Mary Elizabeth Ryan *Editor*

Teaching Reflective Learning in Higher Education

A Systematic Approach Using Pedagogic Patterns

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Part I
Conceptual Underpinnings of Reflective Learning

Chapter 1
Introduction: Reflective and Reflexive Approaches in Higher Education: A Warrant for Lifelong Learning?

Mary Ryan

1 Introduction

University students are faced with more career and study choices than ever before, with a focus on employability rather than employment (Savickas 2011). In this fluid career environment, individuals must actively manage their capabilities and decisions in ways that are meaningful and manageable in their particular context (Antonovsky 2006). This chapter argues that effective choices require a reflexive and lifelong approach to learning whereby the individual engages in a continuous process of questioning and transforming their own capabilities and motivations *in relation to, and as a response to* the changing social conditions and expectations of the work or learning environment (Archer 2007). Reflexive processes, including reflection, are highly sought after in individuals seeking employment through vocational pathways (Commonwealth of Australia 2002) and university qualifications (Kember et al. 2008).

Reflexivity is often used interchangeably with other terms such as critical or transformative reflection (Hatton and Smith 1995; Ryan and Bourke 2013). Reflection in this volume is understood as a necessary component of reflexivity, the latter characterised by deliberative action following reflective thought. Indeed, critical and transformative reflection as described in Chap. 2, is inseparable from reflexivity and is only achieved if reflexive action ensues. Although some forms of reflective learning rely on metacognitive thinking strategies (Dahl 2004), that is, thinking about thinking, these alone fail to account for social contexts and structures which influence learning. Reflexivity is thus characterised by the reflective interplay between individuals and social structures to understand, maintain or change, courses of action chosen by individuals (Archer 2010).

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This chapter will discuss the concept of lifelong learning and the role of higher education in its development. It considers the elusiveness of demonstrating that graduates possess such a capability. The case is made for reflexivity and reflective learning as a way to position learners as active agents who are responsible for their learning—a necessary condition of lifelong learning. Next, the conditions for teaching reflective learning and reflexivity are discussed from a unique perspective highlighting the importance of the epistemological beliefs of higher education teachers. Finally, the chapter will explain how this book is structured around a multidisciplinary teaching and learning project in higher education.

2 The Nature of Lifelong Learning

Lifelong learning or ongoing learning is a general capability required of graduates from most Australian universities, and is considered a key skill for employability in industry (Commonwealth of Australia 2002) and for membership of professional associations (Kinsella 2001). But what does lifelong learning mean and why is it given such importance by universities and industry?

Learning can and does happen in different ways and at different points in one's life. At school, at university, on the job, from the World Wide Web, through interactions with others, learning can take place. Lifelong learning, however, suggests ongoing benefits and having a sense of what you might need to learn next. It does not suggest passivity, but rather it is imbued with individual agency within and across contexts. Lifelong learning is defined in various ways, but it generally includes the notion of self-monitoring and self evaluation, a repertoire of learning skills, the ability to make connections across different learning environments and/or fields, and can be undertaken in both formal and informal settings (James and Beckett 2013; Schuetze and Slowey 2013; Sutherland and Crowther 2006). Many scholars agree that learning involves both the external interactions with the social and material environment, and the internal processes of the individual as they acquire and develop new knowledge (Ryan and Barton 2014; West 2006). The social conditions in which we live are an important consideration in the argument for lifelong learning.

The transformation of society and of educational needs and opportunities has meant that traditional social structures, including life and employment pathways, can no longer be reliably predicted (Archer 2013; Schuetze and Slowey 2013). Global economic processes, environmental disasters, terrorism, the risk of contagion, and insecurity at work all contribute to feelings of uncertainty and lack of control (Maccarini 2013; Sutherland and Crowther 2006). How do we as a society try to develop solutions to such global issues, and how does the everyday person deal with local implications for them, their communities and their workplaces?

Citizens and workers who are able to manage change and transition and reorient themselves in new ways are more likely to have a sense of agency (West 2006). They understand the productive contributions they can make in a range of situations by being able to assess their own skills, experiences, knowledge and desires and

how these can be or will be utilised in a particular context. They use previous experiences, bending back learning upon the self, to apply transformed ideas to a new issue or experience (Archer 2010). This bending back upon self is the crux of lifelong learning. It is not enough to be able to assess issues or problems or situations; there is also the need to assess oneself in relation to the situation (Ryan 2013) and this assessment necessarily includes what we 'care' about. In this way, the lifelong learner is one who can mediate the fallible self that they know, and the complex contexts in which they live, work and learn.

Lifelong learning seems like a difficult concept to assess or to demonstrate at a point in one's life, yet it is a claim that is often made about the attributes of graduates from universities. How can universities know that once students graduate they will continue to learn across their lives? One of the issues is that the term lifelong learning has become a catchphrase. Universities include it in their graduate capability frameworks as it suggests that formal tertiary study has far-reaching effects. How, though, is this claim defined, and can it be taught and actually demonstrated? I argue that if we define lifelong learning not as a temporal concept, but as a morphogenetic approach (Archer 1995) to life and learning, then it can be realised through reflexive approaches to teaching and learning. The 'morpho' lexis in Archer's (1995) work acknowledges that 'society has no pre-set form or preferred state' (p. 5); even though some ways of being become normalised, they are always shaped rather than pre-determined. Thus, people can make (fallible) choices about what they prioritise in any situation, and can initiate change to current structures through the actions that they take. I propose that theories of reflexivity (after Archer 2012) offer a useful way to conceptualise reflective thinking and learning as part of the reflexive process. Reflexivity provides the tools to make a case that lifelong (reflexive) learning can be facilitated in higher education, albeit in different ways and with different take-up—as illustrated in this volume.

3 A Case for Reflexivity and Reflective Learning

Lifelong learning is transformative, that is, it involves a weighing up of frames of reference and assumptions (including one's own) and being open to changing one's perspective or ideas (Mezirow 2006). Given that our frames of reference are continually and rapidly changing, there is no longer a blueprint from the past or from others that we can reliably draw upon to guide future actions. The changing relationship between social structures and culture, that is, they are both changing and being changed by each other, means that we are now in a time of unprecedented contextual incongruity where variety produces more variety (Archer 2012). Humans, as a fallible part of this relationship, are faced with multiple possible pathways, choices and outcomes. Archer argues that such contextual incongruity means that reflexivity has become an imperative for humans to mediate their life and work concerns, and chart one's own course of action within and across various contexts and groups.

Social (and learning) outcomes are the result of the interplay between social structures (contextual factors), culture and personal agency (Archer 2012). In understanding the ways in which individuals manage competing influences and deliberate about action in their learning journey, we can start to recognise their potential for lifelong learning. Archer argues that social structures or contextual forms (for example 'normal' ways of doing things) are always transformable but always constrained as they take shape from, and are formed by, agents. Although one's powers and actions are conditioned by social structures, these structures are not considered by Archer to be 'forces', but rather are 'reasons for acting in particular ways' (Archer 1995, p. 209). The reception of such influences by active agents is essential to understanding and explaining eventual outcomes, which are mediated by their reflexivity (Archer 2010). This means that humans deliberate about their levels of engagement, their knowledge, desires and skills, and their concern with outcomes and expectations, to make learning choices within the structures in place. For example, students decide how much effort they will put into an assignment, based on how interested they are in the subject matter, how well they understand the task, how many other assignments they have, how much time they have available, how much the task is worth to their overall grade, what they know about the marker and so on. Students have choices within the structures of university policies and procedures, but of course these policies and procedures do provide some of the rationale for making choices around assessment. Students also have the opportunity to provide feedback on assessment tasks and procedures, which may in turn, lead to changes in those structures. Students deliberate about their learning journey constantly through internal conversations, but making these deliberations more visible and self-conscious, can lead to more effective decision-making and the capacity for lifelong learning.

This deliberation begins with the discernment of a key concern or cluster of concerns that matter to the individual and possibly to their friends or families or peers. Internal dialogue compares and contrasts reflective, retrospective and prospective considerations, weighing up the implications of endorsing one course of action over another (including no action). The reflexive cycle continues as the subject moves through the moment of dedication, not only deciding on worthwhile courses of action, but also whether or not s/he is capable of undertaking them and what priority they might have. In this way, self is considered as its own object of study in relation to subject (Archer 2007). The cycle occurs through, what Archer terms, the internal conversation.

This cycle constitutes lifelong learning when students are able to draw on new repertoires and skills to inform their deliberations and to take action that produces benefits for self and others. Importantly, for learning to produce ongoing benefits for both the learner and their work or study environment, it must involve reflexivity as a necessary condition of active engagement. Mere exposure to content fails to instil a form of learning that prepares individuals for a world where knowledge and skills must be constantly evaluated, analysed and revised for the demands of uncertain situations (McGuire 2009). Reflexive learning processes (Archer 2007; Grossman 2008) include: (i) recognising issues or critical instances; (ii) reflecting

on one's capabilities and desires in relation to the issue; (iii) weighing up contributing social structures; (iv) thinking creatively and critically about the issue; (v) making informed decisions; and (vi) taking appropriate action. These processes can be made visible and can be modelled and practiced at university to enhance students' reflective thinking and reflexive capabilities. As the chapters in this volume illustrate, these capabilities can be supported in different ways to suit different students, different contexts and different purposes.

Not all students engage in reflexive processes in the same way. Archer (2012) found in her large empirical study, that participants tended to foreground a particular reflexive modality at different times in their lives. She explains that she identified four different reflexive modalities: communicative, autonomous, meta-, and fractured. The propensity for a particular modality was not psychologically determined, but rather, was influenced by one's structural and cultural background. Communicative reflexives, she suggests, rely on the confirmation and input of others to their internal conversation, prior to action. They are happy to maintain the status quo as they have generally experienced contextual continuity or stable environmental conditions. For autonomous reflexives, on the other hand, internal conversations are self-contained and lead directly to action. Those who engage in autonomous reflexivity are likely to know what they want and how to get there, and they take action to make it happen. Meta-reflexives engage in internal conversations that critically evaluate previous internal dialogues and are critical about effective action in society. They are concerned about the best course of action for both themselves and others, and they carefully weigh up possible effects prior to action. Fractured reflexives, however, cannot seem to use internal conversations to take purposeful actions, which intensifies personal distress and disorientation and leads only to expressive action. Fractured reflexives are more likely to have experienced severely disruptive occurrences in their lives and therefore may not be able to find a way through a particular situation. Archer (2012) suggests that current contextual conditions of incongruity mean that meta-reflexivity is becoming the dominant mode of reflexivity to make one's way through the world. While we all may rely on the different modes of reflexivity at different times and in different situations, it seems that development of meta-reflexivity is the key to lifelong learning.

4 Higher Education: Does it Deliver its Promise of Lifelong Learners?

In formal education, students are required to demonstrate their mastery of knowledge in a way that can be graded and compared. Assessment thus relies on certainty—making a case for what you know. Reflexive processes on the other hand, thrive on uncertainty and doubt (Boud 1999). What is it I don't know? What are the factors that might be affecting my performance? Will this course of action work? Am I invested enough to make an effort? Who else is impacted by my decisions? If one of the tasks of higher education (as claimed in most university graduate capability

frameworks) is to develop lifelong learners, then approaches to learning and assessment need to be imbued with reflexive learning processes.

These processes can be developed informally through feedback systems, learning scenarios and formative assessment, however they should not be left to chance. It is not always clear to students why they have been successful (or not), or whether particular choices are effective (or not). Feedback is capable of guiding students to improve learning, but the mere provision of feedback does not necessarily lead to improvement, a fact well known to teachers in all sectors of education, including higher education (Sadler 2010). It is not an innate skill to be able to analyse one's performance, or even feedback received, and know how to improve learning outcomes (Ryan 2013). Self-analysis in a learning situation requires a number of skills and capabilities. First, it is necessary to have an understanding of the requirements of the task and the requisite knowledge to complete it. Second, the implications of one's own investment in the task, including emotional investment is integral. Third, one must possess the ability to recognise or judge what constitutes quality in this particular context. Fourth, an understanding of the discourse of assessment feedback is an oft-forgotten yet crucial aspect of learning in formal educational settings. These capabilities can be made visible (and can be targeted by teachers) through critical reflection as part of the reflexive learning cycle. Sadler (2010) argues that we need to provide students with substantial evaluative experience not as an extra but as a strategic part of the teaching design.

Teaching design, including assessment, often excludes affective dimensions of learning and first person accounts of what has been learnt or what still needs to be developed. Even in reflective tasks, it is common for learning to be treated purely as a cognitive exercise rather than an emotional one (Barton and Ryan 2014; Boud 1999). Students learn in different ways and indeed, as explained earlier using Archer's (2012) reflexive modalities, they reflexively engage with their life or study concerns in different ways. This diversity of learning styles and engagement priorities means that there is not one best way to improve learning. Higher education teachers can provide strategies and feedback for improvement within the constraints and enablements of their discipline, their context and their own subjective conditions. These strategies, however, are not enough if students are unable to relate them to their own learning styles, knowledge, skills, situations and motivations (their subjective conditions). The key to successful strategies for lifelong learning is to provide well-scaffolded opportunities for reflective thought and reflexive learning. These opportunities optimally include identifying issues or concerns, relating those concerns to one's subjective conditions, reasoning about the implications of particular actions (using various forms of evidence), and deciding on the most appropriate course of action which is both satisfying and sustainable. If teachers include explicit reflective dimensions in learning and assessment which foreground performative self-analysis, rather than purely analyses of a final product, students are more likely to be able to diagnose issues and improve learning. The provision of online or other resources does not necessarily lead to the ability to reflect in deep and transformative ways, as outlined in the following chapters of this book. These chapters illustrate that the teacher is integral to building capacities for lifelong learning.

5 Teaching Reflective Learning: Personal Epistemologies of Teachers and Students

Personal epistemology is philosophy at the individual level, which reflects an individual's cognition about knowing and knowledge which influence, and are influenced by, the social and learning environment (Brownlee et al. 2011). Some scholars argue that personal epistemology includes ways of knowing and acting, arising from one's previous experiences, capacities and negotiations with the social and sensory world, to shape how one learns (Billett 2009). A number of studies have shown that sophisticated personal epistemologies are related to meaningful approaches to learning (Brownlee et al. 2011). Such approaches include understanding that knowledge is uncertain and can be problematised; being able to connect new knowledge to prior knowledge across different contexts; and using knowledge to set personal action goals. Personal epistemologies are not only central to the process of individual learning, but also to the transformation and re-making of culture and social structures (Billett 2009). Indeed, the learning or work environment engenders different levels of agentic action. This centrality of personal epistemology to types of commitment and action, suggests that individuals engage in different ways and at different levels in different social and cultural environments, consistent with Archer's (2012) modalities of reflexivity. While Archer argues that these different modalities are not psychologically constructed, she acknowledges that it is the interplay between the individual and the social that constitutes reflexivity, with both aspects contributing to the different ways that reflexivity is performed.

The importance of personal epistemology in reflexive engagement means that it is important to unpack the continuum from naïve to sophisticated epistemology. Different frameworks have been developed to define personal epistemology as a developmental trajectory (Kuhn and Weinstock 2002) or as dimensions of belief (Hofer 2004). Kuhn and Weinstock (2002), for example, found evidence of changes in personal epistemology from absolutist (an absolute view of knowledge) to subjectivist (valuing personal opinions but not examining claims) to evaluativist (understanding that knowledge is constructed but evaluating the veracity of particular knowledge). Hofer's dimensions run across these positions to explain in more detail how knowledge is perceived and used. These include the stability of knowledge (from certain to uncertain); the structure of knowledge (from unconnected to connected); the source of knowing (from objective to subjective to the mediation of both); and the justification of knowing (from absolute truth to opinion to validated judgement). Some connections can be made here with Archer's (2012) reflexive modalities and the mediation of objective and subjective conditions. Archer is more concerned with how the individual uses this knowledge and these beliefs to discern and deliberate courses of action. Billett's (2009) understanding of personal epistemology as knowing and acting shaped by social and cultural environments (drawn from psychology, sociology and philosophy) provides a bridge to connect this body of research with theories of reflexivity drawn from relational sociology and critical realism (as per Archer 1995, 2007, 2012). Such connections can enable even more

nuanced understandings of how and why an individual identifies and pursues particular concerns or projects. For example, an absolutist (Kuhn and Weinstock 2002) may engage in autonomous reflexivity (Archer 2012), having certain knowledge and a singular goal to pursue, unconnected with others' knowledge or goals (Hofer 2004); a subjectivist (Kuhn and Weinstock 2002) would be likely to seek and value personal opinions of others (Hofer 2004) as a communicative reflexive (Archer 2012); and an evaluativist (Kuhn and Weinstock 2002) may be likely to critically analyse possibilities and choose the most appropriate (Hofer 2004) for self and others as a meta-reflexive (Archer 2012). The latter is indicative of a sophisticated personal epistemology, which is connected to meaningful learning. These elaborations are useful to understand how students engage in and learn through higher education and beyond, remaking and transforming their learning and activities in particular situations at particular times. Deeper understanding of the generative possibilities of particular kinds of engagement can enable higher education teachers to develop intentional teaching strategies for self-conscious reflection and reflexive self-analysis.

If students are to develop sophisticated personal epistemologies, they need to be guided in their inquiries into knowledge and the learning environment. Teachers can influence students' attitudes to learning and how they see knowledge (Weinstock and Roth 2011), so teachers with naïve personal epistemologies are less likely to promote higher levels of epistemological understanding and action. For example, teachers who believe that knowledge is certain and objective, are less likely to provide assessment tasks which require students to reflect on what they don't know, or understand what they care about or believe in as part of their learning journey. Billett (2009) argues that personal epistemologies are exercised to understand the knowledge required of learning tasks, and the boundaries of what one knows. At some point, therefore, these limits are understood and guidance by others is required. Higher education teachers can help students to self-analyse and understand their limits, so that appropriate guidance and resources can be provided for students to take action in their learning journey. However, for this to happen teachers need to have an understanding that knowing and knowledge in their discipline is not the same as knowing and knowledge in *teaching* the discipline. An understanding of how students learn in different ways is paramount, and part of this understanding relates to helping students to understand themselves and how they learn, in order to become self-analytical and independent learners. University teachers who facilitate students' explicit, guided reflection on personal epistemology and how it influences decisions and actions in different contexts can enable more sophisticated personal epistemologies (Brownlee and Berthelsen 2008; Strømsø and Bråten 2011) and learning approaches. The chapters in this book describe some of the ways in which higher education teachers across different disciplines have attempted to guide the development of transformative reflections for lifelong learning.

6 About this Book

This book elaborates research into the ways in which reflection is both considered and implemented in different ways across different disciplines in higher education. While it aims to highlight the diverse (subjective and objective) conditions that influence reflective learning and teaching, it maintains a common purpose to transform and improve learning and/or professional practice. It stems from a research project—Developing Reflective Approaches to Writing (DRAW)—that sought to understand how reflective learning could be systematically implemented across higher education programs in different disciplines. It began with a focus on writing, but was expanded to include multimodal forms of reflection, as outlined in a number of the chapters in this volume. Two companion websites have been developed to provide evidence-based resources for higher education teachers to make considered decisions about the reflective strategies that they adopt at different points across a program of study, in order to focus on specific reflective goals.

The main project website www.drawproject.net explains the underpinning theories and approaches used within the project, and provides an overview of the outcomes and recommendations from the project. The companion website www.edpatterns.net proposes a new model for developing reflection in the field of higher education—Teaching and Assessing Reflective Learning (TARL)—which is explicated in Chap. 2. The TARL model is used to situate the implementation of reflective strategies that are explained and analysed in Part II of the book.

The book is organised to foreground the pedagogic field of higher education as a theoretical construct, arguing that reflection should be consciously situated within this field, rather than as a smorgasbord of teaching strategies across individual subjects. It is divided into three parts, beginning with the conceptual underpinnings (Part I), followed by empirical chapters (Part II), which showcase evidence-based practice based on the theoretical model and conceptualisations introduced in Part I. The final part addresses issues around implementing curriculum and pedagogical change in the field of higher education (Part III).

Part I explicates the conceptual underpinnings of the reflective project, including this introductory chapter and the reflective frameworks and models in Chap. 2 (Ryan and Ryan).

Each of the empirical chapters in Part II will begin with a visual plot of the reflective strategy or pattern on the TARL Model introduced in Chap. 2. This part is organised around three key themes. The first theme is *Performative reflection in creative disciplines*, including reflection around artefacts in Fashion Design (Chap. 3, Brough and Ryan), reflective practice in Dance (Chap. 4, Jones and Ryan) and reflection in Music Education (Chap. 5, Barton). The second theme in this part is *Reflection in large subjects*, including comparisons between first and final year students in Psychology (Chap. 6, O'Connor, Furlong, Obst and Hansen), reflective writing in Law (Chap. 7, Cockburn and Ryan), and reflective peer review in

Accountancy (Chap. 8, Taylor and Ryan). The third theme is *Developing professional identity through reflection*, with Chap. 9 focusing on the use of multimodal technologies to enhance reflection in Pre-service Teacher Education (Adie and Tangen), Chap. 10 investigating the utility of reflection to promote critical thinking in Social Work (Kaighin), and Chap. 11 examining the teaching of reflection for service learning in Education (Bursaw, Kimber, Mercer, and Carrington).

Part III engages with some of the issues around embedding complex pedagogical and curriculum change across programs and institutions in higher education. It begins with the case for a well-supported e-Portfolio approach (Chap. 12, McAllister and Hauville). In Chap. 13, Yancy provides further argument for an e-Portfolio approach, but one that prioritises the social life of reflection. Bahr and Crosswell (Chap. 14) provide leadership perspectives on curriculum and pedagogical change from an Assistant Dean (Teaching and Learning) and a Program Coordinator in an Education Faculty. In the final chapter, Ryan and Ryan theorise a model, developed through reflexive methods, for embedding pedagogical change in higher education (Chap. 15).

Collectively, these chapters raise important questions about reflective learning in higher education. First, they explore the multimodal possibilities of reflection across disciplines and how these reflective modalities can be taught and assessed. Secondly, these chapters emphasise the integral role of the teacher in prioritising the 'I' in reflection—through the reflexive lens and through voice in writing. Finally, the chapters consider the tensions for higher education teachers in developing reflexive, lifelong learning approaches in an increasingly corporatized and credentialised field of education.

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Chapter 2
A Model for Reflection in the Pedagogic Field of Higher Education

Mary Ryan and Michael Ryan

1 Introduction

This chapter provides theoretical underpinnings for a new, transferable and customisable model for teaching and assessing reflective learning in all higher education courses that seek to develop students' capacities to enhance their learning and their professional practice. We begin by reviewing current approaches to reflection and identifying key gaps in the applicability of such approaches. Next, we outline our proposal for a model that aims to address these gaps, and which takes account of different theoretical approaches, and is compatible with professional standards from different disciplines. Finally, we discuss ways in which the model can be implemented in practice through pedagogy and associated resources, including an innovative new concept of online pedagogic hubs.

