as they can’t be put into practice, don’t show any demonstrative results and – he importantly notes – that skills involved in performing are reliant on behaviour – physical attributes rather than in mental exercises of recollection (pp. 14–19). The nature and knowing of performance, as Carnicke (2010) further discusses, results from a ‘series of explorations’ that ‘probe different pathways into a performers unique creativity’ (p. 23). Contemporary performance training inspires learning that is explorative in its physical, spatial, emotional, psychological, dialogic and rhythmical vocabularies. It also requires students to discover and adapt unique styles and forms of performative expression. Contemporary performance resists notions of universally applied methods and rejects the constraints of absolutes (Hodge, 2010). Creative and imaginative investigation is as Boggs, Mickel, and Holtom (2007) posit, a powerful educational tool (p. 833) in arts scholarship. Assessing teaching delivery in this learning environment poses challenges that may include: confusion surrounding the infinite possibilities embedded in attaining objectives and outcomes, acknowledging the behavioural activities aligned with embodied discovery of theatrical circumstance and accepting that cognitive and behavioural elements of learning are intrinsically linked to experiencing.

A review of teaching delivery is evaluated through generic criterion that is applied across diverse fields of scholarship within the one School – the School of Education and Professional Studies. Professional Studies teaching in performance skills is (in this instance) specialised education that refers to curricula that prepares students for a specific artistic career and emphasises ‘creativity, critical thinking, cultural awareness, problem solving and communication skills’ (Altbach et al., 2009, p. 115). The idea of a generic evaluation document suggests problems at the outset for peer review in arts teaching. Learning requirements associated with education discipline degrees are distinctly different for specialised areas of professional arts training as delivered in CAT. The two offerings are separate fields that require diversely different and specific training methods. This discussion acknowledges that
experts in educational delivery may find evaluating performance training especially perplexing. In many ways performance training and facilitation conflicts with the core business and teaching delivery practices of educational studies programs. During my participation in the process I wondered whether standardised criterion could effectively be applied to teaching practices across both fields. I speculated that peer review of performance training might present obstacles in the following areas:

• observers’ ability to identify and appreciate the differences in the delivery practices of teacher education and performance training;
• observers’ awareness of how the complexities and peculiarities of embodied performance technique training is facilitated as experiencing;
• observers’ ability to appreciate how conceptual theoretical knowledge is embodied and embedded in the performative experience; and
• conflicting understanding of what is identified as discipline expertise relating to contemporary performance fields. Performance practice is not drama education and therefore a PRO-Teaching nominated discipline observer may in actual fact have little understanding of professional practice training methods.

In the course there is a specific focus on practical collaborative experimentation with and discovery of, performance techniques. Learning facilitation encourages a process of discovery as ultimately performance students need to ‘make art that will actually open the world up’ as they move past notions of theatre ‘where the world is set up to reinforce or restore [a] belief in what [they] know’ (Kozzin & Sandford, 2010, p. 197). Training facilitation may therefore pose philosophical and theoretical challenges for peer review that might be linked to:

• learning facilitation which conflicts with educational literature on good teaching practice;
• training practices that embody learning aims and objectives within an exploratory creative experience;
• environments that utilise unique learning resources such as space, sound and light; and
• conflicting notions of formative assessment practices.
• dissemination and demonstration of creative content knowledge and expertise.

All of the above points may be linked to what is identified as expertise in a discipline specific observer and as such I suggest the term discipline specific may be contested in the peer review process. Peer reviewers have comprehensive expertise in teaching and widespread knowledge of good teaching literature in their discipline. However questions may be applied in a creative arts context of evaluation: Can their education expertise transfer to creative practice? Can their theoretical knowledge be applied to arts disciplines? Is it possible to evaluate the complexity of performance practice facilitation from education delivery perspectives? Can theory of one discipline be effectively transferred to another? With these questions in mind, I feel
it is pertinent to discuss discipline complexities from my experience of the peer review process.

The discipline specific expert observer associated with my process is an internationally respected drama educator. His applied theatre work is held in high regard and is aligned with educational applications of the form. His directorial background is in traditional productions of naturalistic play texts. His acting teaching expertise in the theory and techniques associated with psychological realist methods is extensive. As such his knowledge in drama education, applied theatre and a specific twentieth century acting technique is broad. His background and expertise in contemporary theatre performance fields is however, very minimal.

Contemporary performance practice and training directly conflicts with his experience of drama practice, philosophy and pedagogy. The point here is there is no specific or generic ‘theatre/drama’ discipline – knowledge of one area of the field does not readily transfer to another in terms of practice facilitation, application, delivery and consequently in students’ demonstration of learning.

The points made above are by no means meant as a criticism of the reviewer but rather noted to highlight the potential challenges nominated peers and teachers may experience in arts teaching review circumstances. Whilst cross-disciplinary responses through teacher peer review and observation provide excellent analysis and evaluation of teaching practice, the distinctions between creative practice and teacher training delivery review necessitate differing evaluation skill sets in reviewers. There are inherent challenges in evaluating learning that investigates processes that as Anderson-Rabern (2010) states ‘become inextricable from, rather than distinct from performance [and wherein] learning is a process that never really coalesces into a goal [as] it is part of the goal (p. 88). From this perspective questions that can be applied to the review process may include: Can peer evaluation data authentically reflect how learning is embedded within an imagined or creative (and created) environment? How can teaching that encourages creative experimentation and is ‘rooted in the bodies creative, imaginative interaction with physical environment’ (Gallagher, 2005, p. 446), be evaluated?

This reflection proposes that there are potential areas for development of the evaluation criterion that address creative arts training in the performance skills field. Areas that are identified in the following discussion will consider PRO-Teaching dimensions: clarifying learning aims and objectives and coherent structured curriculum design, specifically:

- does the teacher clearly define explicit, realistic and challenging yet achievable aims and learning objectives?
- does the teacher organise learning activities and assessments in a structured and coherent manner that assists students to achieve the stated learning objectives?

And further, the dimension relating to the use of formative assessment practices, specifically:
does the teacher engage with activities in class that test students understanding and adapt or adopt teaching strategies to further develop their understanding?

- do the students reflect and share what they know about the topic, relate their new understanding to knowledge in other domains and hypothesise about implications for new problem areas?

Framing the discussion will be an overview of perceived conflicts associated with learning outcomes between two separate student groups and the notional differences in perceived definitions of the experiential learning space and the teaching environment. The distinction between the two environments will be clarified through my experience of performance training behaviours that utilise space as an essential resource.

**PERFORMANCE TRAINING BEHAVIOURS AND EMBODIED LEARNING**

One of the conceptual challenges embedded within the PRO-Teaching process is that the course is enrolled with both first year CAT and Drama Education students. I believe that one of the main challenges associated with a PRO-Teaching of *Introduction to Performance Skills* is that in particular pedagogic demographics it may be perceived that drama education students have conflicting needs and require differing learning outcomes. While it may be suggested that political outcomes may permeate educational teaching environments, the bringing of conflicting philosophies and ideologies into the foreground of teaching and scholarship is a way of dealing with multi-disciplinary perspectives in a critically constructive manner (Pineau, 2002, p. 52). Inherent to this discussion is the fact that graduates of CAT are interested in practical embodied learning processes that will assist them in undertaking careers as performance makers – actors, directors, writers, theatre technicians and applied contemporary theatre makers. Students of CAT aim to graduate into employment in professional and community theatre contexts. Graduates of the drama education strand are dedicated to becoming drama teachers in educational environments and within this environment they aim to teach performance through a theatre/drama studies curriculum framework. The tension that may be politicised across the two learning cohorts is in the identification of learning needs between students who anticipate experiencing performance through artistic cultural practices or events and students who anticipate being able to teach performance in educational environments. In addressing the perceived conflict I refer to the course aims as outlined in the course profile:

- This course introduces and provides students with the opportunity to explore and discover and develop techniques appropriate for the performer/actor in varying performance contexts. Through practical applications, workshops and rehearsal processes and critical analysis of acting and performance applications, students will employ a range of performance techniques suitable for contemporary practice.
As stated in the course profile the course is focused on performance task oriented behaviours. The perceived political divide between CAT and drama education students is somewhat moot in this instance, as drama teachers must be able to understand the essential experiences of performance behaviours if they are to teach performance effectively in the classroom environment or direct event or eisteddfod outcomes. Consequently the aims as outlined are directly relevant to their learning outcomes. While acknowledging that political challenges are inherent within the School and degree structure, it is vital that learning in Introduction to Performance Skills is distinguished through its focus on action rather than information. The style of teaching required supports conceptual discovery rather than information acquisition (Von Glaserfeld, 1995). My role as teacher is to foster an environment of shared creativity that generates performance experiences. I am not necessarily concerned with explaining intellectual constructs of performance that can be recollected in for example, a written exam context. My workshops are delivered with a specific focus on performative, expressive, creative engagement – and consequently learning is demonstrated and assessed through behaviour-based embodiment. Pineau (2002) who discusses embodied learning as ‘enfleshment’ suggests that when students engage their physical bodies they come to know (author’s italics) things in a uniquely personal and heuristic manner (p. 50). Guiding students to the point of coming to know relies on their immersion into embodied exploratory experiences. Consequently tutorial/workshops are facilitated in collaborative, creative and imagined environments that focus on emergent actions and behaviours. Pineau (2002) further states that:

In educational learning environments there has been a movement from theory to practice […] being spearheaded by performance and theatre educators for whom ‘enfleshment’ is more than a theoretical abstraction; it is the disciplinary heart of our pedagogy. (p. 50)

Critical discourse about performance pedagogy suggests that embodied experiences associated with schooling the performative body are the conceptual points of entry for student learning. While CAT courses forge some discipline specific coalitions within the School such as the Bachelor of Drama Education, CAT courses predominantly privilege the practice and analysis of emotional, behavioural and reactionary performance expression. Performative investigations aim to ‘coordinate the actor’s body/consciousness and the circulation of energy’ (Hodge, 2010, p. xxiii). Student outcomes are associated with what Roach and Rienelt (2007) define as behaviour that ‘offers a temporary and usefully ephemeral site at which to think through questions of the signifying body […] of the undecidability [sic] of the visual and the materiality of the corporeal’ (p. 426). Performance studies scholarship, they further suggest, cross ‘interdisciplinary lines […] involves theoretical speculation’ and is a mode of learning that ‘fights for autonomy insisting on a separation from other areas’ of learning (pp. 3–5). Recognising and understanding embodied and experiential learning concepts from the position of observer may thus prove difficult if the review team are unfamiliar with performance training practices that ‘stand in
oppositional relation to the academy and the profession in which they’re lodged’ (Dolan, 1993, pp. 418–419).

In my documented response to the PRO-Teaching process I suggest that nominated observers for performance training could be sourced from external areas that are aligned with performance/arts training practices (conservatoire Griffith University). The facilitated scholarship in these environments addresses learning aims and objectives from unique perspectives that are aligned with creative expression, experimentation and artistic behaviours. When considering learning objectives as outlined in the course profile, conservatoire tailored educators may better recognise criteria’s such as: After successfully completing this course you should be able to:

- communicate through praxis varying conceptual and physical frameworks of performance techniques;
- effectively utilise a range of performance techniques in the creation of dramatic meaning;
- respond with honesty and integrity in performance contexts;
- demonstrate skilled and controlled use of the actor’s instruments of body and voice;
- demonstrate an ability to work in group contexts in creating coherent, shared interpretations and experiences in performance; and
- experiment openly with appropriate ideas, emotions and physicality to meet the needs of the dramatic context.

To meet these somewhat unique objectives, the teaching approaches that are utilised need be specific to embodied experiences within the performance paradigm. Learning pre-requisites are realised through embodied practices that lie outside more traditional, educational, theoretical or historical contexts of drama content. In facilitating performance training as scholarship I aim to encourage students to experience and embody conflict to express meaning (performance is inherently described as conflict in action) in creatively constructed, imagined atmospheres (the learning environment). I refer to review data, specifically to Facilitator responses to Peer Review of Teaching – Process Evaluation Griffith University F1. What suggestions do you have to improve the peer review of teaching process? My response considers the selection of peer reviewers:

It would be excellent if when reviewing professional studies courses [such as this one] the observers [are selected] from creative arts/conservatorium areas as opposed to [being experts from] education. Feedback strategies relating to teacher training for example aren’t really relevant to a course that is predominantly concerned with teaching acting skills to students wanting to be actors/directors [or in experiential knowledge of performance].

Reviewing performance delivery practice may be difficult if observers are:
CHALLENGES ASSOCIATED WITH ASSESSING TEACHING DELIVERY

• unaccustomed to how learning objectives are scaffolded within the embodied practice?
• unfamiliar with professional practices specific to training performance artists.
• discomforted with how embodied practice is facilitated and how learning outcomes are scaffolded within the experiential process?
• unaccustomed with how the structure of the workshop is facilitated.
• anxious about how performance, practice behaviour is assessed?
• unsure of how the Contemporary and Applied Theatre degree is situated within the School of Education?

If this is the case then evaluation discrepancies might arise in areas:

• does the teacher clearly define explicit, realistic and challenging yet achievable aims and learning objectives?
• does the teacher engage with activities in class that test students understanding and adapt or adopt teaching strategies to further develop their understanding?
• do the students reflect and share what they know about the topic, relate their new understanding to knowledge in other domains and hypothesise about implications for new problem areas?
• does the teacher organise learning activities and assessments in a structured and coherent manner that assists students to achieve the stated learning objectives?

Directly linked to the points made above, I again refer to: Facilitator responses to Peer Review of Teaching – Process Evaluation Griffith University F1. Question 7 of document also asks: (1) How would you describe your understanding of a learning space and (2) How would you describe your understanding of a teaching space?

I will contextualise my understanding of the differences with the aim of contributing to the possible rearticulation of some evaluation criteria for such courses.

THE EXPERIENTIAL LEARNING SPACE AND THE TEACHING ENVIRONMENT

Performance learning is facilitated in studio workshop delivery modes that are recognised in performance scholarship as experiential spaces rather than teaching environments. In contextualising the distinction between an experiential learning space and a teaching environment it may be suggested that traditionally a teaching environment can be regarded as a setting where the teacher or lecturers knowledge is privileged. Knowledge shared in this setting in the subject area is usually prescriptive and curriculum specific. The teacher/lecturer is usually acknowledged as an expert in the subject and this expertise is shared through various forms of information giving processes with students invested in that subject area. In acknowledging that educational models of teaching are shifting focus from the teacher to the learner, defining what students are meant to achieve are predominantly aligned with topics that are meant to be taught (Biggs & Tang, 2011, p. 9). The teaching environment may therefore suggest that learning is derived through traditional contexts of
discussion, analysis and lecture practices on and about theory, technique, subject and/or practice. One of the perceived challenges associated with observation and evaluation of performance training in a university context is that ‘there is no historical [or pedagogical] limit to what is or is not performance’ and as such, ‘one size theory does not fit all’ (Schechner, 2002, pp. xi–xii). For a performer, knowledge about performance does not equate to successful performing and as Mamet (1998) states, for the performer ‘the mind cannot be forced’ (p. 11). An experiential learning space encourages creative imaginative expression that is executed in the immediacy of a dramatic or theatrical moment. That moment is constantly shifting and evolving. Experiential learning in this space is aligned with circumstances that are personal, local, national, historical, or global.

Within this space scholarship is generated through collaborative actions and embodied engagement rather than through information sharing. Schechner (2002) addresses the conflicts inherent to teaching performance in universities and concludes that teaching in this discipline is distinctive to other areas as it is a ‘creative art and not a pedagogical one’ (p. ix). He further states that teachers, academics and pedagogues may subsequently find themselves uncomfortable with how it is delivered in higher educational environments as it is a study of a form that blurs ‘the distinction not only between ‘art’ and ‘life’ but also between ‘scholarship’ and ‘art-making’ (p. ix). Scholarship is facilitated as Shepard and Wallis (2004) suggest, as an ‘embodied event - a medium of bodies’ (p. 191) whereby specific behaviours relating to circumstance and spatial contexts become the vehicle for theatrical expression and dramatic meaning making. An experiential space encourages a broad spectrum of learning incorporating physical, psychological and emotional expression. The space encourages discovery. The space is interactive as students respond and react to spatial contexts of the performative moment. Space is utilised as an essential learning resource that inherently evokes theatrical atmosphere that in turn, contributes to the escalation of dramatic tension. The performer reacts to and within circumstances dictated by the creative space. The performance space is continually changing and students are encouraged to; explore the space from numerous levels, respond to the space from conflicting perspectives, react to physical and psychological relationships with the space and essentially to treat the space like an antagonist. The learning space therefore becomes dramatic landscape or scenography.

Often utilising experimental, ever changing and innovative techniques, performance expression is formed through reactionary spatial relationships that are interactive and exploratory. The field of contemporary performance is, as stated, ever changing with focus being on functional rather than declarative knowledge and as Schechner (2002) claims, is not a discipline that can be taught with resources such as ‘lecture notes’, long [...] stored computer files or ‘packaged approaches’ as the relationship between student and teacher ‘is not hidden under cloaks of objectivity’ (p. ix). What is unique about experiential learning spaces Schechner (2002) identifies is the ‘thrill of not knowing – of discovering’ (p. ix). The experiential space encourages discovery through creative inquiries that are both personal and
collaborative. The process of discovery encourages the sharing and investigation of ideas – wherein the teacher operates as a ‘facilitator’ and collaborates with students through behavioural exercises and activities. Learning is assessed through individual and collaborative participation in creative behaviours, in reactions and responses to experiences occurring in the immediate moment in and in the student relationship to the atmospheric space. The learning site is acknowledged as a creative, imagined, constructed and contested space.

The PRO-Teaching evaluation in *Points for Consideration* provides feedback on delivery modes. Observers suggest that I could further develop my teaching skills by: engaging students in more theoretical discussion [of performance] and I could also consider utilising more [teaching] materials and aids (Notes from peer observation of teaching – points for consideration – Week 2). I agree that the above points are very relevant in some areas of theatre or drama scholarship i.e., studies in Stanislavskian or Brechtian techniques or in scholarship that investigates drama discipline knowledge in the history of theatre or non-western forms and styles. However to incorporate these suggestions into a performance class would conflict with learning outcomes relating to; spatial awareness, vocal and physical energy, resonance, articulation, vocal placement, motivated movement, interaction with prop, truth and authenticity in performance as well as with other performative psychological and emotive behaviours. Performance scholarship advocates that there are no definitive answers that can be provided through language or usual modes of learning resources and/or assessment. If I provide the students with a comprehensive body of information in (for example) a traditional lecture/tutorial method of delivery, if I engage them in theoretical discussions, if I present power point slides at the onset of every workshop, if I ask them to read text books and retain information, if I provide them with detailed handouts – and – if they digest and study all of these scaffolded learning tools and even successfully pass a written exam, I will still not be able to guarantee that they will able to perform or indeed understand in any way the nature of a performance task. From this perspective scholarship fosters learning discovery in favour of prescriptive delivery practices of information dissemination or recollection. Within this complex learning space the questions generated by students while recognised by me as scholarly inquiry may be considered ambiguous by observers. I further refer to evaluation data provided by the PRO-Teaching office to identify some of the idiosyncrasies of the learning tasks whilst illustrating how students’ learning is implicitly associated with *doing*:

• how as a [performance] group can we maintain [physical] tension through focus and timing?
• how can tension be applied in other parts of the body?
• how can we use our stimulus [prop] in different ways to portray meaning?
• how can my element be expanded into an un-littered aesthetic?
• how can we explore our core context to compliment the…physical [narrative]?
Can these sorts of questions be effectively answered through theoretical discussions about physical tension or can learning be more efficiently facilitated by showing YouTube clips or by lecturing with power point slides? The unique nature of the questions highlight how performance scholarship is unusual in its aim to empower students to connect the dots between the investigated experience, the theatrical aesthetic and performative expression and meaningful action. The learning space supports the idea that ‘learning and development are achieved through personally determined experiences and involvement rather than on received teaching’ (Hostetter & Alibali, 2008, p. 495).

In this setting students’ are attributed with a sense of status that often supersedes the facilitator’s as, they are encouraged to overcome obstacles through their own experimental embodied investigation. While immersed in a process of discovering Anderson-Rabern (2010) posits that performers will intentionally generate obstacles to enhance the experience as the aesthetic of performance is developed through each obstacle encountered (p. 90). My experiences of a particular obstacle may be very different to their own because the art of creating performance is an individual, personal act within a collaborative event. Responses within and to the obstacle are often individual and instinctual and are usually unanticipated and un-prescribed. Making mistakes in a workshop/rehearsal room is celebrated – in the inability to perform authentically in that moment a learning objective relating to ‘truth and authenticity in performance’ is discovered. In his definitive and still relevant text, The Empty Space, Brook (1987) suggests, performers must ‘become instruments that transmit truths which otherwise remain out of sight (p. 107). Within the experiential space the teacher as the expert who transmits truth is under continual negotiation. In this space, developing truth and authenticity evolves as a ‘repetition of-the-never-the same’ whereby ‘the task is taken up over and over, while the particulars keep changing’ (Schechner, 2002, p. ix). It is in this conflicting liminal space where challenges associated with the evaluation criterion may arise.

**CLARIFYING LEARNING AIMS AND OBJECTIVES AND COHERENT STRUCTURED CURRICULUM DESIGN**

*Observation dimension 1: clear learning aims and objectives*, states that evaluation of teaching practice is based on evidence of clear learning aims and objectives as observed. When I enter the workshop space, my objective is to encourage students to discover performance contexts by kick starting their imaginations. My aim is that by the end of the class they will have experienced a specific circumstance, engaged in performance related behaviours, participated in theatrical actions, created collaborative theatrical relationships and or physically embodied or reacted to a created imagined world. My professional practice history is extensive and as such I transfer professional knowledge into the professional studies learning space. When entering the experiential learning environment I very rarely structure a lesson plan that begins with addressing the class on the aims and objectives of the following
three hours – I do not tell them that by the end of the class they will know this if they do these things. Rather my planning involves anticipating ways the students may begin coming to know. I must be prepared to go with whatever contextually evolves through their active experimentation. The evolution doesn’t necessarily follow a structured through-line. Student experimentation may lead the activity to places I didn’t anticipate and as Schechner (2002) identifies performance scholarship is random as the

interchanging intersections of particulars, [occur] at convergences where every possible X may meet any possible Y...there is nothing that ‘really belongs to’ or ‘really does not belong to’ performance. (p. x)

One of the activities evaluated – ‘transformation’ – asks students to explore ideas relating to the transformation of prop (object interacted with during performance building). The students are required to create a relationship with the prop in ways other than the literal – a bamboo pole for example can, when invested with the appropriate performer/prop relationship become an oar, a golf club, a shot gun, a brush or indeed any other object the performer intends it to be. From a facilitation perspective, I can’t identify how the individual students or groups will strategies, approach and realise the transformation task. There are no specific instructional descriptors that may be followed. The success of this task ultimately depends on their instinctual, imaginative, experiential, investigative and creative exploration of their relationship with the prop. The prop is in a sense, the obstacle that has to be overcome. However, in the performance space ‘the term obstacle with its insinuation of problem disappears and struggles become potential creative opportunities’ (Anderson-Rabern, 2010, p. 91). Through experiencing the doing of the relationships between performer and prop the students will discover a ‘coming to know’ of the technique.

Thus in referring to observation dimension 7: coherent structured curriculum design:

• does the teacher organise learning activities and assessments in a structured and coherent manner that assists students to achieve the stated learning objectives?; observers may encounter obvious challenges with evaluation

The embodied behaviours associated with transformation don’t follow a clear trajectory nor are they explored in a structured coherent curriculum based task model. Nor are they direction specific. The workshops encourage amorphous experimentation. Like Schechner (2002) I embrace the exciting prospect of imaginative and creative discovery. He states:

I step into them [workshops] with as close to an empty mind as I can approach. I know that I am going to teach some relaxation centring for [the students’] preparation. But what happens next is dependent on those present…. (p. ix)
Altbach et al. (2009) state that until fairly recently, teaching meant covering a body of declarative knowledge and as a consequence assessment practices ‘measured how well students received that knowledge based on their ability to regurgitate it on examinations.’ (p. 113)

Schechner (2002) and Chavkin (2010) identify that learning in performance fields regularly imagines the unknown and is a reactionary event as the processes involved happen in ‘real rather than reflective time’ (Chavkin, 2010, p. 108). I cannot predict or prescribe student responses to performative tasks. I will prepare the students by taking responsibility for warm-up protocols and activities such as relaxation, and to ready them for the act of performing by energising and focussing their bodies and minds. While the idea of prepared unpreparedness may be an uncomfortable fit within traditional strategies of excellence in teaching practices, students involved in performance learning respond well to the responsive and reactionary nature of the learning as indicated below:

Extremely easy to understand our objective for the lesson and how we can expand that objective farther [sic] in our own [rehearsal] time. (Student Response, Lesson 2)

To re-iterate, the evaluation document asks: does the teacher clearly define explicit, realistic and challenging yet achievable aims and learning objectives? No. No the teacher does not explicitly define the learning aims and objectives as they are not explicit – one performance is distinctly different from another. However while objectives may not be prescriptive and consequently difficult to pinpoint for the observer, they may appear to be clear for the student performer. In suggesting ideas for developing the evaluation criteria question: does the teacher clearly define explicit, realistic and challenging yet achievable aims and learning objectives the nature of embodied experience could be acknowledged as follows:

- does the learning facilitator utilise strategies and workshop activities that encourage students to explore, experience and discover performance (artistic) aims and objectives that are imaginative, creative and contextually embedded in the task?

The second part of the question relating to: clear learning aims and objectives will still remain contextual and relevant:

- do the students appear to understand the learning aims and objectives such that they engage with activities in a productive and meaningful way?

In re-imagining the criterion to support performance learning activities, the nature of experiential and embodied learning objectives are supported.
USE OF FORMATIVE ASSESSMENT PRACTICES THAT SUPPORT INDUSTRY CONTEXTS OF PRACTICE

The re-articulation of some evaluation questions for professional studies and vocational training may address issues relating to quality control within peer evaluation processes. As Thompson (2013) suggests, evaluation measures should be conducted with trust for the promotion of intellectual and institutional growth. Performance training is directly associated with professional industry practice contexts. Students’ are assessed on their developing performing skills. I refer to observation dimension 5: use of formative assessment practices:

• does the teacher engage with activities in class that test students understanding and adapt or adopt teaching strategies to further develop their understanding?

And observation dimension 6: encourages deep learning outcomes:

• do the students reflect and share what they know about the topic, relate their new understanding to knowledge in other domains and hypothesise about implications for new problem areas?