2 Definitions and Approaches to Reflection

Reflection has been variously defined from different perspectives (e.g. critical theory or professional practice) and disciplines (see Boud 1999), but at the broad level, the definition used here includes two key elements: (1) making sense of experience; and importantly, (2) reimagining future experience. This definition reflects the belief that reflection can operate at a number of levels, and suggests that to achieve the second element (reimagining), one must reach the higher, more abstract levels of critical reflection as outlined below. We refer to this type of reflection as academic or professional reflection, as distinct from personal reflection, which may

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not necessarily move to the critical level, and may not have a conscious or stated purpose. Thus, academic or professional reflection involves learners making sense of their experiences in a range of ways by: understanding the context of learning and the particular issues that may arise; understanding their own contribution to that context, including past experiences, values/philosophies and knowledge; drawing on other evidence or explanation from the literature or relevant theories to explain why these experiences have played out or what could be different; and using all of this knowledge to re-imagine and ultimately improve future experience.

Most researchers and commentators agree that there are different types or hierarchical levels of reflection. Grossman (2008) suggests that there are at least four different levels of reflection along a depth continuum. These range from descriptive accounts, to different levels of mental processing, to transformative or intensive reflection. He argues that students can be scaffolded at each level to produce more productive reflections. Similarly, Bain et al. (2002) suggest different levels of reflection with their 5Rs framework of (1) Reporting, (2) Responding, (3) Relating, (4) Reasoning and (5) Reconstructing. Their levels increase in complexity and move from description of, and personal response to, an issue or situation; to the use of theory and experience to explain, interrogate, and ultimately transform practice. They suggest that the content or level of reflection should be determined by the problems and dilemmas of the practitioner. Hatton and Smith (1995) also suggest a depth model, which moves from description to dialogic (stepping back to evaluate) and finally to critical reflection. For example, critical reflection can be used to facilitate 'multiple ways of knowing' as opposed to scientific evidence as a singular basis of practice in nursing (Tarlier 2005). These multiple ways of knowing include an understanding of one's own ideologies and a broader knowledge of contextual factors, which can be teased out in critically reflective ways to inform one's art of practice in any professional field.

Academic or professional reflection, as opposed to personal reflection, generally involves a conscious and stated purpose (Moon 2006), and as it is generally linked to assessment or professional development, needs to show evidence of learning and a growing professional knowledge. This type of purposeful reflection, which is generally the aim in higher education courses, and is the focus of this paper, must ultimately reach the critical level for deep, active learning to occur. Such reflection is underpinned by a transformative approach to learning that sees the pedagogical process as one of knowledge transformation rather than knowledge transmission (Kalantzis and Cope 2008; Leonardo 2004). The learner is an active participant in improving learning and professional practice. Critical social theory underpins this transformative approach to reflection. Critical social theory is concerned with emancipation, however it also engages in a language of transcendence, whereby critique serves to cultivate students' abilities to question, deconstruct and reconstruct their own practices and imagine an alternative reality (Giroux 1988; Kincheloe 2003). When students are provided with opportunities to examine and reflect upon their beliefs, philosophies and practices, they are more likely to see themselves as active change agents and lifelong learners within their professions (Mezirow 2006).

Much of the literature on reflective learning is concerned with how, and at what level, learners reflect (see for example Bain et al. 2002; Hatton and Smith 1995;

Mezirow 2006), rather than on developmental or systematic approaches to reflection. There is a large body of work associated with higher education and/or professional learning, which describes how particular reflective strategies or activities can be used to develop deeper or more complex levels of reflection. To illustrate key ideas from this body of work, evidence-based strategies reviewed here include: reflective journaling—unstructured and structured (more explicitly guided); formal reflection papers; interviewing; and group memory work.

The use of reflective journaling is a common strategy in higher education. Barney and Mackinlay (2010) describe how students and lecturers in an Indigenous Australian Studies course utilised reflective journaling to write about and discuss both emotional and intellectual discomforts, and through this discursive exchange, to transform their ways of knowing about identity and learning. Barney and Mackinlay suggest that exploring the relations of power through dialogue with self is a powerful way to deal with complicated and 'messy' issues around race and identity. Carrington and Selva (2010) and Fitzgerald (2009) also describe the use of reflective journals that focus on diversity and identity in higher education courses. Both papers report on service learning programs that incorporate more structured and scaffolded journal writing than that described by Barney and Mackinlay. Carrington and Selva make a strong argument for the benefits of a more structured approach with explicit prompts to guide students to deeper and more critical reflection. McGuire, Lay and Peters (2009) similarly take a more formal approach to reflection with the use of reflection papers (essays) in their Social Work course. They found that structured papers, with guided prompts and clear assessment rubrics, were the most effective way to enable critical thinking about the relationship of theory to professional practice. Each of these approaches is concerned with both personal and professional identity, particularly in courses that deal with diversity in the community.

Less common approaches to reflection are described by Janssen, de Hullu and Tigerlaar (2008) and Ovens and Tinning (2009). Their strategies are contextualised within teacher education courses. Janssen et al. propose a cognitive strategy for reflection that is based upon positive triggers rather than problems or negative experiences. They scaffolded students to interview one another about practicum teaching experiences, using pre-determined guiding reflection questions which ultimately led to a resolution for future practice. They found that positive reflection led to more innovative teaching resolutions, while problem-based reflection spawned conservative or more traditional teaching resolutions. Ovens and Tinning on the other hand, describe a socio-cultural process of small group memory-work, which involves 'interpreting participants' subjective experiences through an iterative process of individual and collective analysis of participants' written memories' (p. 1126). They suggest that by writing and analysing narratives about personal experiences that relate to the research topics under discussion in class, students will reflect more deeply on their epistemologies and implications for professional practice. Their findings suggest that reflection cannot be taught as a discrete skill, but rather that it must relate to the discursive context, and strategies must therefore be chosen carefully for their applicability to that context. These findings have informed our proposal for a model of reflective learning outlined in the latter section of this paper, which prioritises the pedagogic field.

Moon (2004) advocates the use of reflective journals, logs and portfolios, similar to those described by Barney and Mackinlay (2010), Carrington and Selva (2010), and Fitzgerald (2009). She also proffers a comprehensive list of ideas which are intended to help learners understand how to learn or write reflectively. Some examples include: charting the differences between reflective writing and other forms of academic writing; showing samples of reflective writing for students to analyse; considering situations from a different social/cultural perspective or disciplinary approach by creating dialogues, visual depictions, literary responses or dramatic role-plays; and asking students to act as a critical friend to a peer as they undertake an activity. Moon's (2004) ideas are underpinned by some key principles. First, that learning is a process in constant flux that is influenced by a variety of elements; and secondly, that learning is both an individual (cognitive) process and a social one. These principles are in accord with the ideas proposed by Kalantzis and Cope (2008), which underpin the model that we propose in the latter part of this paper.

3 Conceptualising the Model

The examples reported from the literature outline successful strategies and/or recommend useful ideas for teaching and assessing reflective learning. We contend that whilst these examples offer a rich smorgasbord for higher education teachers, there are no examples of a systematic and deliberate approach (recommended by Orland-Barak 2005) to teaching and assessing reflective learning across whole programs/courses in higher education. Thus we used our systematic literature review of reflection, reflective learning and reflective practice, along with transformative and social/cognitive learning theories (e.g. Kalantzis and Cope 2008; Leonardo 2004; Kincheloe 2003; Bloom 1956), to visually map and discuss the crucial elements of the pedagogic field of reflection in higher education, Our own practice and experience in teaching, and our knowledge of influential contextual factors such as professional standards in most disciplines also informed our ideas in the model.

As a result of our collaborative reflections and conceptual mapping, we suggest that careful consideration is needed to plan deliberate and explicit strategies for improving students' reflective learning in higher education. The pedagogic field of higher education is influenced by a number of socio-cognitive factors. First, there is the developmental stage of the learner in this particular learning context. That is, whether the learner is a novice in this field (for example a 1st year undergraduate), about to embark on a new profession as a final year student, or somewhere in between. Secondly, there is the disciplinary context in which the learning is occurring. The subject matter, or discipline knowledge, along with key ways of knowing within different disciplines (Freebody et al. 2008) and professional standards from the field, will influence the kind of evidence, language and technologies that learners will use to demonstrate their reflective learning. Expectations that the lecturer has about the level of reflection required for the task at hand are also a factor in the choice of pedagogic strategies. The final factor influencing the pedagogic field in

higher education is the diversity of learners. The prior knowledge, abilities and experiences of students in relation to reflective learning and practice, along with academic conventions, is a major consideration in the pedagogic choices that are made (Barney and Mackinlay 2010; Fitzgerald 2009; Singh and Doherty 2008). Thus, we propose a model for teaching and assessing reflective learning that is directly concerned with pedagogical decision-making and which accounts for these influences on the pedagogic field of higher education. The model can assist program/course designers, in conjunction with individual unit/subject co-ordinators to plan extended programs that progressively build student skills and understandings in a consistent fashion (See Sect. 3 in this volume for discussions related to embedding these ideas across programs). Direct teaching, rather than just provision of student resources, is integral to this approach (Haigh 2000).

4 Introducing our Model for Reflective Learning and Assessment in Higher Education

In this section we explain our transferable and customisable model for Teaching and Assessing Reflective Learning (TARL). The chief purpose of this model is to describe the pedagogical 'landscape' associated with reflection so that effective pedagogic choices can be made. Pedagogic choice can be better imagined as a task requiring multi-dimensional characterisation. To accommodate an expansion in the ways of thinking about reflective writing and assessment, the notion of a pedagogic field is proposed. It can be represented as a two-dimensional space that captures some of that complexity associated with pedagogic choice. One can imagine the field populated by different teaching techniques or strategies around reflective writing or assessment from which selections are made. On a two-dimensional scale it is possible to "load up" each dimension with scales that vary together (as demonstrated by Panda 2004). Figure 2.1 illustrates the pedagogic field that forms the basis of the TARL model, with each dot representing a particular teaching pattern or strategy. The *category-based dimension* is concerned with levels of thinking or application of higher order ideas, while the *development-based dimension* relates to developments in students' thinking over time as they progress through a program with increasing exposure to disciplinary concepts and practices.

The category-based dimension (vertical axis) captures the progression from rudimentary reflective thinking to more sophisticated thinking that is current in the various theoretical scales for learning (for example a revised version of Bloom's taxonomy by Anderson and Krathwohl 2001; Kalantzis and Cope 2008). Other learning theories can replace, or be used alongside those that we represent in our model, in recognition of the different ways of knowing in different disciplines (see Fig. 2.2). For example, cognitive-based system theories such as that proposed by Ackoff (1989), in which one starts with data input, uses the information in different ways, generates new knowledge by incorporating it into existing knowledge schemas, then applies this knowledge in ways that indicate levels of wisdom. The

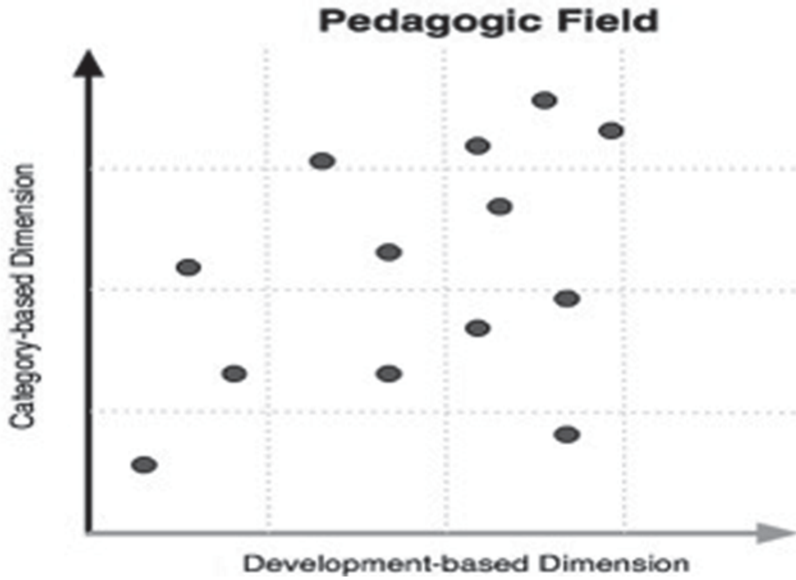

Fig. 2.1 Pedagogic field

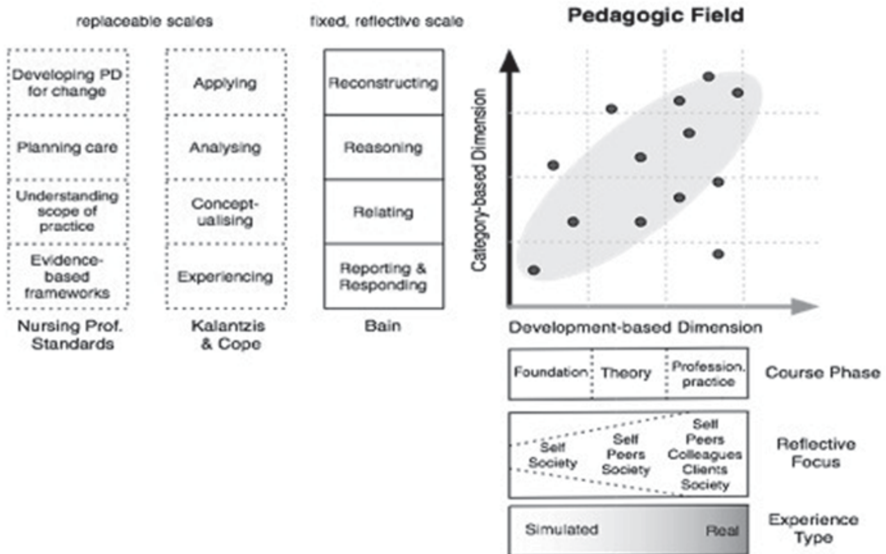

Fig. 2.2 The TARL model

model is flexible, and can be customised according to the learning theories used in different disciplines.

Another customisable aspect of this dimension is the way that it simultaneously captures varied levels of thinking and action demanded in the recognised professional standards of any field of practice. As an example, we have indicated in the model ways in which the professional standards for nursing in Australia (Australian Nursing And Midwifery Council 2005) include elements of reflection that fit along our vertical axis. Key foci such as evidence-based practice, recognising the broader scope of practice, planning care suitable for the context, and developing own programs for ongoing professional development, recognise the importance of the different levels of reflection in the nursing profession. Professional standards for teachers in Australia (Australian Institute for Teaching and School Leadership 2010) similarly include levels of reflection, and could be substituted into the model. Most professions or fields of learning recognises the value of reflexive and reflective practice that relies on rigorous evidence, trialling of ideas and ongoing learning. Thus, professional standards from any field sit easily on this axis of the model.

Scales that characterise reflective thinking such as Bain et al.'s 5Rs (2002) provide an integral dimension for pedagogic choice. They provide an important framing since, for example, the student activity targeting reflective reasoning could be expected to be distinct from one targeting (mere) reflective reporting (this has been conflated to 4Rs in this project as students in Carrington and Selva's (2010) work found it difficult to separate reporting and responding). This aspect of the category dimension is one that we keep constant in our use of the model at our institution. Whilst other scales of reflection could be substituted here, a key focus of a systematic approach is to develop a shared language for students and staff around reflection. The 5Rs offer the potential for this shared language; hence, in this institutional context this aspect is a constant feature of the model. Figure 2.2 illustrates three scales 'over-layered' on the category dimension. Although Bain et al.'s scale is fixed, the theoretical and professional scales are replaceable.

While necessary, use of a scale that categorises reflective thinking is in itself not sufficient for pedagogic selection since there are a myriad of other factors at play when designing learning experiences. The development-based dimension (horizontal axis) tries to capture the varied demands on teaching as students progress through a program/course of study or act within different contexts (see Fig. 2.2). A scale that indicates a student's place in their program/course of study (over time) can have a critical influence on what activity or assessment method is best. Typically, learning experiences for students in their first year at university differ markedly from those directed at students in their final year. For example, undergraduate teacher education courses tend to concentrate on foundation skills in early years with an increased emphasis on learning from field experience or work integrated learning near the end of their course.

Another key aspect of the development-based horizontal axis is the focus or subject matter of reflective activities across time. Early in the program/course, students won't generally demonstrate authoritative knowledge of the professional field. Students in their first year of a program/course need to have opportunities to reflect on

contexts and ideas that are familiar, and within which they are immersed, so they can move from the known to the new (Kalantzis and Cope 2008). A focus on self, own views, learning style and one's place in society provides rich ground for reflection in the first instance. Mid-way into the program/course, reflection can begin to focus on peers' contributions, and use of relevant theory and disciplinary frameworks to reason and reconstruct their burgeoning ideas and practices. Towards the end of the program/course reflection can be situated squarely in the theory-practice nexus, using theory, disciplinary knowledge, professional standards and pedagogic experiences to relate, reason and reconstruct interrelated facets of professional practice.

Development of reflection across time can also engender different contexts in which to reflect. Early experiences with reflection may be undertaken in simulated spaces, for example, using scenarios and problem-based learning. On the other hand, by the time students reach their final year of study, their reflections may well be undertaken in the professional workplace as they increasingly embark on work-integrated learning, internships and fieldwork. This aspect of the horizontal axis does not suggest that simulation cannot occur in the final year, or that reflection in the workplace or field cannot be included in first year of study. However, in terms of professional knowledge and opportunities to enact theory in practice, most productive reflection will follow this progression as students become more knowledgeable about, and attuned to, the professional field.

The complete TARL model (see Fig. 2.2) with two replaceable scales represents the pedagogic field, which is populated by distinct teaching strategies and assessment around reflection. The shaded region highlights an assumed trend whereby, over time, increasingly higher levels of reflection related to the professional field are targeted. The model provides a means for course developers to include deep reflection at different points across a course so that students have the skills to critically engage with the theories and practices introduced along the way. By positioning reflective teaching strategies and assessment across a pedagogic field, both time and contextual space are prioritised in pedagogical decision-making. In addition, the scales provide a 'language' around learning activities and assessment tasks so that students can better understand requirements and connections to professional practice. Thus the model prioritises informed and strategic pedagogical choices (the dots in Fig. 2.2) in a move away from a 'smorgasbord' approach to reflective activities.

5 Implications for Application of the Model and Further Developments

As an integral aspect of resource support for embedding our model across programs/courses in higher education, we have drawn from the work of the pedagogical patterns project (Bennedsen and Eriksen 2006; Sharp et al. 2003) to develop a suite of pedagogical patterns for teaching and assessing reflection, which sit at various points on the pedagogic field grid (See Fig. 2.2). Pedagogical patterns seek to capture effective practice in teaching and learning. They are the essence of tried

and proven strategies (Bennedsen and Eriksen 2006) that have been written using a pattern language to enable transference across contexts and disciplines.

The pattern language generally poses a problem or issue that has sparked the pattern; it provides the context in which the strategy was effective; and outlines the steps taken to implement the strategy. Other resources or notes can also be added to the pattern, for example, the levels of reflection targeted and specific textual features of the reflection. This approach may seem quite prescriptive and rather dry, particularly for teachers who are competent in weaving a number of pedagogical strategies through a learning context in flexible ways. We address this issue in two key ways: first, in the way the patterns are presented to potential users; and secondly, we contribute to the scholarly field of pedagogical patterns by introducing a new concept of pedagogic hubs that has emerged from our cross-disciplinary work in the project and which can be facilitated online for easy linking of resources.

When presenting the pedagogical patterns as a resource package, we have found the use of metaphor to be a powerful device in portraying the underlying philosophy of our project. We see teaching as both a functional and creative enterprise, highly dependent on the skills of the teacher rather than on the curriculum or resources alone: essentially, teachers do make a difference (Darling-Hammond 2010). Thus, we do not seek to 'teacher-proof' our patterns, rather we provide a framework which can be used as needed when trialling new strategies. The metaphor of a cooking recipe is useful to highlight the customisable nature of the patterns. When one first tries a new recipe, depending on previous cooking skills and knowledge, one may be more likely to use the ingredients and follow the method as set out in the recipe. However, as the cook becomes more confident (this happens sooner for some), they may start to substitute ingredients and vary the method to suit different tastes and purposes. Another aspect of the metaphor that highlights a key focus of reflection in the project is that recipes can be represented in multiple modes: written, visual, oral, performed or combinations of these. So too, we see the potential for reflection to be represented in multimodal forms, thus the pedagogical patterns encompass these different modes. This metaphor enables teachers to see that they can 'own' the patterns and use the elements and modes of representation that fit their context and student needs. Their adaptations can then be documented to add to online pedagogic hubs.

Pedagogic hubs can enrich pedagogical patterns and can enable the sharing of ongoing work in the pedagogic 'community of practice' (Wenger 1998). We developed the concept of online pedagogic hubs (see Fig. 2.3) through our work with faculties involved in the current project to capture the dynamic nature of any field of pedagogic practice. In writing up the pedagogic patterns and presenting them within workshops across the university, it became clear that the abstract form of the patterns could be enriched by the provision of convenient (ultimately online) resources to make patterns 'come alive' for the reader. The pedagogical pattern (the dots in the pedagogic field in Fig. 2.2) becomes the hub of a much larger resource, with hyperlinks to: samples of student reflective work evolving from the pattern; assessment descriptors and criteria sheets that have been used; unit/subject objectives; related patterns or tasks; presentations by staff and students; scholarly articles about, or related to, the pattern; and online forums to facilitate staff reflections on

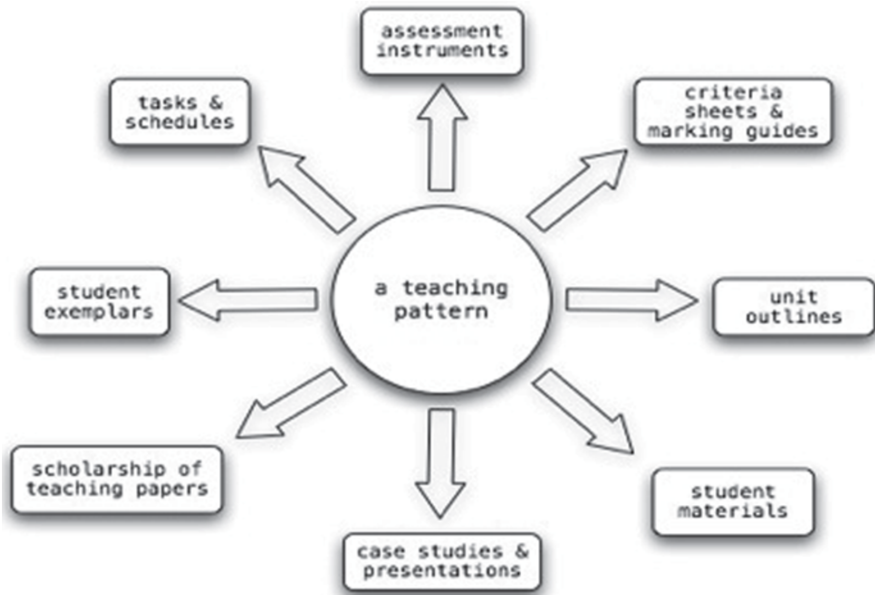

Fig. 2.3 Pedagogic hub

their implementation of the pattern or explanations of successful variations to the pattern. Reflections on and variations to the pattern may also spawn new patterns, in a continuous reflexive cycle of effective, evidence-based practice.

The provision of such a rich resource in the pedagogic field of higher education can contribute to the systematic development of reflection across whole programs/courses, and across faculties. Becoming part of the community of practice around reflection means that teachers in higher education can access useful resources and ideas, and can also generate new knowledge in the pedagogic field by contributing new patterns, pattern modifications or teaching resources to support patterns, as has happened in the current project (see www.edpatterns.net for current pedagogic hubs from this project).

Implementing a shared language to describe levels of reflection for both Faculty staff and students is an important cohesive element in a systematic approach to reflection. Within the current project the Bain et al. (2002) scale has been adopted. Whilst there are a variety of scales reported in the literature, as outlined in previous sections, this scale uses simple, easy to remember descriptors—the 5Rs of reflection (conflated to 4Rs in this project as we found that there were only four distinct levels of thinking—after Carrington and Selva 2010)). Prompts can be provided to help structure the reflection through the levels (see Table 2.1).

The shared language can be embedded into assessment descriptions and criteria sheets, along with student resources and pedagogic patterns and hubs. The chapters in Sect. 2 of this volume offer more detailed descriptions of the potential of these resources and patterns.

Table 2.1 Prompts for the reflective scale. (levels adapted from Bain et al. 2002)

Level	Questions to get started
Reporting & responding	Report what happened or what the issue or incident involved. Why is it relevant? Respond to the incident or issue by making observations, expressing your opinion, or asking questions
Relating	Relate or make a connection between the incident or issue and your own skills, professional experience, or discipline knowledge. Have I seen this before? Were the conditions the same or different?
	Do I have the skills and knowledge to deal with this? Explain
Reasoning	Highlight in detail significant factors underlying the incident or issue. Explain and show why they are important to an understanding of the incident or issue. Refer to relevant theory and literature to support your reasoning. Consider different perspectives. How would a knowledgeable person perceive/handle this? What are the ethics involved?
Reconstructing	Reframe or reconstruct future practice or professional understanding. How would I deal with this next time? What might work and why? Are there different options? What might happen if…?
	Are my ideas supported by theory? Can I make changes to benefit others?

6 Conclusion

The importance of reflection in higher education, and across disciplinary fields is widely recognised; it is generally embedded in university graduate attributes, professional standards and course objectives. Furthermore, reflection is commonly embedded into assessment requirements in higher education subjects, often without necessary scaffolding or clear expectations for students. Despite the rhetoric around the importance of reflection for ongoing learning, there is scant literature or theoretical guidance on a systematic, developmental approach to teaching reflective learning in higher education programs/courses. Given that professional or academic reflection is not intuitive, and requires specific pedagogic intervention to do well (Ryan 2010), a program/course-wide approach is essential. Pedagogic decisions about reflective activities should be cognizant of the stage of the program/course, and should recognise where students have been introduced to reflective practice; how and where it is further developed; and what links can be made between and across the years of the program/course. Choosing reflective tasks with due consideration to levels of professional knowledge and prior experiences with reflection, can enable higher education students to develop these higher order skills across time and space.

The model we propose has been developed through extensive literature review and analysis of approaches to reflective learning/practice through the layered lenses of transformative, social and cognitive learning theories. We undertook a process of visual mapping, reflection and discussion of current influences across disciplines in higher education, to develop the two-dimensional model of the pedagogical field of reflection in higher education. The model has the potential to draw together excellent (albeit unsystematic) work reported in the literature around reflective activities, along with new pedagogical patterns that are developed from staff in our university,

so that reflection is implemented as a consistent developmental process. The pedagogic field of higher education is fore-grounded in the model as we argue, through our analyses of the literature, and our work with academic staff in our institution thus far, that explicit and strategic pedagogic intervention, supported by dynamic resources, is necessary for successful, broad-scale approaches to reflection in higher education. Chapters in Sect. 2 describe the results of implementing particular strategies/resources, drawn from our model, across different disciplines.

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Part II
Reflective Learning Across Disciplines

Chapter 3
Refining a Teaching Pattern: Reflection Around Artefacts

Dean Brough and Michael Ryan

Reflection		Foundation	Intermediate	Capstone
	Reconstruct		✱RAA	
	Reason			
	Relate			
	Report			
		Foundation	Intermediate	Capstone
		Program Phase		

RAA reflection pattern plotted on the TARL Model (see Chap. 2)

1 Introduction

The broad aim of this study was to better understand and test out higher education teaching methods directed at inducing high-level student reflection. The study has two particular characteristics. First, there was a focus on the use of *artefacts* to help elicit reflective expression from students (see Fig. 3.1). We use the term artefacts to denote tangible productions of students engaged in learning-through-design processes. In this study, undergraduate students planned and made prototype garments over a course of study in fashion design. Although these garments were treated as artefacts, other student productions (e.g. workbooks, photographs, blog posts, video clips and sketches) could also have been used. Second, the use of, and thinking around, a *teaching pattern* to represent and subsequently track the refinement of pedagogy, over an extended period of time, was employed. Teaching patterns are formal, structured descriptions that partly capture exemplary practice. Although

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Fig. 3.1 A student gesture accompanying spoken reflection

they may be shared within a group of collaborating educators, here we intended to focus on the refinement of a single pattern taught by a single lecturer to similar groups of students over different semesters. Eventually, more than one teaching pattern became relevant. However the focus of study remained with a pattern we named *Reflection Around Artefacts* (RAA).

In this chapter, we review the literature surrounding the use of objects as mediating artefacts in educational contexts. This leads to a general examination of student expression of reflective thinking where objects are included through the use of gesture. The methodology of a longitudinal teaching experiment is described along with the results that arise from comparing pedagogical patterns over time and analysing student spoken and deictic expression. We conclude by drawing implications for higher education teaching practice where reflection is seen as a desirable goal to support student creativity and learning.

We employ the term "pattern" in two distinct ways in this chapter. First, we make reference to pedagogical *patterns*, which are descriptions of successful teaching practice. Second, we make reference to student-made sketches and drawings for garments that they are fabricating. While our usage should be obvious from context, we will reveal a deep connection between the two meanings in the conclusion.

2 Review of Mediating Artefacts in Educational Contexts

It is useful to consider the artefacts that are produced as a result of student creative effort, constructed under the purview of a teacher, as *boundary objects* (Star and Griesemer 1989) or as *mediating artefacts* (Falconer 2007; Conole 2013). In the sense used here, student artefacts lie at the boundary between their own conceptions of professional practice and the more formal and idealised abstractions of their teacher. Carlile (2002) sees boundary objects as simultaneously a means of representing, learning about and also transforming knowledge. Boundary objects work by setting up contrasts (e.g. between practical and theoretical knowledge), which are in turn resolved *at the boundary* where these objects live. In a review of the educational literature, Akkerman and Bakker (2011) describe four ways in which learning is enhanced by the use of boundary objects: identification, coordination, reflection, and transformation. In this chapter we primarily focus on just one of these, reflection. We propose a relatively formal teaching activity involving structured mediation (through performance) based on such objects. Together, the student productions (as boundary objects), and the performance (as mediation), combine to setup conditions whereby students, their peers and their teacher negotiate meaning through reflection.

Deictic gesture is where hand, arm or whole body movement is used as an expressive act associated with coincident spoken language (McNeill 1992). On the face of it, the very physical action involved with a gesture may seem to have little in common with the thinking associated with deep reflection. However they are linked by the complex way communication is achieved while performing. Traditionally, spoken language is perceived to dominate over what might be achieved by gesture (Norris 2011). However, Norris analyses cases where gesture towards an object co-constructs or even becomes the predominant channel for communication. When employed in this way, something targeted by deictic gesture can be seen as a mediating object because its presence helps to bridge the gap between performer and audience when explaining their thinking. This study was special because the mediating object was self-made, and as such, carries with it traces of events and decision-making that have special meaning to its maker. Such traces can act as potent stimulus for reflective expression across spoken and gestural communication.

In order to represent distinct teaching activity, pedagogical patterns provide particular utility. Pedagogical patterns are highly structured, succinct descriptions of practice that can be made/used to enhance the teaching within a community of educators. They are abstractions generated from successful experiences, with just enough detail added to enable replication and improvement. Goodyear and Retalis (2010) argued that pedagogical patterns are particularly useful in representing, sharing and putting into practice, knowledge about educational design. Derived originally from architectural patterns (Alexander et al. 1977) these descriptions represent a bottom-up approach to educational design, in contrast to theory-led approaches such as in traditional instructional design.

Teaching experiments may be understood as critical interrogations that are used in teaching and learning situations to better interpret student understandings as they respond to deliberative and dynamic teaching approaches (Komorek and Duit 2004). Teachers and researchers work closely together in this interpretation process. Indeed, there may be a blurring of the boundaries between the roles, as researchers get involved with teaching, and teachers in researching. The technique became popular in the United States when Wirszup and Kilpatrick (1975–1978) translated and promoted Russian educational research methods into mathematics education (Steffe and Thompson 2000). Teaching experiments are concerned with conceptual structures and models along with productive changes that improve student learning and teacher understanding (Steffe and Thompson 2000). Typically, they are studies built around teaching episodes involving a witness (such as a *researcher*); some means of recording interaction; and retrospective analysis. The teaching episodes are organised into cycles of progressive refinement, much like action research (Saunders and Somekh 2009). In clinical settings, these cycles might be measured in minutes, but depending on the context (as in the case of the current study), they might be measured in years.

The present study is here presented as a teaching experiment that spanned four years (2009–2013) where two teaching episodes were analysed in some depth (Ryan and Brough 2012). We each took on *researcher* and *teacher* roles at different times. In the case of the second episode, interaction with students was recorded through video capture. The 4Rs of reflection (reporting and responding, relating, reasoning, reconstructing) (Ryan and Ryan 2012) was employed as a conceptual model for understanding student expression and the retrospective analysis that was used to construct and refine the RAA pedagogical pattern. Such analysis can be labelled as *professional reflection* (as distinct from student reflection) and is hence also open for interpretation using the 4Rs.

3 Context

3.1 The Disciplinary Field: Fashion Studies

The ability to critically reflect on processes, techniques and design outcomes is a pivotal element in the repertoire of skills for industry professionals. It forms a keystone for good design practice. Many practitioners with a wealth of experience have an innate, and at times an intangible sense, to scrutinise their work in progress and then intuitively tweak the product in order to seek quality design and technical outcomes. This crucial ability generally takes years of experience to hone and for some it remains an elusive goal. Indeed as Lawson (2005) argues, if a designer fails to appropriately reflect on their process it can lead to a failure to explore important design avenues.

In some design fields such architecture, the ability to reflect and then change the design(s) as the building evolves is significantly hindered by the pragmatics of the construction process, long lead times from design to fruition, and by the need to adhere to approved plans. Whereas in the field of fashion design, designers can rapidly (relative to a number of other design fields) produce a first artefact, referred to as a *sample* or *toile* in the industry, and then reflect on the product and create subsequent iterations. For some complex garments this process may require as many as ten or more enhanced versions until the designer is satisfied with the outcome. This approach allows for an elevated level of reflection, as the designer (it may also include the pattern-maker and the sample machinist) can visually evaluate the changes required and then keep testing and sharpening the improvements—design lines, fit, drape of the cloth, colour and silhouette—based on masterly practice or sometimes serendipitous experiments. Although as McKelvey and Munslow (2003) argue, some solutions to design problems are based on a tacit sense of knowing—it just feels right.

This style of engagement in design practice requires a level introspection and questioning of action. This reflective space needs room for the designer to challenge customary norms. It is an iterative process of innovation through problem seeking and problem solving, often using tacit reflection. For some, the reflective musings are less about problem seeking and more about being in an inner space of quandary, based on the unknown and the unforeseen—a chance to play with new response. This reflective process may also go beyond the evaluation of an artefact with the designer generally reflecting on their work relative to the wider domain of other practitioners in the field and the context of their work in the market place.

Thus, reflective thinking is a core part of professional practice associated within the disciplinary field of Fashion Studies. While reflection may or may not be formally expressed by practitioners, most would acknowledge it as a critical part in making and evaluating garment patterns. Also, a tangible element in professional practice is the production of a sample or a sequence of samples as part of the iterative refinement process. It is reasonable to assume that these two elements, reflective thinking and sample productions are co-constructive. This assumption forms the basis of the RAA teaching pattern described and detailed in this study.

3.2 Academic Fashion Studies

Paradoxically, even though reflective practices informal are the norm in the fashion design industry, in *academic* fashion studies the teaching of reflective skills is an area of limited discussion. Fundamental questions need to be explored relating to the shape, purpose and effectives of reflective teaching in fashion studies, including non-textual reflective practices. Indeed, the ability to demonstrate coherent reflective practices, particularly in non-textual modes, is rarely assessed in fashion studies—in the main, the measure of quality being gauged on the merits of the final product and/or any supporting material that may accompany the work.

For fashion students, the ability to critically reflect on their work with reasoned reflection for iterative improvements is critical—reflection based on sound or informed reasons for possible future action. What needs improvement? Why should the improvement occur? And, for some, how to go about the improvement? Even if the action is based around serendipitous outcomes, there should still be a level of awareness of reflective reasoning. The role of the educator is critical in cementing future industry practice for this style of reflective action. As Hinds and Lyon (2011) propose, for design professionals, the types of questions that are raised in response to their practice are often mirrored in the techniques that were taught in their disciplinary training.

In the teaching and assessment of reasoned reflective practices several questions are raised:

- The connection between knowledge of garment making and pattern engineering are inextricably allied with the ability to successfully reflect on technical aspects of the sample (artefact) that require further experimentation or enhancement. This connection has important implications for teaching design. For example, what if a student has a deficit in knowledge of garment making, and will this affect their ability to provide reasoned reflection? Will they be constrained to rudimentary reflective comments such as "I don't like it"? Similarly, a knowledgeable student garment-maker who cannot express reflection around their performance may find it hard to engage in iterative refinement of their emerging design. For the educator, designing a course of study while simultaneously attending to discipline knowledge (in this case, garment design and making) and reflective expression is a particularly difficult, (Knight 2007).
- Garment samples for complex or new styles are rarely successful in the first iteration. In educational contexts it is seldom feasible to have the privilege of making numerous iterations, due to time constraints, fabric costs and assessment conditions. At what point does a student stop the iterative reflective process? Are there pragmatic and appropriate reasons or is it based on indifference or uninformed knowledge that may stop the development of subsequent samples?
- In fashioning samples, serendipity through experimentation can play a large part in successful garment outcomes—the unexpected design outcome(s) from playing with cloth on the mannequin or a mistake in the pattern process that may lead to new design ideas evolving. At what point does reasoned reflection actually hinder this process, and does too much informed refection may actually stifle the design outcomes?
- The fashion lecturer plays a significant role in providing non-judgemental and supportive critique of the sample(s). At what point does the boundary blur between the student reflecting naively on their work and the lecturer providing informed advice—who's reflection is it?

In asking these questions, reflective processes need to be contextualised with findings from a UK study on student approaches to learning fashion design. Drew et al. (2002) propose there are four key learning strategies for fashion students: product-focussed, with the intention to demonstrate technical skills; product-focussed, with

the intention to demonstrate design processes; process-focused, with the intention to develop design processes and concept-focussed, with the intention to develop own conceptions. Each strategy being neither distinct nor linear and students may digress from one strategy to another, at times. It is noteworthy that this study was conducted on a small scale and there is limited research in learning strategies in fashion education.

3.3 The 2009 Cohort

In Design Studio units in the Bachelor of Fine Arts (Fashion) course at QUT (Queensland University of Technology), students have three critical stages for assessment:

Stage 1, Design Selection—an opportunity to present to a panel and peers a range of concept based designs with supporting research, with one or more designs selected (in consultation with the student) for sampling in stage 2 and product realisation in stage 3.

Stage 2, Sample Review—students present a sample garment (artefact) on a professional model (or a mannequin) and they reflect, with guidance from staff, on the areas for possible improvement on the sample.

Stage 3, Final Presentation—the final resolved garment is presented to staff and peers alongside any relevant supporting material.

The focus of this study in 2009 was the Sample Review, with the use of reflection, in both text and non-textual forms, to enhance student learning in fashion design. In particular, the Sample Review process will be explored for second year students with a cohort size of approximately 30 students.

The Sample Review process replicates real world activities. As we have described above, the majority of professional fashion designers have a point in their design process where they need to evaluate the quality of a garment sample. We argue that there needs to be a tangible artefact(s) to see, touch and experience in order to initiate the reflection process. Aspects that are generally appraised for improvement at Sample Review can be divided into three main areas: design, fit and fabrication. It can be argued that design is the more subjective area for improvement.

Historically, the Sample Review process for second year fashion students at QUT was a valuable learning experience, but the student reflection on their sample was rarely captured, documented, nor analysed and the level of reflection was generally teacher-led. This changed in 2009 when QUT fashion students were invited to be involved in a real world project to design cutting edge swimwear, alongside key industry swimwear professionals, including renowned Australian labels such as *Zimmermann* and *Anna and Boy*. This project was also in conjunction with the Australian National Maritime Museum (ANMM) in Sydney and became a national touring exhibition in 2010.

As part of the project, a public blog was set up—linked to the ANMM site—that required students to progressively document the development of their swimsuit/s, from concept through to product fruition. This blog formed the key tool to document

student reflection and the Sample Review point was an opportunity to capture critical thoughts on design development, fit and issues arising from construction. Students were encouraged to upload photographs and videos to the blog of their swimsuit(s)on a professional fit model; alongside this, they had accompanying textual reflective statements. The blog also acted as a tool for peer-to-peer critique and this occurred on regular basis. Students were required to also develop a hand-written design journal with supporting images (original and sourced) to supplement the blog. Hard copy journals assist to build the suite of possible portfolio evidence and many potential employers for design positions seek to view this material. As Gray and Malins (2004) argue, for design practitioners, reflective journaling provides a useful model to extend professionalism and to engage in better conversations.

During Sample Review students were encouraged, and at times politely coerced, to analyse the garment and then comment on possible improvements for the next iteration. For many, this was captured in audio format and they could replay the reflective analysis in order to subsequently alter the sample.

The different modalities of reflection, images, video, audio, and text (blog and journal), allowed the student to capture their reflection in a non-traditional academic format. In the main, using the blog instigated very casual language for refection and this assisted to create very open and honest dialogue, alongside supporting images of the sample; although, as the blog was in public domain some students were apprehensive to document personal inner thoughts. The use of the private hard copy journal assisted to alleviate this issue.

The 2009 cohort formed the first stage of the longitudinal teaching experiment. The researchers analysed the Sample Review process in detail and used it to collate the initial RAA pattern (see below). There are significant contextual factors worth noting at this point. First, the cohort was composed of second year undergraduate students with some prior experience in academic reflection. Second, the teaching pattern (RAA) was abstracted from practice after the semester. And the teaching design did not explicitly target student reflection, although it was certainly apparent in the enacted methods.

3.4 The 2013 Cohort

In 2013 the unit of study was the first in a sequence of six design studio units within the Bachelor of Fine Arts (Fashion) course at QUT. Because it is the first unit that students encounter, Design Studio 1 is critical to the course, as it frames discipline approaches for design principles and practical skills and understandings of apparel fabrication. It has several unique characteristics that help to frame the teaching and assessment approaches. First, the cohort size is very small (relative to the norms of traditional first year core units) with around 30 students. This allows for a teaching approach that can more easily cater for individual learning differences/needs. Second, the contact hours for the unit are extensive (12 h contact per week) and

this extended contact is highly atypical in contemporary university contexts. The long contact hours are required, as students need to acquire a skill base for garment fabrication due to design and making being intrinsically linked. Third, entry into to the course is via portfolio and interview, and, as such, students are typically very high achieving and motivated.

In Design Studio 1, students are encouraged to explore unique and individual pathways for their design learning. Students can direct their design aspirations to a diversity of directions that align to their personal passion for design. This diversity could include areas such as sportswear, menswear, couture ('high-end' one-off fashion) or street fashion. As a result, the teaching approaches are very fluid and centre on what the individual is motivated by. Bespoke teaching methodologies are used to allow the student to realise their designs through a myriad of fabrication directions that align to the student's current skill base.

The assessment for the Design Studio 1 has three critical points. In a 40% presentation in Week 6, students are required to 'pitch' a design concept (aligning to their personal interest) and with a range of supporting research and design developments. From this, one design is then selected for fabrication in the subsequent assessments. In Week 10 students are required to present (approximately 15 min allocated per student) a 'Sample Review' of the selected design. This formative assessment point allows the student to present (verbal, with supporting artefacts) a work-in-progress sample to peers and staff in a supportive collegial environment. This collective dialogue ascertains what aspects could be enhanced (both technical and design elements) on the sample and this assists to hone the quality for the final fabrication of the garment design. The final design outcome (60% weighting) is then presented at the end of semester, normally week 14, to peers and staff. The presentation can be a group collective or individual based. Again, no marks are allocated for the actual presentation, but are awarded to artefact(s) presented. At this final presentation students are stimulated to reflect verbally on the semesters learning (design and fabrication) and to express reflective 'words of wisdom' that would assist their peers if they were to undertake a similar garment style. The reflective advice is diverse, ranging from textile awareness, fabrication finishes, pattern-making knowledge and aesthetic opinions.

Prior to the Sample Review stage, the 4Rs Model (Ryan and Ryan 2012) was briefly introduced to students in Design Studio 1. As this student cohort was new to studio practices, the 4Rs assisted to provide examples of higher order reflection that moved away from the purely descriptive for processes of design and fabrication of reflective practices for fashion.

3.5 Differences Between the Cohorts

Because the 2013 cohort was based on a first year unit, *oral* rather than *written* reflection was expected. This approach allowed for a more organic and spontaneous form of reflection, as the student was not hindered by the need to develop academic

requirements for cogent written reflection. Oral reflection also allowed for prompts (peers and staff) to be made to assist with developing a higher order depth of discussion. For the second year students of 2009, both forms (oral and written) were expected outcomes of the Sample Review. In this cohort, students were required to develop a blog for reflective practices, in addition to an oral reflection at Sample Review. The blog generally allowed for a richer experience, as students tend to reflect in response to multimedia elements and build up a progressive collective form of reflective dialogue. It also allows for a *post-event* experience as students can view historical posts from previous design projects and build a breadth of reflective dialogue that spans their growth in fashion learning.

3.6 Research Focus

Given the similarities and differences in the two cohorts where a common teaching strategy was applied, two major questions arose:

- How can a better understanding of student reflection around self-produced artefacts be productively applied to refine teaching design? and
- How well do students reflect verbally? Are there any evident relationships between in-performance gesture and reflective utterances?