I address the criterion from a position that identifies industry, learning requirements. Specifically I will analyse a component of the observed workshop that is conducted routinely at the beginning of each performance class. One of the most formative tasks a performer must undertake, learn and exhibit expertise in and is expected to practice in the professional industry is the practice of warm-up. In terms of teaching performance, education students will utilise this technique in drama classrooms to focus and prepare their students for classroom activities. In the course warm-up activities are routinely conducted at the beginning of every workshop as skills are developed over a long period of time. It is the physical and vocal preparation facilitated during this time that prepares the students for investigative creative experiences. It is, if you like the time where students are asked to ‘wake up’ to the possibilities within their imaginations. This awakening, if structured correctly is understood to take time. Loui (2009) reinforces the importance of the warm-up in performance training and states that:

an alert physical body is a conduit for emotional impulse, and the well-articulated and flexible body is capable of expressing nuance of emotion and range of being. (p. 1)

Authentic performance requires emotional expression and emotional expression suggests performers undergo physical and psychological reactions to circumstances explored. With this in mind the introduction to the workshop needs to engage with training strategies that prepare the students for the emotional and psychophysical, experiences they are about to undertake. Consequently warm up activities must address a performers’ psychical and psychological preparation as well as be performance task oriented. Warm-up activities in the class will include:
Warm-up activities are also designed to protect the actors’ body and voice from damage or injury during the performance experience. A professional warm-up is conducted for anywhere between 45 minutes to an hour as the process requires the performer to slowly warm up the mind, body and voice while encouraging concentration and focus in anticipation of performance. My responsibility is to ensure that student performers understand both the value of the warm-up in safely preparing themselves for performance and how a warm-up should be structured and facilitated for maximum benefit. Peer review responded to facilitation of the warm-up activities across both classes and it was noted:

- peer observation note 1: warm-up activities too long (observation week 1).
- peer observation note 2: the warm-up focus resonator work was a little too lengthy (observation week 2).

The skill must be developed over a long period of time and for the uninformed observer, the practice of it may seem to take up too much time in a 3hr class. Yet it is a formative learning outcome required in the field. The warm-up is crucial to longevity in sustaining performance disciplines. A performer must be heard, must to be understood, must be able to create authentic theatrical moments, must be free from threat of injury, must be focussed and must have energies concentrated into the performative outcome. The actual doing of the practice to expected industry standards is imperative to performance scholarship. Students must become disciplined in the protocols of performance preparation and procedures. From a PRO-Teaching perspective questions pertaining to what is the appropriate length of time in which this activity should be conducted coincide with my observations relating to the observer understanding of the practice being reviewed:

- what industry contexts of learning are considered to be formative within discipline expectations of the practice?
- do observers have contextual discipline knowledge in performance skills training areas that are industry appropriate?
- how do observers authentically evaluate professional theatre industry processes embedded within teaching strategies that aim to further develop student expertise in the related field of scholarship?

The above observations may be contextualised into evaluation processes by rearticulating formative assessment evaluation of embodied practice in observation dimension 5: use of formative assessment practices:

- does the teacher engage with activities in class that test students understanding and adapt or adopt teaching strategies to further develop their understanding.
The criterion could ask:

- does the teacher embed within the class activities, strategies that develop and test discipline specific requirements relating to professional industry contexts of practice?

Directly following on is *observation dimension 6: encourages deep learning outcomes:*

- do the students reflect and share what they know about the topic, relate their new understanding to knowledge in other domains and hypothesise about implications for new problem areas?

If *observation dimension 5* is rearticulated as outlined above, *observation dimension 6* clearly follows in terms of evaluation structure. If we consider that students will be expected to develop and apply strategies to facilitate and conduct warm up activities (as an example) through participation in, and expression of the discipline specific activities as part of formative assessment practices they will be:

- reflecting on their understanding of the benefits of the warm-up for performance preparation.
- assessing discipline implications relational to the protocols of performance
- applying their burgeoning skills to practice specific activities
- developing their practice knowledge base for participation in other domains such as rehearsal related processes.
- hypothesising about complimentary practices that can be included in the warm up for explicit reasons.

In conclusion I refer to Noice and Noice (2006) who discuss learning theory through a performance, training lens and in doing so align aspects of the practice with current theories of embodied cognition. They propose that performers

unwittingly employ most of the learning principles identified by cognitive researchers by employing devices such as extensive elaboration (imaginative embellishment) perspective taking (adopting the perspective of one character in a narrative), self-referencing (relating material personally to oneself), self-generation (remembering one’s own ideas better than ideas of others), mood congruency (matching ones mood to the emotional valence of the material), and distinctiveness (considering details that render an item unique). (pp. 14–15)

When theorised from this perspective performance training implies that formative approaches to teaching and learning are ‘already critical, political and marked by difference (Dolan, 1993, p. 418). Altbach et al. (2009) suggest that teaching, learning and assessment in the context of global higher education may benefit from focussing more on what and how students learn as opposed to what teachers do (p. 114). Consequently PRO-Teaching processes of performance practice based
courses in CAT and other artistic disciplines could be developed with the uniqueness of unusual facilitation practices that foster embodied learning experiences in mind. If the PRO-Teaching process is equitable in its evaluation practices it will recognise that within the processes there is the potential to appreciate the distinctiveness of professional and vocational training delivery. In doing so the PRO-Teaching will notably be supporting the way embodied learning facilitation compliments creative scholarship. In doing so it will recognise that within the School of Education and Professional Studies, Bachelor of Arts courses are not specifically aligned with teacher training scholarship in curriculum based learning. As Altbach et al. (2009) suggest notable changes are emerging in relation to teaching and learning assessment, particularly among universities that recognise the ‘complex interplay between curriculum innovation and approaches to teaching, learning and assessment’ (p. 116). Implicit to this discussion, is the suggestion that similar recognition to experiential and embodied teaching and learning practices will have larger implications relating to promoting an overall awareness of how the Contemporary and Applied Theatre Degree is positioned and consequently supported within the School.

Overall the PRO-Teaching process contributed to my continuing desire to develop my facilitation skills in the learning environment. The review process while generating numerous questions pertaining to review challenges unique to my teaching practice was consistently supportive, encouraging and provided me with valuable evaluation data. This reflection aims to propose however, that there are potential benefits in rearticulating some of the criterion for the benefit of aligning the way facilitation in performance discipline courses, is measured and evaluated in the program. While it is acknowledged that the PRO-Teaching model is an important performance indicator for continued development of excellence in learning and teaching areas, it is also important that performance indicators be consistently developed with ever-changing, diverse and multi-disciplinary areas of scholarship. As Ramsden (2006) posits, academics who review teaching outside their individual fields are vulnerable as they may be criticised as having ‘scanty and biased knowledge of their colleagues teaching abilities; [and] their judgements [may] ‘correlate poorly with other measures’ (p. 129). In appreciation of the review process and the expertise of PRO-Teaching observers, it can be re-iterated that measuring teaching quality in creative arts courses is challenging – difficult even – as learning facilitation is affiliated with complex elusive phenomenon which privilege the embodied and aesthetic experiencing of pervasive expressive life-experience behaviours.

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CHALLENGES ASSOCIATED WITH ASSESSING TEACHING DELIVERY


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10. EVERYONE’S A CRITIC: THE POWER OF PEER REVIEW

A Pedagogical Case Study of Quality Enhancement Methods in a Music Education Course

INTRODUCTION

It is common practice in the modern tertiary environment for academic staff to receive ongoing critique from their students in the form of semesterised course and teacher evaluations, and from supervisors as annual academic reviews. While the feedback from students and supervisors is useful for teachers’ self-reflections and the possible streamlining of course content and delivery, it has been suggested that peer review is likely to of greater, particular value:

Faculty are particularly well qualified to critique their colleagues’ teaching when the objective is to improve quality of instruction because they are in a position to assess several aspects of teaching better than students, academic administrators, and other constituencies of the academic community. (Keig, 2000, p. 67)

In speaking to collaborative, peer assessment, Gaunt, Creech, Long, and Hallam (2012) also promoted peer co-mentoring as an effective vehicle for teacher reflection and development, noting it as:

a collaborative developmental process, with a mutual exchange of knowledge, skills and experience aiming towards shared learning and helping individuals to place their own development within wider cultural and educational contexts. (p. 40)

I considered these opinions through the lens of my parallel careers as both teacher and performer where critical review is an inherent characteristic of both professions; that is in academic environments a teacher is expected to respond to and reflect on supervisor and student evaluations while in performance environments the critical reviews of agents, managers, other musicians and most importantly, audiences can ‘make or break’ a career. So, while accepting that we work in fields where ‘everyone’s a critic’ teacher/performers must consider which criticisms are most useful in improving their work/artistic performance outcomes.

In 2012, my experience of the collaborative PRO-Teaching project encouraged me to reflect on the benefits of receiving objective feedback from faculty colleagues.
of my own teaching practice. It also raised my awareness of the personal learning to be gained through observation of a colleague’s teaching practice, particularly the communication of ideas from teacher to student. As a component of the PRO-Teaching sequence, two observers (the peer partner and a neutral observer from a different discipline) were present in a colleague’s classroom to observe and analyse aspects of the teacher’s method of presentation and communication. In following weeks the peer partner became the presenter and this cycle of presentation and observation was repeated twice during the course of the semester. In each of the two observation sessions, data were collected as both peer observation notes and student evaluations of teaching. At an informal follow-up meeting, the three colleagues discussed the teacher’s lesson objectives and the perceived student learning outcomes. The teacher’s strengths were highlighted and potential improvements to course structure and delivery were discussed and considered.

I found my engagement in PRO-Teaching to be a stimulating and rewarding process of collegiate interaction; therefore, when invited to contribute to PACES, I recognised an opportunity for a cross-generational mentor/mentee collaboration with a colleague from the Jazz Voice teaching team which I lead.

MENTORING

Interestingly, early in my career, I attended a conference where a respected keynote speaker announced, “I don’t believe that I have ever had an original thought.” She went on to define her personal journey and evolving pedagogical approach as having developed through the study and adaptation of ideas from all the pedagogues who had gone before her. As I teach and research in an emerging field of pedagogy, I recognise that my teaching approach has evolved through my adaptation of existing ideas and methodologies; and, that my learning and knowledge base continues to grow through informal observation and planned interaction with pedagogue/mentors across a wide range of voice-related disciplines. These interactions are made possible through intra-university peer discussions, networking sessions at conferences and seminars, and through extensive reading of science-based research papers and texts in my field. So it is that I find myself in full agreement with that keynote speaker and propose that as ‘life-long learners’ we are, in actuality, life-long mentees. This realisation caused me to reflect on my understanding and interpretation of what a mentor/mentee relationship actually looked like and what expectations I had in terms of outcomes from such a relationship.

Developing the Mentor/Mentee Relationship

I knew mentoring to be an historical practice in many fields (e.g., education, art, religion, literature, sport, the apprenticeship tradition and music). According to the Oxford Dictionary (2014) the term ‘Mentor’ originated in the mid-18th century “via French and Latin from Greek Μεντόρ, the name of the adviser of the young
Telemachus in Homer’s *Odyssey.*” Its definition describes a mentor as an experienced and trusted adviser suggesting that, traditionally a mentor is expected to be older and more experienced than a mentee.

To a degree, this description aligned with my past experience as a mentor; however, it was not the whole picture. I considered that beyond the “trusted advisor” role the best outcomes for the mentee could be achieved through mutual respect, collaboration, problem solving and most importantly, through mutual listening and observation. Reports in the literature support this view attributing relational success to the mentor’s ability to actively listen to the mentee’s ideas and concerns. For example, Schechter (citing Alsbury & Hackman, 2006) proposed that, “…mentees most valued their mentor’s availability to listen and provide different perspectives, ask reflective questions, and provide general support throughout the year (Schechter, 2014, p. 54). Crow and Matthews (1998) suggested that an emphasis on reflective thinking is the most important component of mentoring programs while McCann (2013) proposed a list of characteristics and dispositions that all mentors might share, noting that these attributes do not guarantee a successful collaboration unless the mentee and mentor are incompatible:

…for example, they should be accomplished teachers and good communicators, and they should be supportive, empathic, reflective, and knowledgeable about the discipline. At the same time, there needs to be a good fit between mentor and mentee, and the generic list of characteristics does not reliably predict that a mentor will work well with any new teacher. (p. 89)

Generally, the literature suggested that the mentor’s role is to guide, to give advice, and to support the mentee and there is an expectation that the mentee will gain valuable experience and guidance working alongside the mentor. However, this seemed a very narrow view; couldn’t there be some reciprocity, with the mentor also benefiting from the relationship? Schechter (2014) considered that mentoring often includes receiving new ideas and perspectives from mentees. In support of his position he cited Daresh (2004) who proposed that, “attentive mentors, can turn this potential to a new source of knowledge, insight and talent, later to be integrated into their own professional growth and advancement process” (p. 505). I considered that some equal benefits for mentors might include exposure to new and diverse perspectives, improvement of their teaching/listening skills and the opportunity for continued growth professionally through reflection on their own practice.

Conway, Albert, Hibbard, and Hourigan (2005a) argued forcefully for a collegiate sharing of ideas and experiences as the best method of effecting positive educational outcomes for our students:

We as a profession may need to re-think our idea of what professional development really is. Is it about a one-day “let’s get pumped” experience led by “experts” in the field, or can we expand our experiences to be more meaningful? What about developing sharing communities of arts teachers who, as the real
experts in many cases, get together to problem solve and exchange ideas? What about ongoing, regular workshops for arts educators, where progress and change is shared among the group? Somehow, we need to get beyond “token” days or hours of sharing good ideas and move toward meaningful experiences where the voice of the teacher and the effects on students are being discussed and felt. (p. 8)

While I hold a personal view that conference/symposium-style professional development plays a useful role in building a teacher’s foundational knowledge, I can appreciate the sentiment expressed by Conway et al. (2005a) as, in my experience, any lasting outcome from these mostly passive learning activities is developed through a subsequent, active exchange of information with colleagues and a planned application of the new ideas. Similarly, Kolb (1984) maintained learning as the process whereby “knowledge is created through the transformation of experience” (p. 26). Russ (1998) in discussing Kolb’s “learning cycle” suggests that:

the four stages of the cycle imply, first, a direct experience in which either or both thoughts and feelings are generated; second, a process of reflecting on thoughts or feelings; third, a drawing of rational conclusions or emotional insights about experience; and fourth, the implementation, testing, and initiation of action from the experience. (p. 304)

Kolb’s cycle is highly relevant to the teacher/student learning process and aligned well with my conceptual understanding of a productive mentor/mentee relationship. The following sections of this chapter describe the strength in collegiate collaborations where needs-driven ideas become actions through reflections of shared experiences and insights.

The First Steps

I am fortunate to lead a cross-generational teaching team and so it was both convenient and appropriate to invite one of these younger, less-experienced teachers to join me in the mentor/mentee partnership. David is a career jazz musician, an outstanding pianist, a talented singer and a young teacher who is respected and valued by his students and colleagues alike. At our first informal meeting, I introduced David to the concept of a mentee/mentor relationship and together we perused the PACES workbook, taking special notice of the scheme’s aims:

The scheme aims to inform and equip academics with skills and strategies to reinvigorate their course. It provides opportunities for teachers to share ideas; to discuss improvements and to develop future educational innovations. PACES brings together teachers and researchers with a common interest in building peer capacity to enhance learning and teaching. (p. 5)

Following these intentions we identified the weekly ‘jazz vocal workshop’ as the class where observations of teaching would be most convenient and where we might
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best work together to stimulate the students’ learning through an enhanced class experience.

Typically, and as a component of their performance study program, undergraduate students enrolled in the Bachelor of Music at the Queensland Conservatorium attend weekly workshop classes focused on their instrument specialty. The classes are designed to engage a cohort of student musicians as an audience where they are able to observe fellow students’ performances within a structured, supportive environment of critique proffered by the attendant instrumental/academic staff.

Over seven years, I had developed a different and independent system for the Jazz Voice workshop where each student singer was rostered twice per semester as the performer and once per semester as a member of a ‘peer review panel.’ This system ensured that in each semester, every student in the Jazz Voice cohort would be called on to not only perform but to also reflect and comment on their fellow singers’ performances. In addition to an oral critique from the panel, members of the Jazz Voice teaching team offered supporting commentary and further comments were invited from the audience. All students were required to document their critiques of the performances in a reflective journal submitted at the end of semester.

Before the implementation of this roster system only the most confident students had volunteered to perform and only the teachers and a few outspoken students in the audience had offered feedback to the performers. Following implementation of the peer panel system, the singer-students’ course evaluations indicated that the voice workshop was a highlight of their academic week and that peer critiques of their performances were a valued feature.

David had attended the weekly Jazz Voice workshop for three years prior to our PACES collaboration and in 2012, David and I had cooperated to create a resident workshop ‘house band.’ This initiative was intended to present the singers with a ‘real world’ performance experience and to reduce time losses that occurred regularly through band/accompanist interchanges between each performance (‘changeover’ activity was limiting the number of singers who could perform each week). The ‘house band’ rhythm section was comprised of third year, student musicians who were strong sight-readers but who had limited backing-band, accompanying experience. David undertook to mentor their accompanying skills, individual playing and intra-group cohesion as they ‘backed’ the jazz singer students in real-world gig situations (i.e., no rehearsal, just a talk through of the singers’ lead-sheet arrangements). This mentoring stance constituted a leadership role for David with the band instrumentalists, while I guided the student singers in matters of style (e.g., phrasing, rhythm articulation), vocal technique, storytelling and band leadership (i.e., talking the ‘musos’ through the arrangement in advance of performance). I also worked with the student audience in developing constructive critique behaviours particularly when they presented as review panelists.

At our first PACES meeting David and I agreed that he should lead a number of the Jazz Voice workshop classes while I undertook a mentor/observer role. At this
meeting we were able also to generate an outline of three key points to guide our mentor/mentee collaboration, notably:

- ways in which I could assist David develop his class teaching skills through mentor observation and feedback, pedagogical modeling, discussion and advice
- ongoing reflections of our respective observations with open discussion of the positive elements of teaching and objective criticism of areas that needed improvement (what was working and what wasn’t)
- planning discussion, negotiation, development and implementation of ideas for course improvement while recognising and integrating our individual ideas (Figure 10.1).

David had observed me as lead teacher in the vocal workshop classes over a number of years so after two observations (concurrent weeks) where David ran the class, we met to reflect on the strengths and differences in our respective presentation and communication styles. We followed our plan and discussed our observations in line with the first two focus points (i.e., training and reflection). I continued to observe David as he led the weekly workshop class, offering feedback on his developing teaching style at our regular, post-class reflective sessions. But, in addressing the third focus point (i.e., sharing and developing ideas), the mutual benefits of our cross-generational collaboration became evident; while I could offer important pedagogical insights grounded in a rich experience of performance and teaching, David brought innovative ideas and specific skills with regards to integrating Internet and computer technologies into the teaching environment. As we discussed possible improvements to the format of the weekly workshop, David helped me to visualise the development of a purpose-built website which would encourage an interactive engagement of the whole student body.

We brainstormed ideas for an online site where the entire cohort would critique their fellow students’ vocal performances through a ‘live’ forum format in real-time. This
was an exciting plan and it appeared to be a positive step towards my ongoing quest for full and active participation of all singer students within the workshop class format.

Supporting evidence was found in the literature for this form of collaborative learning. Laurillard (2009) proposed that online tools could support collaborative learning, and that enhanced learning experiences could be delivered through the use of integrated technologies. Further, she suggested that mobile devices can, “facilitate the link between students allowing them to collaborate on a collection of data” (p. 7). This theory appeared to support our goal to engage the jazz singer cohort in both the sharing and discussion of the actions they were taking as both performers and critical listeners (as audience members) within the workshop class.

Goodyear (2005) emphasises the importance of human-human interaction as being essential to networked learning, suggesting that networked learning can be used to promote important connections “between one learner and other learners; between learners and teachers; between the learning community and its learning resources.” He goes on to describe mediated communication, as being “essential to networked learning” (p. 83). In line with this view, we planned to use the students’ online observations to focus a spoken discussion of each of the weekly class performances whereby they might improve their own singing performances through heightened observation skills and the sharing of positive critique.

DEVELOPING AN ONLINE SYSTEM OF PEER REVIEW

The use of peer assessment as a tool to enhance student learning is gaining traction in the literature. Lebler (2008) commented that, “assessment as learning involves students in the act of assessment as active participants and this involvement is intended to produce learning in itself” (p. 193). He suggested also that peer assessment develops music students’ ability to “recognize good work and make professional judgments” (p. 194). This mode of active participant assessment was integral to the workshop class through the ‘peer panel’ system; however, the panel system had not engaged the whole cohort of students as I had hoped.

David’s idea of a purpose-built website with an online peer review system to engage the entire student body was to become the major benefit of our collaborative, intergenerational partnership. At successive planning meetings, we determined that within the area-specific webpage we might also establish a forum space accessible to all students and teachers. We imagined that the site might include:

• a teacher-networking page to support the team-teaching (lesson rotations) involved in the Jazz Voice performance study course;
• an “Ask The Teacher” function to reduce lesson interruptions brought about by recurring student questions regarding coursework and assessment particular to the Jazz Voice curriculum; and,
• a social gateway for students and staff to improve teacher/student communications
Most importantly, we needed the site as a department asset, and for it to be completely self-servicing – not to be an additional locus for students and teaching staff to manage. The following section describes the outcome of our planning meetings as a four-stage process of planning, design/development, implementation, review and refinement.

**Stage 1. Planning**

On a practical note, we first needed to address how we could build the site with an informed but limited technical knowledge of website design and no budget! While David addressed the practical aspects of the plan through investigations of free hosting sites and existing website templates, we proceeded to refine our plan for a system where all students would be ‘logged on’ and commenting during performances in ‘real time.’ I requested that the student audience should be able to view their personal comments only; the cohort’s comments were to be invisible. David proposed the idea of an “Administrator’s” screen where all comments collated as they were entered. This facility would serve a dual purpose; firstly David and I could moderate the comments as they were uploaded if the need arose (e.g., should a criticism be unreasonable); secondly, having observed the performance, we could invite those students whose online comments would be most useful to the performer to lead the group discussion. In this way issues of technique and performance could be identified and discussed providing grounded and comprehensive feedback to the singer-performer while promoting ongoing training in critical judgment and meaningful critique for the student audience.

As our planning continued we identified areas of general course management work that seemed likely to be streamlined through integration on the website. For example:

**Listed personal email contacts.** This would allow the construction of mailing lists specific to students’ year levels, ensembles and/or class enrolments:

- to ensure that all students received and read all course relevant communications in a timely manner. The website could list their nominated, personal email addresses in addition to the university addresses attached to their enrolment (past experience had shown us that students favour their personal email address for primary communication; the students’ assigned university email addresses were not checked regularly).

**Blogs.** To allow more performance time in workshops, we resolved to create two blogs:

- the first for teaching staff announcements,
- the second for students’ gig and concert announcements.

Students would receive these blogs via email and also alerts would appear on the screens which the students were accessing during the workshops.
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Q&A section. The purpose of this section was to:

• reduce the need for repetitious communications with individual students
• standardise course-related responses from the teaching team.

As a fail-safe measure David suggested that the question should link by email automatically to all members in the teaching team and be marked as “answered” once a teacher had replied.

Links to social networking sites. To leverage off the large social networks already in use by the student body.

Stage 2. Design and Development

Once the planning stage was complete, David took the lead. He explained that when creating a website web developers have two options: to either write their own code or, to use a pre-written code. Given his limited understanding of programming languages, David decided to use a prewritten code. He explained that developers worldwide had contributed existing code snippets called ‘extensions’, these snippets of code ‘snap’ together within a site’s framework to add the desired functionality. David was familiar with a few popular content management systems (CMS) that he could use to scaffold the site (a content management system is software that keeps track of every piece of content on your website). He decided that “Joomla” CMS was most appropriate for our needs as it offered extensions to fit our exact requirements – “Joomla is an open source CMS which enables you to build websites and powerful online applications” (Joomla CMS Support Forum, 2014).

To obtain the look and feel of our desired user interface David explored numerous large directories which offered free, pre-built templates. These templates, built for the most part within the last two years, offered the latest technologies, web standards (such as HTML5, CSS3) and responsive coding which meant the site would be viewable on all systems, mobiles and tablet devices.

In total, the site took around thirty hours to build with much of the time spent learning how to remove system errors through support forums such as “YooTheme – Template Support Community.” We have since discovered that to outsource this work, a site such as ours could be developed for around one hundred dollars. However, having gone through the process and with his newly acquired knowledge, David reports that the construction of a similar site would now take only 5–10 hours at no cost, other than that of personal time and effort.

Stage 3. Implementation

Successful implementation of the website as a vehicle for communication, lesson note keeping and workshop interactions necessitated training the Jazz Voice teaching
team in the detail of the website. The training sessions were designed to familiarise teachers with the site’s functionality, especially the interactive “peer review system” for workshop. Once the teaching team was comfortable with operating the ‘teacher’ and ‘student log’ sections we then introduced the site to the student cohort through a guided PowerPoint presentation at the workshop class. Students were encouraged to work along with the presentation using their Internet devices. As predicted, students were easily able to integrate their comments, performance notes and gig announcements onto the site and we were able to initiate full use of the system in class the following week.

Stage 4. Review and Refinement

We experienced some technical issues on the site over the following weeks. These issues were not unexpected. Professional web development companies routinely implement ‘User Acceptance Testing’ (UAT) prior to releasing a site. What we were doing was releasing a beta version and the UAT would take place live during workshops. Problems were noted and added to a ‘bug register’ as students and staff reported them with ‘fixes’ occurring soon after.

We continued to review and refine the website addressing issues as they arose. These included, user registration and social login implementation, the saving of teacher and student comments into the correct database tables within the site and the necessary restriction of certain areas to ‘Teachers Only’.

For the most part, David was able to successfully remove bugs by tweaking configuration settings and the extensions used within ‘Joomla CMS.’ For more complicated fixes we ‘commented’ certain lines of code within existing ‘php’ and ‘html’ files which essentially removed them from the website front-end. The site was fully functional from day one and bug-free after about a month.

To date, we have identified only two issues which require more focused attention. The first concerns recent hacking attempts on the site. These events have alerted us to the risk of ongoing security threats and the disruption to our intra-department communications when the site has to temporarily close. We have decided to resolve this issue through outsourcing of the server security and maintenance to a company specialising in ongoing site management. The second issue is one of poor Wi-Fi connectivity in the teaching space; currently the Jazz Voice workshops take place in a room where students and staff experience temperamental network connections. Resolution of this issue requires a change of venue and this is being negotiated.

KEEPING THE MOMENTUM

Intra-departmental discussion and reporting of the success of the Jazz Voice website inspired the jazz convenor to create a complimentary website to service the entire department. This new site has direct links to the vocalists web page and to the formal university website creating a complete interface of Internet communication and
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information delivery for all students (singers and instrumentalists) and teaching staff in the jazz area of study.

The singers’ website has engaged all students in the Jazz Voice workshop activity with the online system of performance critique welcomed and embraced by the student body. They are able to now to download a written record of all peer reviews of their workshop performances to inform future performance appearances and for inclusion in their reflective logs. The ‘general notice board’ area (e.g., “gig guide”, “ask the teacher a question” etc.) is being fully utilised as exemplified by the following student communications: “Hey everyone:) Just a reminder to the alto section of continuum to meet in the foyer 11am tomorrow morning xxx See you there!” And, “Can anyone tell me where I find the proforma for the PSP?”

Teachers within the Jazz Voice team have welcomed the online system also. They have reported improved communications with their students and closer working relationships with their fellow team members. They report that the team taught ‘performance study’ singing lessons are more cohesive given their ability to discuss student progress through the sealed “Teacher Reports” area of the website.

A FINAL REFLECTION

At the end of semester, David and I met for a frank discussion of our PACES involvement. As we reflected on the internal relationships between our planned learning concepts and the learning outcomes for the students, including the applied actions (workshops, rostered role participation, online tools etc.) and the ways these actions were influenced by feedback from students and the teaching team – we agreed that the process had helped to build a stronger collegiate relationship characterised by trust, openness and a focused commitment to improving the student experience through innovative delivery and ongoing course development.

In addition to the benefits to our students, we agreed that this particular mentor/mentee collaboration had proved valuable in terms of an ongoing development of our individual teaching practice and further; it had served to combine and consolidate our individual skill sets into a cohesive and efficient teaching team. I attributed this success to our willingness to share the additional workload created by our involvement in the project and to a free-flowing communication and open-minded consideration of each other’s ideas/views. Whether initiated by mentor or mentee, all ideas were discussed and considered before practical merit was raised. David confirmed this view in his final report; “My ideas and opinions were not only recognised, but more importantly valued. And, I appreciated the time to meet and casually converse about all aspects of the project, working together to develop an action plan with clear goals and objectives which would see our combined vision to the stage of completion.”

At the outset of our mentor/mentee programme, we had no idea that the relationship was to be the beginning of a journey, rather than being an isolated moment in time. We believe that ‘time’ was key to the success of the collaboration; that is, making
time to participate in the first instance, secondly, taking time to communicate and thirdly, acknowledging the timeliness of our collaboration and the opportunities it presented. This ‘time’ commitment has fostered a valuable ongoing, productive and collegiate conversation and given us insight into how deliberate and informed action can improve teaching and learning experiences for our students.

If as the literature suggests, ‘successful mentoring is a reciprocal and joint venture’, then David and I met these goals and our collaboration was very successful. We believe that our experience is not unique to the Australian context but could be the outcome of an open and collegiate mentor/mentee relationship in any educational context where excellence in teaching and learning is the goal and where there is a will to encourage and utilise cross-generational skill sets to create a flexible yet cohesive teaching environment.

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11. FROM 1–2–1 INSTRUMENTAL TO LARGE CLASS ACADEMIC TEACHING

A Case of the 21st Century Conservatoire Lecturer

INTRODUCTION

Conservatoires have long adopted the master-apprentice teaching model to vocationally prepare students for linear-careers. Although currently undergoing reconsideration in Australia, the ethos of one-to-one teaching remains strong and is deemed highly valued by music students, teachers and musicians alike. As is common for institutions of artistic excellence Australian conservatoires, as do those worldwide, generally have a smaller cohort of students. Thus, a lower student-to-teacher ratio than other parent university sectors is common.

As such, Bachelor of Music (BMus) students are educated in an intimate environment supported by a flexible personalised curriculum within broader educational criteria and learning outcomes. The primary focus for these performance students is their “major study” i.e., main vocational purpose. Thus, core and elective literature subjects tend to suffer comparatively lower prioritisation. Adopting highly engaging, thought-provoking education catering for the diversity of vocational expectations and education motivations becomes exponentially challenging in large classes that exist as a minority within the Bachelor of Music program of study.

This chapter will explore the reflections of one conservatorium lecturer conducting large class teaching of a first-year vocational preparation course. An investigation of the lecturing and course transformation over a 4-year period using peer-guidance will parallel an auto-ethnographical account of a musician embracing an academic career. Factors contributing to this analysis such as macro- and micro-environmental influences on the music industry and tertiary music education will also be considered.

The implications of this critical evaluation may serve as a guide to early career academics transitioning from an active industry career, as well as those from the broader university community who are new to large-class teaching.

AN AUTOETHNOGRAPHIC ACCOUNT

Hindsight is a bittersweet gift. When I reflect upon my 14-year journey from sessional one-to-one tutor, to lecturer of small (<20 students) elective courses, then large (>160) class lecturer it is not without a mental grimace (and at times, the
urge to drink). Thoughts such as “If only I had known ...”,” “How was I expected to know ...” and “Had the subject not been so new ...” tend to be my knee-jerk blame commentary. However, in my more lucid moments, I understand that my experience was the product of my deeply embedded music education, a tradition redefining its place within the context of current university employment.

My early development as a classical musician was reasonably comparable to others: private one-to-one lessons with a long suffering teacher and hours of anti-social practice 8 years prior to high school completion. Followed by an audition for a prestigious tertiary music institution. My high tertiary entrance score was considered an unnecessary bonus. Upon entry, designation to one-to-one major study lecturers who delivered very dogmatic, rigorous, and exceptional bespoke clarinet, piano and saxophone performance education. There were some literature and theory subjects delivered in small classes (<30), but I really did not pay attention to those despite the exceptional quality of the teaching. Ensemble involvement held more respect as it was practice for the “real-world” plus the gratification that short-term projects such as these guaranteed. Along with “gigging” and scholarship opportunities, my undergraduate performance music education can be summarised as an intense oxymoron of single-minded focus on, and denial about, a performing career as an orchestral clarinettist.

Teaching was something I fell into and began as a one-to-one and ensembles peripatetic school woodwind tutor from my first year as an undergraduate (aged 16). I would not have boasted that I was a good teacher, however I did learn “on the job” and a solid reputation developed over time. By the age of 26 I was sessionally employed by the Queensland Conservatorium to teach one-to-one clarinet and saxophone students. When I inquired how I should teach within this context, I remember my original one-to-one lecturer simply stating, “just like me.” 7 years later the institution invited me to redesign/teach the Woodwind & Brass pedagogy course, and 5 years following to design, develop and deliver the My Life as a Musician strand of vocation preparation courses.

It must be mentioned that aside from experiencing an undergraduate subject dubiously titled “Studio Music Teaching Techniques”, I had no education-based qualifications. A quick retrospective analysis suggests that I was, by a large percentage, not alone amongst my fellow conservatoire employees. Indeed, I would hazard to state that I learnt more about “delivering” theoretical lectures via my Masters of Business Administration (MBA) enrolment. For this, lecturers encouraged students to engage with PowerPoint presentations, inclass discussion, and course module books facilitating learning beyond the required texts. This was very foreign to my practical-based conservatorium upbringing. However, beyond this perceived insight into what so-called “normal degrees” delivered, terminology such as “blended learning”, “the flipped classroom”, “student retention”, “constructive alignment” and the most important “student learning experience” was still an unknown. All I had was my grass-roots industry experience, and teaching practices inherited by my past instructors.
What the above personal story contextualises is the lack of prior formal teacher education common to most conservatoire lecturers worldwide in the 21st century owing to their “snowball” career paths. This also highlights a student attitude towards conservatorium training, which will be argued as unchanged in spite of university response to student and graduate expectations. The aim of the following narrative is to allow any early-career academic to differentiate between personal teaching deficits and workplace environmental influences, aided by peer review of teaching.

In summarising the purpose for using auto-ethnography Chang (2008) states that:

> autoethnography is becoming a useful and powerful tool for researchers and practitioners... e.g., educators [and that it is] an excellent vehicle through which researchers come to understand themselves and others. (pp. 11–12)

This style of research will be used throughout this chapter, examining the layers of consciousness (Muncey, 2010) that can occur throughout the peer review of teaching process. To contextualise my transition to large class teaching: the conservatoire environment, the music industry and the course in question need first be considered.

### THE EVOLUTION OF THE CONSERVATOIRE IN AUSTRALIA

**– A BRIEF OVERVIEW**

The 19th century conservatoire model was initially conceived in Europe as a linear-career vocation preparation institution for opera houses and orchestras (“Conservatory”, 2014). Australia adopted this form of training however owing to the Dawkins reform of the late 1980s most amalgamated with what is now known as parent universities (Dawkins, 1988; Schippers, 2011). Continuing with the conservatoire tradition Queensland Conservatorium Griffith University (QCGU) entry remained via a successful performance audition with secondary consideration to pre-tertiary academic results. One-to-one teaching has persisted as the cornerstone of the Bachelor of Music (BMus) program of study and lecturers continue to be sourced from orchestral, opera, composition and active jazz employment affirming master-apprentice style teaching generically called the “conservatoire model”.

Aside from infrastructure, conservatoires also enjoy their universities’ appreciation for graduate employment outcomes. For students enrolling in a tertiary degree in music, career options are as plentiful as the career term “music” is broad (Hannan, 2003, 2013). Compared to non-music programs of study such as Bachelor of Nursing, graduates of a BMus have conceivably less determinable available employment. As linear careers such as fulltime orchestral or opera positions are declining in all western countries, the portfolio careerist is gaining more prominence as a viable graduate outcome (Bartleet et al., 2012; D. Bennett, 2012a, 2012b; Bridgstock, 2009, 2011a, 2011b, 2013; Bridgstock & Carr, 2013; Sorensen, 2010; Throsby & Zednik, 2011). Income is more likely to arise from a variety of areas such as performance, teaching, recording, composition, arranging, and arts management as well as non-music occupations (Throsby & Zednick, 2010;
In addition to adopting a portfolio career, many musicians find themselves adjusting to a “protean career” where obligatory new skills and areas of the profession are more likely learnt “on the job” (Bartleet et al., 2012; D. Bennett, 2012a; Bridgstock, 2007; Enache, Sallan, Simo, & Fernandez, 2011; Hall, 2004; Segers, Inceoglu, Vloeberghs, Bartram, & Henderickx, 2008). Yet training is still centred on producing graduates for a 19th century industry that is becoming an increasingly non-sustainable pandemic.

THE 21ST CENTURY MUSIC INDUSTRY

A number of influential factors have determined the current international music industry to be in an ongoing state of flux. These include the increasingly rapid changes in and accessibility of: technology, social media platforms, creative commons copyright, independent record labels, revision of entertainment venues, and crowd-funding programmes (Cutler, 2010; Myles-Beeching, 2010; Simpson & Munro, 2012; Tschmuck, Pearce, & Campbell, 2013). The music industry is also not immune to the volatile global economy. Therefore this combination of environmental factors has impacted audience attitudes towards music consumption such as preferred pricing and accessibility. David Bowie declared over 10 years ago, “Music itself is going to become like running water or electricity” (Pareles, 2002) perceived as free and taken for granted. The imperative for tertiary music institutions to instil the awareness and application of non-music business skills for artistic, let alone financial, sustainability has therefore become more crucial.

MY LIFE AS A MUSICIAN IN CONTEXT

In 2011, the Queensland Conservatorium introduced the My Life as a Musician (MLaaM) vocation preparation strand to its programme with the overarching aim to equip students with non-music skills supporting degree and industry immersion. The first of its kind in the world to be delivered in conservatoires, it possesses no prior model for reference. A core compulsory first-year course of the Bachelor of Music and Music Technology degrees, it averages 150 enrolled in first year; then 70 in the third and 20 in the fourth year of study.

The first year course is one of only two for the entire program of study that is classed as “large class” i.e., greater than 80 students to one teacher (n.a., 2011). The other, Exploring Music – an overview of music history, engages with a series of guest external and internal lecturers facilitated by the course convenor, supported by tutorials and a tutor team. Whereas, currently 75 per cent of MLaaM lectures and the four assessment tutorials are conducted by the sole lecturer/course convenor: me. All other courses involving aural training, music theory, music technology core courses, ensemble classes and course electives have considerably smaller class cohorts. Thus for the more than 800 enrolled students across two campuses, the student to teacher ratio is 11:3 (“Consolidated University Plan KPI Report as at October 2013”,)
2013) feeding an intimate education experience expectation. In summary MLaaM, in addition to being new to conservatoires globally, has the capacity to develop a unique education environment within this Bachelor of Music/Music Technology program of study.

*From One-to-One to Small Class Higher Education Teaching*

My adjustment to teaching an elective small class course called *Wind & Brass Pedagogy* was relatively smooth. Students were responsive, engaged in learning and the class size was such that “crowd-control” was not a consideration let alone a concern. Housed in a rather small room for 18 people, class attendance was virtually 100 percent and it was rare for anyone not to contribute or attend unprepared. The learning curve for me was more so with course design, thus course convener and student constructive criticism was welcome. As all students had elected the subject with the desire to teach during/post-graduation, the learning purpose was implied and required very little explanation or justification. For this and my one-to-one teaching, my sessional contract described me as a “lecturer.” My transition to large class teaching after one semester of MLaaM inspired me to reassess that label.

*From Small to Large Class Higher Education Teaching*

The first delivery of the MLaaM course included a section titled “Sound Making: Instrument and Body” (SM). This had previously possessed an independent course code involving intimate workshops for all Bachelor of Music students regarding perceptions and applications of sound and movement within the professional performing domain. However, as MLaaM required room to fit within the BMus curriculum, the solution was to place a smaller version of SM within the MLaaM course. Given the opposing learning outcomes of the courses, all lecturers knew this might end up a “square-peg-in-a-round-hole” event. One challenge was linking the two subjects’ assessment items within the course. The most aligned assessment task required students to write 200 words reflecting on each lecture/workshop. The justification of the latter is supported by Donald Schön’s concept of reflective practice (1983) considering values and theories that “inform every day actions” (Bolton, 2010, p. 19) thus leading to developmental insight (ibid.). In other words, deeper consideration and reflective understanding of what it takes to be a musician within the 21st century.

*Reflections from Behind the Lectern*

The following reflection represents my impressions of teaching MLaaM for the first time. My misperceptions may serve to “strike a chord” with other early-career academics new to large-class teaching.
From my perspective, the students were engaged with learning. They laughed at my jokes, asked quite a few questions and seemed attentive in class. One student was pretty vocal and was the one to count on when no one wanted to respond to a question. Considering the course was developed quickly and at such short notice, I thought I had prepared as best as humanly possible. The course had never been taught before and was based on new concepts, as such scholarly information was scarce. I was relying on my industry experience, qualifications, and what I, and my professional colleagues, understood to be tools needed as future musicians. The class would applaud after every lecture. What a great affirmation! Perhaps I was a natural at large class teaching!

In Front of My Lectern

Three experiences occurred that semester that made me seriously doubt my abilities as a large class teacher and designer of this subject, or for that matter a teacher at all.

Firstly, another sessional colleague suggested that she had seen a Facebook comment that my MLaaM class was boring. This was ironic considering I had just completed a lecture on professional industry networks. It also highlighted that there was a form of student feedback about my teaching that was in real time for all to see except for me.

The second event occurred when a highly experienced visiting lecturer gave an excellent presentation. She was very skilled at contextualising the subject for all the music disciplines, offered intelligent thought provoking questions, and unpacked the information in a digestible uncluttered manner the students could relate to. By comparison I realised that in spite of my previous experience and knowledge, I was poorly equipped with skills to communicate to such a class. This was personally embarrassing considering my status as a pedagogy lecturer. To make matters worse, I overheard a student state “I actually learnt something in this class!” implying that in mine, she did not.

This was the first time I had witnessed Erica McWilliam’s concept of the “yuk/wow!” generation (2005). Relating to teaching McWilliam asserts “[t]he space between Yuk and Wow is the time that it takes a child to decide whether s/he likes something or not” (2005, p. 2). One may say “but this is the opinion of just one student!” but as McWilliam suggests “[w]e have to start to think about what it is that engages kids, and it won’t necessarily be the things that engage us.” Donald Bligh’s 1972 study (as described in Biggs & Tang, 2011) highlighted among other revelations that “[l]ectures cannot be relied on to inspire or to change students’ attitudes favourably, although many lecturers believe their own lectures do” (Biggs & Tang, 2011, p. 136). In spite of this, the literature abounds in publications promoting good in class teaching practices, however as I was to discover, lecture presentation was only one element to effective teaching. It was never the students’ fault for failing to engage with my teaching, but mine. As a musician, my philosophy is “bad feedback is as useful as good feedback” as it
forms the catalyst for improvement and lifelong learning. And there was more to come.

I read and marked the reflective assignments. It occurred to me that this was not the most effective form of assessment considering the students’ stage of their degree/career and therefore lack of inherent ability for this task. However this style of assignment gave me a true understanding of my core skills as a lecturer and how the content had been interpreted. Although some students were able to understand the vocational purpose to the course, phrases such as “I can’t see how this applies to me”, “Why are we learning this?” and a variety of misconstrued perspectives were predominant.

The key messages I received from these disappointments were: student response in the lecture theatre does not necessarily mean engaged learning, rather students had participated in “surface learning” i.e., the tasks set had been achieved without understanding the deeper educational purpose (Biggs & Tang, 2011); the information was not contextualised for the students; my concept of the lecture was not an efficient learning tool for this class environment; and I had not correctly gauged the culture of the students nor taken the time to allow them to understand their forms of assessment, rather assuming their prior education had informed them. Above all, the assessment was not constructively aligned with the course content and although well-intended, the Sound Making topic did not belong within the course. Finally, in a great demonstration of hypocrisy: in demanding the students be reflective, I was not so myself.

As considered as this may sound, I was not so at the time. The frustrating reality was that I had abundant music industry experience, but no skillset to ensure its communication and value to students. Career theorists Ruth Bridgstock and Lauren Carr identify with this problem regarding the related topic of teaching Creative Enterprise (CE) to first-year students:

Tertiary educators must be provided with sufficient support and professional development to implement CEE [Creative Entrepreneurship Education] curricula into their programs. It is valuable but not sufficient for teachers to be creative practitioners themselves – while teacher – practitioners (sic) will have useful entrepreneurial expertise to share, being competent in CE themselves does not necessarily mean that teachers are capable of teaching CE. (2013, p. 30)

This may appear to be common sense to seasoned academics. But, it does need to be taken into consideration that my practice as a one-to-one lecturer and long-standing music industry participant had never exposed me to this level of educational discernment. What introduction to university teaching training I had received was minimal and as Carbone affirms did “not include discipline specific content” (Carbone, 2011, p. 84). I now felt my position on the higher education expertise continuum was at the Neanderthal stage. Stating as such to my work supervisor, he suggested, “I think you would benefit from a peer review of teaching programme.”

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A NEW FORM OF FEEDBACK (NOT FACEBOOK!)

During 2012 I participated in the Griffith University-wide initiative PRO-Teaching and in 2013 a similar programme titled the PACES. The first I participated as a peer mentor and mentee, the second solely as mentee.

This would be the first time within my 23-year teaching career I was to be subjected to observation, scrutiny and feedback from educational experts. This is usually unavailable to studio music teachers owing to its peripatetic nature and non-institutionalised mode of employment (Elgermsa, 2012). SET was one practiced feedback mechanism. However, not ideal feedback within the conservatorium environment as the teacher could identify the survey participants considering the small numbers and individualised major study i.e., the student’s course codes.

I gained understanding of effective and diverse learning styles when I deputised my teaching and observed the products of others’ work through the eyes and results of my students.

Attitudes towards Peer Review

A teaching career without observation is also not unusual within the higher education realm considering the relatively recent introduction of the process to Australian universities (Harris, Farrell, Bell, Devlin, & James, 2008) and other developed countries (Lomas & Nicholls, 2006; Thomas, Abraham, Raj, & Beh, 2014). Regardless, it was not without trepidation that I met with my discipline observer Amanda (de-identified), a fellow pedagogy lecturer at the Queensland Conservatorium and external observer John (de-identified). Preceding the event, I felt genuinely concerned that I had nothing to offer the process, as both people were far more developed instructors than I. In addition, I fancied the process to Charles Dickens’s A Christmas Carol where John was Marley’s ghost informing the arrival of visiting spirits, and to listen to them or be forced to wear the chains of bad teaching for the rest of your life. Perhaps a little melodramatic but there has been a considerable amount of resistance to such programmes, one example being suspected managerial abuse of the review outcomes (Harris et al., 2008). As for the first visiting “spirit”, that was me reflecting on my teaching toolkit.

Ghosts of Teachings’ Past

The PACES succinctly identifies three main types of barriers “which can often cause courses to underperform” (Carbone & Rae, 2012, p. 7): 1) “Internal barriers” involve intrinsic concerns that are usually defined by personal perspectives of reality 2) “External barriers within your control” can be defined as educational and cultural workplace practices, and 3) “External barriers outside of your control” which can include anything from lack of student’s prior learning to the organisational psychological factors such as class size, room allocation and teaching equipment.
(Carbone & Rae, 2012). As with the PRO-teaching programme, it is encouraged to reflect and discuss these with your peers.

**Internal Barriers Identified**

Internal barriers for this music-tutor-turned-lecturer included an inbuilt reservation about my ability to teach a large class of many music disciplines and career aspirations, plus the intimidation of size. In my first year of teaching MLaaM I canvassed various lecturers of music literature subjects asking their opinion of teaching 140+ students. One talented lecturer offered “Oh no! I would hate it! I had to give a guest lecture in Exploring Music and I found the whole event very disconcerting and impersonal. I much prefer teaching in a small classroom with a manageable number!” These insecurities are not solely related to music higher education.

As university budgets are reduced, large classes and “breadth” subjects have become more common resulting in reservation and resistance from staff and students alike, citing a challenge for teachers to conduct student-centred lectures and students to optimally engage (Hogan & Kwiatkowksi, 1998). The student cohort across all university schools is identified as increasingly diverse (Biggs, 2006) and the teaching quality perceived as reduced compared to smaller class teaching (Gibbs & Jenkins, 1992). It is universally recognised that students find the adjustment to the higher education environment from their prior intimate schooling jarring. While the literature lacks specific investigation into large class teaching in music higher education, Kolb and Kolb’s study identifies significant difference between arts and, for example, management education as possessing opposing learning styles and spaces (2005). Relating to class size, they generalise that arts learning and teaching is

individualised, with small classes and individual attention, while management education is organized into large classes with limited individualized attention.

(Kolb & Kolb, 2005, p. 203)

The conservatoire model, therefore, remains completely at odds with the large class medium. To explain this further, the one-to-one teaching environment shall be scrutinised.

**The One-To-One Legacy**

The one-to-one performance-teaching environment usually involves a smaller room. Student engagement is a given, unless rare personality disagreements occur, and is a relationship built on “trust and respect” (Hallam & Gaunt, 2012, p. 82) usually over the course of the degree (3 to 4 years) and has been described as “a cross between parenting and friendship” (Hallam & Gaunt, 2012, p. 83). The broadly designed curriculum ensures choice of repertoire can be a collaborative process between student and teacher based on students’ developmental stage, educational needs and artistic taste. Theoretical/declarative knowledge is immediately applied, and if
not understood then workshopped in a variety of ways using metaphor, imagery and analogy (Lehman, Sloboda, & Woody, 2007) until learning becomes more concrete. As a result, feedback is immediate, specific and usually respected. Thus, the one-to-one teaching and learning environment is dynamic and at first glance not transferable to large class teaching. Traditionally the teacher has been “looked at as a role model and source of identification for the student” (Jørgensen, 2000, p. 68) and independent learning is not just encouraged, but expected. Burwell acknowledges:

...by the time students reach undergraduate level they should have begun to take the lead, in at least some respects, in their own learning. (2005, p. 202)

First year BMus students usually have a 50-minute private lesson per week, 12 weeks per semester. The general expectation is to complete independent effective practice of 3–4 hours per day for the entire year if seeking performance excellence. This is not only based on traditional processes but is often affirmed by teachers using Michael Gladwell’s 10 000-hour rule of success and other music related studies (2008; Subotnik, 2004).

The discrepancy with this requirement is that with all other courses commitment required is calculated by credit-point (CP) weighting: e.g., a 5CP subject would require, including the lecture time, 5 hours of time dedicated to the subject per week of the academic semester. Major study is a 10CP subject contributing towards a 40CP semester. By university standards this would indicate that only 9 hours of practice per week, therefore 108 hours per semester, 216 per year, is required. However, tradition suggests that to succeed professionally, a minimum of 1068 focussed and effective hours per year is more realistic. This is almost 500 per cent of the university allocated subject weighting and 11 per cent more than the total yearly programme requirement. Not surprisingly, a study involving a comparable UK tertiary music institution discovered that

students found their principal study lessons to be overwhelmingly the most important factor in their improvement and development at college. (Presland, 2005, p. 243)

**Barriers Outside One’s Control – Or Are They?**

In contrast to the highly valued one-to-one experience, students place lesser importance on their classwork. Presland’s study affirms this stating:

...disappointingly, the direct benefits to playing of aural, harmony and history were hard for many to see. (2005, p. 244)

Another study affirms that undergraduates viewed academic subjects, including music history, negatively, valuing only ‘practical subjects’ (Arostegui, in Colwell, 2012). One can therefore assume, in spite of its practical application, *MLaaM* is not immune to this attitude.
This negative outlook on core non-practical subjects is exacerbated by the fact that MLaaM is delivered in what is known as the Ian Hanger Recital Hall. Normally used as a performance space, it is the only venue in the Conservatorium that can effectively house the number of people enrolled in the course. Regrettably, the 225-tiered seating is steep, offering no foldout desks for writing or power outlets for computer recharging. Classes are the same quantity as major study lesson time, however as a 5-credit point course, the expectation is not longer than 4 extra hours per week for readings and assessment. In the eyes of a music student, the priority of this topic within the greater scheme of their degree has plummeted before even reading the course profile.

Where major study lessons possess unusually focussed and intense learning environments, large class lecturers are warned, “What is learned after 20 minutes is likely to be learned at the expense of material learned in the first 20 minutes” (n.a., 2008, p. 37). It is no coincidence as to why TED talks are 18 minutes long (Gallo, 2014). Indeed, one student gleefully informed me that if the first three minutes of a lecture does not engage her attention, Facebook is much better place to be. As Erica McWilliam points out, the onus is on the lecturer to discover an attention-grabbing, engaged method of teaching and learning that aligns with current students’ motivations.

They are on about lifestyle, image and being entertained. They are screen-centred, rather than book-centred. For most of us, the issue of sound and audio is peripheral. We think the basic assignment is about words, and that we just put other things around it to titivate it. We need to understand that for this generation, however, ‘remix’ is fundamental and the word is not central. (McWilliam, 2005, p. 2)

One study identified three types of learning motivations towards engaging with MLaaM (Tolmie & Nulty, 2013). This is dependent on the students’ current engagement with, and understanding of, the music industry. These attitudes are:

- “I don’t need this” – an arts-for-art’s-sake student mindset where the coursework would never be applicable therefore “I just want to pass the subject and focus on my major study.”
- “I need this in the future” – students understand they need MLaaM but are struggling with their identity as a current active musician.
- “I need this now” – currently active as a musician, or plan to be very soon, students perceive this information as immediately applicable.

Considering a student-teacher ratio of >140:1 there are limitations to how engaged one’s teaching can be within 50 minutes to multi-disciplines and motivations. An intimate student-teacher relationship mimicking the one-to-one environment is virtually impossible let alone associating all the students’ names with their faces. As a result, assessment feedback is slow by comparison with no holistic understanding of the students’ learning needs and idiosyncrasies. Thanks to the Internet, Google is
the new guru and, unlike the master-apprentice role model, students can instantly verify the validity of teacher and content delivered. The course profile is inflexible once semester is in flight and, as I initially discovered, open to all kinds of delightful interpretations. Furthermore, is subjected to criticism via Facebook and SETs/SECs should one dare remotely deviate from the plan.

*Barriers within One’s Control*

Transitioning to large class with limited curriculum design experience meant designing all learning outcomes, lecture sequence and assessment proved a steep learning curve. This was made all the more challenging owing to the lack of example, and to non-specific texts. A large part of MLaaM course content is based on career theory as applicable to portfolio career musicians. As this genre of research had only recently begun to take momentum, it would not be until late 2012 when a related book to this course would be published. The peer review of teaching process affirmed my decision to undertake doctoral studies based on the MLaaM course design. Construction of support materials for the multi-disciplinary nature of this cohort became a chief priority.