4 Method

Because we sought to better understand the teaching and learning taking place, this study was conceived as a longitudinal *teaching experiment*. The study started with, and subsequently built upon, an existing and successful, but undocumented teaching method. In the first instance, during semester 1, 2009, the method was crystallised into the Reflections Around Artefacts pedagogical pattern. The second episode, in 2013, led to a revision of this pattern through professional reflection. Also, because student presentation was the core phenomena that we sought to understand, we chose to collect video footage of students actually presenting with their garment artefacts. So the data that this study drew upon consists of two documents (the patterns), student productions (including blog posts) from 2009 and two video presentations, each about 4 min in length, from 2013.

A mixture of descriptive analysis methods was used to interpret this data. For the RAA patterns, summative content analysis (Hsieh and Shannon 2005) was used to compare and explain differences between the two documents. This analysis was reasonably subjective since the authors of these documents also conducted the analysis. However, the significant interval of time (three years) between the drafts did help to provide some objectivity to the exercise.

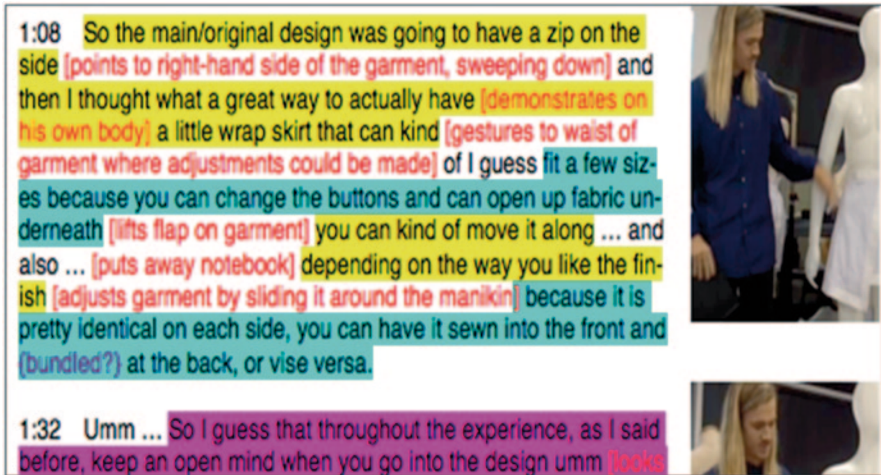

Fig. 3.2 Example gestural and 4R coding with [Gestures in brackets] and reporting, relating, reasoning and reconstructing reflection colour coded.

For the video footage, two stages of grounded research (Strauss and Corbin 1998) were employed: open and axial coding. Two student volunteers were videoed giving their Sample Review presentations to their peers and teachers. Both speech and gestures were transcribed in some detail. Open coding was performed to produce a small number of expression categories that attempted to describe the relationship between gestures and accompanying utterances. Although not strictly grounded, (because of an existing theoretical model) speech utterances were also coded using the 4Rs model (see Fig. 3.2). To explore possible relationships between levels of reflection grouped around presentation topics, utterances were also plotted on a time-line (see Fig. 3.3). Finally, axial coding was subsequently performed to build possible relationships between the different categories, including verbal and gestural categories, along with the 4R codes.

Fig. 3.3 Example timeline (same time interval as Fig. 3.2) of utterances around a topic (Zips) plotted against reflection level

Reconstructing						Z
Reasoning			Z		Z	
Relating						
Reporting	Z	Z		Z		
Time (min:sec)	1:08					1:32

Because the students volunteered, there was an obvious selection bias in this data. Additionally, only two presentations were analysed from a class of 24 students. We chose this small number of cases, from interested students, in order to provide for deeper analysis of the phenomena rather than to provide a representative picture of the group.

5 Results

5.1 Pattern Drafts

The 2009 version of RAA Pattern (Ryan and Brough 2012) documented a successful teaching method where different modes of reflection were elicited from second year students in Fashion studies. The 2013 version of RAA (see Appendix 1) was based on the earlier pattern but it included changes that we incorporated, drawn from the second episode of the longitudinal teaching experiment. The resulting pattern was both longer (1318 against 640 words) and more detailed than the earlier version. Despite these differences, a significant result is the *constancy* of the pattern. Essentially, the problem statement, context and instructional sequence remained intact. This suggests that the teaching method associated with the RAA pattern is an enduring and valuable one, at least to the teacher and researcher involved.

The introduction of *conditionality* characterised the 2013 version. Phrases such as *"for students who …", "If the artefact is physical …"* and *"optionally, …"* indicate that the pattern was re-written to provide more flexibility in pedagogical design. The appearance of conditionality in patterns that are revised over time is not surprising, because the cohorts and contexts will always be different. In this case, the university teacher and researcher responded with variations that generalised the reach of the underlying pattern.

More *detail* was present in the 2013 version of the pattern. For example, *"students can easy forget the reasoning…*" was added to the problem statement section. In the notes section, the comment *"In some circumstances students…*" was added. In one instance, a group reflection session, where the students and teacher collaboratively composed advice for the next cohort, was detailed. These additions suggest that a better understanding of the pedagogical design was at play. More elaborate explanations, drawn from experience and reflection are not surprising, given that the pattern itself served as a pedagogical artefact.

Finally, it is worth noting that a new focus, on student *gesture* while performing, was included in the pattern. This focus arose from the student presentation analysis (see below) but also has pedagogical utility. The presence or otherwise of gesture towards the artefact provides useful clues to the observing teacher about the reflective episodes by students.

5.2 Student Presentations 2013

The videos of two student presentations, labelled **AS** (Asymmetrical Skirt) and **HS** (for Hemp Skirt) were analysed. The AS presentation lasted 2 min and 31 s and covered four topics related to the garment that the student produced (block-replacement-design, zip, flare and summary). All 4R levels were observed during the presentation. Four significant 'objects' were referred to via gesture: as well as the garment artefact, the student also referred to the mannequin, a notebook and to his own body. The HS presentation was longer at 4 min and 31 s and covered six topics (initial-planning, hemp-characteristics, pads, zip, facing and summary). Only the three lower levels of reflection (reporting, relating and reasoning) were observed, with no reconstructing utterances. Only two objects were referred to via gesture: the garment artefact and her own body.

An important finding, that both presentations shared, relates to the frequency of reflective utterances (i.e. coded using the 4Rs) to non-reflective utterances (e.g. disfluencies, jokes, asides). The majority of the utterances (84 % for AS and 78 % for HS) were coded as reflective in nature. In general, this is a much higher ratio when compared with written reflections as part of a traditional assignment (Ryan 2008). We coded this measure **reflective density** since it seems to characterise spoken/deictic reflection given during performance of a self-made artefact.

When analysing the reflective utterances that accompanied deictic gesture, three categories emerged from the data, across both presentations. **Denotation** was a category used when the presenter pointed to a feature of the artefact as an illustration to the accompanying reflection. For example, in AS the student said: *I like the fabric contrasts* [points to garment*] and the project was really great* ... (see Fig. 3.4). This category tended to be associated with higher-level reflection in contrast to the others.

A second category, **explanation**, was a category used to describe situations where a dynamic gesture accompanied an explanation of a physical process. For example in HS the student said: ... *its going to get caught on the little things like as you are going down* [gestures pulling down zip] *and I was like "oh well, I can just sew them away."* This category was reasonably frequent with both presenters using gestures that mimicked specific actions (e.g. moving a zip, adjusting the waist length, sewing a technically difficult piece). Additionally this category was strongly associated with reflective recounting of incidents and decision-making that occurred.

A third category, **recollection**, was used when the presenter gestured to the place associated with an incident involving other people or resources. For example, in AS the student said: *So even with the flare* [gestures towards garment] *Dean helped me.* [gestures towards a specific part of the garment]… Again, this category was strongly associated with reflective recounting.

In addition to these categories of reflective expression, *how* they are arranged over time was revealed through axial coding of the timelines. On two occasions during the AS presentation (one is illustrated in Fig. 3.3) a sequence of progressively higher reflective utterances, around the same topic, was observed. In contrast, the

Fig. 3.4 A denotation deictic gesture

HS presentation did not exhibit this feature. We coded this feature as a **reflective expression gradient** since it seemed to demonstrate an ability by the presenter to succinctly mount a coherent and authentic argument around his/her thinking, beginning with lower levels of reflection and ending with higher.

The results from this study have included comparisons of the RAA teaching pattern over time and an in-depth analysis of student reflection during performance. In addition, the analysis of student performance, while only based on two cases, offers some tantalising insights into how utterances and gestures combine to elicit expression that has high reflective density.

6 Discussion

This discussion illustrates our own 4Rs reflection of the refinement of a teaching pattern, where we *report* the key elements of the refinement, *relate* it to other similar contexts and utilisations, *reason* why these elements improved the pattern, and *reconstruct* the pattern accordingly. The RAA teaching pattern has proved to be an effective description of successful practice. The stability of the pattern, along with the way it was refined in detail, suggest a useful and adaptable teaching strategy has been captured. The inclusion of *conditionality* points towards greater abstraction of the pattern, so that it covers wider sets of students over their courses as well as catering for subsets of student groups. Additional detail provides clues for the university teacher to adapt the pattern for their own instructional contexts. These refinements strongly suggest that a much better understanding of the pedagogical issues involved in inducing reflective performance associated with a self-made artefact has been achieved.

The in-depth analysis of student performance starts to explain how the artefact works to elicit reflection. Students make their reflection explicit using spoken language and deictic gestures with an artefact acting as a boundary object, in order to bridge the communication gap between themselves and their audience. The proximity of the artefact creates conditions for expression with high reflective density when compared against written assignments. Students can then co-construct meaning by speaking and using gesture in a variety of ways, including denotation, explanation and recollection. Some students are able to exhibit *reflective expression gradients* where complex arguments towards high levels of reflection are composed. Reflective expression gradients are highly desirable from a university teacher's perspective because they indicate both high level as well as authentic understanding of the discipline by students.

While working on this project we discovered another unexpected result. If the RAA pattern is itself to be considered an *object*, then it is available as an artefact for professional reflection. Such reflection may result in further refinement of the pattern over time. So, in a sense, the RAA pattern is recursive for it both describes a useful teaching practice as well as acting as a mediating artefact between university teachers trying to understand and improve their practice. Additionally, in retrospect, we can easily identify episodes from the current study that correspond to the 4Rs levels. For example, in the 2013 RAA pattern traces of the *Reporting* level can be seen in passages such as "*... students are sometimes asked to present artefacts to industry mentors …*" where the authors reflect to describe particular conditions or episodes. The same pattern also contains evidence of reflection at the *Relating* level where connections are made to other disciplines, different patterns and the relevant literature. The complete Context portion of the RAA pattern represents *Reasoning* at a professional level by the authors since it is here that they explain in detail why the methodology works, for example: *"The artefact, the formal setting and the prompting can act together to initiate and then reveal reflective thinking. This is evident when students…"*. Finally, the steps of the RAA pattern are an embodiment

of the *Reconstructing* level of reflection since it details how the authors reframed their practice based on greater professional understanding of the task. Thus, it is significant that 4Rs model is effective in representing both forms of learning that were the focus of this study: reflection by undergraduate fashion studies students and professional reflection of university teachers.

7 Conclusion

Asking students to critically reflect within their chosen discipline setting, about their own performance is quite difficult. This is so even when reflection is specifically targeted through assessment (Ryan 2008). To do this in their first year of university study is even more challenging since students are new to so much, including acquiring the necessary skills; dealing with unfamiliar language; and understanding assessment demands. In such cases, requiring verbal reflection through performance is a good starting point because when students are engaged in making artefacts, this form of reflection is particularly *close to the surface* and thus is available to student and (trusting) audiences. The RAA pattern encapsulates a successful pedagogic strategy for eliciting student reflection in this manner.

Are the results from this study only applicable to creative industries such as fashion studies? To answer this question we need to consider the role of creativity across other university disciplines. In a sense, all student work, whether in the form of tangible items, performances, texts or multimedia elements can be considered creative productions. If we take a constructivist approach, these works are ideally fabricated alongside their developing disciplinary knowledge. So we believe that requiring high-level reflection around artefacts is something that is both desirable and attainable across a range of university courses.

Boundary objects, whether they are garments or pedagogical patterns, bind experiences and critical thinking together. Because they are tangible and accessible, boundary objects can conveniently connect experiences and projects over long periods of time or in the case of students reported in this study, over recent experiences. Their reflective expression opens up their newfound knowledge to wider audiences.

8 Appendix 1: RAA Pattern (2013)

8.1 Reflection Around Artefacts

8.1.1 The Problem

In some contexts, students need to see, and at times touch and experience an artefact (something that is produced from their learning activity) to help them reflect on the processes that went into its design and/or fabrication. Creative work that requires

the fabrication of tangible artefacts almost always involves intense iterative design. However, reflection in these situations is difficult since it must compete for attention with other activities, such as the processes involved in skill acquisition. Students are so busy that they may ignore the benefits to be gained by reasoned reflection on their own performance. Further, students can easily forget the reasoning behind critical design decisions that they have made unless prompted in some way. Even when students are actively reflecting when engaged in design work, there are still hurdles to overcome when taking part in academic study. They may be asked to express their reflective thinking, initially in dialogue, but later in writing to what might be an unfamiliar genre.

8.1.2 The Context

A performance, where a designed artefact is presented to peers and assessors is an opportunity to prompt reflection. The performance (in the case of Fashion Studies students, a review of a sample/prototype) is a time when the artefact is displayed in a formal setting and an audience prompts the student to express reflective thinking in dialogue. The artefact, the formal setting and the prompting can act together to initiate and then reveal reflective thinking. This is evident when students can be seen to spontaneously point to and gesture around the artefact. In addition to the performance, reflective thinking can occur in the lead-up or afterwards. The "performance" in this case is drawn from the discipline (a review of design) and is reasonably formalised. Most disciplines have characteristic performance genres for example, business students pitching a business plan, education students demonstrating a lesson segment or law students mounting a legal argument. Associated with each of these performances is an artefact, be it a business plan, a lesson plan, a legal brief or (in the case of Fashion Studies) a garment sample.

The key aspect to this pattern is the engagement with an artefact (whether it is a garment, a plan or a structured document) and the leverage that this provides to stimulate recall and higher-order reflection. Depending on the discipline, this approach mirrors real world processes, as prototype artefacts are often reviewed in a team context requiring high level reflective dialogue for issues like product usability, uniqueness of design and possible marketplace acceptance.

8.1.3 The Pattern

1. Set up the design task with a realistic time-frame since design, practical and creative skills usually require an extended time, because students need to work through an imprecise number of developmental iterations. A clear task specification is required so that students can begin to know what outcomes are expected, the time-frame involved and the ways in which they will be assessed. Depending on the context, students may need extensive scaffolding around use of time, resources, milestones, and the acquisition of skills.

2. For students who have not had introductory experience in formal reflective expression, provide resources (such as the 4Rs model) and opportunities for skill building. Try at least to cover verbal reflection over a range of levels through modelling.
3. Ask students to set up a private journal (e.g. a blog or physical record) so that students can record their reflection on the processes involved in designing and making the artefact (these may include multimedia elements). If the artefact is physical (such as an item of fashion design), students may also benefit from a physical journal, as this can allow for tactile elements such as fabric swatches. Scaffold the reflective journaling task with frameworks, exemplars and assessment criteria (if it is to be assessed directly).
4. Prepare the presentation event. If you have videos of good performances by past students, use these as exemplars. For the event itself, prepare a running order for presentations, arranging people (such as a profession model, in the case of fashion artefacts), resources, recording and display equipment, etc. Photographs, videos and audio recordings are particularly useful because they can be used to capture dialogue that can serve as further prompts to further reflection, as well as providing exemplar resources in subsequent semesters. Student peers can also be engaged to act as recorders using devices such as mobile phones.
5. During each presentation, students individually present their artefact to an audience of peers and academic teachers. They explain and provide a rationale for their design (i.e. reflection) through commentary, but may complement this with other representations (e.g. graphic images, diagrams, plans, patterns). In addition, as the artefact is a tangible object the student can discuss dimensional issues (in the case of fashion, garment fit and silhouette) and may elect to show/reveal internal construction elements that are critical to realise the design. During the presentation, the audience pose questions concerning design (perhaps around how the artefact matches the conceptual plan, commercial viability and aesthetic nuances) and technical issues (around decisions and mistakes they made). These questions serve to elicit verbal reflections that are captured directly (as a recoding) or as a stimulus for recall following the presentation.
6. Follow up by requiring reflection after the presentation. Optionally, ask students to make a posting to their blog following the presentation and/or their non-digital journal. This writing can be structured to include multimedia elements (from the presentation). Because it is effectively second-order reflection, if it is an assessable piece, higher-order reflective thinking can be expected. Alternatively, conduct a whole group reflection session couched in terms of what advice present students would give to the next cohort. Student reflections can be transcribed, grouped, re-ordered and displayed on screen to encourage participation. As well as providing students with an opportunity to reflect this can provide valuable feedback teaching improvement.

8.1.4 Related Patterns

- Performer as Reflective Practitioner (PRP)
- Second Order Reflections (SOR)
- Start Talking Reflection (STR)

8.1.5 Notes

In some circumstances students may feel overwhelmed or suffer performance anxiety to present their artefacts to peers. This is particularly the case if the student considers their work to be of a lower standard than their peers and consequential judgmental values that may apply. This may also apply to some international students where they may feel ill at ease presenting to peers, due to language or cultural barriers. Hence, it is important to frame the environment in a collegial context to support open and honest reflective dialogue. Exemplar videos of past students performing and reflecting may also help overcome barriers to presentation.

In capstone units, students are sometimes asked to present artefacts to industry mentors for feedback, in consultation with their peers, and this can present unique challenges for open reflective dialogue. Students may feel threatened to expose flaws in their work in fear of judgemental comments from experienced professionals. In such cases it may be prudent not to assess reflective dialogue at all, or to assess it indirectly (e.g. as annotations to an assessable product).

In some circumstances students are given an extension for submission of the artefact (health issues or unforeseen technical or personal circumstances) and this then does not allow for presentation of the artefact to their peers. If the student is unable to present and/or attend the group presentation, it can be challenging, or impossible, to develop an authentic suitable audience for their subsequent presentation.

Issues may exist for privacy, as some students may not want for personal and/or religious reasons to have their presentation digitally documented with photos or video.

To reduce the marking load when this pattern is used for summative assessment, the first phase marking can be largely mechanical, e.g. based on frequency and spacing of journal entries (rather than their content). In addition, the second order reflective work can be compact and use non-textual forms of representation (images, models, audio & visual productions).

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Chapter 4
The Dancer as Reflective Practitioner

Evan Jones and Mary Ryan

Reflection	Foundation	Intermediate	Capstone
Reconstruct			★
Reason		★	
Relate	★		
Report			
	Program Phase		

Trial reflection strategy plotted on the TARL Model (see Chap. 2)

1 Introduction: Reflective Practice in Performance

The Arts are rooted in human experience and feeling. It is impossible to consider an artistic performance without acknowledgement of the human conditions under which it was brought into being and the human consequences it provokes in real-life experience (Dewey 1934) . These human conditions and experiences are the catalysts for self-awareness and identity-building both in the perception of the artform and through the expression of creative performance. Reflection is an integral and cumulative form of learning in dance. Reflective learning generates knowledge that is, in the main, specific to oneself and is a form of evidence upon which to analyse and change one's practice (Ryan 2014). It is through deep reflection that we respond to and represent feelings and emotions, and concurrently, make aspects of our world and our experiences more perceivable (Langer 1953).

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Reflection is an intensely personal undertaking, yet a conscious awareness can prompt deep learning about our relationship with the world and the people around us. Reflection is thus both an individual and a social process (Moon 2004) as one responds to experiences and feelings always in relation to the context in which the response was prompted. Reflection has been variously defined from different perspectives (for example, critical theory or professional practice) and disciplines (Boud 1999), but at the broad level, the definition used here includes two key elements identified by Ryan (2012): (1) Making sense of experience in relation to self, others and contextual conditions; and importantly, (2) reimagining and/or planning future experience for personal and social benefit. This definition incorporates the belief that reflection can operate at a number of levels, and suggests that to achieve the second element (reimagining), one must reach the higher, more abstract levels of critical or transformative reflection. The four levels of reflection or 4Rs model (adapted from Bain et al. 2002 and outlined in Chap. 2 of this volume), including: (1) reporting and responding, (2) relating, (3) reasoning, and (4) reconstructing, is a useful framework to teach and apply reflection in dance practice. These levels increase in complexity and move from the identification of a position or movement that requires improvement, to an application of disciplinary knowledge intimately connected with experiential self-knowledge, and ultimately transformation of practice, allowing the development of new ideas and expressions (Dewey 1934).

Stock (2004) notes the impact of *reflection on practice* in dance by providing students "a learning environment in the studio where students can consciously, actively and effectively apply anatomical knowledge, reflective/motivational skills and theoretical understandings to their dancing" (pp. 5–6). Thus, the students are displaying active engagement through developing awareness of the forms, coordinations and movements of the body in space and time as well as reflective thinking by consciously seeking the potential for improvement in practice in situ.

These approaches align with Langer's 1953). notion that some knowledge must be expressed in non-discursive forms leading to expressive form or mode being just as important as the content in learning situations (Ryan 2012). In dance, these modes can include aesthetics, dynamics, biomechanics, sensorimotor feedback, emotional connectivity, and spatial integration. Doughty and Stevens (2002) state that: "reflective thought and judgment are central to the artistic process and established features of arts pedagogy" (p. 1).

This chapter will explore the implementation of reflective practice in a dance class from two different perspectives. First, it provides an analysis of performative reflection from external observers (Barton and Ryan—authors in this collection), and then Jones provides an 'insider' reflective analysis of his approach to teaching reflective practice, including student reflections on this approach. Data are woven through these two perspectives to provide a rich picture of reflective practice in teaching and learning dance. Next, the student voice is explicated with comments on their experiences interpreted through the applications of dancer-as-reflective-practitioner pedagogy. We conclude with a reflection on this approach to teaching dance.

Table 4.1 Reflective practice in dance

The 4Rs	Modes of reflection in dance
Reporting and responding	Being able to describe and feel what they are doing physically (linguistic, embodied, visual, spatial). The more accurate, detailed and comprehensive, the greater the effectiveness of the reflection on the student learning
Relating	Relate the action/form to their own body—consider what is currently achievable and expected in this context (embodied, visual, spatial). Self-awareness and knowledge of the exigencies of the dance context enable this reflection
Reasoning	Reason through physicalised anatomical knowledge, metaphor and experience—experimenting with movements and techniques (embodied, visual, spatial). Freedom and courage to try something different enriches this reflection
Reconstructing	Reconstruct their practice as a result of a number of influences: feedback, feedforward, watching others, or 'feeling' it themselves (embodied, visual, spatial, linguistic)

2 Teaching Dance as Reflective Practice—External Observations

External observations were provided by Barton and Ryan (in press) as part of the larger reflection project explained in Chap. 1 of this volume. In dance, spontaneous and considered performative reflections are enacted while the students prepare for their final examination during a ballet class. The students continuously view themselves (triangulating data from the mirror, peer feedback and sensorimotor feedback) and also receive oral, tactile and visual/gestural feedback from the teacher. The aim is for the students to improve their physical and aesthetic performance by examining and exploring the capacity of their own bodies, their impact on prospective audiences in the space (in this specific case, the examination panel adjudicating the examination presentations), and by working collaboratively as a team. In this way, they are prioritising embodied, visual, audio and spatial modes of reflection.

Table 4.1 outlines how the teaching of dance developed the 4 levels of reflection: reporting and responding; relating; reasoning; and reconstructing, via multiple modes. The evidence from this study strongly suggests that reflective critical thinking plays a large part in the learning and teaching journey in dance.

Barton and Ryan (2013) identified certain multimodal 'triggers' that are employed by dance teachers that enable more rigorous and critical reflective practice.. For example, the simultaneous spatial, visual, audio and corporeal modalities 'triggered' a self-conscious reconstruction of technical and aesthetic disciplinary practice. These triggers are essential components of reflective practice in this discipline as they enable the sub-conscious to become conscious, the invisible (unfelt) to become visible (aware) and the automated to be exposed for analysis—thus opening the dance student up to informed disciplinary critique and the potential for improvement with clear self-awareness.

3 Analysis and Discussion

The still shots in Fig. 4.1 are taken from a dance class and show the teacher providing feedback to a student after observing her during a warm-up exercise. The teacher is demonstrating disciplinary aspects of posture and movement through verbal, tactile and gestural modes.

This reflective example is enacted in the moment. It involves visual and gestural demonstration as well as oral instruction by the teacher. As the student watches herself in the mirror it involves visual and corporeal reflection in action. She is asked to 'feel' the stretch and the position of the body. This enables her to modify movements and positions in order to improve her overall dance practice. Once the student actually enacts these requests the teacher responds via oral, visual and gestural instruction and tips. It is inherently *relational* as one knows one's own body and feels its present limitations. The student *reasons* with kinaesthetic intelligence and applied knowledge about how to coordinate, move and position the body to *reconstruct* the sequence of movements in order to achieve the most technically effective and aesthetically appealing outcome.

As a 'reflective practitioner' the dance teacher reinforces the idea that students use self-conscious reflection in practice—using visual and sensual body prompts so it becomes embodied during performance.

> You need to develop the spatial awareness of exactly where you are. Not by looking around during the exercise. You are still looking around at what you're doing—you can do that when you're practising at home. "Where's my leg? here, right, this is what it feels like". But when you're doing the exercise for the exams and you look around at your body for what's going on, it will be seen as an error; it changes where your weight is and the whole look. By all means check it out for yourself; but when you're practicing the exercises in class, carry your head according to the wholeness of the movement—don't be checking yourself out during the 'performance'. (Reflective instance 2: Teacher feedback)

The teacher here is asking the students to be consciously 'reflecting' on their dance technique and awareness of their bodies through the use of discipline jargon such as 'energy lines', 'projection' and 'muscle tension'. This involves *reporting* on what they are doing; *relating* their movement to previous attempts or that of others; *reasoning* about how they are doing something and how they might modify that doing; and *reconstructing* their practice in order to potentially improve professional practice by reflecting in and on action.

Student A reflects on the practice that takes place in the studio with the teacher:

> To think about being aware of yourself in space … where your extremities actually are rather than where you think they are. How your body feels when it is working…. He often speaks about energy lines and pathways of energy. This way of teaching makes us think about the overall finished product of a movement. It gives it a fuller and more nicely executed appearance as it makes us extend our lines and think about where the movement is going. For instance transferring balance from two feet to one foot—a whole new set of muscles must activate and he uses the term energy line to symbolise which body systems are working…. Reflection is very important otherwise there is no progression as you do not reflect upon what you have learned previously. Dancing is all about learning the muscle memory of a movement and sometimes it can take a very long time. (Reflective instance 3: Student A)

Fig. 4.1 Reflective instance 1: Annotated still shots from videoed ballet class. **a** Imagine their head being held by an invisible string from the crown. **b** Have the student project their energy line forward and up (this is making corporeal reflection a continuous process). **c** Hold their neck in line with shoulders. **d** Hold their body up and in line with the head and shoulders (the overall position)

Dance as a performative art form requires reflective thinking constantly. It is a critical part of the dancer's practice as it "involves the learner in questioning themselves and their situation, making judgments about their performance and prompting action" (Doughty and Stevens 2002, p. 2)). The teacher and students in these examples are self-consciously reflecting on performance and feedback in a continuous cycle as they demonstrate and enact 'dancer as reflective practitioner'.

4 Teaching Dance as Reflective Practice—A Teacher's Ruminations (Evan Jones)

I use the 4Rs (*reporting/responding, relating, reasoning, reconstructing*) to reflect on the pedagogy of dance as reflective practice. My moment of crystallisation with respect to the dancer as reflective practitioner precipitated soon after I transitioned from working as a ballet master in a ballet company to working as a dance lecturer in a university. The professional company dancers were more or less self-sufficient with respect to interpretations and applications of the content and corrections I might give them in class and rehearsals. However, the university students did not have this professional self-sufficiency. They wanted me to tell them how to apply suggestions, how to find and activate the appropriate muscle sets, how to coordinate this with that, how to dance with the best dynamics, how to interpret the music,, how to communicate emotion, how to find the aesthetic expression of the genre—in short, the dance students wanted me to show them and tell them how to dance (*reporting/responding*). This is reasonable considering their stage of development and context; however I found it exhausting and extremely challenging with the large class sizes. The most I felt I could provide was a structure which could scaffold student learning, help them evaluate their decisions and inspire their intrinsic motivation to explore and search for the answers to their questions (*relating*).

My epiphany came as I was reading about Inhelder and Karmilhof-Smith's wooden block balancing experiment described in Schön (1983). Reflective practice was indeed what dance professionals did as an implicit, self-evident, 'natural' process of improving our practice. We construct our own, personal theories of allegro, pirouettes, pas de deux and performative qualities. This is based on feedback from a variety of sources and our own experiences, reflected upon, reasoned about and reconstructed in the next class, rehearsal and performance. Our knowing is in our doing, and mulling over what we had done gave us specifics to further investigate, to question, to experiment with, in order to improve the performance. The performance of a dance artist comes from an internal source rooted deep within the body/mind/spirit of the performer. The performing artist does not reproduce like a photocopier; each performance is a unique re-creation, manifesting the reconstructed outcomes of reflection and rehearsal as related to the performance and the performer (*reasoning*).

Consequently, since the purpose of the practice, the artistic expression, is associated with an internal source, the teaching of the student wishing to become a performing artist must also permit, even oblige, the learning to come from within. The student should not be told or shown how to dance; the student should be given the relevant information and methodologies to *discover* how to dance. Structured reflective practice seemed to me to be an approach with which I could help the students conduct the research required for them to find their answers to their questions *(reasoning/reconstructing)*. Johns expresses the same concept in a different context:

> By telling stories and using structured reflection, tacit patterns of action and intuitive performance are examined, leading to greater understanding of the way the self responds within situations. New insights and ideas are constantly applied to future situations and subsequently reflected on, leading to a spiral of reflexive knowing. Within this process the practitioner draws on relevant extant theory to inform practice which then becomes assimilated into personal knowing. (Johns 2000, p. 41).

This enlightenment has subsequently changed the essence of my interactions with students. Instead of satisfying their ravenous, questioning appetites with answers from my repertoire of knowledge and experience, I became their guide on the side (King 1993). My own studies of the work and practice of Moshe Feldenkrais provided me with the awareness that "it's only when you know what you are doing that you can really do what you want" (Feldenkrais 1984, p. 68)). The student needs to know 'where they're at' in order to be able to further develop their practice. Class content, pedagogy and the current goals of the student should all be pitched within zones of proximal conceptual knowledge and physical capabilities so that the student can relate their present state to the subsequent level of development and understanding (*reasoning*).

As the guide on the side (King 1993), I provide information through words, gestures and physical contact which the student can combine with their own embodied literacy to experiment, through responding, relating, reasoning, and reconstructing, with their dance practice. The information I provide is designed to be universally appropriate within the context and genre being studied. For example, working on fifth position of the arms, I might say, "Look for a sense of relaxation within the shoulder area, with level shoulders. Feel the form around your head as though you are embracing a large, fully inflated balloon." If I see a student with the right shoulder higher than the left, I will suggest they check their position in the mirror, paying particular attention to the level of the shoulders and finding the position they choose to be preferable. If I see excessive tension in a student's shoulders, I might gently brush my fingers over the area and suggest that they seek to release this tension, finding other ways to sustain the position with less effort and stress. If I see a position with droopy or forward pointing elbows, I will suggest that they ensure their "balloon" is fully inflated, expanding against the insides of their arms, as I make this gesture. The reconstruction of the fifth position of arms most often has moved to a more sophisticated, genre-appropriate level. The key aspect, though, is that the students have discovered this development for themselves, individually, with reference to the mechanics of their own bodies and their own aesthetic understanding. They have been empowered by the freedom to investigate their own work their own way with always-appropriate applications. A sense of success and ownership engenders a perception that they have the intrinsic capacity to improve their own practice, to seek their own solutions, to move from where they are at further towards where they want to be. As a result of growing awareness and ability, these goal-posts defining "what you want" are themselves then moving in the direction of professional attributes at a rate commensurate with expanding understanding and embodied achievement *(reconstructing)*. One dance student said:

> This reflective practice allows me to think about what my body is actually doing and feeling exactly where the execution of the movement comes from rather than just doing a class without thinking—this allows me to perform better in class. (Student B)

If the students are to be encouraged to use reflective practice in their own personal ways, the information, corrections or suggestions made by the teacher need to have a relevance and applicability that is universal, at least within the context of the dance being studied. This is because the information byte or 'trigger' in the mind of the student very often becomes an integral part of what the student does. In the earlier example of the fifth position of the arms, a suggestion to 'lower your right shoulder' would no longer have relevance once a way had been discovered to equalise the shoulder levels. It could become an internalised paradox to then associate the 'correct' position with the trigger 'lower my right shoulder'. However, the experimental results the student found within her or his body to achieve this levelness can still be associated with the suggestion to "look for a sense of relaxation … with level shoulders". The inscribed muscle memory resulting from successful discovery should not be associated with the instruction to lower a shoulder. Another possible correction in this instance could be "don't pull your left shoulder down". This would be less appropriate in encouraging reflective practice for the same reason as just discussed. Furthermore, another important consideration for nurturing reflective practice is that negative directions should be avoided, if possible. An active, positive direction or suggestion will have a more developmental influence on the student's relating, reasoning, reconstructing and motivation than an instruction couched as a negation.

There are many areas of somatic, technical, historical, biomechanical, physical, metaphysical, psychological, biological, aesthetic, ethnographic, and poetic fields which can be explored by the dance teacher in devising suggestions for universal application in classroom pedagogy. When modelling the students' reflective practice,, each teacher can find metaphors, images, descriptors, sounds, associations and gestures which resonate and work for them in their contexts with their students at any given time. This form of Action Research can function to keep the teacher both current in the field and attuned to the students' changing requirements. Not every teacher suggestion will work every time for every student. The teacher, too, should have the freedom to experiment, to try things out, to modify and to recalibrate in order to find approaches that assist the students in their own discovery processes of responding, relating, reasoning and reconstructing. The metaphor of the fish for dinner and learning how to fish is relevant here. When teachers overtly model reflective practice in their own pedagogy, they are setting the scene for the students to involve the activities of research, exploration and discovery with respect to *their* learning to dance *(reasoning)*. Being given the fish may satisfy hunger briefly, but catching your own fish is generally a far greater satisfaction. As one dance student wrote to another dance student following their peer observations:

> To me, you were always a beautiful dancer but after watching you grow this year and with the help of action research,, you have improved immensely, especially with your perfection of 'freedom of breath' in your movement. (Jones 2000, p. 4))

My post-enlightenment studio practice of engaging with the students as reflective practitioners does not mean that I have eliminated student questioning. As the guide on the side, I am there to be consulted about something a student is ready to experiment with, in a way the student has devised and at the time the student is ready. With this approach, my responses as a teacher can be much more accurately tuned into what the learner's needs are rather than what I might find in my knowledge bank to fill a perceived gap. I am not addressing a deficit in their knowing, but rather contributing to their own knowledge construction, with their permission and following their blue print *(reconstructing)*. Another student observation following applications of my reflection-centred pedagogy was:

> I think the practice of thinking of goals made the approach to practice completely different. It provided a clear path to work towards by giving greater focus and attention to the details and working in an achievable framework. (Jones 2009, p. 4))

Two aspects of recent scientific research findings indicate that reflective practice could be an effective approach to enhance kinaesthetic learning and conceptual understanding. Investigations into neuroplasticity and mirror neurons show how thought processes, operating independently from physical processes, can have developmental influences on both our capacities to think and move. For example, Di Pellegrino et al. (1992) discovered evidence for an action observation/action execution matching system in monkeys in the1990s. From this work, the recognition of a new class of neurons with both visual and motor properties emerged. These were termed mirror neurons. Iacoboniet al. (2005),), along with Gazzola (2009) have subsequently demonstrated evidence that a mirror neuron system is also present in humans. There is considerable ongoing debate about the functionality and genesis of our mirror neuron system (Heyes 2010). However, there is general agreement that the mirror neuron system plays a role in action understanding.

The conscious awareness of our physicality, our reporting, sets the stage for the establishment of a modulated mirror neuron network by the dancer's observing, relating and reasoning, through explorative reflective cogitation. This process provides us with the data to devise a different approach to some specific aspect of the dance we are seeking to improve. When it comes time for action, this freshly minted mirror neuron network then subtly influences the nerve systems that control the musculature and the reconstructed aspect of the dance is assisted 'from within' to become closer to what we wanted, or at least thought we wanted. The iterative spiral cycles of Action Research follow one after the other as the dance is refined and the dancer's skills are developed. Mirror neuron systems provide a scientific mechanism for the expansively observed and described benefits of 'mental rehearsal' or action simulation (Cross et al. 2006).). A student's description of action simulation application was:

> I know I will be working on thinking about the things I need to fix before I do the exercise and I think it is a really good habit to get into. (Jones 2009, p. 4))

Discoveries surrounding neuroplasticity (see Dayan and Cohen 2011; Francis and Song 2011) indicate that neural pathways in the developed brain are capable of growth and re-routing, so habitual behaviours or diminished functionality can be

changed through conscious, mindful, explorative applications of reflection, action simulation and practice. These developments are exciting, as they open up an array of possibilities for socio-scientific research into hither-to esoteric or murky notions of what it means to change as a human and to function as a reflective performer. "With our increased understanding of neural reorganisation, we could drive function-enabling plasticity and prevent function-disabling plasticity. Thus, this knowledge can be directed toward functional improvement" (Francis and Song 2011, p. 8). These developments have implications for pedagogies that teach students how to use reflective evidence and take action to change habitual movement for improved performance.

5 Learning Dance with Reflective Practice—Student Observations

Let us now allow the dance students to express their experiences working consciously as reflective practitioners: responding, relating, reasoning and reconstructing in their dance classes. Below are some responses, observing both positive results with the 4Rs, as theorised and noted above, as well as concomitant challenges mostly related to focus, scope and scale. Our analysis of their demonstration of the 4Rs is explicated in the text boxes woven through their reflections:

I personally reflected on my performance quality within exercises at the barre and in the centre. After completing the exercise on the first side I was able to assess what the overall look and feel was which enabled me to use performance qualities such as extending and a larger use of head and arms. I believe this improved my overall comprehension for the exercise as it gave the movement more meaning, dynamic and flow. It turned an ordinary exercise into a performance that was worth watching and doing. Overall, the idea of reflecting on movement is very helpful as I believe it improved my performance quality within a technique class. (3rd year student)

- Reporting/responding—indicates importance of reflecting on overall look and feel.
- Reasoning—using terminology and discipline specific goals
- Reconstructing—applying the technique for improvement in a different class

While on barre I found the reflection between sides of exercises very useful in focusing my self-correction. I felt more aware of my body during the exercises (as opposed to focusing just on the movement sequences) and the opportunity for self-correction helped me as an active learner. I found that I focused more on the feeling behind movements when the corrections were

generated internally. During centre work, I felt like I was less focused on the finer detail of my movement, and more focused on correcting major mishaps such as stumbles or working towards more pirouettes. I feel like perhaps in future I should pull back and refocus those basics in order to further facilitate the larger movements. (2nd year student)

- Reporting/responding—importance of self-awareness for self-correction
- Relating—comparing body awareness as a focus with (presumably) other instances where movements might have been the focus
- Reasoning—nice delineation between externally and internally generated feedback. Self –management of learning is important and reflection can help this.
- Reconstructing—identifies changes for next time and how a different approach will still facilitate the larger movements

After concentrating on reflective practice particularly in the past 2 weeks, I have felt a sense of calm whilst dancing. This has been reflected in movements where I would usually struggle and feel uneasy whilst approaching the movement. After reflecting on what may or may not be 'working' my body has been able to calm and perform the movement with a sense of fluidity and has ultimately 'worked' better. I felt stressed and up-tight during my last exam, which may have been reflected in my movements, limiting myself in some areas. This is because of the state of mind I would have after completing the exercise where I would be 'beating myself up'. I feel, after the past two weeks concentrating significantly on the reflection of the practice, I will now apply this in exams especially, to help bring a sense of calming to my movements and fluidity. (2nd year student)

- Responding/relating—identifies issues with previous approach to exams and compares it to response within a reflective approach
- Reporting—focuses on feeling the execution
- Reasoning about the effects on state of mind during performance
- Reconstructing—has identified that state of mind is the key issue and that reflection can be used in future to improve this but doesn't indicate specific strategies to try or ways forward

At first I found that when I picked things to focus on I chose too many and it crowded my brain and made it harder to focus. Now I find that when I pick one or two aspects for each exercise I do much better overall. (1st year student)

- Importance of reporting—focuses on one or two critical aspects

I was focussing on core stability throughout ballet yesterday and I found each time I focused on my core, it released tension from my upper body. I found that as the class went on I had to spend less time focussing on this as it became more natural (1st year student).

- Reporting/responding/relating—identifies critical issue, why it is important, its effect on the body
- Starting to reconstruct but doesn't quite reason it out

In ballet class, I concentrated on trying to flatten my shoulder blades when moving the arms through port de bras. On the barre, I found that helped with stability and not dropping my wrists in a la seconde. In the centre, I continued to concentrate on this and found that sometimes I pulled my focus away from the exercise, particularly in pirouettes. This may be because I was thinking of opening my back and not concentrating on the dynamics and technique involved in performing a pirouette.

In contemporary class, I was concentrating on using my body weight to direct my movement. I found that this really assisted with the direction of the body. It allowed everything to connect together, giving quality to the movement as opposed to just doing the set exercise. In many respects it felt easier because the movement was natural and fluid and I found I wasn't fighting myself. (1st year student)

- Reporting/responding—identifies critical aspect and why it is important
- Relating and reasoning—identifying intention and reasoning why
- Reasoning about how the focus on body weight helps to connect everything.
- Reconstructing—tried this technique in the second class and saw improvement. Self-awareness and self-conscious performance during learning seems to be very important in performative reflection.

Over the past few lessons when I have been focusing on being aware of what my body is doing, I have definitely noticed a difference in the amount of 'strained effort' that each movement requires. I find that if I visualise myself doing the movements first, and then perform them that way they come with a greater sense of ease than when I just try to fight my body into the practice. I have also noted that I am more aware of my fellow colleagues, and how watching them dance and seeing the movement on their bodies helps me to not only see what the movement looks like from an outside perspective, but become conscious of things that I need to be aware of when I'm dancing. We did this throughout the semester when we went in groups for the adage study and I have always felt it is an extremely beneficial exercise as you learn as much about yourself as you do about the other dancer (2nd year student)

- Reporting/responding—identifies critical aspect and why it is important. Some reasoning about attaining the 'ease' of movement
- Relating self to others
- Reasoning about the outside view of the performance.
- Not quite reconstructing—what has the student become aware of and how will this be addressed?

Consistent with the developmental aspects of the TARL model outlined in Chap. 2, second and third year students have generally learned more successful reflective practice applications than the novice first year students. Early in their program, most students show evidence of reporting/responding, relating and early reasoning. However later in their program, most students have more evidence and knowledge upon which to draw for more sophisticated reasoning and subsequent reconstruction of their practice.

6 Conclusion

Reflective practice is an integral part of performance and learning to perform. Transformation must ultimately come from within the dancer. However, it has been shown that the teacher can provide 'triggers' to enable particular kinds of reflective practice leading towards improved performance. External observations can identify such triggers and the ways in which they prompt particular kinds of multimodal reflection.. The reflections of the teacher/insider have the potential to provide an even more nuanced understanding of the importance of the positive triggers that the teacher provides to prompt physical inscription of effective muscle memory, as well as the development of cognitive and kinaesthetic conceptual understandings. Dance students in these cohorts have demonstrated their corporeal, visual and verbal reflections as they self-consciously improve their practice using input from their teacher, peers and their own sensorimotor observations and physical experiences.

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Chapter 5
Reflective Practice in Music: A Collaborative Professional Approach

Georgina Barton

Reflection
Reconstruct
Reason ✶
Relate
Report
Foundation | Intermediate | Capstone
Program Phase

Trial reflection strategy plotted on the TARL Model (see Chap. 2)

1 Introduction

This chapter will report on how reflection is used as a tool to assist students to examine their personal, social and cultural relationship with music. It draws on evidence from an elective and foundation course in music titled *Sex, Drugs and Rock n Roll*. The course is introduced to the students by indicating that it is not a history of rock n roll but rather about identity.

> It concerns your personal, social and cultural relationship with music and music making. It is about what music means to you and how this affects your character formation and identity. In this unit you will begin by analysing your personal relationship with music, compare it with your peers and then examine it against key issues that arise from a global perspective of the role of music in human society (Course materials).

Reflection plays a key role throughout the course. Students often come to this course with pre-conceived ideas about the role music has in their lives. These assumptions are challenged through a process of reflection that initially deconstructs what the students already know about music and its function; then reconstructs conceptual findings identified during their personal and collaborative reflective journeys.

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In 2011 two theoretical framing models were used to assist students in their conceptual understanding and application of reflective practice. The first was based on Bain's et al. (2002) work which includes four levels of reflection: reporting and responding; relating; reasoning and reconstructing. Known as the 4Rs model (Ryan and Ryan 2011) it provided the opportunity for students to demonstrate their knowledge via the particular disciplinary field in which they engage (see Appendix 1). The second was an ethnographic approach to understanding music. Ethnomusicology is essentially an investigation into the ways in which music is created, performed and shared within a particular social or cultural group (Barton 2004). It often combines both an 'outsider' and 'insider' lens to the phenomenon being investigated. Using this approach enabled students to locate the role of music in their lives and understand the ways in which music was embedded centrally to the conversation about music, its socio-cultural practices and associated personal meanings.