In summary, these contextualised teaching barriers suggest that although large class teaching is accepted in many higher degree domains, it is less so within conservatoires. The culture of low priority for non-major study education is compounded by the 19th century teaching traditions and attitudes towards vocation preparation. In short, teachers from this environment will most likely encounter a longer transition into alternate education conditions than their colleagues from other university schools. The PRO-teaching model is ideal to assist this, and may become a necessity as the one-to-one teaching model’s future existence is further questioned as financially unsustainable within the current university structure (Schippers, 2011; Tregear, 2014).

**GHOSTS OF TEACHINGS’ PRESENT – THE PEER REVIEW PROCESS**

The teaching process was heavily discussed between myself, John and Amanda, analysing what went well, what could be better, what will one do next time and covered a minimum of two lectures throughout the semester supported by in-class paper-based survey tools. Observations from how to communicate my dry humour to positioning myself away from the lectern all sought to assist my request to develop an engaging teaching style. Understanding that directions need to be more explicit, rather than the implicit guidance that one-to-one learning is generally understood to follow, resulted in vocalised and written learning objectives for each lecture. Not only were students clear on what they were learning, but why. However, I discovered there was a deeper level to this technique.

*I thought there were some great aspects to your lecture today Diana.*
Thanks Amanda!
But I really don’t think my own first-year vocal student would be in the headspace of accepting the concept of ‘networking’ yet. Her own ability is rather remedial and she would not be considering herself as an active musician let alone a skilled performer. Also, rather than deliver these concepts – let the students come to it themselves. They tune out and go back to mucking around on Facebook.

I had failed the 3-minute test. Sitting in on other large classes across the university it would appear many others do as well, with students phasing in and out of attention dependent on the activity emanating from the stage. A quick glance at the students’ computer screens revealed a lack of related subject matter to the topic being discussed. Given the globally understood changing nature of university lecture attendance, it still did not mean that those students present in the lecture were actually “there.” Amanda had highlighted that I was refusing to contextualise the lecture subject, rather assuming students could create links to a life they have yet to understand, thus appealing to an intuitive learning capability (Biggs & Tang, 2011). I had to revisit my own first-year learning, recognise the similarities, teach from and to their level. I also needed to mimic the students’ collaborative learning encountered in their major study to contribute to the class learning process, instead of dumping as much information as possible via “wordy” PowerPoint and lectures.

In observing Amanda’s classes, although much smaller by comparison, I was able to gain ideas of teaching strategies from a more seasoned teacher and likewise relate and trouble shoot her barriers from the perspective of a fellow pedagogy lecturer. Of note was our illness in creating text-heavy PowerPoint slides. I could see, from the other side of the lectern, how distracting and cluttering it could be for the students and near impossible to take notes and actively listen. Following the students’ lead, a simple online search for correct PowerPoint etiquette reveals a ubiquitous agreement that too much text negates the message one is aiming to communicate. One blogger states “Congratulations. You’ve just killed a room full of people. Cause of death: terminal boredom poisoning” (Wax, n.d.). Facebook wins again.

While I endeavoured to use engaging tools, such as short videos of interviewed musicians, it was pointed out they were used incorrectly. I, again, was assuming the students would absorb this mode of communication more intuitively given this generation of “screen-agers” (Rushkoff, 1999) or “digital natives” (S. Bennett, Maton, & Kervin, 2008) however they were crying out for tasks that applied to them. Rather “while watching this video I want you to write down all aspects relating to the 10 points of a resilient musician as previously discussed” was more conducive to re-affirming key learning objectives.

As John encouraged, it was time to stop being the “sage-on-the-stage” as the master-apprentice model and become the “meddler-in-the-middle” (McWilliam, 2008) i.e., to get out amongst the students, teach creatively and co-learn. I resolved to take some risks and allow their assessment to align, rather than conflict, with their
major study. However, to do this I needed to further explore their motivations for music learning. What the PRO-Teaching and PACES programmes have instilled in me is a curiosity about my students: Who are they? What do they expect from their university life and their career? I subsequently enrolled in a Doctor of Philosophy degree.

THE GHOST OF THE FUTURE – THE EVOLUTION OF A COURSE

My doctoral research has so far discovered more barriers to learning and teaching. However I now feel more empowered to break through them by utilising not just my strengths, but theirs: the students’. From engaging students with a learning support activity identifying their music career motivations I discovered that there are three categories of first year music students (Tolmie, 2014):

- artist – career risk tolerant, rather seeking personal creative fulfilment
- dreamers – aspirations for highly competitive linear careers
- realists – aspirations for diverse non-linear and/or teaching, self-employment

PRO-Teaching taught me that it was not just the lecturing technique, but the content and course alignment and delivery variety that required revision. My philosophy thus became personalised supportive assessment such as reflective tasks considering students’ personal place and path within the music industry, in order to invoke deeper understanding and application of course content. This included: short online quizzes of theoretical music industry facts; a personalised investigative 5-year career plan and SWOT analysis; and a networking/reflective assignment requiring the student to personally engage with 3 active industry professionals. Overwhelmingly, students suggested this incited their curiosity for their career, promoted independent learning and an ability to practice professional interaction: “The assessment was personally relevant to our lives as student musicians – building on, rather than just duplicating the content lectures” (First year student, SEC 2013), “I particularly enjoyed the last assignment because we got to talk to music professionals” (First year student, SEC 2013) and “This course has also helped me to understand what I would like to do both within my degree and after I graduate” (First year student, SEC 2013). Supplementing this approach, class lectures have evolved to include blended learning as rationalised in Table 11.1.

IMPLICATIONS AND CONCLUSION

What Amanda brought to the experience was an innate insight to the conservatoire mindset that John had yet to inherently appreciate. John was able to offer his stellar educational knowledge and act as a very respecting “guide-on-the-side” i.e., provided advice to allow one “do something with the information, interact with it, manipulate the ideas and relate them” to one’s work (King, 1993, p. 30). At no time did I feel disrespected or vocationally threatened.
Table 11.1. Blended learning strategies for MLaaM 1

<table>
<thead>
<tr>
<th>Learning and Teaching Strategies</th>
<th>Rationale</th>
</tr>
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<tbody>
<tr>
<td>In-class short videos of currently industry-active successful Queensland Conservatorium graduates</td>
<td>Incites group discussion, inspiration for career development highlighting course themes, tasks centred on the videos. These in-class activities allow for the application or identification of theoretical knowledge and “break up” the lecture into more attention sustaining segments. Extra videos were uploaded to the university web-based course management system for those students curious for more information.</td>
</tr>
<tr>
<td>Case studies of real-life music industry scenarios</td>
<td>Problem-solving invites a student-centred approach to education and increases class participation in discussion. This allows the students to demonstrate and reinforce class readings while sharing authentic music industry experiences.</td>
</tr>
<tr>
<td>Specialist guest lecturers</td>
<td>An audiologist, musicians’ physiologist and artistic psychologist analyse relevant musicians’ hearing, body and mind health to promote mindful longevity of career. These lecturers currently engage professionally with the students’ peers and mentors, and are international leaders in their field.</td>
</tr>
<tr>
<td>Q&amp;A Final lecture (1020QCM)</td>
<td>Engaging the class and successful industry musicians inspiring course themes discussion, emphasis on the power of networking and supports final assignment preparation.</td>
</tr>
<tr>
<td>In-class Web-based polling (JPoll) quizzes</td>
<td>Students accessed online polling via their smartphone, tablets or computers. The purpose was to accommodate students less willing to contribute vocally/demonstrably in class, and to allow students to engage with the learning tools that they brought to class. (It may have meant a few more minutes not on Facebook.)</td>
</tr>
<tr>
<td>Facebook group page interaction</td>
<td>This engaged students more confident with online discussion within their own social media forums (other than L@G) and to practically engage with networking further affirming classroom themes and discussions. In addition, one can associate names with faces. In general, 85% of the cohort joins.</td>
</tr>
<tr>
<td>Web-based Course Management System (called Learning@Griffith): official course site announcements</td>
<td>To include students not able to attend lectures and/or absent from social media. The site was re-worked to allow greater ease of use for the student, rather than the lecturer by the Griffith University Blended Learning Support Team.</td>
</tr>
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(Continued)
SEC results rose 0.6 (within a 1–5 Likert scale system, 5 being excellent) over the course of 4 years. My overall SET scores remained high however specific categories such as student respect, engaging teaching, knowledge increased, as did the nomination for teacher awards. Students’ marks began to form a more consistent bell curve and engagement beyond the classroom in the form of emails, Facebook postings, conversations in the hallways concerning music career increased. Ironically, while the students were transitioning to a tertiary life, so was I. There is no way that I, as a practising musician and early career academic, would have realised the intricate mechanics of teaching within a changing higher education environment unless I had undergone the peer review of teaching process. As such, PRO-Teaching and processes such as these are responsible for my prioritisation of my students’ education, my doctoral work, but above all my students’ careers. The end result would have possibly been the same eventually but, for what sacrifice? Of students’ grade point average, careers, and programme revival success?

Introducing an inaugural strand places a large responsibility on those that are required to acquit it. Those with the privilege of such a role, and a high industry-to-academic teaching experience ratio need to adopt peer review of teaching training immediately, even if to affirm quality teaching practices or, as this case study has demonstrated, to: identify, accept and/or overcome barriers to teaching. Relying solely on introduction-to-university teaching courses or waiting for SET/SEC results may slow the transition. “Being thrown in the deep end is one way to learn, but is more enjoyable and less stressful to be well prepared” (Hannan, 2003, p. viii).

<table>
<thead>
<tr>
<th>Learning and Teaching Strategies</th>
<th>Rationale</th>
</tr>
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<tbody>
<tr>
<td>Assignment assistance templates</td>
<td>In response to assessment tutorial activities to aid those requiring explanation beyond the lecture and course profile mediums. I found this aided the ability to connect with the students and generate further discussion about career i.e., the time spent with the students was in a less formal environment, classroom (as opposed to lecture theatre) style and acted more like career-support.</td>
</tr>
<tr>
<td>Non-graded formative Learning Support Activities</td>
<td>Such as career reflective tasks and online quizzes to foster individual perspective and content affirmation. This was a great way to gauge how well the students were engaging with the course prior to their assessment and SEC/SETs submission.</td>
</tr>
<tr>
<td>Recorded PowerPoint lectures</td>
<td>For those unable to attend class in person and/or use English as a second language. While a standard in most university classrooms, this was the first year that the Conservatorium had engaged with this technology.</td>
</tr>
</tbody>
</table>
This account aims to serve not only a sympathetic example and guide to those encountering large class teaching for the first time, but also those in higher management parent-university learning and teaching positions grappling with the enigma that is the musician academic.

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12. STORY-TELLING IN LECTURES
How a Narrative Pedagogy Can Create Meaning for Students in Large Group Settings

INTRODUCTION
Good teachers know real learning is not acquired through short-term memorisation or learning just enough to pass a quiz, with answers likely forgotten tomorrow (Warrall-Davies, 1999; Armit, Slack, Green, & Beer, 2002). Effective teachers also know rote learning at best offers shallow or ritual knowledge, while genuinely acquired deep knowledge will be internalised to create personal understanding (Ivanitskaya, Clark, Montgomery, & Primeau, 2002, p. 101). Indeed, the dichotomy of deep and surface learners, first set down by Marton and Säljö in 1976, has been a central theme in higher education research for nearly 40 years. In that time, reflective teachers have come to know that passive learning is likely to create, at best, inert knowledge that “sits in the mind’s attic” (Perkins, in Meyer & Land, 2003): dusty data unlikely to offer students gateways to higher levels of cognition. Efficient teachers now also understand that active learning, where students and teachers travel sign posted paths together, encourages students to draw on their own initiatives to produce an even greater capacity for life-long learning (Niemi, 2002).

But how to create deep and active learning is a matter of fierce debate. Many practitioners warn that the lecture, while efficient in quickly delivering information to large groups simultaneously, can be equally ineffective when it comes to cultivating deep learning. I argue that this is only potentially true and that the lecture theatre can be an exciting place for students to acquire knowledge and skills and to share ideas and stories that lead not just to scholarly and vocational success, but to a deep personal fulfilment. The crux of the debate thus rests on the distinction between “effective” and “efficient” teaching. Lectures can indeed by “efficient” for teachers because they transmit large chunks of information to large groups of students in a short space of time. But, if that lecture is delivered poorly with little student engagement, the lecture can in no way be deemed effective. If, by contrast, the lecture becomes an occasion for story-telling that leads to self-discovery – an opportunity for students to become deep and active learners as they make sense of otherwise arcane concepts – then the lecture is both efficient and effective.

Equally contentious are the debates on how to measure when deep or active learning has occurred. Most theorists, from Jean Piaget and B.F. Skinner onwards,
broadly agree that genuine learning is best demonstrated in permanently changed cognitive, physical and attitudinal behaviours in the learner. If students can show their experiences rather than just tell, we know real learning is likely to have taken place (Piaget & Cook, 1952; Skinner, 1954). Yet exactly how deep learning occurs remains a central question, and one driving this chapter on how story narratives facilitate knowledge and skill acquisition. Piaget’s early research, especially his landmark *Construction of Reality in the Child* (1937), tackled this question most aggressively in the pioneering of “constructivism” that argues students learn by making sense of their experiences. Glaserfeld’s (1995) “radical constructivism” continues this long tradition in arguing knowledge is actively built up by the cognizing subject…[whose] organization of the experiential world” constructs knowledge. (p. 51)

This general principle has been refined in the evolution of various learning taxonomies where theorists such as Bloom (1956) and Dale (1946), via various pyramidal and conical models, demonstrate how students advance from such basic skills as remembering and understanding, to more sophisticated cognitive tiers as “synthesis and evaluation.” These principles have been further adapted in more recent years to comprise models where students demonstrate more refined behaviours by passing over knowledge and skill “thresholds” (Meyer & Land, 2003, 2005, 2006; Williams, 2014).

Yet exactly how do teachers produce these changed behaviours? Can students be forced up taxonomy spirals? Can learners be pushed through conceptual gates without contextual meaning? Or do effective teachers instead guide their students over critical thresholds only by framing concepts and skills in ways personally relevant to learners? And, if the latter is true, should teachers engage only with small groups of students to optimise learning energy? Or can lecturers in large group settings sufficiently inspire students to also pass over critical thresholds?

Sadly, too many practitioners in today’s universities answer the last question with a deafening “No” and, in so doing, deny themselves, and their students, unique opportunities for innovative learning and teaching in large groups.

**CONTEXT AND PURPOSE**

The context of this chapter draws on my experience teaching first year students in Australia in the Humanities course *News and Politics* – a course designed as the first practical course for beginning journalists where students write news stories. The course is a segue from a first semester subject, *Styles and Genres of Journalism*, which exposes students to the many varied writing styles required for various media briefs. As such, *News and Politics* uses policy-making and political institutions – the staple of any news outlet’s media diet – as students’ introduction to the world of news gathering. Lectures are delivered on two of the university campuses where combined enrolments exceed 300 students.
Ability and engagement levels are varied, with the vast majority of students being 18 year old school leavers. A small number of mature-aged students, usually more vocal in class discussions, will complement most undergraduate cohorts. Students are generally united, however, in their limited experience of a formal lecture of two hours’ duration, including breaks, in a large group theatre setting. Students will, however, be more familiar with the weekly one hour, small group tutorials supporting lecture.

Critically, most students will show great trepidation at the study of political institutions, with anecdotal evidence suggesting they regard politics as “boring”, “irrelevant” and “difficult to understand” (Williams, 2014). Student feedback commonly reveals, however, that students find the study of politics in a news context far more accessible and enjoyable than first anticipated.

The purpose of this chapter is therefore two-fold. First, it is a defence of the university lecture as an efficient and effective medium for learning and personal discovery. And while I acknowledge some might read this as a superficial defence of the lecture as a teacher’s indulgence of mere stage presence, this chapter is more substantially a defence of the lecture as a device to inspire large groups of students – equitably under uniform conditions – and to allow them to challenge, through the lecturer’s stories and Socratic questioning, their own long-standing beliefs. In that sense, the chapter is also a clarion call to those with lecturing expertise to assist their colleagues in developing lecturing skills. The chapter’s second function is to unpack a key strategy, as designed and executed by the author, to bring potentially dull course content to life in large group settings: the art and science of the lecture narrative.

ARGUMENT AND STRUCTURE

This chapter advances two arguments. First, that lectures in large group settings, far from impeding active and deep learning, offer students – through large audiences and rhetorically dramatic elements – unique opportunities for teacher-student and student-student engagement. Second, the chapter argues that, to best cultivate meaning for students, a narrative approach to lecturing allows teachers to package potentially troublesome concepts in aesthetically pleasing parcels that, because they resemble stories in their structure and composition, offer intellectually digestible bites that, when properly sequenced, comprise logical and organic wholes (Meyer & Land, 2003; Sotiropoulou-Zornmpala, 2010). If managed correctly, students will find these narratives – with identifiable beginnings, middles and ends – so personally meaningful they can construct their own intellectual frames on which to hang newly acquired concepts. Anchored to these internal frames, these new facts, theories and ideas are unlikely to be readily discarded as they now hold personal meaning for individual students.

Following a discussion of the nature, limitations and strengths of large group teaching, this chapter explores the long-standing role of story-telling in human
society as well as in learning and teaching. The chapter then unpacks the anatomy of narrative pedagogy and the mechanics of its delivery, with a specific examination of my original FACTS model for lectures in large group settings. The chapter then explores my News and Politics case study, with an additional case study on the use of Aesop’s Fables as a “micro” story-telling example. I then offer my experience with the Griffith University PRO-Teaching project before offering a concluding note.

WHAT IS LARGE GROUP TEACHING?

For the purposes of this discussion, this chapter employs Warrell-Davies’s (1999) definition of a “large group” as one exceeding 30 students. As practitioners employed by large universities in popular first year courses well know, it is not uncommon to teach hundreds of students, with lectures streamed live to adjacent theatres to accommodate hundreds more.

It is equally critical to note the terms “large group teaching” and “lecture”, while perhaps colloquially interchangeable, are not genuine synonyms. While most lectures will be delivered to large numbers of students, they are not the only strategy for large group teaching; and lectures, of course, can be delivered to comparatively small groups. This chapter therefore addresses the very specific medium of the lecture as the most common large group teaching method.

Research into large group teaching is long-standing. As early as the 1920s, Edmondson and Mulder had concluded that, despite nascent fears student motivation was being lost in large group settings, “the method of instruction and not the size of the class seems to be the major ingredient contributing to learning” (Edmondson & Mulder, 1924; Lewis, Woodward, & Bell, 1988). In subsequent decades, large group teaching enjoyed strong research attention but appears more recently to have become the poor cousin to small group strategies in the pedagogy literature.

Limitations of the Lecture

Critics of the lecture have long argued its limitations far outweigh its benefits, with more recent arguments suggesting the lecture is a relic from a pre-internet era where herding large numbers of students into halls to receive information unable to be transmitted in any other way was a necessary evil (Folley, 2010). In that context, critics argue the lecture in an age of e-learning is “dead.”

Others mount the more usual argument that the traditional lecture is an inert medium where passive learning is most likely to occur (Cantillon, 2003). As a result, critics claim the usually reactive environment of the lecture theatre will see too many students disengage, tune out, and absent themselves from future classes. As outlined above, this claim is potentially true. If lectures are delivered poorly, in monotone voice with little or no variation in medium – and, perhaps most critically, with no sense of narrative coherence – students will indeed see the lecture as a study chore and not as a learning opportunity.
This argument will be especially true if the lecturer speaks to a full theatre in the same way he or she would an empty one. If so, the teacher will almost certainly be a poor practitioner for ignoring the student in the learning-teaching equation. As explored below, more engaging lectures can be delivered if the lecture moves from “expository” to “heuristic”, that is, from merely telegraphing information to one where knowledge is collaboratively uncovered through shared experiences, problem solving and discovery (Canfield, 2002). In short, lectures should be a balance between student-centric and teacher-centric activity.

The role of the student in the teacher-learner equation when measuring effectiveness and efficiency should also be noted here, and there is much research that accentuates how such variables as the student’s own self-motivation, and his or her preparedness through prior reading, can shape how well any student will engage with any lecture narrative. Biggs (1999, pp. 57–58), for example, famously relates the experiences of apocryphal students “Susan” and “Robert” who, despite both “hear[ing] the lecturer say the same words”, will enjoy very different lecture experiences and, probably, see very different academic results. The difference, Biggs argues, is that Susan, a deep learner, “comes to the lecture with the relevant background knowledge and a question she wants answered.” This allows “Susan” to form “a keystone for a particular arch of knowledge she is constructing”. Meanwhile, “Robert”, a surface learner, is scholastically “less committed”, possesses a “less developed background of relevant knowledge”, and “comes to the lecture with no questions to ask.” Chin and Brown (2000) similarly stress the internal qualities of learners and conclude that scholarly success arrives when

the learner personalizes the task, making it meaningful to his or her own experience and the real world. (p. 110)

A key responsibility of the lecture, then, is to personalise and make relevant any number of facts and themes that will assist students transit from surface and passive behaviours to a more profound deep and active cognition.

Today, lecture sceptics insist we no longer need traditional lectures in large group settings because their allegedly didactic, inflexible and impersonal atmosphere creates nervous or confused students who are impeded in their learning (Chalmers, Hannam, & Herbert, 2003; Cutts, Kennedy, Mitchell, & Draper, 2004). Again, such claims can be true, depending on who is delivering the lecture, in what style, with which media and in what time frames. Ample research has demonstrated, for example, that student attention – when passively listening to a speaker and engaging no other senses and undertaking no other activities – decline rapidly after 10 to 30 minutes (Middendorf & Kalish, 1996; MacManaway, 1970; Gibbs, Habeshaw, & Habeshaw, 1987; Folley, 2010; Young, Robinson, & Alberts, 2009, p. 41). Indeed, the incidence of student attention drop-off – exacerbated by a “PowerPoint paralysis” that can induce “cognitive coma” – has been aptly labelled “vigilance degradation”: a phenomenon that, as demonstrated below, can be avoided with innovative large group strategies (Jensen, 2007, p. 138).
It is critical to note that a student’s lack of physical attendance at scheduled lectures is far from concrete evidence of that learner’s disengagement. As outlined below, in an age where large numbers of students work long hours in part-time jobs – thereby making physical attendance at university increasingly difficult – learners do engage successfully with course materials, assignments and teaching staff via e-learning support. Indeed, there is strong evidence to suggest that motivated students cope well in online environments, with those students frequently demonstrating a use of deep approaches of learning like higher order thinking, reflective learning, and [an] integrative learning [approach to] their study. (Chen, Lambert, & Gudry, 2010, p. 1230)

The critical caveat, however, is student motivation, and there is equally strong evidence to indicate that online students are at greater risk of course failure if their engagement is infrequent (Davies & Graff, 2005). As demonstrated below, this chapter argues that the face-to-face lecture, while no single panacea to poor student motivation, nonetheless provides opportunities for teachers to engage and inspire otherwise languid students to move upward through learning taxonomies. Given the face-to-face lecture will remain the reality for most universities in the short- to mid-term, improving the quality of lectures must therefore be at the core of any university’s mission.

**Strengths of the Lecture**

There is ample evidence the face-to-face lecture offers students in large group settings unique learning opportunities. First, the verbal medium of the lecture trains post-internet students, acculturated through a lifetime of screen activity to recognise visual detail first and foremost, to develop critical listening skills (Morris, 2014). Given that so much of human interaction is still in person – one study found verbal communication comprises 45 per cent of any given “message” (Tepper & Hasse, 2001) – it is important for students of any discipline to develop acute listening skills, and especially critical for those embarking on careers in medicine, journalism, education and the law. The corollary is that those who fail to attend lectures and only read notes and PowerPoint slides online, or who listen only to pre-recorded podcasts, will also miss the nonverbal cues lecturers offer, often unconsciously, through facial expressions and body language. There is, to put it colloquially, “nothing like being there.”

Second, the lecture offers students experience in real-time note-taking – often under the pressure of a rapidly moving narrative – that will further assist professional development. Moreover, research indicates that note-taking assists learning not only by consolidating newly acquired data, but also by offering personal interpretation of, and reflection on, that data, thereby increasing the propensity for retention (Piolat, 2005). Again, the advantage of taking notes in real time from a “live” speaker, rather than from an impersonal recording, is clear: not only can nonverbal cues be read...
but, also, questions can immediately be asked regarding elaboration, clarity and, of course, assignment and examination hints. Again, the advantages for journalists in developing skills to take notes – quickly and accurately – while listening to live speakers needs no explanation.

Third, the lecture offers students not only a more efficient method of information dissemination, but also a more equitable one. With all students present in the same theatre at the same time, no individual student is advantaged or disadvantaged by receiving more or less information, delivered at a higher or lower efficacy, by more or less experienced small group tutors. This is especially critical for course pivot points where lecturers introduce new threshold or potentially troublesome concepts. If the lecturer can consciously identify potential pitfalls in learning, she or he can signpost them accordingly in the lecture narrative. Given, as Boser (2014) argues, that equity and effectiveness in education settings “are not mutually exclusive”, we can conclude that a cohort of students receiving content more equitably via the lecture is also a cohort learning more effectively and efficiently. By contrast, if students meet critical concepts for the first time only in small groups, there is the risk new concepts will be unevenly, incompletely or inequitably delivered. In short, it is essential for students to be navigated through course “pivot points” as a single cohort – where all students have the opportunity to engage with the lecturer, and hear answers to questions, simultaneously – and not risk the atomisation of understanding.

Fourth, there is the fact that tertiary institutions for too many students have become sites of fleeting acquaintance and not, as in days past, places of intellectual exchange between peers and staff. Given that significant numbers of full-time students work more than 24 hours each week (Horin, 2011), there is often little time for students to engage in scholarly exchange with others let alone attend lectures. The result is that students, sporadically dipping in and out of classes without learning the names and ideas of classmates, fail to develop a collective scholarly identity, and emerge instead as a loose group of individuals with post-nominal letters as their only common ground. The face-to-face lecture, then, remains a last bastion where a collective student identity can be built.

Last, and undoubtedly most critically, the lecture underpins the above by offering students the opportunity to make sense of course content via an engaging conceptual narrative. Happily, the cultural frame to which most learners respond is the traditional story model. The lecture provides teachers with a unique opportunity to deliver content within listener-friendly frames so that even the most disengaged student can hear a conceptual narrative develop, and therefore make sense of potentially troublesome ideas. The evidence of the success of this approach is found in long experience which has taught me that students enjoy “light bulb” or “penny drop” moments when new material is, first, prefaced by knowledge the student already possesses and, second, framed within cultural contexts personally relevant to the student (Williams, 2014; Gopalakrishnan, 2010).

It is this heuristic approach to large group teaching, where experiences are shared among teachers and students that learners are most likely to move from passive
to active learning. As such, a revival of scholarly interest in the pedagogy of the university lecture has never been more pressing. Given the challenges the online world creates for student retention, critical thinking and study skills, it is essential to keep the lecture alive with opportunities to inspire students.