This chapter will present a number of student case studies using a narrative approach to explore the reflective practices used by students in the elective music course. Often, reflective practice in higher education is implemented as just an assessment task, however, in creative disciplines such as music, reflection is not only an essential part of the critical and analytical discourse about music but is inherently embedded into embodied performance in, through and around music itself. This type of reflective practice impacts on the development of disciplinary and professional language; encourages multimodal expression; and above all collaborative music practice.

2 Reflection in Music—A Literature Review

2.1 The Notion of Reflective Practitioner

Reflective or critical thinking has been explored extensively in the literature. This investigation originated from philosophical inquiries such as John Dewey's (1933) work on reflective thinking for personal and intellectual growth. Some decades later Freire (1972) and Habermas (1974) investigated how reflection is a critical and transformative process enabling one to enter the professional domain. In creative disciplines for example, reflection is often an important component of learning and teaching and plays an integral part in the cumulative attainment of discipline knowledge and professional skills (Garner 2000; Kolb and Kolb 2005).

The work by Donald Schön (1983) *The Reflective Practitioner* has been particularly influential in creative disciplines as it presents four types of reflective thinking. These include: action, reflection in action, description of the reflection in action, and reflection on the description in action. Schön's work enables researchers to build theory from practice by providing a framework for reflective thinking in context. This may occur *in* practice or *through* practice over a longer period of time.

Despite the fact that reflection is often assessed as an attainable skill in higher education, usually in a written form, there have been limited rigorous and systemic-wide approaches to this assessment. What tends to happen is that reflection is included in course assessment as an 'add-on' rather than valued for the critical and conceptual modes of thinking that it can allow (Fry et al. 2009; Rogers 2001). Interestingly, much research on reflection presents information on reflective or critical thinking without mention of a creative component; something which is often encountered in the arts. Reflecting through action is something that artists do all the time (Schön 1983). Sengers et al. (2005) work for example, highlights that "reflection is not a purely cognitive activity, but is folded into all our ways of seeing and experiencing the world" (p. 50).

This kind of reflection can be expressed in a variety of ways in creative disciplines. Haseman (2006) provides some examples including: material forms of practice, of still and moving images, of music and sound, of live action, and digital code (p. 6). In music, Johnston, Amitani and Edmonds (2005) describe how instrumentalists require skills in two areas. They state that "firstly they must develop the ability to physically manipulate their body and instrument to produce musical sounds and secondly they require creative skills in order that the music they produce is interesting to others" (p. 166). It therefore is important to consider how many artists are required to be proficient at reflective practice. This is often executed through the embodiment of creative expression. This often occurs 'in the moment' and aims to improve practice overall. Additionally Steinberg and Kincheloe (1999) note that meaning making such as through musical and performative expression can open up opportunities for personal transformation through acute awareness of and reflection on one's own beliefs, knowledges and values through the process of creating artistic work.

This kind of reflective work in music can be complex indeed, as not only can musicians reflect on their own performances, by watching video recordings of themselves for example, they also are participating in reflective practice while performing, altering the ways in which they engage with their instrument and their audience. In teaching and learning situations, such as in higher education, reflective practice is critical to the development and improvement of professional practice. The teacher may be demonstrating reflective practice by commenting on, or playing a response to, a student's work; and a student may be critiquing their own practice.

2.2 The Notion of Disciplinary Professional

Much of what we do as higher education educators is to encourage reflective practice, but in a way that aligns with the discipline that we teach. It has been noted that disciplinary knowledge, including literacies, is built and enacted in distinct ways (Freebody et al. 2013). In fact, language and other semiotic systems are distinctly unique to the ways in which content areas are learnt and taught (Halliday 1978;

Shanahan and Shanahan 2008). Reflection is also practised in different ways depending on the discipline in which it takes place (Ross 2011).

Music is essentially about the ways in which people work with sound. Therefore, aural perception and the ways in which sound is manipulated are important parts of a musician's professional practice. In a physical sense, small movements of a performer's hand, for example, can make a big difference to overall sound including sound production. Johnston et al. (2005) believe that these muscle manoeuvres "are too complex and subtle to be meaningfully controlled by the conscious mind" (p. 167). However, a professional musician can be aware of the ways in which their approach to, and reflection about performance can ultimately impact on the overall result. This is what Busch (2009) refers to as ephemeral features of artistic practice. Others have noted the spiritual or trance-like component of music performance (Hilton 2006) where reflective practice is more likely to be subconscious and cumulative over time and space.

This aligns with Pultorak's (1993) explanation of Van Manen's (1977) three levels of reflection that practitioners can use. These are *technical rationality; practical action*; and *critical reflection*. According to Van Manen:

- *Technical rationality* focuses on classroom competency and effectiveness demonstrated by measurable outcomes
- *Practical action* is where the teacher goes beyond technical rationality and becomes concerned with clarifying the assumptions and predispositions underlying competing pedagogical goals and with assessing educational consequences toward which a teaching action leads; and
- *Critical reflection* incorporates moral and ethical criteria such as whether important human needs are being met into the discourse about practical actions. Educators, here, are concerned with worth of knowledge and the social circumstances useful to students without distortions of personal bias. (cited in Pultorak 1993, p. 290)

The ways in which these levels are applied in disciplinary context may differ but essentially are addressed in any teaching and learning situation. In regard to *technical rationality* musicians constantly focus on the ways in which they create sound and how they can improve this. Often, other more extrinsic issues or concerns can impact on a musician's performance. Therefore addressing these, or *practical action*, is important in order to move forward. To reach an ultimate performance standard *critical reflection* is essential and moves the novice to expert, the student to professional (Bolton 2001).

In terms of assessment involving reflective practice, many initial approaches involve some form of writing, for example, reflecting on certain processes and procedures applied in learning or reflecting on final products of work (Barton and Ryan, 2014). Often this type of reflection concerns an opinion on what worked well and what was not so effective and can be presented in interactive ways such as in blogs, wikis or other social media forums. This type of assessment is integral to creative disciplines such as music as it enables the student to reflect on and communicate about the type of work that they do (Dillon and Brown 2006).

In order to effectively analyse and present the data in this study a number of theoretical frameworks were used including the 4Rs model as well as an ethnographic approach. For the students in this study it was important that they had a variety of platforms to reflect on their practice—both musically and in terms of their assessment for the course. Many of the students included live performances in their discussion and therefore being able to act as both an 'insider' (where they reflected *in* practice) and an 'outsider' (where they reflected *on* practice) was important. This enabled them to 'step back' from the situation and observe it from an objective viewpoint. It also allowed them to tell a story from their own perspective via a narrative approach. The data that follows is presented according to the overall assessment process in the course of study.

3 Reflection in Music—A Narrative Case Study

The following section will present data from five music students—Robert, Elizabeth, Bethany, Kelly and Tony and their lecturer, Simon—as a narrative discourse on the ethnomusicological processes and reflective practice used throughout their study. A variety of students across the university (who are not necessarily music majors) select an elective course *Sex Drugs and Rock n Roll* as part of their undergraduate study. The theoretical approach to learning in the course is one of an ethnomusicological stance whereby students investigate the relationship between sound and society. At the commencement of the course Robert makes the following comment:

> Perhaps [I was] first attracted to Sex Drugs Rock 'N' Roll by its unit title, [but] I wasn't totally sure of what to expect. Having worked in the radio industry alongside independent musicians for the last six years, I've constantly analysed music on merit for airplay consideration and reviews. Previously studying musicology in some depth, I went into the unit with the preconception of an inability to in fact learn anything new, but rather '7' my way through. Quite early on in the introduction to the unit, I developed the opinion that it was a total wank. Here I was being lectured on how to analyse music using terminology invented by the lecturer. We weren't talking pitch, melody, rhythm, harmony, texture or dynamics, but rather, "groove, hook, sound". (Robert)

Here, Robert is *relating* this course of study to his prior experience in the music scene. He consistently uses discipline and professional jargon, having worked in the industry for some time and is *responding* by offering his opinion at the commencement of the course. Once introduced to the conceptual framework of the course Robert *reasons* about the usefulness of this 'new' approach. He questions this unfamiliar analytical method which implies he is taking an 'outsider' or a more classically-trained musician's perspective in the analysis of music.

Across the duration of the course students are required to select a style/genre of music, and using this music as central to conversation, critically analyse it. They are asked to examine their personal, social and cultural relationships with this music

by reflecting on any interconnectedness between these areas. Investigating these relationships allows students to put an ethnographic lens on their work.

The first component of the assessment was described as follows:

> You are to present an autoethnographic essay 300–800 words outlining your emergent understanding of music and society and your relationship to music. This will need to be linked by evidence of your thinking and writing throughout the semester. To prepare for this you will be expected to summarise your experience with writing the eZine and reviewing theory discussed and investigated in tutorials. Essentially it asks the following questions:
>
> - What is it you know now about music and you and the wider culture? and
> - How might you apply this in your life and work in the future?
> - This is what we call meta-analysis and provokes reflection about what you may have learned through these experiences (Sex, drugs and rock n roll assessment outline).

Using both musicological and semiotic analytical tools the students tend to work through a process of deconstruction and then reconstruction moving from an ontological to an epistemological focus. In order for students to present their ideas and perceptive critical analysis they may choose from a number of multi-modal formats. These included blogs, ezines, podcasts, and/or performance and were used to display ideas with their peers and their lecturer.

Kelly for example, shows how researching for this assessment will have her exploring a wide variety of information platforms. She then *reasons* that actually going to a venue to watch live performances over a period of time will ensure that she gets the best research material. She acknowledges a number of multi-modal networking sites as possible sources although not as effective as ‘onsite experience’.

> My research will have me stumbling over sites like youtube, rave mag, the zoo website, wiki, local bands sites, band review sites and timeout to name a few. The real research comes from the onsite experience. Going to the venue, being there, watching, listening, seeing. That’s how music is best heard, [isn’t it]? Firsthand and live, with all your other comrades who praise these talented souls and the music they are offering us. So the 3 nights at the zoo will really hit the guts of how I will get my material. There’s no shock or secret in that. (Kelly)

For Elizabeth, actually making the choice of mode can be a reflective process in itself.

> My name is Elizabeth and I am a New Wave addict….I don’t know how or when it started but all my life I’ve loved music coming from the late 1970s through to the 1980s and all it has to offer. As a recreational musician/singer I’ve always been enamoured with the strong and eclectic female vocals featured in the music of this period and genre—one of my favourites? Debbie Harry and Blondie. I’ve always loved how they never stuck to one specific genre and seemed to take influence from all over the music community from hip hop to ska. So taking the experimental nature of the music and coupling it with the character of Blondie, I’m going to look at Blondie the band as an Icon of the 1970s/1980s pop art/new wave scene as they took the kitschy and banal—like disco influence which was leaving the spotlight at the time and Harry’s op-shop punk look and turned it into a commodity—their popularity and success in the music scene and their influence on the music scene for generations of artists—effectively turning the ordinary into the extraordinary through an artistic lifestyle and experimentation rather than a specific musical style.
>
> A podcast is appropriate so I am able to use music examples in real-time, it’s also a chance for me to do some experimenting of my own with the new software and programs. (Elizabeth)

In this story Elizabeth shares with us her experience in doing study about music like this for the first time. She has clearly selected a style of music that she likes, and is familiar with, yet her choice of presenting her reflective work is unfamiliar. Elizabeth has revealed her knowledge of the genre through her use of descriptive language and she begins to apply an ethnographic lens on the music of choice.

Elizabeth comes to realise or *reasons* that a podcast is the most appropriate way to present her ideas and critical analysis as it allows both discussion about her selected music genre with the music performed 'realtime'. She also *relates* this decision to the fact that this would enable her to use a mode of communication that she had not previously used, aligning this with the innovative practice of *Blondie* the band. Throughout her reflective blog she uses professional jargon to *report* on the music she is discussing by *relating* it to other genres as well.

For Tony, exploring the *why* and the *how* of music impacted greatly on his personal relationship with music. Tony writes the following reflective statement:

> "Music itself has never been sold because music can only be experienced, not commodified" Hugh Brown (2010, p. 11). This is just one of many simple sentences I have read that has changed my views on music completely. When I started the unit, Sex Drugs, Rock 'n' Roll, all I knew was that I liked music and live music even more. I was intrigued by the atmosphere and connection it created. However weeks later I now understand in more detail, WHY and HOW music affects us as Human beings.
> Using the Groove, Hook and Sound to analyze music was a very simple yet effective tool that has made me think about songs differently. It allows me to look at them in more depth and I now find them a lot easier and more interesting to break down and discover, especially when it came to using them in the Ezine article. Breaking down the song 'In Your Honor' whilst exploring music that had meaning, allowed for me to discover just how much the song and The Foo Fighters actually mean to me. Followed by the research and analysis that came with the Ezine, I have discovered what part music plays in my life, the impact it has had and how it continues to influence me. (Tony)

Tony makes a philosophical statement about the fact that music is not a noun but rather a verb—something experienced/embodied. Tony knew he liked music and in particular 'live' music but by the end of his reflective journey he knew how much it "actually meant to him". This insight shows that Tony can straddle both the 'insider' and 'outsider' perspective of music tradition whereby he can still enjoy listening to the music and appreciate its value in his life but at the same time analyse it for its musical content.

In a similar way Bethany shows how she reasons why she likes a particular genre of music by using discipline jargon and entering into a professional mode of critical discourse. Like Robert, Bethany relates these feelings to her previous training and experience. Interestingly Bethany starts to reconstruct her thoughts showing how she 'thinks' she should be feeling but then accepts that perhaps it is more of an intrinsic nature.

> I didn't (and still don't) particularly know why I fell in love with Ima Robot. Though technologically savvy, often reinforced by high quality synths and wondrous guitar filters, their sound had a tendency to be somewhat static. It was about the rhythm rather than the melody; this contradicted my traditional upbringing as a flautist, I always assumed that melody should prevail. Even the vocals were whiney and nasal in nature, rarely sung but more of strung together as pizzicato, tonal talking. Despite the fact that my brain told me

> that this was all wrong my heart and my body knew that I loved it. The sound was intriguing, the groove was constant, and the hooks would get stuck in my head for weeks. That is a big part of what music is though, part of what makes it so powerful, as McClary (1991) states, "listeners have no rational control over what influences them… [music is one of] the most cerebral art forms [because] it is the best at engaging the body".

A vital part of the analysis of music for this course is the discussion had between students and their lecturer, Simon. This is ongoing throughout the semester. Online blogs assist in the communication between students and development of their ideas for final assessment—an exegesis in multimodal format about a musical performance. For example, Simon comments on Elizabeth's early attempts at analysis:

> A very thorough and comprehensive analysis and presentation. Be careful not to drown in data. From the analysis the ecclecticism of new wave can be derived certainly from the NYC perspective that merged with Art scene and Disco as distinct from the UK version in pubs. An interesting aspect of syncretism here. Keep it tight around Blondie and 3 songs that amplify and express the differences. (Simon)

Simon, provides academic advice to Elizabeth in terms of how to improve her writing by not 'drowning in data' but rather keep it 'tight' and focus in on the professional language and aspects of the music itself. In addition to the interactive conversation between student and teacher is that of student to student. There is an expected assessment component where the students need to comment on another student's work. Robert comments on having the opportunity to peer review others' work:

> Being able to read and comment as a peer review on another students eZine articles really enabled me to broaden my knowledge of music. I was able to read about songs I had never heard of and see that person's point of view. I realised after reading these eZines that, although I had a good focus, I lacked in my writing of the argument which was confirmed when I got my feedback. (Robert)

Reflective practice can support change when done collaboratively. It has the potential to be transformative when used as positive reinforcement and an openly critical tool in the development of student work. Music is inherently a group activity; musicians often perform with or for others. Enacting reflective practice in a collaborative way is therefore a natural process in music. For Simon to include a component in the assessment whereby the students were to comment on each other's work enabled the students to not only critique their peers work but also impacted on the way in which they reflected on their own. This allowed them to identify any areas for improvement.

At the completion of their assessment Elizabeth comments on the benefits of using her chosen mode of representation, a podcast, to present her ideas:

> I was extremely pleased with the chance to get my creative juices flowing and make a podcast! This was the first time I'd ever had the opportunity to do something other than a paper or a presentation for assessment in my degree so I literally jumped at the chance to try something new. I found the experience extremely fulfilling and educational for my own self as I now have the resources and knowledge to do something like this again in the future (and I found it quite fun!). (Elizabeth)

We can see here a positive impact on Elizabeth's learning and knowledge about the use of reflective practice via multi-modal forms. In all of her past studies, assessment was expected only via written form, this time being the first with another mode. Learning ways in which to develop their reflective practice, students inevitably included reflective comments on the benefits of the course to their journey as an apprentice in the music genre.

> All in all I feel this unit has been extremely beneficial to my understanding of and ability to perform and analyse music. My horizons have been broadened in terms of different genres and artists as well as delving further into my own appreciation of music and timbre and expanding it through research and the assessment (which in turn also granted me a better appreciation for technology and different ways of presenting assessment through the podcast and learning to use different audio and editing software for this purpose). I feel extremely satisfied on completion of this unit—both through the topics covered and my own growth in analysis and appreciation of music—as well as knowing I've "come home" somewhat, re-realising my passion for music analysis and performance and being able to express it in such a unit. (Elizabeth)

4 Discussion

Throughout the period of this course of study the music students highlighted the fact that the ways in which they originally viewed music had now been greatly changed. This was a result of both an ethnomethodological and reflective approach to learning. Being able to represent their ideas, questions, analysis and personal reflection via multimodal means provided a powerful platform for the students to express themselves. Students commented on how music related to them personally, socially and culturally and the ways in which they implemented reflective practice was indeed social.

Many of the students chose to include music as part of their overall presentation, including live performance. This enabled them to enact audio, visual and linguistic modes to watch, listen to and deconstruct essential elements of the music performance being analysed. The lecturer ensured that this process was collaborative and had music as central to this conversation. In this sense a collaborative discourse with both their peers and mentor allowed the students to develop disciplinary and professional knowledge through reflective practice.

Using the 4Rs model assisted the students to identify areas in which they could develop their reflective capacities. When reporting or responding to music, the students presented facts and samples of particular music genres, including both written and audio information. In relating, the students discussed and showed how the music connected to them personally, socially and culturally and used an ethnographic model that acknowledged both an etic or outsider and emic or insider perspective on the situation in question. They were also able to reason about their chosen mode of communication and representation of their selected music style. Reasoning was also used when the students began to realise that their original method of analysis

and approaches to music learning were challenged, enabling them to acknowledge transformative change. This in turn impacted on the ways in which they were able to reconstruct the social and cultural meaning as well as the personal meaning that the music had in their lives.

The data shows that a collaborative and professional approach to reflection has certainly impacted on the ways in which the students engaged with music. The multiple layers of assessment, including an auto-ethnographic essay, reflective blogs and critical analysis of a music performance, all contributed to professional and reflective growth. According to the students' narratives we can deduce that the use of reflective and collaborative practice enabled a positive change to take place. The cases illustrated here add to the increasing evidence that suggests that well scaffolded reflection creates platforms for potentially transformative learning moments for students.

5 Conclusion

Reflective practice done well has the potential to enable students to improve their discipline knowledge as well as gain an in-depth understanding of working in professional contexts. It has been shown that music is a collaborative human activity. When practised as a positive, supportive and reflective profession it can transform the ways in which people view music generally. Applying all four levels of reflection as per the 4Rs model and participating in a music culture as both 'insider' and 'outsider' not only allows students to participate positively in the discourse of music but also to improve the quality of their own personal practice as a musician. In this sense reflective practice needs to be a key component of this practice.

Observing and investigating the process that the students and their lecturer went through in this course reinforced, for me, the importance of reflection and critical thinking in the discipline of music. For these students the reflective process made a difference but it is difficult to determine whether or not it was the same for the remaining students in this course. Further investigation should aim at gaining perspectives from not only the other students but also the musicians involved in the reflective process.

The importance of collaborative practice in music allows an individual to converse with others about this potentially transformative change. It would therefore be recommended that reflection in this discipline occur individually, amongst students and lecturer, as well as with others who are professionals in the industry. Being a musician myself, I understand the integral role that reflection plays. This refers to not only when we perform but how we improve our practice, and ultimately challenge and innovate on what we do.

Appendix 1—4Rs Model of Reflection Applied to Music

Level	Stage	Questions to get you started
1	Reporting and responding	Ask questions such as: Where is music in my life? What music do you like? What musical experiences give me Flow? What are my experiences of music in personal, social and cultural context? How do I evaluate the quality and value of music? What language do I use to describe music and my response to it?
2	Relating	How does my music ontology compare to my peers? How does my understanding of music compare to my peers? How does our group understand music and me, music effects and music and culture?
3	Reasoning	Why do I need to analyse music? How can I use musical language and concepts? How effective is the groove, the hook, the sound as an analytical tool for me? How does our critical analysis fit into semiotic notions of semantics, syntactic and pragmatic ecologies?
4	Reconstructing	How can I use these skills techniques and processes in my life? How has critical analysis affected my relationship with music? What is it you know now about music and you and the wider culture? What experiences, people, ideas and resources you encountered in the unit had an influence on the way you think and act?

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Chapter 6
Using the TARL Model in Psychology: Supporting First and Final Year Students to Compose Reflections

Erin O'Connor, Patricia Obst, Michele Furlong and Julie Hansen

Reflection	Foundation	Intermediate	Capstone
Reconstruct			*
Reason	*		
Relate			
Report			

Program Phase

Trial reflection strategy plotted on the TARL Model (see Chap. 2)

1 Developing Reflective Practice in Psychology: Comparing How First and Final Year Students Use the 4Rs Model to Compose Reflections

Reflection is an important tool in psychology as it is both a catalyst for professional development and a clinical tool to help clients explore the very private experiences of cognitions and emotions. The value and importance placed on reflection is evidenced by the Australian registration board's requirement that all psychologists engage in professional reflection and peer consultation to maintain registration (Psychology Board of Australia 2011); however, it is uncertain how many undergraduate students are systematically trained in reflection. This chapter describes the introduction of guided reflection in two subjects. These units, one offered to

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first year students and one to final year students both focused on professional skills and awareness. The first year unit aimed to introduce students to the breadth of the profession of psychology. It attempted to assist students to examine their motivations for studying psychology and the challenges they may face when studying and working in psychology. The final year unit was a work integrated learning unit that provided students with the opportunity to apply their theoretical knowledge in a workplace experience. In both units, the students were required to write reflective assignments about their learning. The 4Rs model (adapted from Bain et al. 2002; see Chap. 2) was adopted to guide this writing. To support and scaffold the development of student reflective writing, the approaches taken in the two units were adjusted to suit the abilities and needs of each year level, in line with the developmental aspects of the Teaching and Assessing Reflective Learning (TARL) Model introduced in Chap. 2.

1.1 What is Reflection?

Reflection is a complex cognitive endeavour. Barnett (1992, p. 198) claims that reflective practitioners have "developed the capacity to keep an eye on themselves, to engage in critical dialogue with themselves in all that they think and do" and "continually make connections between knowledge, self understanding, and actions at the highest level of criticality". Reflection is a cognitive process that links real experience, theoretical knowledge, and an ability to critically analyse connections between actions, thoughts and emotions, and knowledge.

Reflection may occur in the moment, but should also be purposefully developed after an experience. Schön (1983) suggests that for any action (1) reflection can occur in (or during) action (2) through the post-action description of events (3) or in a final and more thoughtful stage called reflection on action (4; see Fig. 6.1).

The "reflection on action" (4)" is the point in which the learners are able to view the action or event in its entirety, including their cognitions at each point during and after the action as well as their current emotional or subjective reactions to the action or event. At this point, learners may also bring their theoretical and professional knowledge to the reflective process to help understand the events and their reactions to it (Schön 1983). Academic written reflections are largely based on this stage of the reflective model. The 4Rs model provides scaffolding to support learners' reflections on action. The model prompts learners to move beyond initial reports of their reactions by drawing on past experiences (relating), external evidence (reasoning) and drawing integrated insights from these elements (reconstructing).

1.2 Reflection in Psychology Training

In psychology, reflection is not only a method of learning from experience but is also a tool used by practitioners. Psychologists regularly invite their own clients to engage in reflection; to mindfully think over past and current experiences and

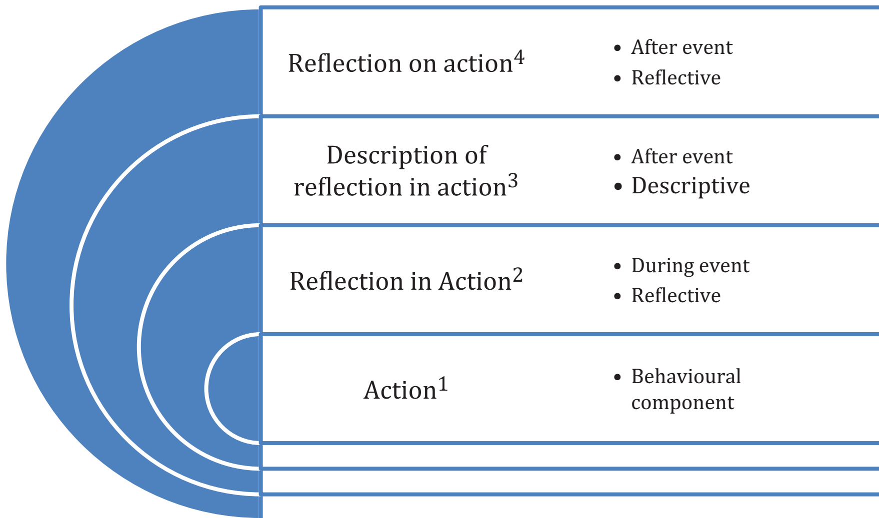

Fig. 6.1 Levels of reflection. (adapted from Schön 1983)

to notice connections between experiences and other experiences, or beliefs and values. Reflection may be used to examine critical experiences and to cultivate self-improvement in areas deemed important by the individual or their therapist. The importance of reflection within the first four years of training is also set out in the Australian graduate attributes guidelines for four year psychology qualifications (Cranney et al. 2009). As part of graduate attribute six "Learning and application of psychology", psychology undergraduates are required to "Reflect on one's experiences and learn from them" (Cranney et al. 2009, p. 259). Previously, the majority of reflection training was conducted at the fourth year level or beyond. Much of the psychology-based research into self-reflection has also focused on this advanced level (e.g., Bennett-Levy et al. 2001; Skovholt and Ronnestad 1992).

Although the majority of reflection training has typically been delivered in post graduate psychology, there is rationale for including reflection in undergraduate courses. In Australia, where majors are selected at undergraduate level, there are many psychology students who will study at this fundamental level but due to academic and practical limits on course enrolments, will not progress to post-graduate training. In 2010 there were approximately 13,686 undergraduate students studying psychology in Australia but only 1148 students enrolled in post graduate psychology coursework programs (Department of Industry, Innovation, Research and Tertiary Education 2011). Concentrating reflection tasks in the fourth-year honours programs and the post-graduate courses means that the vast number of psychology graduates do not get exposure to this skill set. Limiting reflection to graduate and post graduate training fails learners in two ways; learners who enter the workforce after completing the undergraduate course are not privy to this important area of development, and learners who continue studying after their undergraduate degrees

are not given the support of scaffolding this important skill set throughout their progression.

1.3 Reflection as Part of the Learning Process

Schön (1987) has criticized universities for focusing on propositional knowledge, that is, learning about things, concepts, and ideas. This propositional knowledge "does not take into account the realities of professional life and practice" (Brockbank and McGill 2007, p. 86). The challenge for universities is supporting and training students to prepare for "the unique, the unanticipated, (and) the uncertain" (Brockbank and McGill 2007, p. 86). This type of criticism prompted the development of the two professional learning-focused units presented in this chapter. The units serve two groups of students with different developmental needs but are both focused on providing opportunities for the students to apply the theoretical knowledge developed elsewhere in the course. The context of application in both units is the professional or workplace environment. Dunlap (1998) has suggested that applied classes, and work-integrated learning in particular, involve a level of experiential learning that requires reflection to adequately support learners. In particular, frameworks like the 4Rs model allow learners to make meaning from experiences by moving beyond initial emotional reactions.

1.4 Scaffolding and the 4Rs Model

The development of complex cognitive tasks, such as reflection, requires the provision of a structure or framework to assist learners at each developmental stage (Schön 1987; Russel and Munby 1991). These structures should act as a guide, rather than an overly prescriptive set of rules which could limit the authenticity of student reflections (Boud and Walker 1998; Rosenshine and Meister 1992, p. 26) "a strategy is not a direct procedure [or] algorithm. Rather, a strategy is a heuristic that supports or facilitates the learner as he or she learns to perform higher-level operations". The 4Rs framework provides a structure to help students understand and compose academic reflections.

Compared to personal reflections, academic or professional reflections are intended to have a focus on critical analysis and a stated position. They are expected to synthesis professional knowledge and theoretical understanding with experience and personal reactions. To assist students in the use of this framework or strategy, a process of scaffolding should be used. Scaffolds are methods and forms of support provided by the teacher or peers to the student via learning activities to promote student skill development by "bridging gaps between current student abilities and the intended goal" (Rosenshine and Meister 1992, p. 26). Scaffolding should consider the developmental level and potential of the learner. As the learner's competence increases, the scaffolding should be reduced or modified to offer less support.

This chapter explains the method of scaffolding the 4Rs framework with first and final year students. In each unit, the students were required to write academic reflections (reflections on action). A method of scaffolding was adopted and adjusted to suit the expected needs of each group of students. Although this investigation was exploratory, it was expected that final year students would be more receptive to the 4R model than first year students. Compared to first year students, final year students were also expected to find the model easier to use. It was expected that both groups would also agree that reflections were relevant to the units of study.

2 Method

2.1 Participants

Data for the final year unit were collected in the first semester only. In total, 43 students from across the first year unit (first offering $n=10$, response rate 7.4 % and second offering $n=33$, response rate 26 %) and 19 from the final year unit (response rate 59 %) completed the surveys. Due to missing data, two responses from the first year offerings and four responses from the final year offerings were removed leaving a total of 41 in the first year unit and 15 in the final year unit.

2.2 Procedure

Students from the first and final year unit completed scaffolding activities to assist them to use the 4Rs model in preparation for a reflective essay assignment. After submission of the assignment, participants then completed a survey about reflection and the utility of the 4Rs model. This study was granted university ethics approval and all responses were anonymous and voluntary.

2.2.1 First Year Unit

The first year unit was an introduction to the broad area of psychology adopting a simulated work integrated learning focus. Students were introduced to registration pathways and a number of other job opportunities and applications of undergraduate psychology. The unit also focused on self understanding and skill development through problem solving activities based on work integrated learning content. One assessment task for this unit required students to reflect on their experiences within and outside of class by responding to direct questions.

A number of techniques were used in the first year unit to support students in writing their reflections (see Table 6.1). First, students were provided with examples of a number of situations in which psychologists use reflection as a professional tool. For example, reflection for professional development, reflection as a

Table 6.1 Methods of scaffolding the 4R model

Rosenshine and meister (1992) stages	First year unit	Final year unit
Present the new cognitive strategy	Demonstrated in class by teacher—thinking aloud as choices are made, reflection 'authored' on projector screen	Reflection on core values and verbal/ informal self-reflection
Regulate difficulty during guided practice	Demonstrations & activities on a different topic to summative assessment and then on same topic as assessment	Demonstrations & activities on different and similar topics to summative assessment Process also included experiential preparation for reflection in action
Provide varying contexts for student practice	Contexts included: Teacher led –whole of class Students in pairs writing reflections on experience in class Online activity	Contexts included: Demonstrated in class by teacher—thinking aloud as choices are made, reflection 'authored' on projector screen Experiential workshops (using mindfulness principles for examples, see Wilson and DuFrene 2008)
Provide feedback	Verbal feedback from peer Drafts of assignments 'marked' by teacher and provided with written feedback	Verbal feedback from peer
Increase student responsibility & provide independent practice	Online wiki for students to co-edit samples (moderated by teacher) Summative assessment	Summative assessment

clinical tool, and reflection as a means to ensure ethical and legal responsibilities are upheld. Reflection was highlighted as an important professional skill through the use of guest speakers from various areas of psychology (e.g., clinical psychology, forensic psychology, marketing, and research). To illustrate their own use of reflection, these guests provided examples from their own professional contexts.

In a subsequent class, students viewed a role play (written by the teacher but acted out by fellow students) of a new psychology student volunteering at a community centre for the first time. The themes included role uncertainty, adjusting to a new environment, and building confidence related to a new task—all experiences that may also be relevant to their first semester at university. The whole class as a group was asked to imagine themselves in the role of the 'new volunteer'; with the teaching team, the students collaboratively drafted an academic reflection about the experience. This involved students suggesting sentences for inclusion in each of the 4Rs sections and the lecturer typing the sentences into a word document for the whole class to view on a projector screen. This reflection was discussed and reviewed in the lecture. The collaboratively composed reflection was also placed on a wiki to allow students to ask questions about the reflection, to suggest improvements, to follow each other's comments, and to reply to other students. Teaching staff also responded, as appropriate, to the student suggestions and comments.

To scaffold students' skills in reflection and to allow students to practice independently composing a reflection, students were provided with an additional opportunity to practice reflection in their tutorial class. The activity involved one student verbally guiding their blindfolded partner to draw an image that the 'drawing' partner had never seen. This was part of a learning activity for verbal communication strategies but also provided a challenging experience from which to compose a reflection. Students were asked to individually write a reflection about the activity using the 4Rs model as a framework. The students were then told that they would be reviewing these reflections with peers. New partners were formed for the peer review of the reflection to allow students to freely discuss any experienced frustration. In new pairs, the students then engaged in peer review using the marking criteria as a guide for discussion.

In each of the support activities, the individual components of the 4Rs model were scaffolded. For example, when recalling the details of the role-play, students were told that these details may be included in the reporting section and prompts were used to illustrate the requirements of the 4Rs component (e.g., "does this clearly explain the event to a reader?", "have we included our emotional response here?"). Some sections required teacher modeling before students were able to compose their own writing. For example, in the blindfolded tutorial activity, the tutor discussed psychological theories of the impact of frustration on team performance as a tool for reasoning before inviting the class to brainstorm other possible elements of the experience and appropriate links to theories or models.

Finally, students were allowed to submit a draft of their individual assessment for written feedback before the assignment was due. For this summative assessment task, students were asked to reflect on their motivations for entering psychology, and their strengths and weaknesses as a student of psychology and write three reflections. Students were encouraged to explore their reactions to the first 6 weeks of class in the degree. Students were required to use the 4Rs model as a framework for developing their reflections. The final reflections were marked using a criterion-referenced rubric on a 7 point scale (low fail—high distinction).

2.2.2 Final Year Unit

The final year unit was a professional practice work integrated placement of 50 h with supportive workshops provided on campus. Students were not provided with set questions; instead, the number and nature of the reflections were left open as long as they conformed to the word count. As in the first year class, these reflections were marked using a criterion referenced rubric, but a 3-point scale was used (fail, pass, and high pass).

Final year students were provided with a similar program of scaffolding to the first year class; however, this scaffolding was modified to suit their advanced level of academic skills as suggested by the TARL Model. As in the first year unit, a draft reflection was collaboratively written by the students with the teacher taking a facilitation role. The reflection focused on a shared class experience (this time, a role play of a professional placement experience). The writing process again involved

class members composing sentences for each of the 4Rs model sections and the lecturer typing these sentences into a reflection on a projector screen. This activity was completed in the first few weeks of student placements and, as in the first year unit, verbal prompts were used to link the student suggestions with each of the 4Rs. The students were also provided with a handout of a diary entry (fictional) by a student on placement. This handout contained suggestions about how to turn the entries into a 4Rs reflection. While some peer review of drafts was allowed in class, the teacher did not read drafts in this unit.

2.3 *Measures*

A paper survey was used to collect responses to the reflection task and 4R model. This survey was given to each student present in a class held after the submission of the reflection assignment.

2.3.1 Responses to Reflections

Participating students used a 5-point likert scale (1 = *strongly disagree* to 5 = *strongly agree*) to respond reflection belief questions (e.g., "I believe that completing the reflective tasks helped my understanding of this unit").

2.3.2 Responses to the 4Rs Model

Participating students used a 5-point likert scale (1 = *strongly disagree* to 5 = *strongly agree*) to respond 4Rs evaluation questions (e.g., "The 4Rs model was easy to use").

2.3.3 Helpfulness of 4R Model

The students were also asked to respond to an open ended prompt. This prompt asked students to "describe how the model helped or didn't help you to learn how to reflect".

3 Results

The survey data for each unit are presented below. As seen in Table 6.2, first year and third year students responses to the 4Rs model were similar. Students endorsed the usefulness and relevance of reflection as professional tool. They also endorsed the 4Rs model as a useful framework on which to structure their reflections. The responses from both cohorts were significantly different to the mid-point

Table 6.2 Student responses to the reflection task and the 4R model

Scale on a 1–5 likert	First year $n=41$		Final year $n=15$	
	Mean (*SD*)	$t(df=40)$	Mean (*SD*)	$t(df=14)$
I believe that completing the reflective tasks helped my understanding of this unit	3.59 (0.74)	5.06*	4.01 (0.59)	6.96*
I believe that reflecting on my learning will be an important skill for my future career	4.32 (0.72)	11.67*	4.40 (0.63)	8.58*
I believe the reflective tasks were relevant to the content in this unit.	3.83 (0.83)	6.37*	4.20 (0.68)	6.87*
I believe the reflection tasks were a waste of my time	1.90 (0.80)	−8.78*	1.87 (0.83)	−5.26*
I believe the reflection tasks were very superficial	2.15 (0.82)	−6.64*	1.87 (0.82)	−5.26*
The model was easy to use	3.78 (0.76)	6.59*	4.00 (0.65)	5.92*
The model helped me to organise and structure my reflective writing	3.98 (0.82)	7.61*	4.20 (0.68)	6.87*
The model helped me to make deeper reflections	3.66 (0.82)	5.11*	3.70 (0.88)	3.21*

$^*p=<0.01$

demonstrating endorsement of all positively worded statements and rejection of the statements referring to reflections as “a waste of time” or superficial.

Thirty-nine participants took up the opportunity to respond to the open ended prompt. The students’ responses were analysed using a general thematic approach. While a priori codes were not generated, it should be declared that the purpose of analysis was not conducted to identify unanticipated ‘emergent’ themes (Bazeley 2009) but to understand how students felt the model helped or hindered their work and any explanations for this evaluation that they had formed. Coder consistency checks to assess trustworthiness (see Thomas 2006) revealed some discrepancies between the coding of benefits of the model. The data were re-examined, re-coded, and a second consistency check was run. In this second check, all of the ‘primary’

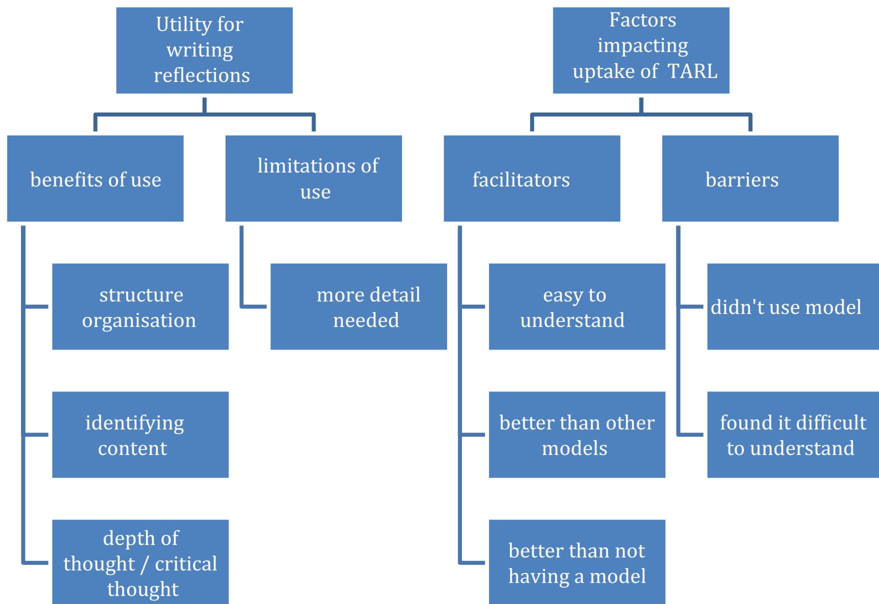

Fig. 6.2 Student understanding of how 4Rs supported their learning

or most suited codes provided by the two coders aligned except for in one case. Two codes were reviewed and adjusted as a result of this process. The results of this process are discussed below.

The coding resulted in 14 initial codes and, after inspecting for redundancy and overlap, these were reduced to 9 codes. Overall, the categories were merged into four main categories that related to two different overarching concepts: utility and factors impacting the uptake of the 4R model. The resulting analysis provided a framework to which describes how students viewed the model in relation to their learning (see Fig. 6.2).

3.1 Benefits of Use

Students identified a number of benefits to using the model. These benefits were identified by first and final year students.

3.1.1 Structure or Organisation

Participants identified that the model provided structure and guidance for reflections. This made the task easier to approach.

> It was really handy for structuring my ideas and made it more formal than it would have been (first year)
> The model made it very easy to structure reflections (final year)

3.1.2 Identifying Content

Participants also indicated that the 4Rs model assisted them to identify content for the reflection (the *reporting* element of the 4Rs). The model also walked them through what should be included in a reflection and encouraged them to take the point of view of an uninformed reader (important for the *relating* element of the 4Rs).

> It certainly gave me more to talk about in my reflections (first year)
> Helped me write a descriptive reflection reminding me that the reader needs to know the full story (final year)

3.1.3 Depth of Thought/Critical Thought

A small number of participants also indicated that the model had helped them become more sophisticated in their thinking (the *reasoning* element of the 4Rs).

> I found it very helpful. It helped me to see things and question myself on a deeper level. A very good tool for future clients (first year)

3.2 Limitations

While the limitations of the model did not emerge in the comments, a suggestion for improvement was made.

3.2.1 Needed More Detail

Students identified that the 4Rs model could include more detail and made suggestions for alterations including:

> The only criticism I would give is more detail in the draw model would have been helpful to learn how to link points and questions together (first year)

3.2.2 Barriers

Some students indicated barriers to using the 4Rs. These were most commonly provided by first year students.

3.2.3 Didn't Use the Model

A number of first year students indicated that they didn't use the model or didn't apply the assignment in its entirety when constructing these assignments. Many of these comments were short statements without further explanation.

> Forgotten what the model is (first year student)

However, a small number of students discussed incongruence between the questions posed by the model and their experiences.

> It didn't help that some of my questions could not be applied to my situation (first year student)

One student discussed the degree of application of the model.

> Unfortunately, I didn't apply the 4r model in depth or as effectively as I would have liked (first year student).

3.2.4 Difficult to Understand

None of the final year students discussed difficulty in understanding the model; however, this was a comment made by several first year students. These statements were often short and without elaboration.

> Found it confusing (first year student)

3.3 Facilitators

A number of facilitating factors were identified by the students. In contrast to benefits, or the advantages of using the model, these factors encouraged adoption of the model.

3.3.1 Easy to Understand

The most common facilitator mentioned was ease of use. Overall, these comments came from final year students.

> It was straight forward and easily followed formula (final year)

While first year students did comment that it was "handy" or "helpful" to have the model, only one first year student mentioned that the model was easy to use. This student indicated that there was a phase during which they were coming to understand the model.

> It was just very simple to follow, once I understood it (first year)

3.3.2 Better than Other Models and Better than no Model

Students in both classes indicated that the use of any model or structure was appreciated.

> It was useful to follow a structure so I didn't get off track (final year)

Further, some final year students also commented that the 4R model was better than some they had used for previous reflections.

> I did end up using it in my reflection assessment piece as it was easier to comprehend than other models (final year)

4 Discussion

The students endorsed positive statements about reflections and their relevance to the work integrated subjects and future careers. There was low endorsement for the negative statements regarding reflections being a waste of time or superficial. The students were also generally positive about the 4Rs model. Each group also supported statements that the 4Rs model helped them to organise their reflections and there was moderate support for the statement that the model helped to deepen reflection content. These features of the 4Rs were also reinforced in the qualitative responses to the model. When responding to the open prompt, some students in the first year unit identified issues with understanding the model. This comment was not seen in the final year student responses.

The qualitative responses generated a framework for understanding student responses to the reflection task. The comments from students related to the utility of the 4Rs as a tool to assist writing reflections and the factors that influenced their uptake of the model. While some of these comments replicated the quantitative survey items, the students also identified that the 4Rs model assisted them to identify relevant content suitable for reflection, was better than some of the other models they had used, and was better than no model. Surprisingly, some students indicated that they either forgot about the model or did not use it to the extent they had intended.