STORY TELLING IN TEACHING AND LEARNING

Story telling as a means of cultural transmission is as old as humanity. In pre-writing societies, generations of communities taught social rules, values, history and culture through oral stories, with even the greatest of early literature, such as *The Iliad*, *The Odyssey* and *Beowulf*, “recorded” in their first forms verbally (Foley, 1991). Even today, through literature, music, cinema and conversation, the narrative is humanity’s preferred method of making sense of an often-senseless world.

But despite the deeply human character of the narrative, story-telling in education has largely been subsumed over the centuries by “ritual” teaching and, if maintained, deemed appropriate for only the youngest of learners (Harbin & Humphrey, 2010). In very recent times, however, the art and science of story-telling as a pedagogical tool has gained renewed interest, with research on “narrative pedagogy” swelling the scholarly literature (see Mott, Callaway, & Zettlemoyer, 1999). While the definitions and descriptions of narrative pedagogy are many and overlapping, that offered by Ewing and Hayden-Miles (2011) is especially insightful:

...narratives are especially helpful to foster student expression resulting in active engagement with practice. In classrooms with large numbers of students where lecture is often performed, the interpretive process can be used as a strategy to make lectures interesting and meaningful. Self-reflection and uncovering thoughts leads to a fuller understanding of individuals as they exist in their world, thereby helping students to become respectful of the other’s point of view. Students often say, “I never thought of it that way before.” (p. 213)

It is essential to note that the definition of *story* in our analysis assumes a broad meaning of “narrative.” Stories need not take the form of fictional tales in the traditional sense and, for the majority of classroom time; they should not, although, as explored below, there is a place for imagination in the lecture theatre. Instead, *story* in this context includes true personal anecdotes, factual and historical points, and even course descriptions if presented in such a way as to bring otherwise discordant components together in a logical sequence to form a meaningful, organic whole.

Finding personal relevance in new concepts is critical to students’ learning, and dovetails neatly with any teacher’s primary mission to “teach with purpose” (Loughran & Russell, 1997). Explaining to students why the curriculum is heading in a particular direction is also central to the mission of guiding students over learning thresholds – taking students with us on the learning journey – rather than pushing them through gates before they are truly ready.
Indeed, the very process of rationalising learning objectives should form an early part of the learning story. As Gilkinson (2013) reminds us, a key element in any course’s opening moments, especially in the large group setting, is the establishment of a dialogue between teachers and students, and among students themselves. The value in this dialogue is found when “teachers and students interpret narratives together” so that students “develop the ability to listen” (Gilkinson, 2013), and learn to respect each other’s interpretations of the narrative. A central tenet of narrative pedagogy, then, is the *shared* nature of story-telling, where both teachers and students relate anecdotes, with all participants afforded the opportunity for reflection, interpretation and response. As Ewing and Hayden-Miles (2011, p. 212) argue:

Humans shape and are shaped by the empirical and dialogical experiences. Through narratives, pre-understandings are brought forward. Shared practices are derived, and understanding occurs through interpretations that are never final.

The reality that narratives in large group teaching will, for most of the time, assume forms other than traditional fiction provides teachers with opportunities to weave story structures around several levels of discourse. As such, the narrative structure is optimised when articulated across four distinct tiers, examined below.

**THE ANATOMY OF NARRATIVE PEDAGOGY**

The first, or macro, level should begin at course commencement. Lecturers are well-placed to offer introductory explanations as to how any given course complements students’ previous study, and how it will prove intellectually, vocationally and personally relevant to their lives. The power of well-articulated course introductions is well documented in research that finds “inclusive introductory materials…operate as advance organisers for the learning that is to follow” (Ausubel, in Tribe and Tribe, 1987). Consequently, these materials “facilitate the establishment of a general and inclusive explanatory basis for the subsequent content” (Ausubel, in Tribe and Tribe, 1987). It is here also that teachers can elaborate broadly on the nature and history of the subject’s discipline, with anecdotes of how course graduates, or even historical figures or events, have been shaped by the subject’s study. In this way the importance of the subject, as well as the “humanity” of the teacher, is established for students.

The second, or major, tier of the narrative should next be offered, again at course commencement. Here, teachers should explain to students how any course’s lecture sequence “hangs” together as a cohesive whole. Like the traditional stories already familiar to students, the lecture sequence should evolve logically and organically, with the first module comprising an introduction, and with middle and concluding lectures forming a body and *story* resolution respectively. Only by illustrating to students where the course “story arc” is heading can students truly prepare for the narrative (Baranowski, Buday, Thompson, & Baranowski, 2008).
The third, or minor, narrative layer begins when teachers, at the beginning of any given class, demonstrate links between the topical sections of that particular lecture. Once again, lectures within the narrative approach should boast clear beginnings, middles and ends to mirror the story forms to which learners, irrespective of age or cultural background, will be accustomed. And, like the delivery of any story, the lecture should be clearly signposted: if using PowerPoint or equivalent visual aids, slides should be logically sequenced with “must know” and “should know” concepts highlighted, and “nice to know” material expediently placed in support (Macleod, Steinart, Meagher, & McLeod, 2003). If delivering a lecture without visual aids, verbal signposts need to be flagged clearly. In either case, audiences must be guided across smooth segues between concepts, and alerted when the lecture changes “cognitive gears” and moves in new directions or towards increasing complexity.

The last, or micro, layer of the narrative is found in the unpacking of each significant concept in any given lecture. It is here that teachers enjoy the most flexibility in the narrative and where, to illustrate key points and principles, personal anecdotes and fictional tales can be most extensively explored to allow students yet more opportunity for sense-making (Townsend, 2002).

THE MECHANICS OF NARRATIVE DELIVERY

Determining the composition of these narrative tiers – identifying exactly what component of the story to deliver, and where and when – can be problematic for teachers. Experience has taught me that each of these layers is best illustrated when a combination of discourse elements is used at each level. Whether explaining how a course complements a degree program, or how the lecture series boasts an inherent logic, or the origins of a new or “troublesome” concept, each tier should offer students five core elements, expediently labelled by the acronym FACTS, detailed below. Below, I illustrate the application of these elements through the teaching of a specific journalism and public relations concept of how politicians in western democracies can be inclined to “freeze out” – refuse to acknowledge, engage with or “leak” to – journalists deemed to be “unfriendly.”

F.A.C.T.S

Years of large group teaching experience have allowed me to construct my own original working model of what I identify as the five most critical elements of narrative pedagogy. To assist peers in the acquisition of their own large group teaching skills, I have anatomised my model under the simple acronym FACTS. Each tier of the model is discussed below.

The first element, the Foundation, is where teachers offer the most basic scaffolding in terms of the history, nature and relevance of any new course, lecture or concept. In terms of explaining how politicians occasionally “freeze out” allegedly “hostile” journalists, I establish that journalists and political public relations officers enjoy (or
suffer!) a symbiotic love-hate relationship amid a mutual need for exchange, and with each exerting pressures on the other.

The second element, the *Anecdote*, is an opportunity for the journalist academic to relate his or her own professional tales of having been “frozen out.” Like many anecdotes, the lecturer’s story can be delivered for dramatic or humorous effect to ignite student interest. It is also acceptable for the anecdote to assume apocryphal or purely fictional form, or even a colourful fable designed to identify a moral or lesson. *Cinderella* is universally popular as an ethical tale highlighting how those favoured by authority figures do not always win. This warm classroom will ideally encourage students to share their own anecdotes and reflections.

The third tier, the *Concrete* example, is where lecturers relate yet more true professional stories, but now impersonally, without emotion, and with a “scientific” deconstruction of the anatomy of the real world problem, and the steps necessary to solve that problem. In the journalist example, this would include “textbook” instances of how innovative journalists have worked around the “freeze.”

At this point, students should have garnered enough “facts”, and found sufficient personal relevance, for the lecturer to offer some summative *Theory*, the fourth element, to bind the above together. Specifically, that theory would be woven around why politicians engage in the “freeze”, if it is truly an effective method to muzzle journalists, and other strategies politicians might use to thwart media inquiry.

A fifth element, a *Socratic* approach to teaching, stands apart from the above in that it describes a style rather than a stage of content delivery. Indeed, a lecturer’s Socratic approach allows students to actively reflect on the lecturer’s discourse by engaging in a dialogue…with a view towards persuading the student that what he or she had taken to be “obviously true” is, at best, questionable; the teacher does not tell the student that his or belief is mistaken or demonstrate it empirically; rather, through a series of carefully selected questions which elicits more of the student’s belief system, the teacher gradually leads the student to see that his or her original belief is in fact inconsistent with other beliefs that he or she holds dear (Perkasky, 1994).

Happily, the Socratic dialogue lends itself most neatly to narrative structures, and allows teachers to punctuate lecture pivot points and illustrate critical concepts with the most colourful stories – both fact and fiction – to optimise class engagement and to maximise student sense making.

*Stage Presence*

As outlined in the introduction, the defence of the lecture should not be a defence of the role of the teacher alone. While, for some, this might be true in part, the lecture – delivered dynamically and enthusiastically – is more substantially an opportunity to engage students and to inspire them, through narrative story-telling, to challenge long-held beliefs. Over the years, for example, I have observed many colleagues – experts in their field and passionate about their profession – who prepare detailed
lecture material in clear and logical sequences. But those same lecturers fall at the last teaching hurdle simply because they do not prepare themselves. Approaching the lectern to address a large group of students requires far more than well prepared notes or slides; it also requires a careful consideration of mind: how the teacher, as a fellow learner attempting to forge an intellectual link with her or his audience, will deliver those notes.

The first consideration is the use of voice. As Richard Morton put it quaintly more than half a century ago:

His [sic] voice is one of the teacher’s greatest asset. Its qualities and skilful use lie in much of the secret in the success of many teachers…The university teacher should not feel himself [sic] above such lowly details as those of proper voice technique. (Morton, 1962, p. 121)

But proper technique means much more than adequate volume, although that, too, is important, even with microphones and good theatre acoustics. Good voice also means intonation and modulation: raising and lowering pitch not only as a dramatic tool for emphasis but, also, as a stimulus for continued audience engagement. The lecture voice should also demonstrate tempo, where faster speech adds excitement to a tale, with slower and more deliberate articulation offering a sense of solemnity or indignation. The effect of dramatic pause, too, is incalculable: knowing when not to speak, to allow students a moment to digest a seemingly incongruous fact, is just as invaluable.

As outlined earlier, body language, including hand gestures, offer powerful nonverbal cues that add meaning to any lecture’s narrative. With the availability of lapel radio microphones and PowerPoint slide “clickers”, teachers should not be tied to the lectern but should instead move around the theatre, engaging with students rhetorically at will to heighten classroom energy. Once again, this affords teachers opportunities to enjoy meaningful dialogue with students, and to make all in attendance – not just those in the front rows – feel part of the learning experience. If the above elements are practised – and practice in story-telling is essential – the lecturer can craft a stage presence that will dovetail neatly with a narrative content.

CASE STUDY 1: NEWS AND POLITICS

Below, I use the example of teaching a first year course to unpack the four tiers of narrative pedagogy, outlined above.

When introducing my News and Politics course, I use the macro level of my narrative to demonstrate to students how their new course complements their previous study and, despite many young learners’ obvious scepticism as to the value of a politics course, how the course will prove professionally and personally relevant to their lives. At this point I relate anecdotes from previous students who, initially fearful of politics, gained detailed institutional knowledge of our political processes – knowledge that allowed them to gain employment as a news gatherer. It pleases
STORY-TELLING IN LECTURES

students enormously when lecturers can list familiar television news identities as past graduates of the program. But the macro introduction also relates how even the non-journalist in Australia, initially baffled by political news, has come to understand the nature and role of such Westminster institutions as Parliament, Cabinet and the High Court to ideally become better-informed citizens able to make better-informed vote choices – a particularly desirable objective given Australians’ legally enforced compulsion to register and vote at every state and national election.

The major tier of the narrative, again at course introduction, is where I illustrate how the lecture sequence of *News and Politics* comprises an organic whole. Students might initially baulk, for example, at a journalism course that begins its politics module with the potentially arcane study of the Australian Constitution. But a large group discussion driven by Socratic questioning will reveal for students that understanding the rules of any game – from polo to parliament – allows for a deeper understanding of that game. Only by reading the introduction of the institutional story can students understand the interplay of political characters and, more generally, the plot of daily politics as played out in the news media.

As described above, lectures under a narrative approach should boast clear beginnings, middles and ends to mirror the story forms learners already know. This is the core of the third or minor layer introduced at every lecture’s beginning. Quite separate from lecture aims and objectives, or even PowerPoint subheadings, this third tier must demonstrate relevance for students by identifying story links between conceptual pivot points in the lecture. In, for example, the lecture on parliament, I establish relevance by asking students if they pay tax (which they all do, whether directly via income or indirectly via consumption), if they feel they pay too much tax, and who they think decides the tax we pay. The discussion then segues into why we pay tax and, therefore, the historical roots of any democratic government’s taxing powers. This ultimately leads to the conclusion that we can best understand any legislature’s taxation role by first knowing why, where, and when parliament and like legislatures originated. The narrative would then move to the threshold concept that contemporary democracies have not always enjoyed their freedoms, and that even Great Britain – the mother of Westminster parliaments – enforced taxation centuries ago without the people’s permission. The lecture story itself would therefore describe how parliamentary functions have evolved since the 13th century as liberal and democratic forces exerted increasingly powerful cultural pressures. Must know and should know concepts are respectively highlighted as the parliament’s appropriation function and the signing of the *Magna Carta*, while nice to know concepts would include the fact the power of the British House of Lords to amend money bills was removed in 1911. The resolution of that particular lecture story comes in a question: given all we know about what democratic legislatures should do, are our parliaments fulfilling expectations? Here, the teacher-student and student-student dialogue becomes the key medium as students make sense of the potentially “troublesome” concept of public accountability.
The final tier of the narrative in any News and Politics lecture is where I unpack key concepts. When, for example, exploring the representative function of parliament, I relate the novel fact that any voter (cynical students included!) can lodge a petition with their local Member of Parliament (equivalent to, for example, a member of the USA Congress) – providing the petition has at least two signatures – and that such members are obliged to table it in the chamber as a register of community grievance. This sense of empowerment usually whets audience interest, with the discussion then inviting students to vent their own political frustrations, and how a petition might address them. The narrative then moves to the true history of a famous Australian petition, written in the English and Aboriginal Yolgnu languages (and accompanied by bark paintings) handed to the Australian Parliament in 1963 to demand protection of Indigenous land from mining rights. This micro story then moves to a more formal discussion of the origin of citizens’ right to petition parliament as a key representative function in Westminster systems, with troublesome knowledge now ideally acquired.

CASE STUDY 2: USING AESOP’S FABLES TO UNPACK A ‘THRESHOLD’ CONCEPT

As argued above, the micro tier offers enormous opportunities for creative storytelling in the lecture theatre as a medium to unpack potentially troublesome concepts by drawing on students’ imagination. Below is my experience of assisting beginning journalism students, enrolled in News and Politics, to pass over the key threshold concept that politics underpins not just formal institutions but also human relationships.

In addressing the “Politics as Power” concept (Williams, 2014), I use the purest form of story-telling: the fable or fairy tale – a story form many practitioners might regard as inconsistent with venerable halls of learning. But, as Sanders-Bustle (2012) argues, students relate easily to colourful fictional characters and settings as it is where conflict is created and resolved in the most dramatic fashion. As Egan (1993) further argues, the fairy tale is especially well-placed to allow students to “take perspectives other than their own” and to draw from even the reticent student a genuine emotional response. Goodwin and Jenkins (1997) concur, arguing that fables, myths and legends “deal with complex issues concisely”, with students more likely to remember the historical facts and themes contextually embedded in listener-friendly tales.

As a means of introducing political concepts to students who may be compulsorily enrolled in a politics subject and therefore both nervous and sceptical of what lay ahead, I use Aesop’s Fables to broach the critical threshold concept of politics is power, compromise and consensus. Early in an introductory lecture on why the study of politics is germane to journalists – and before any formal definitions of politics or power are explored – I will read to students Aesop’s fable of The Sun and The Wind:
The Wind and the Sun were disputing which was the stronger. Suddenly they saw a traveller coming down the road, and the Sun said: “I see a way to decide our dispute. Whichever of us can cause that traveller to take off his cloak shall be regarded as the stronger. You begin.” So the Sun retired behind a cloud, and the Wind began to blow as hard as it could upon the traveller. But the harder he blew the more closely did the traveller wrap his cloak round him, till at last the Wind had to give up in despair. Then the Sun came out and shone in all his glory upon the traveller, who soon found it too hot to walk with his cloak on.

(Alchin, n.d.)

After a second reading, I ask students to write what they see as, first, the moral lesson of the tale and, second, any political element – however defined – they can identify. Responses are usually varied, with many offering real insight into student understanding. Yet, even among novice politics students, answers are often discerning.

The moral of this fable – and one most students easily identify – is that one can often achieve more through gentle persuasion than through brute force. Interestingly, many students can also identify the political element, that is, that there is more than one way to motivate others to do what one wants – interestingly, a common definition of effective political leadership. After further Socratic dialogue where students ponder if suggested scenarios – a student requesting an assignment re-mark, or a group of friends deciding where to have lunch – are genuinely political, class members will usually report a link between the fable’s moral and political elements. If so, students will have begun to pass over the threshold concept where politics is defined by more than just politicians.

Ideally, students will also have personally related to a narrative that is both familiar and non-threatening which, in turn, has allowed them to engage with both lecturer and peers to make sense of a potentially troublesome concept. Students will also boast a wider cognition of the scope of politics, and will now see the virtue of its study – because politics are near-universal – as something relevant to their own personal and professional lives.

**PRO-Teaching Experiences and Student Feedback**

In 2013, I participated in the PRO-Teaching project where University peers observed my narrative lecture strategies in the sister course *Styles and Genres of Journalism*. The experience was a rewarding and enlightening one that, while delivering largely positive feedback, also offered insightful suggestions to improve my narrative delivery.

Peers’ comments included reference to a “lively” lecture “informed by historical and social contextualisation”, a “synthesis” of lecture concepts, a “good use of visual and audio resources” and a “well-paced” presentation that “referred to the topic as something that is part of an architecture of knowledge that will inform the students’
later journalism studies.” Happily, peers also noted a “pleasurable”, “interesting”
and “synthesised” presentation where “questions and examples created a sense of
positive engagement with students.” Peers also noted I was “responsive” to students,
allowed learners to speak and participate…without feeling pressured”, and that I
“affirm[ed] all contributions” which “sustain[ed] participation.” Observers also
noted a teaching “dynamism” where all students, irrespective of location, were
engaged by a mobile lecturer whose “dialogue…broke the monotony and helped
students to stay alert and interested.” Evidence of genuine and deep engagement was
found in peers’ observation of students cross-referencing teaching points in online
resources.

By contrast, the observers also reported my propensity to speak quickly, and
to occasionally segue too rapidly between lecture concepts. As a proponent of the
narrative model, I found this a critical reminder to remain in the learner’s mindset
when teaching, and to remember the role language plays in any student’s experience
and construction of knowledge. Moreover, a rushed story, with too little time for
reflection, robs the listener not only of sense-making but also of enjoyment.

Anonymous qualitative student feedback on the completion of News and Politics
always returns positive comments. Past students have noted the course’s “relevance
to the world we live in”, the opportunities I provide to “promote discussion and
encourage participation”, my attempts at “humour…which makes him very easy
to get along with”, and a voice which “wasn’t monotone and boring [which] kept
me engaged.” While adjectives such as “interesting”, “organised”, “passionate”,
“enthusiastic” and “knowledgeable” are flattering, as a teacher I find deeper
satisfaction in one student’s recent comment: “I have really learnt a lot and never
thought I could get so interested in News and Politics”.

Interestingly, few students comment specifically on my story-telling style
of delivery, and yet I am gratified rather than disappointed simply because this
indicates that students have acquired knowledge seamlessly without being distracted
by the medium. After all, one wants to remember the content of a good story without
consciously being reminded one is reading a book. Like the thread holding together
a delicate garment, it is always better to keep the underpinning support out of the
line of sight.

CONCLUSION

This chapter has explored how structured story-telling in lectures can help students,
in potentially impersonalised large group settings, to construct their own sense-
making of otherwise arcane concepts. Despite critics’ claims that lectures precipitate
only passive or surface learning, this chapter has argued that the lecture remains an
effective medium, potentially well received by students that can indeed cultivate
depth and active learning. Moreover, the unique environment of the theatre offers
opportunities for large group engagement not available in other classroom settings.
The strong evidence of its success as a teaching strategy further indicates the
university lecture is not dead but alive and well. Transforming from a traditionally expository to an innovatively heuristic approach, the lecture can adapt well to the 21st century. Part of that successful adaption lies in lecturers’ use of a narrative approach that allows lecturers to transmit potentially troublesome concepts in intellectually palatable bites that, in comprising an organic whole, allows learners to build their own intellectual frames on which to hang newly acquired concepts.

American poet Muriel Rukeyser (1913–1980) opined that “the universe is made up of stories, not atoms” (Mott et al., 1999). It is a romantic notion that nonetheless offers great insight into ways any teacher can engage her or his students, especially in large group settings. A teacher’s mission is to assist students make sense of the world by drawing links between ostensibly dissonant concepts. There are many strategies to meet this goal, but the science of narrative pedagogy and the ancient art of story-telling remains the most effective. Facts may be the material of knowledge, but stories are the thread that holds them together.

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13. PEER OBSERVATION AS A COLLABORATIVE VEHICLE FOR INNOVATION IN INCORPORATING EDUCATIONAL TECHNOLOGY INTO TEACHING

A Case Study

INTRODUCTION

In this chapter we discuss the use of peer observation of teaching as a vehicle for innovation in teaching through the development of a scholarly approach to teaching. We develop a data gathering framework for facilitating scholarship of learning and teaching. In the rest of this chapter we discuss:

- the process which led to the introduction of a technological innovation for a first year computer science course and the role that peer observation of teaching played in this process;
- follow the development of the innovation and its impact on student learning to illustrate how interdisciplinary teams can work together to create innovative solutions to enhance student learning by leveraging technological, pedagogical, and content knowledge; and
- conclude that engaging in cross-disciplinary peer observation of teaching provides a promising developmental process for educators.

We provide a case study using peer review and observation of teaching (PRO-Teaching) as a vehicle to develop both a scholarly approach to teaching as well as providing a framework to gather data for ongoing change to facilitate scholarship of learning and teaching. The case study describes the process behind which a technological innovation was introduced into a first year computer science course and the role that PRO-Teaching played in this process. The process that was developed as part of the case study shows a promising way forward for educators involved in peer review and observation of teaching. It illustrates how interdisciplinary teams can work collaboratively to create innovative solutions to enhance student learning by leveraging technological, pedagogical, and content knowledge.
Literature Review

Much has been written about the weaknesses of the lecture format as a pedagogical approach (e.g., Bligh, 1998). Straight transmission of information from a single content matter expert to a group of students was suited to a time when knowledge was rare and difficult to come across. With the near ubiquitous availability of information in the 21st century, modes of teaching that involve direct transmission are becoming out-dated. There are now options for far more interactive learning designs that adhere more closely to notions of constructivist pedagogy (Laurillard, 2002). This broader context was indeed an important consideration in the development of the methods used to deliver the course under discussion in this chapter, however, as articulated by Goodyear (2005), any educational design problem can only be solved whilst being mindful of the educational and organisational constraints within which the instruction is to be offered. That being the case, the evolution of the approach described here is an attempt to move from a purely transmission-based lecture to an approach that is more interactive.

A delivery approach of mixing chalk and talk with PowerPoint slides works well for courses which rely heavily on writing equations and drawing various types of diagrams including digital circuitry. Scott (2011), when discussing the delivery of economics content, argues that such dynamic writing cannot be delivered as effectively using slide-ware such as PowerPoint and this type of content is more effectively delivered in a freehand format.

However, reliance on the use of a whiteboard to deliver content can have a negative impact on student engagement in a number of ways. One detrimental consequence of writing on the whiteboard is that the lecturer has their back to the audience and therefore loses the benefits of face-to-face connection and communication. In particular, lecturer and audience lose the ability to have meaningful eye contact, thus violating a basic tenet of effective lecture delivery (Race, 2007, p. 130). The legibility and comprehensibility of content written on a whiteboard can vary a great deal depending on a range of factors, including the handwriting quality of the lecturer, the available colours and their contrast, as well as student position in the venue.

Capturing this type of dynamically generated content for later observation may also be problematic for students. Copying copious notes may reduce the students’ ability to pay attention to content that is being discussed during the transcription process (Kiewra, 1985). In addition, a serious drawback of this hand-written approach is the difficulty of recording lectures that use both PowerPoint and the whiteboard. A further complication is provided by the over-reliance on student feedback as a method of evaluating the quality of learning designs and practice approaches. As argued by Lodge and Bosanquet (2014), drawing on a wider range of evidence is necessary for getting a clear sense of the actual benefits of particular approaches for enhancing teaching practice. While student evaluations provided some qualitative evidence of the effectiveness of various aspects of the delivery methods used in this context, it was important to widen the range of evidence considered before
Peer Observation as a Collaborative Vehicle for Innovation

attempting further innovation of practices and hence, peer observation of teaching was undertaken.

Peer Observation of Teaching

Quality of teaching has links to student success and thus retention (Biggs, 2003; Tinto, 1993; Zimitat, 2006) both of which are important to students and to higher education institutions. Standard student evaluation mechanisms used alone, provide limited information that can be used formatively to enhance individual teaching performances. Peer observation of teaching is recognised as an effective method both for assuring quality and for generating developmental information for improving teaching (Bell, 2001; Brinko, 1993; Donnelly, 2007; Lomas & Nichols, 2005). Used together, student and peer evaluations of teaching along with focused reflection on teaching performances can provide enhanced developmental potential (Berk, 2005). Whether used for summative or formative purposes, taking part in peer observation encourages the observed teacher to actively consider how to enact characteristics of good teaching. With linked, multiple sessions developmental feedback from peers can be implemented in a peer supported “action learning” (Kember, 2000) cycle. Observers must also engage in deep analysis of what is working, what is not working, and why, in the process of providing developmental feedback on teaching. Observing different interpretations and implementations with a critical eye is a developmental exercise in itself (Bell, 2001).

At the university where this study was undertaken, the “peer review and observation of teaching project” was created, dubbed “PRO-Teaching” (literally: FOR teaching) as a developmental resource for teaching colleagues. To meet contextual design constraints PRO-Teaching is of robust design producing validated, objective evidence both of teaching quality and development from multiple, triangulated sources. Reporting is framed objectively based upon that evidence providing value to managers should it be used to support a case for progression, promotion, or awards. Participants’ data security is assured by covering the information process by ethical informed consent whereby teachers have full control of the use of their data for reporting purposes. As teachers from different disciplinary contexts often have different teaching cultures and practices (Knight & Trowler, 2000) and are not often conversant with “eduspeak”, PRO-Teaching design develops capability and language through professional conversations between discipline experts and learning and Teaching scholars.

A pilot design for PRO-Teaching was refined in an Education Faculty to produce a collaborative, developmental peer observation (Harris, Farrell, Bell, Devlin, & James, 2008) process that engages teachers in two observation based action learning cycles at least two weeks apart (Drew & Klopper, 2013). Data triangulation is achieved using observed teacher reflections, discipline expert observation, external learning and teaching expert observation, student evaluation of lessons, and student learning outcomes through Harvard minute tests to create validated evidence.
through each action learning cycle. PRO-Teaching has been applied to observations of teaching in a range of contexts from traditional lectures and workshops, through to blended learning applications and most recently to online courses.

*Technological Pedagogical and Content Knowledge*

Peer observation of teaching as a developmental vehicle can be focused on a range of aspects of teaching and learning knowledge. Lee S. Shulman (1986) relates the growth of knowledge in teaching to be in three areas that include the discipline-based content knowledge, the fundamentals of pedagogy, and the expertise that is developed in the most effective learning activities to develop content knowledge in the students (Gudmundsdottir & Shulman, 1987). These areas were described as pedagogical knowledge, content knowledge, and the overlapping area as Pedagogical Content Knowledge (PCK).

With increased embedding of technology into physical teaching and learning spaces and, in some cases, the creation of virtual teaching and learning spaces, a technological knowledge aspect was required to renovate the PCK model. Koehler and Mishra (2005) asked the question: “What happens when teachers design educational technology?” to reveal the development of new kinds of teacher knowledge. In particular technological pedagogical content knowledge (TPACK) is the technological knowledge that is required to create effective learning activities that build required content knowledge in students. This area of knowledge has been reframed to guide integration of technology into each area of curriculum (Harris, Mishra, & Koehler, 2009; Schmidt et al., 2009) and its development evaluated through studies of teacher and student experiences (Shin et al., 2009). TPACK has been developed into a trans-disciplinary conceptual framework to assist teachers in their quest to develop effective blended and online educational experiences (Mishra, Koehler, & Henriksen, 2010).

The clear need to add technology to the PCK model speaks to the increasing impact technology is having on teaching practices in higher education settings (Koehler, Mishra, Kereluik, Shin, & Graham, 2014). A substantial focus of recent discussions around the use of technology has been on wholly online (e.g., Moore, Dickson-Deane, & Galyen, 2011) or ‘flipped’ classroom approaches (e.g., Abeysekera & Dawson, 2014) in the wake of the massive open online courses (MOOC) phenomenon. To an extent the notion of ‘blended learning’ has been backgrounded. Despite this, delivery of material to students in a face-to-face context remains an ongoing requirement at many institutions. As opposed to a wholly online environment, blended learning approaches more readily provide the affordance of collegial review of practices and thus avenues for ongoing innovation. Given this, the following case study is a description of the enhancement of TPACK in a blended environment using peer observation of teaching as a collegial vehicle.
In Semester 1, 2011, Computer Systems and Networks (CSN), a first year, first semester computer architecture and networking undergraduate course was taught across three campuses within the Bachelor of Information Technology at Griffith University in Brisbane, Australia. Learning activities for CSN consist of a weekly 2 hour lecture and 2 hour workshop. The course introduces the beginning IT student to the low-level inner workings of computers. The course content is highly technical in nature and includes various mathematical and abstract concepts. The teaching approach for the course has been, in the past, to use chalk and talk with PowerPoint slides for the dissemination of theory and its application through the interactive development of illustrative examples on the whiteboard.

Feedback collected from students both informally during the course as well as student evaluations in the formal university data collection process at the conclusion of the course has consistently indicated that the information written on the whiteboard is extremely valuable to students and has a positive impact on student learning.

I believe I learnt better not through the slides but by the lecturer physically drawing diagrams on the board and explain as he goes. (CSN-Formal-End-Of-Course-Evaluation)

During the lectures [The lecturer] would draw examples on the board along with the lecture slides, this was probably the most helpful part of this course. (CSN-Formal-End-Of-Course-Evaluation)

Prior to 2011, and the peer review and observation process for CSN discussed later, no suitable way was found to successfully overcome this difficulty and, despite student demand for this resource, the lectures for the CSN course were not able to be recorded completely.

The PRO-Teaching process for the CSN course consisted of two separate action learning cycles comprising of observations of the lecture component spaced two weeks apart. During the observation process, two observers observed the delivery of the lecture by the observee. One observer had a discipline specific focus (Information Technology) and had extensive background in the content. Observer number two acted as learning and teaching observer and brought an educational background with limited understanding of the lecture and course content. Both observers reflected on the perceived quality and effectiveness of the teaching using the standardised PRO-Teaching observation instruments and protocol. To gauge student perception of the quality and effectiveness of teaching, a survey was given at the end of both peer observation sessions. The teacher was not present during the survey completion or collection phase.

The first peer observation session, held in the lecture of week 6, covered the representation of real numbers, such as 1.93, in binary notation. Prior to this, students
had only been exposed to representing whole numbers in binary. The teacher in this observation relied heavily on worked examples illustrating the IEEE standard encoding and decoding process for binary real numbers.

The second peer observation session, held in the week 8 lecture, introduced higher level concepts related to the computer’s Central Processing Unit (CPU), starting and stopping processes from running on the CPU, various ways to approach how processes are stored in the computer memory, and how text-programs are made ready for execution on the machine. The teacher in this session also relied heavily on content dynamically written on the whiteboard. However, this content consisted mainly of diagrams rather than worked calculations.

A half-hour debriefing session between the two observers and observee was completed subsequent to each observation. During this debriefing the observers indicated a number of opportunities for improvement related to increasing engagement and learning outcomes. The discipline observer, who was extremely familiar with the content, gave feedback on the flow and pacing of the lecture, as well as specific feedback related to the content. The second observer, who had a background in learning and teaching, did not have specific comments related to the unfamiliar content, but was able to provide very insightful comments related to how the content might be better structured and disseminated. In particular, the learning and teaching based observer raised the issue of capturing the content and the difficulty that students would have in copying the material on the whiteboard for subsequent revision. Further discussions led to the exploration of options for solving this particular pedagogical problem by considering both the student learning process and potential opportunities provided by emerging educational technologies. Several possible options for increasing interactivity in lectures were discussed in the debriefing session and laid a foundation for ongoing collaboration between the learning and teaching observer and the observee.

The Innovation

One of the major hurdles in enacting change and innovation in higher education is that the ongoing evolution of both pedagogical knowledge and technical knowledge makes it difficult for any one practitioner to keep abreast of developments in both these knowledge domains in addition to that of their own core discipline. Mishra and Koehler (2006) suggest an approach that involves “learning technology by design” (p. 1020) for overcoming this issue. One of the main difficulties in applying this kind of design thinking to innovation is that there is a substantial gap between the overarching pedagogical principles and actionable strategies that can be applied in the classroom (Goodyear, 2005). Individual academics rarely have the specialist expertise to bridge this gap themselves instead relying on their subjective experience to interpret principles in such a way as to make strategies useful in their own context. Without sufficient knowledge of the affordances of newly introduced technologies, this process can break down. The consequences of this are situations
where technologies are being used in haphazard ways leading to frustration amongst both the students and the teaching staff (Goodyear & Ellis, 2008). A discussion with a colleague who does have specific expertise in this translation process can be productive in overcoming design problems. This is one of the particular strengths of a peer observation model that is specifically designed to seed discussions between pedagogical innovation experts and content experts. The case study described here is one such instance.

As part of the debriefing the person being observed raised the issue of lack of success in capturing the hand-written material that has been identified by students as a very important part of their learning. In response, the learning and teaching observer mentioned the idea of using a touch tablet attached to the computer to write digital ink on the computer screen and project the computer screen. Digital ink allows a computer user to write onto the computer screen electronically using a touch sensitive tablet connected to the computer via a USB connector and a special pen that connects to the touch sensitive tablet. This approach has been used extensively in video-based instruction. The most well known example of this type of innovation is The Khan Academy (https://www.khanacademy.org). Broadly, digital ink is the use of a writing implement and interface of some description (in this case a USB tablet) to represent handwritten content in a digital learning environment. Anything written in digital ink is able to be captured using standard lecture recording software for capturing what is shown on the computer via a projector. With this technology, the teacher can hand draw diagrams on presentation slides, or other software such as, for example, an Adobe Acrobat document. This allows both PowerPoint and hand-written content to be electronically displayed via a typical lecture theatre projection environment and captured as an electronic recording that could subsequently be made available to students. The flexibility of the tool allows for this content to be captured dynamically in a live lecture setting. This approach has the potential to improve learning (Iribe, Nagaoka, Kouichi, & Nitta, 2010) by allowing greater student engagement in the document and knowledge co-construction.

From that suggestion and subsequent in-depth discussions, an innovative way was found to not only project both the PowerPoint and hand-written material, but to also capture them and make them available as a single high-quality recording. Because of the multi-layered approach of the PRO-Teaching observation and feedback process, this innovative approach was able to be trialled in the same semester as the peer observation process.

To trial the digital ink innovation, the lecturer acquired a touch tablet and acted on the feedback from the first PRO-Teaching observation debrief to modify the lecture delivery mode to include digital ink. A full two hour CSN lecture was developed for week 13 and delivered using the touch tablet instead of the normal mode of delivery via the whiteboard. The lecture content revisited material from the previous 12 weeks of the 13 week course and featured many hand-written diagrams and equations. A live recording of the lecture that incorporated both PowerPoint and digital ink was subsequently made available to students on all campuses. 85 students accessed the
recordings, representing a take-up by approximately 37% of the 225 enrolments. This was an encouraging start to the introduction of a new, non-traditional, and non-compulsory content delivery model for the students in the course. Subsequent iterations of CSN have used the innovation for all content delivery.

**IMPLICATIONS OF THIS STUDY**

In order to evaluate the impact of this innovation a comparison of student experiences and student learning outcomes between offerings were undertaken.

**Student Experience Surveys**

Each course in the university has an end of semester anonymous student feedback process for both the perceived quality of the course (SEC) and perceived quality of the teaching (SET). For CSN in 2010, 2011, and 2012, the same teacher delivered identical lecture materials differing only in the use of the innovation for the last lecture in 2011, and for the full semester in 2012. In 2012, the teacher was more familiar with the technology and more effective in delivering the content. The SEC and SET surveys were given at the same time of semester in 2010, 2011, and 2012. A comparison of both SEC and SET data for CSN between, the 2010 offering (without digital ink), 2011 offering (with digital ink for the final lecture), and the 2012 offering (with digital ink for all lectures), shows a rise in the mean value of all questions with “Overall, how effective was this course in helping you to learn?” increasing from 3.9 out of 5 (2010) to 4.4 out of 5 (2011) and 4.5 out of 5 (2012) and “Overall, how effective was this lecturer/tutor in helping you to learn?” rising from 4.4 out of 5 (2010), 4.6 out of 5 (2011), and 4.7 out of 5 (2012). As shown in Table 13.1, the greatest improvements from 2010 to 2011 and 2012 were in questions related to the effectiveness of the course and teacher in helping students to learn. Qualitative data from the 2012 SEC survey included 6 out of 26 comments explicitly mentioning the innovation as being a particularly good aspect of the course. These improvements in student perception suggest the effectiveness of the introduction of the digital ink strategy to influence, motivate and inspire students to learn.

Student perception of the effectiveness of digital ink and the lecture recording was also measured independently via an online survey held at the end of the course. Responses to a number of questions on student perception of the innovation were solicited using a five point Likert-style scale ranging from ‘Strongly Disagree’ to ‘Strongly Agree.’ Percent satisfaction, the proportion of Agree and Strongly Agree responses, is shown in Table 13.2. Each question in the survey received a Percent satisfaction rating >80%, providing further evidence that students found the innovation effective.

It should be noted that one student consistently responded negatively with an answer of Strongly Disagree to each question. This student’s extremely negative responses can be taken in the context of the later qualitative comment in the further
Table 13.1. 2010, 2011 and 2012 SEC and SET question scores

<table>
<thead>
<tr>
<th>Question</th>
<th>2010 score</th>
<th>2011 score</th>
<th>2012 score</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course was well-organised.</td>
<td>4.1</td>
<td>4.4</td>
<td>4.7</td>
</tr>
<tr>
<td>This course engaged me in learning.</td>
<td>4.0</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>The teaching (lecturers, tutors, online etc.) on this course was effective in helping me to learn.</td>
<td>4.2</td>
<td>4.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Overall I am satisfied with the quality of this course.</td>
<td>3.9</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>This staff member presented material in a clearly organised way.</td>
<td>4.1</td>
<td>4.4</td>
<td>4.7</td>
</tr>
<tr>
<td>This staff member presented material in an interesting way.</td>
<td>4.1</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Overall, how effective was this lecturer/tutor in helping you to learn?</td>
<td>4.4</td>
<td>4.6</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Table 13.2. Survey results: % Satisfaction, SA = Number that Strongly Agree, n = Number of respondents

<table>
<thead>
<tr>
<th>Question</th>
<th>% Sat.</th>
<th>SA</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>The material in this lecture recording was presented in a clearly organised way</td>
<td>88.8%</td>
<td>44.4% (8)</td>
<td>18</td>
</tr>
<tr>
<td>The material was presented in an interesting way</td>
<td>83.3%</td>
<td>38.9% (7)</td>
<td>18</td>
</tr>
<tr>
<td>Overall, I am satisfied with the teaching methods used in this lecture recording</td>
<td>88.2%</td>
<td>52.9% (9)</td>
<td>17</td>
</tr>
<tr>
<td>It was easy for me to follow the concepts and ideas presented in this lecture recording</td>
<td>83.3%</td>
<td>44.4% (8)</td>
<td>18</td>
</tr>
<tr>
<td>The tools used in this recording assisted my learning</td>
<td>83.3%</td>
<td>50.0% (9)</td>
<td>18</td>
</tr>
<tr>
<td>The parts of the session when the lecturer wrote out material were effective</td>
<td>88.9%</td>
<td>61.1% (11)</td>
<td>18</td>
</tr>
<tr>
<td>The parts of the session when the lecturer wrote out material were easy to see</td>
<td>88.9%</td>
<td>55.6% (10)</td>
<td>18</td>
</tr>
<tr>
<td>The parts of the session when the lecturer wrote out material were easy to follow</td>
<td>88.1%</td>
<td>52.9% (9)</td>
<td>17</td>
</tr>
<tr>
<td>The parts of the session when the lecturer wrote out material were be useful for me to observation</td>
<td>88.9%</td>
<td>55.6% (10)</td>
<td>18</td>
</tr>
<tr>
<td>The material was presented in an interesting way</td>
<td>83.3%</td>
<td>38.9% (7)</td>
<td>18</td>
</tr>
<tr>
<td>Overall, I am satisfied with the teaching methods used in this lecture recording</td>
<td>88.1%</td>
<td>52.9% (9)</td>
<td>17</td>
</tr>
</tbody>
</table>
comments question where a student expressed extreme dissatisfaction that recordings were not provided earlier, but also stated “at week thirteen, we get a recording which confirms how valuable a resource it would have been.” This suggests that the student found the innovation very valuable but was unhappy at the lateness of its implementation and that this was the reason for the negative comments rather than the value of the innovation. Taking this into consideration, there was only one other negative response to “It was easy for me to follow the concepts and ideas presented in this lecture recording” with the overwhelming majority of respondents responding positively.

Additional open-ended questions asked students to provide input on their perceptions related to both the positive and negative aspects of the lecture. A final open-ended question related specifically to their views of the hand-written component of the recording.

Student responses to the question “Please indicate what you thought was the most effective part of the lecture recording”:

- Being able to pause and replay sections involving process that I wasn’t clear on. It allowed me to move through the steps repeatedly and increase my understanding of how the process worked.
- Parts that were written out that cannot be shown in the normal lecture slides. The visual on what the lecturer was writing and talking about made it extremely useful and was as if he was writing on the whiteboard making it very easy to follow.
- The fact that I could stop the play-back and rewind and go over and over content that I didn’t pick up initially.

The question “Please indicate what you thought was the least effective part of the lecture recording” received answers mostly relating to technical limitations of the trial including relatively poor audio quality and the lecturer’s inexperience using digital ink. A student response:

- Resolution was a little low and having all the toolbars in the capture were pointless and distracting.

The question “Did you benefit from the material written by the lecturer during the session? If so, please explain how.” received only positive responses:

- Yes – Because you see the lecturer’s method of thinking and he walks you through the process step by step.
- Yes, it helps me learn.

Student responses to the question asking for “Further comments?”:

- Thank you so much for going to the effort of putting this together, it has proven to be an extremely effective studying tool.
This has helped me a lot with passing the end test.

I believe a great help would be if all lectures were recorded and uploading to [content management system] … This allows easy viewing in lectures and easy reviewing online at a later time.

In general, student responses to the survey were overwhelmingly positive and there was consensus that the handwritten digital ink elements of the lecture were easy to see and a useful addition to the lecture as well as providing an excellent revision tool.

**Student Learning Outcomes**

Enhanced student experiences of learning appear to have been accompanied by enhancements in student engagement with learning, which are reflected in improved learning outcomes. Figure 13.1 is the final mark distribution for the 2010 cohort without digital ink. Figure 13.2 shows the marks distribution for the 2011 cohort where the digital ink innovation was trialled only in the final, revision class and the teacher was becoming familiar with its effective use. Figure 13.3 shows the marks distribution for the 2012 cohort where the innovation was in place for the whole course offering and the teacher was becoming experienced with the technology. When viewed as variants of normal distribution it is apparent that the ‘tail of failures’ in the 2011 and 2012 cohorts are proportionally much less than that of the 2010 cohort. This indicates better learning outcomes for the more challenged students in the 2011 and 2012 cohorts. This feature is accompanied by a rise in the median mark from 52.5 in 2010 to 57 in 2011, and 61 in 2012 which indicates a rise in the level of engagement with learning (Carini, Kug, & Klein, 2006). Table 13.3 shows the relative distribution of student outcomes in each of the grade ranges from fail to high distinction. It can be seen that there was only minor influence on the percentage of students in the highest grade range. Carini et al. (2006) explain this as a consequence of more accomplished students already being highly engaged learners. The 2012 cohort shows a lower failure rate and lower pass rate, but higher credit and distinction rates. This provides further evidence of better learning outcomes for students who are exposed to the innovation, particularly once the new method has been practiced by the teacher.

<table>
<thead>
<tr>
<th>Year (n)</th>
<th>% F</th>
<th>% P</th>
<th>% C</th>
<th>% D</th>
<th>% HD</th>
<th>Median Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 (105)</td>
<td>27.6</td>
<td>35.2</td>
<td>14.3</td>
<td>4.8</td>
<td>3.8</td>
<td>52.5</td>
</tr>
<tr>
<td>2011 (141)</td>
<td>27.7</td>
<td>38.3</td>
<td>15.6</td>
<td>7.1</td>
<td>4.3</td>
<td>57</td>
</tr>
<tr>
<td>2012 (130)</td>
<td>19.2</td>
<td>28.5</td>
<td>23.8</td>
<td>13.8</td>
<td>5.4</td>
<td>61</td>
</tr>
</tbody>
</table>
There are definite indications as detailed in the student experiences of learning and the relative learning outcomes that the digital ink intervention impacted positively on student learning. This innovation may not have been possible without the professional conversations to enhance learning and teaching that were facilitated through the peer observation process.

Figure 13.1. 2010 Histogram of marks for CSN

Figure 13.2. 2011 Histogram of marks for CSN
As indicated in the previous section, the bringing together of technical knowledge, discipline knowledge, and educational knowledge was a necessary condition for this innovation to take place. It is unlikely that the innovation would have taken place without the enabling structure of the PRO-Teaching process. Different discipline perspectives were extremely valuable. The feedback received from the two observers generally fell into two different categories. The discipline observer generally addressed the first category, content, with some very useful input by the learning and teaching observer in relation to making the content easier to understand. This was in a sense simpler for the learning and teaching observer as the content was new and they approached it as a new learner would.

Category number two, educational design and delivery, was generally addressed by the learning and teaching observer, although this was where the experience of the discipline observer helped to indicate ways to make the content more accessible and understandable. Because the discipline for which the content is delivered is technology based, the technology aspect was familiar to the observee and technology could be readily assessed for suitability and adapted for the proposed purpose. For this innovation to be developed, both of these observers were necessary to bring together the three TPACK pillars.

The technology aspect may be a challenge for discipline observers or observees who do not have a strong technology background. In such instances, it would be a benefit to ensure that at least one of the observers has an awareness of and aptitude
with applicable technologies that could be suited to implementing technology based solutions to issues that are identified during the observation process.

Even without considering the technology component specifically, a strength of the PRO-Teaching process is its incorporation of both discipline and learning and teaching observers. The inclusion of the learning and teaching observer in the process ensures that the discussion is grounded in appropriate theory and that any interventions and innovations have a suitable theoretical underpinning. In short, this provides a measure of insurance that the process is implemented in a scholarly fashion.

The two observers also create an opportunity for non-learning and teaching academics to begin a dialogue with a learning and teaching specialist in a specific problem context. This collegiality is something that may not be possible or perceived as necessary by non-learning and teaching focused teachers prior to exposure to the peer observation process. Part of this may be due to the continued siloing of teaching disciplines (Becher & Trowler, 2001; Buchbinder et al., 2005) Removing the silos, particularly with regard to learning and teaching, and connecting teachers from different disciplines is a direct benefit of the PRO-Teaching process that can lead to improvements in learning outcomes for both students and teachers as well as facilitate scholarship of learning and teaching initiatives, both within the discipline and in an interdisciplinary context. One of the challenges to disseminating learning and teaching theory and approaches to non-learning and teaching focused teachers is to make it specific to a particular problem that that particular teacher is experiencing. General purpose theory without an application may be interesting but usually is not compelling.

The debriefing aspect of the PRO-Teaching approach where both observers are present and discuss the various observations can be an effective way to identify potential issues with the current teaching approach. It can also be used to kick-start the problem solving process in a collegial and supportive way. The PRO-Teaching process gives an opportunity for identifying an issue, for the observee to reflect on the issue, for all three participants to begin to understand the problem, as well as for a collegial and supportive environment to begin to resolve the problem utilising the three TPACK pillars.

From the observee’s perspective, for the innovation discussed here, connecting with a learning and teaching observer on a specific learning and teaching issue germane to the teaching being performed created an opportunity for the observee to develop a scholarship of learning and teaching to their portfolio. The structure of the PRO-Teaching process can speed up the development of the scholarship aspect significantly by providing a framework for evaluating the current strategy, reflecting on it, receiving timely learning and teaching input, and developing a solution based on current learning and teaching theory. The solution developed in this fashion is likely to be worthwhile in making a difference to student learning and is also likely to be worthy of being disseminated to a wider audience (the scholarship aspect). In particular, the PRO-Teaching process discussed in this case study has contributed
directly to the completion of a number of scholarly projects and outputs (Venema & Lodge, 2012, 2013a, 2013b; Venema & Rock, 2014) suggesting that it is a useful vehicle for the development of a scholarly approach to teaching.

In this case study, the single most important issue could be identified from a range of issues observed during the peer observation process. Because of the structure of the PRO-Teaching process, the issue could be addressed through a trial of a technological innovation within the same semester that it and its potential solution were identified.

One of the challenges of introducing an innovation part-way through the semester is the student perception of the innovation. Recall that one student in the survey consistently responded negatively with an answer of Strongly Disagree to each question. However, their text comment indicated that they felt the innovation was extremely valuable, and their negative response was due to it not being made available earlier. In this case, better sign-posting and communication with the student cohort could have addressed this before it became an issue for this student. In particular, the reasons for not being able to provide the recordings of the hand-written material could have been made clear, and the innovation promoted as a solution that had just become available, rather than how it was perceived by the student as something that could have been done at any time and was withheld from students for an arbitrary reason.

The initial trial of the innovation in 2011 was limited to a single revision lecture for CSN in week 13. Subsequently, in 2012 the innovation has been successfully used for each lecture in CSN. Student feedback on its effectiveness, particularly as a revision tool, has been very positive. Future work will look at transferring this innovation to other courses which can benefit from this type of approach.

CONCLUSION

In this chapter a case study of the use of PRO-Teaching as a vehicle to develop both a scholarly approach to teaching as well as providing a framework to gather data for ongoing change to facilitate scholarship of learning and teaching. The case study describes the process behind which a technological innovation was introduced into a first year computer science course and the role that PRO-Teaching played in this process. Evaluation of the instructional innovation that was generated through the professional conversations around the peer observation process showed marked improvements on student experience of learning and in the levels of engagement with learning as evidenced by students’ learning outcomes. This case illustrates how interdisciplinary teams can work together to create innovative solutions by leveraging technological, pedagogical, and content knowledge. By engaging with PRO-Teaching a scholarly, professional learning process was experienced by participating teachers with demonstrable impacts on students’ learning. This case study shows a promising developmental process for educators through involvement in cross-disciplinary peer review and observation of teaching.
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PEER OBSERVATION AS A COLLABORATIVE VEHICLE FOR INNOVATION


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14. THE RELUCTANCE OF SCIENTISTS TO ENGAGE IN PEER REVIEW OF TEACHING

Finding the Way Forward

INTRODUCTION

Over the last two decades universities globally have responded to a growing demand for higher education and hence the number and diversity of university students has increased dramatically (Bradley, Noonan, Nugent, & Scales, 2008; Universities Australia, 2013). At the same time publicly funded universities have faced decreasing budgets leading to radical changes in the delivery of education. There is an ever increasing push towards efficiencies through online learning and larger classes. Concomitantly governments have adopted a quality agenda in which universities are ranked against each other on the basis of teaching, leading to increased competition for recruiting quality students (TEQSA, 2011). As such considerable effort is being exerted by university managements and government agencies to define and measure quality teaching and learning standards (Coates, 2010; Kraus, Barrie, & Scott, 2012; Newton, 2002). However, as Newton points out, there are many interpretations of the meaning of quality, with academics and managers viewing the term differently.

Student evaluations of teaching are now widespread as a measure of teaching quality (Quality as Customer Satisfaction) (Newton, 2002), however they are often used for purposes for which they were not designed, for example, decisions about annual performance, tenure and promotion, creating extra pressure and anxiety among academic staff (Karagiannis, 2009). There has been considerable debate over decades, about the validity of such student surveys and this has been comprehensively reviewed in a number of studies (Alderman, Towers, & Bannah, 2012; Berk, 2014; Beleche, Fairris, & Marks, 2012; Calkins & Micari, 2010; Davies, Hirschberg, Lye, Johnston, & McDonald, 2007; Kulik, 2001; Stes, DeMaeyer, Gijbels, & Van Petegem, 2012; Subramanya, 2014). Student ratings can be influenced by a large number of factors unrelated to the quality of teaching and learning outcomes, for example; class size, difficulty of the course, expected grade, instructor personality, charisma and gender. It has even been argued that students tend to assign high ratings to teachers from whom they learn the least (Rodin & Rodin, 1972). Student evaluation scores have also been shown to decline when faculty members incorporate active learning in to their courses (Walker, Cotner, Baepler, & Decker, 2008; White, Pinnegar,
In addition the system is open to manipulation by “buying” good student ratings with easy exams, entertainment, deflated content and inflated grades (Calkins & Micari, 2010; Schneider, 2013). Clearly additional evidence about the quality of a teacher’s performance is required. Thompson (2013) suggests that the professionals should handle quality control with teachers evaluating each other, creating an environment of trust and humanity, honesty with consequences, intellectual growth and improved institutional values. (para. 14)

The American Association for Higher Education (AAHE) began the project “From Idea to Prototype: The Peer Review of Teaching” in 1994. Peer review of teaching is the process of observation in which a teacher attends a colleague’s teaching session for the purpose of providing helpful feedback to foster improvement of teaching practices (Bell, 2001). Its use has varied between the two extremes of accountability (quality assurance) and staff development (quality enhancement) (Lomas & Nicholls, 2005). Hutchings (1994) identified three main arguments for the peer review of teaching: to encourage collaboration amongst teaching staff to share good practice, to ensure that the enhancement of teaching is under the control of professionals rather than external agencies, and to supplement student evaluations. Lomas and Nicholls (2005) reviewed the challenges of implementing quality-enhancing peer review of teaching in universities, revealing that a major obstacle has been the reluctance of academics to engage with the process. Teaching appears to continue to be held in much lower esteem than research (which is perceived to be more easily quantified in terms of numbers of publications, citation rates and journal rankings, PhD students graduated and grants obtained). Promotion of academic staff is linked to research profile, rather than their excellence in teaching (Harvey & Williams, 2010). This may be one reason why university Science Faculties have been slow to adopt evidence based teaching practices (Gormally, Evans, & Brickman, 2014).

Peer observation of teaching has not been prominent in Australian universities until recently (Harris, Farrell, Bell, Devlin, & James, 2008). At Griffith University the PRO-Teaching project was implemented as a voluntary procedure to provide more reliable evidence beyond student evaluations for a staff member’s teaching performance and to promote a culture of improved practice among academics (Drew & Klopper, 2013, 2014). The process involves the formation of a triad of two observers and one observee, with the person to be reviewed, paired with a colleague from their discipline as well as someone with expertise in learning and teaching. The cycle of activities starts with a briefing of the observers as to the nature of the lesson, its aims and objectives. Students in the class are informed of the presence of the observers who remain unobtrusive and make notes of the pedagogic practices being used. The students are also given an evaluation form at the end of the class. A debriefing session follows, where ideas are shared and a written report produced, indicating how the lecturer has performed on each of ten dimensions of effective teaching. The teacher can then reflect on these observations and consider strategies to be implemented for a second session which runs in the same way as the first.
THE RELUCTANCE OF SCIENTISTS TO ENGAGE IN PEER REVIEW OF TEACHING

A final report with both quantitative and qualitative data is produced after the second session (Klopper & Drew, 2013). The discipline-specific observer and observee then change places and the process is repeated. While the program has been running for several years in this university, the majority of staff in the Science disciplines have not participated. In this chapter we investigate the reasons why science teachers are reluctant to undertake peer review of teaching with a view to suggesting a way forward to increase participation.

METHODOLOGY

Participants

The school surveyed for this chapter was part of the Science Faculty at a research university and comprised 58 teachers at levels B to E (lecturer to professor) teaching across a number of disciplines including physics, chemistry, mathematics, forensic science, biochemistry and cell biology, microbiology, physiology, and aviation. The majority were on a balanced profile (40% teaching, 40% research and 20% service) and teach across all undergraduate levels as well as supervise postgraduate Masters and PhD students. Two of the members of this school were on a teaching focussed profile comprising 60% teaching, 20% research and 20% service, three were on a research focussed profile (20% teaching, 60% research and 20% service), and one was on a service focussed profile (20% teaching, 20% research and 60% service).

Peer Review of Teaching Process

The peer review of teaching process used at this university is called PRO-Teaching and was based on the process described by Drew and Klopper (2013, 2014). A flow chart summarising the process is given in Figure 14.1. Three people create a triad for the duration of the process; two are from the same discipline and are required to be both observer and observer for two classes each during the same semester. The third member of the triad is a teaching and learning expert, identified by the PRO-Teaching administrator, and their role is to observe all four taught classes.

Analysis of Data

Within the school seven members of teaching staff had participated in the PRO-Teaching process during the four years it has been running. The remaining 51 teachers had not. All teaching staff were asked to complete one of two anonymous questionnaires; one for those who had engaged in the PRO-Teaching activity (questionnaire 2) and one for those who had not (questionnaire 1). The authors were advised of the participants in PRO-Teaching by the administrator of this process. Analysis of the responses received was on the basis of a total potential number of teaching staff of 58; seven participants and 51 non-participants.
The information collected from these questionnaires was collated to obtain the views of science teachers regarding peer review of teaching in general, and the specific form of peer review operated by the university. Of the 58 teaching staff who were surveyed, a total of 26 responded; four of the seven participants in PRO-Teaching (57%) and 22 of the 51 who did not participate (43%). The overall staff profile of the school along with the numbers of staff from each level who responded to each of the two questionnaires can be seen in Figure 14.2.

Questionnaire 1 was developed to provide some background demographic context to the respondent with reference to academic level and profile. The development of hurdle selections was based on both the current literature regarding hurdles to the uptake of peer review and verbal feedback received regarding the PRO-Teaching project over the past three years. Non-participants in the university’s peer review process were asked to identify and rank accordingly, those impediments they felt applied to them personally. Furthermore, they were provided the opportunity to reflect on their general perceived value of PRO-Teaching practices and to provide suggestions to overcome identified barriers associated with the current peer review process. This provides a teacher voice to support modifications to the process that could be developed to encourage their participation in the future.

Responses from questionnaire one were collated in order to identify the issues most often cited in respondents’ ‘top 3’ hurdles to participation. This resulted in nine
specific hurdles being identified. For further analysis, the total number of times each of the nine hurdles was cited by respondents was calculated, and this was used to draw conclusions regarding the reasons for non-participation.

For those who had participated in the peer review process a separate questionnaire asked them open-ended questions about the benefits they perceived in the peer review process; to themselves, their colleagues, their students and to the institute and their profession. The responses were collated to determine the key themes identified by the participants. They were also asked about how they had used the teaching scholarship evidence obtained via the peer review process, and also if they had any advice to improve the current process of peer review operating at the university. The four responses obtained from participants covered each of the four academic levels within the school.

RESULTS AND DISCUSSION

Perceived Benefits of Engaging with Peer Review Activities

For the teachers who did participate in the PRO-Teaching process their perceived benefits fell into five broad categories. These included benefits to themselves personally, to their colleagues, to their students, to their institute and to their broader profession.

Participant answers to open questions have been included throughout the results and discussion as direct quotations illustrating the areas of discussion. They are written in italics and the participant number is included in square parentheses after each quote. Where more than one participant provided the same comment, both participant numbers are included.

Personal benefits. From individual feedback there appear to be a similar collective of motivators that provided personal benefits to teaching staff. All respondents felt
that the personal benefits they gained revolved primarily around the opportunity to reflect on their practice and to enhance their teaching methodology. Engaging with this process “helped identify failed strategies and limitations [1]” and that by “observing other’s approaches [one could] get new ideas to apply to own lectures [7, 12].” In addition, it was stated that this opportunity also provided “additional feedback on positive aspects of my teaching [7]” and evidence of good practice in addition to student evaluations and that this could be utilised as “evidence for promotion and teaching and learning awards [7].” Thus for a teacher having their practice observed, the benefits seemed to incorporate both intrinsic and extrinsic motivators. For example, making active time to reflect on one’s teaching and feedback received from a colleague allows for self-development of skills that can be used as evidence required for various elements of academic life. For an inexperienced teacher, this could provide good evidence for an end-of-probation application. These reflections are in general alignment with the many references to the benefits of peer review that already exist (Lomas & Nicholls, 2005; Thomas, Chie, Abraham, Raj, & Beh, 2014; Pereira, 2014; White, Boehm, & Chester, 2014).

Benefits to colleagues. All respondents felt that their participation in the program was also beneficial to their colleagues, whether they were within the science faculty itself, or a teaching and learning discipline colleague. PRO-Teaching provided the opportunities to learn how other academics teach effectively, “provided an outside perspective on practice [1]” and “an excellent opportunity for idea sharing [17].” It was also perceived that this collegial approach to sharing practice would “build collegiality and promote recognition of good practice without the formalised nature of awards [12].” These responses are similar to those observed in a study by Blackmore (2005). Essentially this forum for peer review provided an informal mentoring scenario, which has been shown to be beneficial (Sullivan, Buckle, Nicky, & Atkinson, 2012). Teachers who took on the role of observing a peer appeared to be both extrinsically and intrinsically motivated to do so. Motivators included a variety of learning and teaching awards or gathering evidence of mentoring for their annual review process. Additional motivators revolved much more around the desire to both learn from others and to facilitate the development of peers which would ultimately be beneficial for staff, students, the institute and higher education in general.

Student benefits. Questionnaire responses concerning academic perceptions of the impact of PRO-Teaching peer review on their students indicated that the “pedagogical enhancement of teaching practices [12]” coupled with the “addressing of short-comings [7]” ultimately improved teaching quality through “wider understanding of better learning options [1].” This in turn would lead to a hope for better student engagement when “students realise that you care about their learning and want to help them [17]” by improving personal teaching skills. This demonstration of active life-long learning reinforces best practice to which we would all like to aspire.
Institute benefits. Institutional benefits of the PRO-Teaching process appeared to be twofold; cultural inclusiveness and for accreditation purposes. Culturally, institutional benefits included the PRO-Teaching leading to “an enhanced awareness and sharing of teaching practices, both good and developing [12],” and “the provision of structured reflection opportunities [which] provide staff with an opportunity to present collaborating evidence of enhanced development of professional teaching capacity” and “the development of a more collegial workplace [7, 12, 17].” This is especially important to the school in question which has a highly competitive scientific research environment due to the nature of funding processes. There is evidence indicating that workplaces that are collaborative rather than competitive have better outcomes for everyone (Kezar, 2006), thus developing a collaborative educational focus may enhance other research efforts as well.

The peer review process allows the institute to encourage all teaching staff to continue to improve their teaching, promotes “overall improvement in teaching performance [1]” and brings a global “higher level of teaching professionalism [12]” to a profession that currently lacks standardised formal education qualifications. It also allows the institute to “monitor staff performance [17]” though ideally not as a punitive measure (Atwood, Taylor, & Hutchings, 2000; Blackmore, 2005).

It is very clear that for the institute to benefit it also needs to set an expectation of teachers being reflective practitioners (Atwood et al., 2000; Thomas et al., 2014) and to promote a faculty culture of constructive and critical review of teaching practices (Blackmore, 2005). To achieve this, a framework should be developed in consultation with staff and involve a dedicated work plan, accountability, training and marketing to develop such a culture (White et al., 2014). The requirement of evidencing practices that lead to measurable learning outcomes is a very difficult process for which many methods are utilised (e.g., peer review, student evaluation, awards) but all of these are opinion-based and fraught with potential problems (Berk, 2014). This is clearly still an area where appropriate evidence needs to be developed.

Professional benefits. Participant reflection on the impact of PRO-Teaching on their profession provided feedback that was not dissimilar to that already given as benefits in general, such as “enhanced skills [1]” and “increased awareness of [the] teaching and learning sphere of academic life [7].” For teaching focussed academics, for whom this type of activity is the norm in the discipline of scholarship of teaching and learning, “professional development opportunities that did not have a long-term time or financial investment [12]” such as formal qualifications, but that enhanced networking opportunities appeared to be the major benefit.

When the view of all responding teachers within the school was considered, 92% indicated that they felt that peer review was of value to science teachers. For those teachers who did not participate in the PRO-Teaching, the overwhelming majority still indicated positive comments regarding peer review in general. They suggested that “peers have a lot of useful insight to offer [7, 8, 17],” like “suggestions on
how to streamline process or update curriculum [8]” and that this would inherently “improve teaching delivery...by providing a further metric for evidence of teaching quality [1, 3, 12, 17].” It was also felt that “peer feedback strongly correlates with improved teaching [5]”. However, there were clearly identifiable hurdles which prevented many within the school from actively engaging with the PRO-Teaching.

Perceived Hurdles to Engaging with Peer Review Activities

Whilst it seems clear that participation in peer review in general was positively perceived, the tensions around the specific implementation of the PRO-Teaching methodology in this school appear to revolve around key issues such as time, value and depth of engagement and prior experiences. Teachers articulated a number of different hurdles (Table 14.1) that either prohibited their participation or were burdensome to those who did.

These hurdles can be mostly clustered into the following themes: (A) Time investment required (B) Research agendas seemingly at odds and (C) Questionable elements related to logistics of implementation of the PRO-Teaching methodology. These three major themes all challenged teachers’ perception of the value of undergoing this review process in its current form. The percentage of times each cluster of hurdles was cited by all non-participant respondents is shown in Figure 14.3.

![Figure 14.3. Percentage of respondents citing these reasons as hurdles to their participation in PRO-Teaching: Theme A – Time Investment Required; Theme B – Research Agendas; Theme C – Questionable Logistical Elements and Other Hurdles](image-url)
THE RELUCTANCE OF SCIENTISTS TO ENGAGE IN PEER REVIEW OF TEACHING

Table 14.1. Questionnaire 1 hurdles provided for respondents to identify if they felt they were relevant to themselves

<table>
<thead>
<tr>
<th>Hurdle Number</th>
<th>Nature of Hurdle</th>
<th>Number of responses citing this hurdle in respondent's 'top 3' hurdles (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Too much time invested</td>
<td>66.7</td>
</tr>
<tr>
<td>2</td>
<td>No perceived personal benefit</td>
<td>19.1</td>
</tr>
<tr>
<td>3</td>
<td>Not aware it was an option</td>
<td>4.8</td>
</tr>
<tr>
<td>4</td>
<td>Anxiety around the process</td>
<td>4.8</td>
</tr>
<tr>
<td>5</td>
<td>Aware of others who had bad experience e.g., poor feedback, extensive time invested</td>
<td>23.8</td>
</tr>
<tr>
<td>6</td>
<td>Someone else’s research agenda</td>
<td>28.6</td>
</tr>
<tr>
<td>7</td>
<td>Research outputs in discipline research area prioritised over teaching &amp; learning by institute</td>
<td>19.1</td>
</tr>
<tr>
<td>8</td>
<td>Labelled as having ‘teaching and learning’ interest. Concern that if I participated I might risk having my profile shifted to teaching-focussed</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>Composition of triads questionable (observee, discipline observer, teaching and learning observer)</td>
<td>23.8</td>
</tr>
<tr>
<td>10</td>
<td>Specificity of discipline observer</td>
<td>9.5</td>
</tr>
<tr>
<td>11</td>
<td>Value of feedback provided</td>
<td>14.3</td>
</tr>
<tr>
<td>12</td>
<td>Lack of specific feedback on content</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>Timetabling issues</td>
<td>14.3</td>
</tr>
<tr>
<td>14</td>
<td>Lack of availability of observers</td>
<td>9.5</td>
</tr>
<tr>
<td>15</td>
<td>On short-term contract</td>
<td>4.8</td>
</tr>
<tr>
<td>16</td>
<td>No review process available for laboratory demonstrating</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>Lack of longitudinal (year to year) feedback on reviewed sessions</td>
<td>0</td>
</tr>
<tr>
<td>18</td>
<td>I don’t know anything about teaching and learning language</td>
<td>4.8</td>
</tr>
<tr>
<td>19</td>
<td>Other</td>
<td>23.8</td>
</tr>
</tbody>
</table>

Theme A – Time Investment Required

For 67% of all responding non-participants, time was listed as one of their top three ranked impediments for participating in peer review. This is understandable given the amount of time required to undertake the full PRO-Teaching methodology within one semester (refer to methodology). Comments from non-participants indicated that
if the entire “process was quicker [2,5,9]”, required “less tedious paperwork [4, 9, 10]” and was generally “less time-consuming (but still accountable) [7]” they would be enabled to participate more. This is not a criticism of the process itself, but rather, that for a teacher to engage in such a process they must have placed significant value on the benefits to be gained. Those who undertook the PRO-Teaching review felt that the time investment was valuable to them for intrinsic purposes of enhancing teaching quality or for extrinsic purposes such as gathering evidence for probation, promotion or award. This agrees with White et al. (2014) who reported that those undertaking peer review, felt that the time investment was a sacrifice worth making. Without perceiving direct benefits or meeting external requirements (such as annual academic review) the time required seemed overwhelming to many. Within the school there has been a lack of articulated requirements around demonstrated professional development in the learning and teaching space although this has recently changed. The peer review process supports overcoming the time challenges of completing graduate qualifications in higher education but it appears insufficient to provide enough value for participation. Indeed the lack of perceived personal benefit indicated by 29% (6 of the 21 responses from non-participants) would also support this finding.

All of the responding teaching staff who participated in PRO-Teaching indicated that they found the process “cumbersome and time-consuming [17]” and that the available working “time (or the lack thereof) is the biggest drawback [17]” of the current methodology. They suggested that simplification of the process to “remove the very bureaucratic framework [1]” would be helpful. These staff also identified that perhaps the need to “separate pedagogy from content and student opinion [12]” for general purpose annual peer review could achieve this, with the more time-consuming fully triangulated approach being employed when evidence was required to support applications for probation, promotion or award.

Similar findings were reported by Atwood et al. (2000), where time was one of the top two hurdles to participation in peer review of tertiary academic teaching. Several other studies also cite time as a significant inhibitor to teachers undergoing peer review in any form (Harris et al., 2008; Kell & Annetts, 2009; Thomas et al., 2014; White et al., 2014).

**Theme B – Research Agendas**

This theme encompasses several different questions asked of non-participants of peer review. The most significant of these was that the PRO-Teaching project was someone else’s research project. This was identified by 52% of non-participating respondents as a top three personal hurdle. The cultural challenge associated with competing research requirements and the prioritisation of discipline-based research was also identified by 33% of non-participating respondents indicating this to be one of their top three reasons for not engaging with the PRO-Teaching. These findings demonstrate the competitive and often non-collegial environment of the science
discipline, especially with a large variety of discipline-specific scientific research projects occurring with the one school.

Furthermore, institutional policies and expectations, at the time this research was conducted, provided more reward and recognition of discipline-associated research over scholarship in teaching and learning. For teachers with a balanced or research-focussed profile this was identified as a significant challenge, particularly with high expectations of quality discipline research. In the science school this implies bench-work based research for the most part. The majority of teachers within this school also have greater than 10 years’ experience in the higher education sector. White et al. (2014) discuss how, for these experienced teachers, the perception of need for peer evaluation of teaching is relatively negative, further contributing to the ‘disconnect’ of the research-teaching nexus. With limited recognition of the impact of the PRO-Teaching on academic workload, cultural expectation of participation and limited awareness of recognition of participation, motivation to regard this activity as high value is unlikely to occur. Non-participants indicated that it was perceived to be an activity expected only in the realm of teaching-focussed academics and thus perhaps why many indicated no perceived personal benefit with only one teaching-focussed academic amongst the non-participants. This supports the cultural disconnect where scholarly activities such as peer review are perceived to belong to the forum of educational research not in the sciences. Blackmore (2005), Atwood et al. (2000), and White et al. (2014) all discuss the importance of the institutional development of cultural expectations in engaging academics in peer review of teaching. Magno (2012) goes further to add that professional responsibility in higher education is equally important but needs executive support.

Theme C – Questionable Logistical Elements

The third theme relating to reluctance to participation in PRO-Teaching was around the perceived questionable value of the process itself. This hurdle included elements revolving around the triad composition and how valuable any feedback may be dependent on this composition, with 33% of responding non-participants identifying it as one of their top three hurdles to undergoing PRO-Teaching. Concerns related to the experience and expertise of both discipline and learning and teaching observers and thus the value and relevance of comments or suggestions they could provide. This is a concern also iterated by Berk (2014).

Triad composition required the teacher being reviewed, a discipline observer and a learning and teaching observer. The school has a very broad range of sub-discipline sciences ranging from maths and chemistry to nanotechnology, photonics, physics, biology, biochemistry, biomedical sciences, forensic chemistry and biology and aviation. For those teachers who participated, the discipline observer may have been within the discipline but still have limited knowledge or awareness of the contextual materials being presented. Atwood et al. (2000) recommended that utilisation of experts in content from other institutes would overcome this challenge. However,
the additional logistical burden this creates would seem somewhat prohibitive to broad application, particularly in niche content areas. Furthermore, it was never made explicit exactly how learning and teaching observers were selected, and what qualifications or experience they had to be perceived capable of acting in this capacity. This lack of articulation further contributed to the cynicism around triad composition.

Scheduling of the PRO-Teaching activities themselves was also difficult and restrictions around availability due to timetabling clashes impacted composition. To co-ordinate three busy teachers across the semester for four different teaching activities and four separate discussions firstly between observers and then in addition with the observee, meant that triad composition sometimes varied or that the process was unable to be completed in its entirety.

The analysis also looked at the impact of academic profile or academic level on participation. It would appear that regardless of the academic level the general hurdles to participating in the PRO-Teaching process remain similar. Academic profile did indicate small differences however. For those with a teaching-focussed profile the perceived hurdles were mostly around triad composition or awareness of the process. For those on a research profile, the primary hurdles were around the balance of discipline research versus scholarly activities, which also leads to a decreased perception of the value of feedback. These findings suggest that scientific academic profile may have an impact on perceived value and willingness to undertake peer review activities, however due to the low number of non-balanced profile academics involved in this study, comments may provide a skewed view of perceived hurdles.

It is interesting to note that elements such as anxiety around the process (Blackmore, 2005; Atwood et al., 2000), different discipline language (that of scholarship of learning and teaching which is a social science language and not their own science sub-discipline), or cultural challenges around teaching practices themselves were not directly perceived to be significant hurdles.

The authors were concerned at the lack of longitudinal reflective practices in the current PRO-Teaching process. Review of two classes within the same semester may yield very different results purely based on the difficulty and nature of the content discussed in a class, not because recommendations for improvement provided following the first observation were not implemented. This highlights a concern that any differences made and reported during a single semester are at risk of being relatively superficial in nature. Our qualitative study agrees with a recent quantitative study on the willingness of academics to participate in peer review of teaching (White et al., 2014). In that study it was found that

Academic’s attitudes toward PRO-T [Peer review of teaching] and their willingness to undertake it are largely influenced by their beliefs about is advantages and disadvantages and their own perceived need for it. (p. 383)
THE RELUCTANCE OF SCIENTISTS TO ENGAGE IN PEER REVIEW OF TEACHING

FINDING THE WAY FORWARD

Bell and Cooper (2013), in a study of peer review in an Engineering School in Wollongong, determined that

The success of the program was dependent on four critical elements: educational leadership; a staged, voluntary, opt-in/out-out process involving a hands-on preparatory workshop and trial observation; partnering early-career and experienced academic staff; and an ‘external to faculty’ coordinator. (p. 60)

The authors believe that the higher value for peer review lies primarily in pedagogical enhancement of teaching practices. Ultimately peer review needs to be developed in such a way that it is fit for purpose. We propose that there are in fact two different purposes of such an activity, being the development of cultural educational collegiality and as an evaluative mechanism for gathering evidence of good practice for specific milestone activities.

The first of these has been clearly identified previously (Atwood et al., 2000; Blackmore, 2005; Thomas et al., 2014; White et al., 2014). Without the executive support and setting of behavioural expectations of reflective practitioners (Thomas et al., 2014) for participation in peer review of teaching, establishing a cultural norm of constructive criticism within the faculty would be difficult. Whilst PRO-Teaching fits all the defined elements of previously described best practice frameworks (Blackmore, 2005), the time burden and perceived value of elements of the methodology and feedback currently restrict widespread voluntary uptake within the science school explored in this investigation. In particular, the time burden is a clear concern having been now identified in numerous studies including our own (Atwood et al., 2000; White et al., 2014; Kell & Annets, 2009; Thomas et al., 2014; Bell & Cooper, 2013). Thus alternative measures may be required to develop a cultural expectation of participation.

The purpose of peer review of teaching should be to provide effective feedback to continually improve teaching in a collegial manner and thus ultimately enhance student learning (Gormally et al., 2014, Harvey & Williams, 2010, McMahon, Barrett, & O’Neill, 2007). The focus on improvement occurs when participants have control over the key dimensions of: choice of observer, focus of the observation, form and method of feedback, resultant data-flow and next steps (McMahon et al., 2007). This agrees with studies on resistance to the process amongst science academics whose fears concerned these very issues (Atwood et al., 2000). However it is important that this cultural attitude to peer review is explicitly not linked to performance measures other than participation (Bell & Cooper, 2013; Blackmore, 2005). When the focus of peer review is shifted to demonstrating good practice to a third party (management) there is a risk of the process becoming a compliance exercise which seriously questions the reliability of the data (Berk, 2014; Shortland, 2004).
The second purpose is appropriate when strong evidence of developing good practice (such as in review for probation) or demonstrated best practice (such as in promotion or award applications) provides an excellent opportunity to implement the PRO-Teaching process. Regardless of the purpose, review mechanisms that promote both intrinsic and extrinsic motivators, whilst addressing the perceived hurdles identified in this study, are the most likely to prove successful in the future. Such mechanisms need to be flexible enough to accommodate highly variable teaching modes. In the sciences this includes lectures, tutorials, interactive workshops, laboratories and education in the online space.

When a culture of annual peer review exists in a collegial sharing of teaching experience, the step to the more substantial methodology should not appear so intimidating or burdensome, particularly if such evidence has been articulated to be of value to all stakeholders.

Consideration of a combination of both top down (in values, funding and acknowledgement) and bottom up (acceptable and expected that everyone will participate) approaches to meet in the middle for the benefit of teaching and learning should be measured. This should develop through a consultative process and includes, adequate time provision within any academic workload document, recognition of professional development activities in the annual review process and the acceptance by the executive that continued participation in these activities will be valued in multiple facets of academic life.

One of the keys to encouraging engagement of science teachers with peer review is to create a process which is straightforward and which provides qualitative and quantitative feedback to the observee. This university has recently developed a number of ‘lite’ versions of peer review which are available for academics to engage in. There are a series of ten, which are each designed to evaluate a single aspect of a lecture or workshop class, for example, ‘clear learning aims and objectives’ and asks an observer to provide very detailed feedback on the minutiae of that aspect of teaching. The remaining three ‘lite’ versions range in complexity from simply articulating “what the observer and observee think went well, did not work and what could be changed to improve the session in the future”, to a miniature version of the full PRO-Teaching activity but only run once per semester for each participant; triangulating expected learning outcomes, student perceptions and the views of the observer and observee.

The provision of a ‘lite’ form of peer review is ideal for time-poor teachers within a science faculty however it is important that the evidence which will be generated from such an activity will still have validity. Many other institutions already adopt such short versions of peer review of teaching (for example, Flinders University, Deakin University, and the University of Sydney). Here the reliance on qualitative rather than quantitative feedback means year-on-year comparison of the observation of the same lecture or workshop within a course to a different cohort of students would be difficult. The authors propose that a qualitative and quantitative review would be most appropriate and have developed a peer review matrix where a number
of aspects of teaching and learning can be assessed during a lecture, workshop or laboratory teaching format by the ticking of boxes to show how well the academic being observed has illustrated each aspect. The observer ranks the observee for how effectively they have addressed each aspect ranging from 1, not effectively through 3, quite effectively to 5, very effectively (see Figure 14.4). In addition to the quantitative data obtained the observer is asked to make general comments about things which worked well, points for consideration, and in consultation with the observee, agreed development ideas.

Such a ‘lite’ version of peer review would predominantly provide feedback more on pedagogical techniques. It would also provide some level of evidence of reflection on teaching practices for the annual review process in addition to SEC and SET data. There is a minimal amount of paperwork involved and would require little administrative support. Such a version would be ideal for experienced teachers to obtain a snapshot of their teaching and would be a perfect way to introduce new teachers to the peer review process.

With the increasing demands on time which academics face, obtaining longitudinal feedback on lecture or workshop presentations can be difficult. Lectures at this university are routinely recorded and therefore there is now the potential for an observer to watch a previously recorded presentation and compare it to one which they see presented. This would allow two iterations of the same presentation, one year apart, to be assessed by the same observer, although little indication of student engagement would be available from the recorded session.

The ‘lite’ model proposed in Figure 14.4 would serve the purposes of providing effective feedback for continual improvement of teaching and also to facilitate the development of a culture of good practice within the institution in a less onerous way. It would also provide training for implementation of the full version by developing pedagogic awareness and the skills required to undertake the full version of peer review of teaching. There are some situations, when participation in the full PRO-Teaching process is best practice, for example, if one of the participants is seeking promotion or requires evidence of effective teaching for their probation review. The full version provides additional rigor but also requires funding to support the process with administrative allocation and, given the considerable time involved, needs to be recognised within staff workload documents. Significant consideration should also be given to the allocation and the experience of both discipline and learning and teaching expert observers to ensure the validity of the feedback and recommendations provided. The use of the ‘lite’ version every year in combination with the full version, perhaps every four years, or when seeking promotion or award, would provide longitudinal evidence and allow an academic to demonstrate a continued commitment to the improvement of their teaching.

In conclusion, we see that the way forward for science teachers is to provide dual mechanisms of peer review that can be utilised for one of two specific purposes, either developing a collegial culture of peer review of teaching or substantial evidence of best practice. The former is a simpler, streamlined but still valid, voluntary
**PRO-Teaching ‘Lite’**

<table>
<thead>
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</thead>
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<tr>
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<td></td>
</tr>
<tr>
<td><strong>Teaching Profile (Semester, Continuing, Fixed Term, Other) Please circle:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Faculty/School:</strong></td>
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<tr>
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<tr>
<td><strong>Number of students in class:</strong></td>
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<tr>
<td><strong>Date and time of session:</strong></td>
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<td><strong>Length of session:</strong></td>
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</tr>
<tr>
<td><strong>Observer name:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Faculty/School:</strong></td>
<td></td>
</tr>
</tbody>
</table>

**PRO-Teaching ‘Lite’** Quantitative Feedback

Each aspect below is assessed on Likert Scale from 1 'Not effectively' through 3 'Quite effectively' to 5 'Very effectively'.

**Clarity of presentation of expected learning outcomes**

- How effectively does the teacher clearly convey the learning aims and objectives?
- How effectively does the teacher relate the learning to the broader course objectives?
- How effectively does the teacher emphasise the importance, relevance, and integration of theory and knowledge with professional practice?

**Lesson planning and organisation**

- How effectively does the teacher deliver the lesson in a way that is structured and coherent?

**Clear explanation of requirements and standards for excellence**

- How effectively does the teacher model answers to problems or assessment items?

**Using effective pedagogical techniques**

- How effectively does the teacher encourage and engage students with learning activities?
- How effectively does the teacher use formative assessment procedures to ensure students understand concepts?

**Quality of presentation**

- How effectively does the teacher regulate the pace of delivery?
- How effectively does the teacher demonstrate clarity of speech?
- How effectively does the teacher use eye contact in communication with students?
- How effectively does the teacher provide high quality explanations and answers?

**Quality of lesson content**

- How effectively does the teacher demonstrate advanced content knowledge?
- How effectively does the teacher encourage critical enquiry informed by current research?

**Quality of student participation**

- How effectively are the students motivated and engaged with learning?
- How effectively does the teacher demonstrate concern for individual students and their learning needs?

**Quality of intercultural approach**

- How effectively does the teacher model respectful and culturally competent interactions with students?
- How effectively does the teacher integrate activities for students to engage with others from different backgrounds?

**Scholarly approach to teaching**

- How effectively does the teacher demonstrate scholarly works that inform lesson content?
- How effectively does the teacher integrate discipline research into lesson content?
- How effectively does the teacher engage students to provide feedback on teaching or lesson quality?

**PRO-Teaching ‘Lite’** Qualitative Feedback

**Things that worked well:**

- Points for consideration:
- Agreed development ideas:

---

Figure 14.4. Proposed peer review of teaching matrix for quantitative and qualitative feedback of an observed teaching activity
process that has minimum imposition on valuable time and where the institutional cultural expectation is that this activity is standard practice solely designed for staff development. The latter is to be utilised when more in-depth analysis of teaching is required. For either purpose this peer review of teaching process can only be considered as one element of a larger picture that each academic needs to draw on regarding their teaching practice as a whole.

REFERENCES


THE RELUCTANCE OF SCIENTISTS TO ENGAGE IN PEER REVIEW OF TEACHING

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INTRODUCTION

The university-wide initiative PRO-Teaching explored the potential for the peer review of teaching to enhance teaching practice and the learning outcomes of students to address the perceived need to improve teaching quality (teaching for learning), provide opportunities for academic staff to improve their understanding of effective teaching (learning for teaching) and enact a scholarship of learning and teaching. This chapter appraises the project using data and applying the most significant change (MSC) technique to a new area of work. The outcomes of the project are presented, and the effectiveness of the MSC technique considered throughout.

Four groups within the one university were involved in the PRO-Teaching project. These included: Arts, Education and Law (AEL); Griffith Business School (GBS); Science, Environment, Engineering and Technology (SEET); and Health (HEALTH). To support claims of excellence in learning and teaching within these groups, evidence was derived from a range of sources, as is advocated to be best practice (Nygaard & Belluigi, 2011; Shah & Nair, 2012). Alternative sources of data that complement the student evaluations for quality of courses and teaching include: peer evaluation or observation of teaching (Barnard et al., 2011; Ginns, Kitay, & Prosser, 2010; Lomas & Nicholls, 2005; Smith, 2008; Swinglehurst, Russell, & Greenhalgh, 2008); structured reflection on teaching practice (Askew, 2004; Bamber & Anderson, 2011; Biggs, 2001; Boud, 1999; Healey, 2000); and student learning outcomes. These data sources were made use of in this project.

MOST SIGNIFICANT CHANGE

The most significant change technique (MSC) (Davies & Dart, 2005) was deemed appropriate to the aims of the PRO-Teaching project, and subsequently played a key role throughout. The MSC technique is a form of participatory monitoring and evaluation, involving the collection and systematic analysis of significant changes. This technique is designed to provide ongoing data regarding program performance in order to assist the management of programs. Three primary purposes of program evaluation for which MSC can be utilised are: rendering judgments; generating
knowledge; and facilitating improvements. In this project, generating knowledge and facilitating improvements were the focus, with the use of MSC enabling generation and sharing of knowledge through peer-to-peer interaction, and allowing the direction of improvements to be steered towards explicitly valued directions – the predominant themes in the MSC stories.

Implementation of the MSC technique offered numerous advantages. In contrast to the typical quantitative deductive approach taken to evaluation of similar data forms, MSC uses a qualitative, inductive approach, with participants making sense of events after they have occurred. This facilitates emergence of unexpected outcomes, rather than predetermined indicators (the typical quantitative, deductive approach) being the only points of interest.

Since its development in the 1990s, MSC has been used in Australia and internationally in areas as diverse as education, community improvement, and environmental management (for examples see: Cameron et al., 2014; Olney, 2005; Willetts & Crawford, 2007). Throughout its two decades of use, numerous adaptations of this technique have surfaced, as needed in order to meet the requirements of the contexts in which it is used. Davies and Dart (2005) have outlined ten steps to “full implementation” of MSC. These are outlined below:

- Getting started: establishing champions and getting familiar with the approach
- Establishing ‘domains of change’
- Defining the reporting period
- Collecting stories of change
- Reviewing the stories within the organisational hierarchy
- Providing stakeholders with regular feedback about the review process
- Setting in place a process to verify the stories if necessary
- Quantification
- Conducting secondary analysis of the stories en masse
- Revising the MSC process

MOST SIGNIFICANT CHANGE IN THE PRO-TEACHING PROJECT

The PRO-Teaching project aimed to develop a flexible suite of peer review processes and resources to support a range of peer assisted teaching activities. These processes and resources all provided data that when combined had the potential to provide a valid form of evidence of quality and effectiveness of teaching. This section frames the application of MSC in the PRO-Teaching project through explanation of the project. This is then followed by elucidation of the “significant changes” found, structured around the identified domains of change.

A participatory action research methodology was employed to cyclically evaluate the question: “How can peer review and observation of teaching be used to enhance the quality of teaching within the University?” Creswell (2012) explains that participatory action research strives for
open, broad-based involvement of participants by collaborating in decisions as consensual partners and engaging participants as equals to ensure their well-being. (p. 583)

Over time, the methods and modes of action are formed through a “dialectic movement between action and reflection” (Kidd & Kral, 2005, p. 187). Participatory action research is cyclical in nature and the relationship between action and reflection can be understood as a self-reflective spiral that involves “multiple cycles of reflecting, planning, acting and observing” (McTaggart, 1997).

Gall, Gall and Borg (2007) emphasise the importance of continued reflective practice, as this process provides practitioners with the ability to step back from the fast-paced and problematic world of practice to ponder and share ideas about the meaning, values, and impact of their practice. (p. 604)

Kidd and Kral (2005) believe that within a participatory action research study, the generation of knowledge is inextricably connected to one’s action(s), and a successful participatory action research study is “best measured by the changes in the lives of the participants” (p. 189). To this end the MSC technique (Dart & Davies, 2003) was employed for participatory monitoring and evaluation of the pedagogical change in teaching practices and to capture the significant change points in understandings and operations. This narrative technique (Connelly & Clandinin, 1990) involved the collection of data ‘stories’ telling of significant domains of change in participants’ lives and the systematic review and selection of key stories by the researchers, stakeholders and academic teaching staff (Davies & Dart, 2005). Evidence was constructed from a range of qualitative and quantitative data collected from project members, participants and stakeholders. This included social or involvement impact in terms of numbers of participants, number of repeat participants, number of schools, disciplines, etc. Qualitative statements were also acquired from participants (interviews and/or surveys) to record their experiences of and perspectives on their project related activities with focus upon its strengths and constructive criticism of its shortcomings. Additionally, each instance of peer observation, review or assistance generates data. Classroom observations, student evaluations of the class, learning outcome minute tests, peer observation reports, and collection of guided reflection/auto-evaluation were included also.

The design of the PRO-Teaching process (see Figure 3.3) involved an observee, two observers (a discipline expert from the same school as the observee, and a teaching and learning expert from a different school) and students in two sequenced teaching episodes of the same course. The mix of relevant discipline knowledge and recognised teaching and learning expertise provided a balanced range of views and ideas when generating the observation reports. A developmental approach to the observation instrument design was utilised, as is outlined in Chapter 3.
The PRO-Teaching process can be broken into three components: pre-observation tasks; observation tasks; and post-session tasks. Pre-observation tasks primarily involve organisational tasks in preparation for observation sessions. Observation tasks take place during and following the observation sessions, and can be summarised as: observation; reflection; and debrief. Post-session tasks take place after all observation sessions have been completed, and involve conducting a student focus group; critical reflection on the peer observation process; and finalising of paperwork.

Inductive analyses were employed through the utility of an applied thematic analysis, primarily utilising a descriptive and exploratory orientation. This methodology is well suited to large data sets and is proven to be most suitable for team research. Because most of the data collected are in the form of free-flowing text (i.e., focus groups and in-depth interviews), we narrowed in on the divide between the analysis of words and the analysis using themes and codes. The interpretation is well supported by the data with the inclusion of non-theme-based and quantitative techniques adding analytic breadth to the study.

From a procedural standpoint we engaged quantitatively oriented word-based analyses to evaluate the frequency and co-occurrence of particular words or phrases in the body of the textual data in order to identify key words, repeated ideas, or configuration of words with respect to other words in the text associated with the domain. Word-based techniques are valued for their efficiency and reliability since the original, “raw” data are used, resulting in minimal interpretation involved in the word counts, generally resulting in greater reliability. The word-based analyses have associated attributes of key words, surrounding words and phrases (Dey, 1993, p. 59). The key-word-in-context (KWIC) method followed to identify all occurrences of the key words in the text and identified the context in which the word appeared.

The domains of significant change identified during applied thematic elaboration included: active participatory contribution; pedagogical methods, tools and approaches; the sustainability of the PRO-Teaching mechanism within the organisation; and other emergent themes. As such the following narration details the evidential evaluation of the project presented around these four domains.

MSC DOMAIN 1: ACTIVE PARTICIPATORY CONTRIBUTION

During 2012, the active participatory contribution from all four academic groups of the university afforded 124 teachers to be involved with the PRO-Teaching project. 40 per cent of the teachers involved participated as both an observee and an observer. For the remaining 60 per cent, teachers participated in capacities of observer only, or as the identified learning and teaching expert. Table 15.1 presents the participation numbers for each group within each school for each semester in 2012. It is noted that the Health group was late in engaging with the project due to the group’s roll out of an initiative focusing on the first year experience; hence the data reports no participation during semester 1 of 2012.
Qualitative statements from participating academics in the form of workshop surveys, telephonic interviews, and guided reflection/auto-evaluation from a total of \(n = 23\) (AEL = 9, GBS = 3, HEALTH = 7, SEET = 4) form the basis of elaboration. The data highlights the generative and iterative nature of learning and teaching, confirming the characteristics of quality teaching and learning, and having one’s own teaching peer reviewed is only part of a larger professional development cycle that the PRO-Teaching offers.

### Identifying Pedagogical Techniques

Being an observer from another discipline afforded the opportunity to learn how colleagues from various disciplines use alternative yet effective pedagogical techniques:

- It allowed me to see different aspects of lecture delivery in different contexts and how to adapt.
- Good ideas to implement forced me to use things (e.g., wireless microphone) I had been otherwise avoiding.
- I learnt how to be a better teacher. Less writing on the slides is sometimes good.
- In preparation for my teaching I thought again about the structure of my lectures, objectives, the ways I need to reinforce achievements and summarise at the end.
- I think it highlighted the value of a reflective approach to my work which is my constant habit – it encouraged me to seek solutions for problems that seem constant such as too much material & not enough time.

### Table 15.1. Active participatory contribution 2012

<table>
<thead>
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<th>Semester 1, 2012</th>
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<tr>
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<tr>
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<td>N/A</td>
</tr>
<tr>
<td>Totals</td>
<td>17</td>
<td>9</td>
</tr>
</tbody>
</table>
It made me reflect on a few things I have been doing for years – and I asked the reviewer to show me how she did things – so it was a great teaching experience afterward.

It has fuelled interest in teaching and learning improvement on my part.

The teacher has the ability to engage and disengage students by presentation and content.

It also reassured me of the quality of my own teaching and gave me confidence to try for promotion on that basis. Provided insight into another discipline and how the content may be different but good teaching practice may be similar.

It was also important to receive reinforcement from my colleagues that what I am delivering is interesting and worthwhile. Students' feedback was very interesting to reflect upon.

It can be seen through these comments that observation of peers’ teaching practice commonly prompted reflection on own teaching practice, providing impetus for improvement. Ideas for teaching practice were gained and shared. In some instances this involved increased confidence, resulting in “using things ... I had been otherwise avoiding”, and applying for promotion. Insight was gained “into another discipline and how the content may be different but good teaching practice may be similar.”

Eyewitness of Pedagogical Techniques in Action for Professional Development

Observers reported equally high levels of satisfaction and evidential learning through the observations they had been a part of and justified the value of cross-disciplinary observation for gaining insight and a working knowledge of how ‘others’ approach the learning environment and engage student cohorts:

By observing the work of others I gained valuable insight into how other approach the learning environment and engage with students. This gave me some useful ideas about things I could do in my classes.

I’ve learned new techniques from the academics that I’ve reviewed on how to use online instant surveys in the class.

The biggest thing for me has been the insights I have gained from viewing teaching from the audience which we rarely do as teachers. It was valuable for me to see how students react to certain strategies and I also observed strategies I will use in my own teaching.
Pedagogical Contribution of Peer and Student Feedback

Student evaluations of the classes observed have revealed the lecturers’ use of pedagogical techniques, teaching materials/aids and learning environment and acknowledging particular teaching practices:

I learnt that people really do enjoy my lectures (nice to know after some of the SET feedback!) – and how to structure power point presentations in a more student friendly way. This was really insightful.

I learnt more about how I was perceived by my peers and students – I got more confidence and was reassured in that sense. I also learnt some useful techniques in engaging students through ‘soft questions.’

That feedback is not a negative process. Learning tips/hints about how to engage students successfully from experienced lecturers (I am a novice lecturer).

Teaching Materials/Aids and Learning Environment

Students positively commented on the value of having lecture slides to edit ahead of time. Plain language instead of text directly from the textbook has also been observed as a supportive contribution towards effective teaching. These lecture slides have been supported by academics’ stronger use of visual aids, such as DVDs to help advance a better understanding. However not all feedback suggested effective use of teaching materials:

The lecture could be improved by a standard format of PowerPoint slides that is informational e.g., Containing dot points are addressed sequentially.

Positive Pedagogical Nuances

Student evaluations of the classes that were observed revealed the academic’s use of: positive pedagogical techniques and nuances; teaching materials/aids and the learning environment; and acknowledging good teaching practice. Positive pedagogical techniques and nuances identified by students included: standing in front of class instead of behind desk; the gesture/tone of lecturer; use of Lectopia for review and catch up; more effective use of the lecture space, including becoming more engaging through use of a microphone, and improved flow of information and an increase in breaks to record material; providing readings specific to each week’s topic “instead of clunking all the readings like other courses do” and a good course website.
Acknowledgment of Good Teaching Practice

Good teaching practice was acknowledged by the students, and seen to include both the format of the course itself, and characteristics of the teacher. The course being presented in a clear, engaging, interesting and challenging format was deemed important. Students appreciated the use of review questions at the start of each lecture, use of personal stories “which are more interactive and interesting”, and interactive activities involving the students themselves. With regards to the lecturer, it was seen as good teaching practice for him/her to be accessible, and provide one-on-one assistance when needed; to have immense enthusiasm for subject matter, and strong engagement with the class.

Student focus group sessions (n=8) were conducted across the groups of the university: one (1) from AEL; two (2) from HEALTH; three (3) from SEET and two (2) from GBS. The focus group sessions informally gathered data around the student’s perceived outcome of their teacher being involved with the PRO-Teaching process. Of the focus groups executed, 6 were small groups from small classes (6 or 7 participants). A couple of focus groups were conducted with the whole class (50–100). As it had not been the practice of the project to explicitly count the participants involved in the focus groups, the practice has since been amended to ensure a quantitative measure of participation is secured together with the qualitative data harvest. The interviews were transcribed and coded, and various areas of practice were highlighted, as outlined below.

Differences in Teaching while Observations Were Conducted

Over the course of the two teaching episodes many observations reported how the lecturers’ stance, gesture, clarity of information and format of the lecture were different / somewhat had improved. This resulted in lectures being perceived as more engaging as both the delivery of material and the interactive nature of the lecturer captivated students. Attending to Gardner’s multiple learning styles (Gardner, 1993), students positively commented on the strong use of visual aids, such as DVDs to help achieve a better understanding. This is seen to be supportive through the use of review questions at the start of each lecture, which incorporated more emphasis on gauging prior learning. It was apparent as well that teaching staff took greater care with international students regarding language and consultation.

On-Going Positive Changes after Observations Concluded

Students have confirmed that positive changes have continued after the observations, or frequently, staff have changed previous behaviours. It is worthy to note the witnessed confident teaching style, which is supported through repeated highlighting and in-depth explanation of concepts, coupled with the reiteration
of the learning objectives. Time management appears to have improved during lectures, as lecturers now seem to get through the slides that have been prepared and located on the course site. This had certainly not been the case for many courses. These ongoing positive changes afford enhanced learning experiences through the high level of organisation in both lectures and the course by the lecturer consistently taking on board questions and trying to get the students involved. Tutorials are said to have become more interactive and recap lecture material at the start relating to whole of course. This affirms the many positive constructive alignment scores that have been measured during the PRO-Teaching project.

**Potential Changes to Enhance Learning in the Course**

During the focus group sessions the following points for potential changes to enhance student learning were highlighted. In this light, quality enhancement becomes allied with learning environment enhancement and teaching enhancement that promotes learning enhancement.

**Revitalising Teaching through Multiple Lenses**

Being an observer from another discipline affords the opportunity to learn how colleagues from various disciplines use alternative yet effective pedagogical techniques. “Thanks for allowing me to take part in this project. I have found it really valuable to observe and reflect upon specific aspects of my own teaching performance as well.” Involvement requires teachers to reflect on their own practice and draws attention to the specific aspects that might need attention. Receiving comments from the observers “provided me with a ‘fresh’ look at my teaching and they pointed out some things that I could improve”.

**PRO-Teaching Impact on the Student Learning Experience**

This analysis is based on the overall satisfaction question “Overall I am satisfied with the teaching of this staff member” from the university wide student evaluation of teaching survey instrument. In total, 20 staff members in 26 courses (52 records from Semester 1, 2011 and Semester 1, 2012) have been analysed. The average student participation rates for the groups fall in a narrow range of 40–54 per cent in 2012. Overall, improvement in student satisfaction was seen across all the academic groups. However, due to the limited number of eligible sample courses (for example in the Health Group), specific findings cannot be generalised. Some SETs could not be used for the analysis due to the lack of comparable SETs in Pre or Post period to examine improvement. This analysis was based on the overall satisfaction question “Overall I am satisfied with the teaching of this staff member.”
There are numerous incidences of quality learning and teaching requiring purposeful acknowledgment through both peer and student feedback. A shared organisational language and capacity to identify positive pedagogical nuances and techniques is required. PRO-Teaching provides such a perspective for observers and observees to eyewitness pedagogical methods, tools and approaches for professional development. Both the process and outcome has the potential to revitalise teaching materials, teaching aids and learning environments through multiple lenses.

MSC DOMAIN 3: THE SUSTAINABILITY OF THE PRO-TEACHING MECHANISM WITHIN THE ORGANISATION

Interviews were conducted by the project leaders with the Deans, Heads of Schools, Deputy Heads of Schools and Senior teachers across the four groups were surveyed: AEL (n= 8), GBS (n=7), HEALTH (n=5), SEET (n=6) resulting in a total of 26 interviews. Applied thematic analysis of the interview transcripts report the sustainability of the PRO-Teaching mechanism within the organisation to be recognised in an academic’s workload – supported by administration personnel and/or online, however this would attract associated costs. It is also reported to compliment SEC and SET’s and has the potential to address in some part retention and engagement data – the mechanism was seen to afford students a voice that is timely, productive and developmental. The PRO-Teaching mechanism provides training, opportunity to connect with experienced observers, and supports evidential claims of performance for promotions and awards. It improves pedagogical techniques used in a range of courses, curriculum, assessment design, and the contextualisation of teaching. Participation can be encouraged and resistance reduced by highlighting the non-punitive capacity building opportunity. The PRO-Teaching mechanism provides opportunity to mentor sessional, new, young, and international staff; and to identify and support ‘at risk’ staff. The importance of learning and teaching by those in leadership roles is recognised through this approach. It is recommended to integrate PRO-Teaching into the annual staff review of performance data, and provide recognition for observees and observers as contributing to their service role of work expectations of academics at the university.

Qualitative statements from participants (surveys, telephonic interviews, and guided reflection/auto-evaluation) found PRO-Teaching to be a helpful way of continuing professional development. The mechanism requires people to be respectful and helpful for academics to overcome the “fear of someone sitting in and judging is gone and the actual aim of improving your teaching style is achieved.”

PRO-Teaching offers a good opportunity to meet with discipline and non-discipline peers and discuss strategies for student engagement in a sympathetic environment. The overall outcome is dependent on the openness of the participants. It is envisaged that the process might not be for everyone but over time a cultural sensitisation and
expectation could embed PRO-Teaching sufficiently, efficiently and effectively. No negative impacts were evident for participants as a result of this project.

The structured and formatted approach was deemed helpful as it allows the sharing of ideas and techniques among academics from different fields of study. There is a real risk that PRO-Teaching might primarily only be accessed by ‘good’ teachers if the mechanism is not embedded successfully within the organisation.

The suite of tools offers an alternative data source for teachers on their teaching performance that is not skewed by outrageous SET and as such require the PRO-Teaching reports to be treated as seriously in staff performance and review, and academic promotion, as SET and SEC reports are.

The paperwork requires simplification for embedding peer evaluation process with an additional mechanism for self-assessment and assessment to be created. The PRO-Teaching creates consistent development across teams and campuses and has evidentially claims to improve the student learning experience.

The PRO-Teaching needs strong senior leadership to provide “weight” to the peer observation narrative that would increase the value attached to improved teaching performance at school level and performance appraisal. This would afford leadership recognition for observees and observers and knowledge of substantive goals.

MSC DOMAIN 4: OTHER EMERGENT THEMES

PRO-Teaching aimed to assist quality enhancement of teaching at an organisational level; creating collaborative academic professional development; and ultimately creating world-class learning. This aspiration is realised by bringing together teachers and researchers with a common interest in building peer capacity to enhancing learning and teaching. The PRO-Teaching process requires local ownership and a centralised mechanism operationalised by local administrative hubs.

CONCLUSION

The PRO-Teaching mechanism demonstrates the capacity to collect data to inform the constructive alignment within teaching episodes, student perceptions of teaching quality and observer perceptions of teaching quality enhancement. Effective implementation of the PRO-Teaching is contingent upon collegial support, trust and respect administered by accompanying guidelines, resources and supportive advice. The wider PRO-Teaching project has involved 160 academics in training and the observation of more than 240 teaching episodes. Variants of the process have been developed for a range of teaching contexts including lectures, tutorials, workshops, 1-to-1-studio teaching and on-line course delivery.

There is an explicit link between PRO-Teaching and the enhancement of student learning outcomes as evidenced through the significant change stories when data from multiple sources is used. There are numerous incidences of quality learning and teaching requiring purposeful acknowledgment through both peer and student
feedback. A shared organisational language and capacity to identify positive pedagogical nuances and techniques is required. PRO-Teaching, combined with the MSC technique, provides such a perspective for observers and observees to eyewitness pedagogical methods, tools and approaches for professional development. Both the process and outcome has the potential to revitalise teaching materials, teaching aids and learning environments through multiple lenses. We argue that teaching for learning through learning for teaching is both a process and an outcome for multiple stakeholders participating in the sequenced episodes of peer observation of teaching.

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Sarah Cresswell joined the School of Natural Sciences, Griffith University in 2010 as a senior lecturer in forensic chemistry, having completed undergraduate studies in both chemistry and law and a PhD in chemistry in the UK. She has a number of research interests including the investigation of the clandestine manufacture, chemical profiling and analysis of illicit drugs and drug precursors. She is also
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Linda Hassall is a creative practice-led researcher with 20 years’ experience as a director, playwright and dramaturge in professional theatre industry contexts. Her comprehensive knowledge of performance and performance practices is applied to her teaching and research disciplines. She often works in social justice
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Kirsty Mallitt is the PRO-Teaching and PACES administrator for the Arts, Education and Law Group, Griffith University. She commenced with the Project team in late 2011 and was a key player in the collaboration amongst the Groups for developing a sustainable, embeddable process for peer observation. Also instrumental in the development of the PRO-Teaching Workbook and other supporting documents, Kirsty continues to support teachers who wish to engage in the process, post-project.

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