One author (O'Connor) was responsible for the in-class sessions with the students. She reflected on her experience of conducting these classroom activities with students: *The experience has provided a unique insight into how students develop their understanding of reflection and develop reflective writing skills. I was able to directly observe how students interpret the 4Rs model, the initial suggestions they make when constructing early drafts, their immediate verbal and non-verbal reactions to feedback, and the improvements made when re-drafting. As a teacher, I had not been privy to these experiences before. Previous classes have involved a lot of one-way and indirect feedback. I have not been able to see and hear student reactions in real time. The experience was as much feedback for me as it was for*

the students. I was also able to explore how the different year levels made sense of the reflection task. I could give more detail where they got stuck and acknowledge aspects they grasped quickly. The experience has encouraged me to learn more about experiential learning and how models and practice can help students develop. Research supports this change and shows that learners benefit from developing practice examples and interactions with teachers and peers (*Orsmond, et al.* 2002). *Similar increases in peer and teacher interactions have improved attitudes toward the subject matter, increased motivation, and encouraged deeper learning* (*Barkley et al.* 2005). *The activities used here, provided these opportunities. In the future, the support classes will be held earlier in semester; this change will allow me to be more proactive and supportive. The student comments also highlight that using the 4Rs model is a complicated task for some students and there is a need for more opportunities to develop the reflective skills with the model. In the future, these activities may be altered to allow more individual input from students and to support those who might not want their first attempts at drafting to be public. This change would allow students who are unsure of the task or model to indicate this to me privately. The experience has also helped me to see the benefits of empowering the student in the class: students are more open about their weaknesses and I can respond with support; and students engage and bring their own life experiences to the task. A future focus for me is to be a collaborator with my students wherever possible.*

Future examinations could monitor how attendance at workshops influences the likelihood of failing to adopt the model. It would also be useful to explore the differences between first and final year student responses to reflective tasks and the 4R model and methods of adapting the scaffolding to best suit each group.

Reflection is given a place of importance as an essential skill in undergraduate psychology training (Cranney et al. 2009) and there is a requirement for psychologists to continue engaging with reflection across their careers. Models such as the 4Rs support professional reflection on action. As with all complex cognitive tools, models like the 4Rs must be appropriately introduced and scaffolded across undergraduate psychology training.

This chapter has examined student reactions to reflection in professional development classes and the utility of the 4Rs reflection model. The students involved were at critical transition points into, and out of, undergraduate training. The results show that generally, students are open to writing reflections and can see connections between reflective writing tasks and professional development content. Students in this study also identified strengths of the model and found it a helpful tool when developing their reflections. The scaffolding used to support students seemed appropriate, as there were similar patterns of responses from first and final year students. This case also highlights that similar strategies can be used across year levels if the scaffolding is appropriately adapted.

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Chapter 7
Teaching and Assessing Reflective Writing in a Large Undergraduate Core Substantive Law Unit

Tina Cockburn and Mary Ryan

Reflection		Foundation	Intermediate	Capstone
	Reconstruct			
	Reason			
	Relate		✶ TTR	
	Report			
		Foundation	Intermediate	Capstone
		Program Phase		

TTR reflection pattern plotted on the TARL Model (see Chap. 2)

1 Introduction

In addition to a continuing focus on developing students' substantive discipline knowledge, legal education has expanded to include a focus on building students' professional skills and self-awareness in preparation for their future employment (McNamara and Armstrong 2011). This approach was endorsed in 2010 by the *Threshold Learning Outcomes (TLOs)* which were developed for all Australian higher education Bachelor of Laws graduates under the national Learning and Teaching Academic Standards (LTAS) project (Kift et al. 2010). In particular, *TLO 6(b) Self Management*, provides that graduates of the Bachelor of Laws will be able to: "reflect on and assess their own capabilities and performance…." (McNamara et al. 2013). This means that there is a need to embed approaches within teaching and learning that provide a context within which law students can engage in developing specific professional skills as well as the ability to think critically about their experiences and learning. When students document their critical reflective thinking

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in writing, these texts can be used as evidence of their development; that is, their preparedness for transitioning into professional practice as reflective practitioners (Rogers 2001; Russell 2005; Cockburn et al. 2007).

Given this, a model for teaching and assessing reflective writing has been implemented in the large (approximately 550–600 annual student enrolment), core second year undergraduate law unit, *LWB240 Equity*, which is offered by the School of Law in the Faculty of Law at Queensland University of Technology, a major Australian University.

This chapter will report on the model of reflective practice that is adopted in *LWB240*. It is divided into three parts. The first part will describe why teaching and assessing reflective writing was embedded in *LWB240 Equity*. The second part will describe the teaching and learning approaches that were implemented to embed reflective writing in *LWB240 Equity* in particular, the teaching pattern Task-oriented Teamwork Reflection (TTR). In the final part we analyse the data collected from evaluations and reflect on the way forward.

2 Why Teach and Assess Reflective Writing in *LWB240 Equity* Law?

Since the 1980s, much time and attention has been devoted, in every field of Australian higher education, to embedding incremental development of graduate attributes, in addition to the development of substantive discipline knowledge. This shift in educational focus centres on building students' skills and self-awareness for the transition from University to professional practice to complement the acquisition of professional and substantive discipline knowledge (Shirley et al. 2006). Consequently, universities now face a dilemma: "how best to balance mission (achieving the key purposes of the university) with market (giving students what they want in order to gain and retain them—even if this is specific, skills-focused job training)" (Scott 2006).

With a view to balancing mission and market, this University has utilised its strategic planning process to emphasise the importance of improving the student experience while strengthening 'real world' engagement and skill development. For example, key learning and teaching priorities identified by the University's goals include the need to:

- Clarify, exemplify and assure curriculum and pedagogical attributes of 'real-world' learning; and
- Refine approaches for assuring course learning outcomes and embed threshold academic standards (QUT 2011).

The University's mission also promotes a learning environment that uses "blended learning approaches to maximise student learning through technologically enhanced contexts" (QUT 2011). Accordingly, the use of e-learning tools, such as e-portfolio (a Web-based electronic repository which students can use to document and present evidence of their academic, professional and personal development in the format

of an e-portfolio) is promoted to provide a means of documenting reflections on skill development and real world learning outcomes. Research relating to the use of e-portfolios in a learning environment has found that such tools provide students with an opportunity to evaluate and reflect on their activities and achievements, including skill development (Bhattacharya 2001). By reflecting on their academic experiences, students should develop a better understanding of the connection between their coursework and the skills and graduate capabilities they are expected to develop while at university, which helps them to review and refine their educational goals, and encourages them to take a more active role in their learning and development (Cockburn et al. 2007).

These goals and strategies are supported by the findings of Oliver in her Australian Learning and Teaching Council (ALTC) Fellowship concerning the assuring of graduate capabilities. In that study Oliver identified that "a most pressing challenge is to find increasingly rich and transparent ways of warranting graduate achievements, and at the same time ensure that graduates themselves are assured of their capabilities" (Oliver 2011).

In the context of legal education, a major review of the Federal Civil Justice System conducted by the Australian Law Reform Commission (1999) concluded that legal education should be more concerned with 'what lawyers need to be able to do' as distinct from the traditional Australian approach which has been centred around 'what lawyers need to know' (Kift et al. 2008). In response to this recommendation, and a number of other reports echoing the same theme (Australian Law Reform Commission 1999; American Bar Association 1992), the Faculty of Law at the Queensland University of Technology has taken steps to ensure that its graduates enter the workforce with appropriate levels of theory and knowledge combined with the requisite capabilities and skills required to operate effectively in the context of professional practice. Students are also encouraged, generally through assessment of ePortfolio reflections, to document the attainment of competency levels within each of the skills through a reflective process that would lead to the development of a "student capability profile". This process of active reflection is intended to help students to recognise the variety, depth and ongoing development of their knowledge and abilities, increase their confidence in themselves as emerging professionals, and help them identify skill areas in need of improvement (McCowan et al. 2005). By uploading their reflections to their ePortfolio students will be able to provide evidence of their skill development and their preparedness for the transition to professional practice.

3 Teaching and Learning Approaches Implemented to Embed Reflective Writing in *LWB240 Equity* Law

In *LWB240 Equity*, teaching and learning approaches have been implemented to provide a context within which law students can engage in developing specific professional skills (team work and letter writing) as well as the ability to think critical-

ly (reflect) about their experiences and learning. Without appropriate scaffolding, however, reflection on professional learning and practice tends to be superficial (Ryan and Ryan 2012). Teaching self-conscious and active reflection is therefore crucial for students to benefit from an e-portfolio approach to learning and assessment. Therefore, if students are to learn how to reflect, skills in reflective practice must be taught: "(f)ostering reflective practice requires far more than telling people to reflect and then simply hoping for the best" (Russell 2005).

The model of reflective writing adopted in *LWB240 Equity* was therefore developed to meet the two antecedents for the teaching of reflective practice which were identified by Rogers (2001), namely the need for "an event or situation beyond the individual's typical experience" in order to challenge the individual to "reflect"; and "the individual's readiness and willingness to engage in reflective process." Further, the model addresses the four features of the effective teaching of reflective practice identified by Rogers (2001):

1. clarity of expectations;
2. structure;
3. guidance, coaching and exemplars; and
4. feedback.

In *LWB240 Equity*, students are taught, practice and are assessed on their teamwork and letter writing skills. Students work in teams of four to write a letter of legal advice to a fictional client in response to a real world problem, which requires them to apply their knowledge of substantive Equity law. The skills modules in *LWB240 Equity*—teamwork and letter writing—build upon skills theory and practice that students have already studied in the first year of their undergraduate law degree. This skills theory and practice is incorporated at various stages in the unit's lecture and tutorial program. The outcomes of the team letter writing exercise—a letter and supporting memorandum—are assessed and weighted at 25 % of the assessment in the unit.

The ePortfolio reflection was introduced following student feedback that indicated that many students did not appreciate the benefits of engaging in the skills development modules of the unit *LWB240 Equity*. The requirement to upload an ePortfolio reflection means that students are provided with an opportunity to individually reflect upon and document their skill development following completion of their team letter. The aim was to provide a context for the students' skills development (that highlighted the skills' relevance to future employment) whilst also contributing to the students' preparation for the transition to professional practice.

After their graded team letter and supporting memorandum have been returned, *LWB240 Equity* students are asked to individually reflect on their skill development (either teamwork or letter writing) and to document their reflections in ePortfolio. The ePortfolio reflection in *LWB240* built on the introduction to using ePortfolio to document reflections in a foundational law unit, *LWB143 Legal Research and Reasoning*. In *LWB143* students are given a workshop on the use of ePortfolio for recording their skills and achievements and a strong link is made between student learning and the need to reflect and record their experiences for use with job ap-

plications in the future. The individual ePortfolio reflections in *LWB240 Equity* are assessed on a pass/fail basis and weighted at 5 % of the assessment in the unit (Appendix 2). This task has been written as a teaching pattern as part of the broader project (Appendix 1). Reflective writing skills are further developed in subsequent years of the law degree, for example in the work integrated learning unit*LWB456 Legal Clinic*. A scaffolded approach to teaching reflective writing has therefore been adopted, which builds on reflective writing skills developed in earlier year law units, and uses a blended model of delivery that combines face to face interactions and online resources.

As noted above, the model adopted in *LWB240 Equity* addresses the four features of the effective teaching of reflective practice identified by Rogers (2001). First, *expectations are made clear to students* by way of face-to-face and written explanations as to what is required in the reflection task (Appendix 2). This is supported by written materials and online resources, which include an online module and fact sheets. These materials are designed to provide *structure and guide students* through the process of reflection by following the 4Rs model of reflection. *Exemplars* of reflective writing and specific resources and materials in relation to the use of ePortfolio are also provided to guide and assist students. While not the focus of this chapter, it has been recognized that feedback loops and engagement between students and teachers aid the development of reflective skills, and that dialogue between teachers and students is considered crucial and needs to be regular (Russell 2005). In *LWB240 Equity* students receive *feedback* on their reflections by engaging in a peer review process. This is followed by verbal feedback and discussions in tutorials, and grading by tutors on a pass/fail basis against the published criterion referenced assessment (CRA) grid (Appendix 3) prior to return of marked reflections to students.

4 Evaluation and Our Reflections

Following implementation of the model of teaching and assessing reflective writing in *LWB240 Equity*, data were collected to evaluate: (a) students' views about the value of the reflective task for their learning and future career; and (b) the levels of reflection that students were able to demonstrate. Data collection included:

- a questionnaire ($n = 176$) of students who undertook the reflective writing assessment task;
- samples of the reflective writing task ($n = 12$) from volunteer participants; and
- a focus group interview with five volunteer participants.

4.1 Questionnaire and Focus Group Data

The questionnaire and focus group data were thematically coded and analysed according to Rogers' (2001) four features of the effective teaching of reflection

(clarity of expectations, structure, exemplars and feedback), to evaluate how these elements contributed to students' perceptions of relevance and/or usefulness of the reflective letter writing task for their learning and future career.

4.1.1 Perceived Relevance and Usefulness for Students' Learning

A key theme to emerge from the questionnaire was the perceived relevance of the reflective letter-writing task for students' learning:

- "It made me think about what I learned from the experience, rather than just viewing it as a necessary school task to be gotten through."
- "It really made me read into the exercise and draw out what skills I learnt as a result of this "hands on" task."
- "It helped me to learn about myself, my strengths and weaknesses. It will certainly prepare me for my next teamwork activity."
- "It made me really think about what I learnt and experienced in writing the letter, when I would not usually think about such things."
- "Documenting skill development allows you to reflect on the process you actually went through. It isn't something you might normally do and being forced to makes you realise the skills you actually do possess, especially [with regard to] teamwork/communication."

From these comments it can be concluded that students perceived that this task was valuable as a learning task (Ryan 2012), rather than simply the completion of an assignment as a means to an end (i.e. their final degree). Students involved in this task gained new insights first, about their learning, and second, about how their learning at university could be applied in their future professional practice (Cockburn et al. 2007).

4.1.2 Perceived Relevance and Usefulness for Students' Future Careers

Another theme to emerge from the questionnaire was the perceived relevance of the reflective letter-writing task for students' future careers. This was indicated by comments such as:

- "It made me think beyond the subject and re-enforced the end goal of my degree—which is to gain professional employment. It made the subject seem really relevant to my overall goal."
- "It allowed me to think of this activity as something that would be of good use for when I leave university and go on to practice law."
- "It made me realise some of the qualities and experiences employers look for in potential employees. It also made me see how what we do at uni relates to the workplace."
- "This is an effective tool for me to use for the future in compiling all my skills gained throughout my degree, and I'll be able to release it to prospective employers."

As reflection is context specific (Ovens and Tinning 2009), students need to see the relevance of the task for future professional practice. Establishing such relevance of learning tasks is crucial for time-poor students, particularly in a corporatized and credentialist higher education environment (Rochford 2006).

4.1.3 Effectiveness of Teaching and Learning Strategies

An analysis of the questionnaire and focus group responses highlighted the importance of addressing the four features of the effective teaching of reflection identified by Rogers (2001), namely: clarity of expectations; structure; exemplars and feedback.

For example, questionnaire respondents suggested that the *clarity of expectations* and *exemplars* provided were useful:

- "…The instructions given on the *LWB240* [online teaching] site were very helpful".
- "At first I did not know what to write, but once I looked at [the] examples I realised what was required of me."

This theme was reiterated in the focus group, however it was also suggested that this was an exercise in venting (while pleasing the lecturer and cynically adopting the structure suggested), rather than an important learning tool:

- "They gave us like these models to work with, so that's the first time they've actually prepared us for it as opposed to just, oh, reflect on how you went."
- "For me I gladly took up the opportunity; it was just an avenue to rant at my group members really. Obviously framing it within the four Rs and whatever they wanted…."

As indicated by the comment above, Ryan (2012) argues that unless students are guided in reflecting critically about key issues that relate to them and their professional self, they tend to reflect in superficial ways to mollify the lecturer. Ryan (2012) also posits the importance of teaching students to identify a critical issue upon which to reflect (clarity of expectations) otherwise students resort to broad-sweeping, general statements. One student in the focus group explained how she came to this conclusion herself:

- "I focused on a particular aspect as well, because I thought it would be easier to bring out and come to a conclusion, rather than a general overview of the experience. So I focused on the initial exercise that we did in tutorials, which was establishing team roles, how we saw ourselves within the team. In a team of four, we identified three team leaders, and identified that that was—I actually stated that that was probably going to bring some conflict to the group because it was people, we didn't know each other beforehand, and it did, and I reflected on that".

Accordingly, as Rogers (2001) has suggested, the clarity of expectation and the provision of guidance as to structure of a reflective task is essential. In the focus

group, students commented that they wanted more specific direction, with reflective writing examples specifically related to professional practice in law, rather than drawn from other disciplines.

- "…I think people really struggled to know what reflective practice is."
- "I think more examples would be really useful, and specific examples relating to—the example that I recall, and this again could be from my other subject, was one on an education prac, not related—and it was very, very definitely written, so I think it wasn't very accessible for most people to understand the method that was being applied in the writing. More examples would be really useful."

The comments that seek law specific exemplars of reflection also raise another important consideration: the difference in thinking and writing style required when teaching reflection in different disciplines (Ovens and Tinning 2009). This challenge was described by a student in the focus group as follows:

- "One of the things that I found difficult with this piece of assessment is … in a law degree, you are constantly trained to evaluate issues and to come up with a conclusion based on the law as opposed to your reflection on it or what you think or feel necessarily … having the reflective piece in a law subject was quite challenging for me because I had to change the way that my brain worked. So I had to get into that reflective mode and then, rather than it being about my feelings necessarily, adjust it to the academic reflection. So I did pick up on that, but I found that difficult to do."

4.2 Analysis of Reflective Writing Samples

The reflective writing samples were coded and analysed according to Ryan and Ryan's (2012) TARL model (as explained in Chap 2), to identify the levels of reflection that students demonstrated. The TARL model includes the 4Rs of reflection (reporting, relating, reasoning, reconstructing) as increasing levels of higher order thinking and a developmental perspective on learning reflection across time (from reflecting on self, to reflecting on peers to reflecting on colleagues and community).

Some of the issues identified by students, such as the difficulty of writing in a new style and understanding what constitutes reflective practice are identified in the literature (see Ryan 2011; Martin 2007) and are evident in the work that some students produced. About a third of the students whose work we analysed failed to identify a key issue or element of teamwork or the task itself upon which to reflect, instead they simply reiterated the task:

> As part of a recent team exercise, I assisted in the collaborative creation of a letter of advice from a fictitious law firm to a fictitious client. One of the main aims of this exercise was to gain a deeper understanding of the solicitor-client relationship and how to function in it, especially in relation to trying to convey legal concepts to a client who quite often will have little or no legal knowledge or education in the matter at hand. (Annie)

Anthony used a similar opening, reiterating the task, and then offered reasons why his group was disadvantaged, rather than a reflection on the teamwork or task. As he had not identified a key issue, he was unable to reason it out and relate it to his professional self (Ryan 2012).

> Arguably, by having the free tutorial in week 3, our group did not have all the information in regards to the assignment when the meeting occurred. Arguably this disadvantaged us as the free tutorial was valuable time to collaborate. Without all the information we were arguably not able to use it to the best of our abilities whereas other tutorials would have had the required information. (Anthony)

Anthony is writing in a legalistic style, and is not relating this process explicitly to his own learning and development as a professional. He fails to use the pronoun 'I', which is indicative of the writing style with which he is more familiar. Both Annie and Anthony found it difficult to move to the reconstructing level of reflection as they had not identified a key issue at the beginning. They offered conclusions that were general statements about 'a group' rather than purposive reflections on new possibilities or improvements in relation to his or her own involvement in this task.

> Improvements for future team activities would include more and frequent conversation; clear communication. Furthermore, having more knowledge of the question and related issue may help a group make a decision quickly. Furthermore, better division of tasks as opposed to just divide and assume facts can be divided. (Annie)

On the other hand, some students used the 4Rs framework to develop deeper levels of reflection on the task. Sophie clearly identifies an issue related to group personalities for people unused to working together:

> The Teamwork Letter Writing exercise was particularly interesting and challenging for me as I was working with three virtual strangers, with the disadvantage of no understanding of their preferred work method or personality. The initial communication regarding our individual approach to group work helped greatly in directing me as to the best way to approach the exercise, as it was quickly identified that three of four group members (myself included) were team leads/organizers. (Sophie)

Other students similarly identified a key issue, for example, enthusiasm and contribution of some group members or the impact of different learning styles of group members. Students who identified a key issue were more likely to move to higher order levels of reflection. For example, they tended to go on to relate this task to other similar tasks, to compare their own learning style to that of others', and to use the literature around teamwork to offer possible solutions to the issue:

> As someone who was anxious about the state of things, I had sought comfort in rationalising our group's performance by looking to *Tuckman's team stages model*, which recognises the fact that groups do not start off fully-functioning. Attempting to engage the members was difficult; however by the end I had seen a reasonable improvement in their work ethic. (Tim)

> While many students seem to dislike teamwork assessment because of the potential conflict and lack of fair division of labor that can occur, I have come to enjoy working with other students to achieve an outcome, even if that process can be more difficult than undertaking assessment alone. The opportunity to learn from other's work styles and compare ideas on a complex problem always produces more interesting and creative approaches. (Sophie)

> Having had the benefit of hindsight, in future group tasks I would like to firstly, utilise *Belbin's Classification of Roles* or similar theory more thoroughly in order to develop a refined list of group member task allocations, which would complement each member's characteristics. (Suzy)

The students who understood the expectations of the task, and were able to change the register of their writing from legal argument to critical reflection, demonstrated an ability to analyse their own learning and posit ideas for future practice. It is clear from our data, however, that not all students were able to make this shift in their writing.

4.3 Our Reflections

From our experiences implementing this reflective task, we realized that explicit pedagogy is the key element to address in future iterations of this task. While some students were successful with the scaffolds in place, our data indicate that we need to consider more nuanced aspects of intentional pedagogy to cater for the needs of all students. We have used these data to identify some key areas of consideration for future iterations of this task:

1. The relevance of this task to learning and professional practice needs to be reiterated and reinforced constantly by offering examples and demonstrating how these skills can be applied elsewhere.
2. Provision of models and exemplars is useful, however we need to provide exemplars that relate directly to professional practice in law, being careful not to provide a template for students to simply regurgitate in their assignment.
3. Unpacking the exemplars to show why they are effective or ineffective would be useful, so we can point out issues that seem to reoccur in students' work.
4. Comparing the genres of legal argument and professional reflection would help students to understand how to use textual features effectively for the task.
5. Teaching students how to identify a key issue in the first instance is essential to avoid general and superficial reflection.

Reflective writing is a complex and hybrid genre, with high rhetorical demands (Ryan 2011; Goodfellow and Lea 2005), which means it requires explicit teaching and opportunities for feedback. When scaffolds, such as those we used in this project, are put in place, students are more likely to demonstrate deeper and more critical reflection as a learner and a future professional in law.

5 Conclusion

The Threshold Learning Outcomes (TLOs) developed for the Bachelor of Laws include TLO 6(b) which provides that graduates will be able to "reflect on and assess their own capabilities and performance, and make use of feedback as appropriate,

to support personal and professional development." (Kift et al. 2010) Given this, and the current policy imperatives of the Australian higher education sector, the project indicated that teaching and assessing reflective writing in the large core undergraduate law unit, *LWB240 Equity* is a worthwhile endeavour. We have shown an example of how the acquisition of disciplinary knowledge in law can be infused with the building of students' professional skills and self-awareness for future employment. Such learning and teaching approaches, however, need careful pedagogical attention. Expectations of the task need to be clearly outlined, and it cannot be assumed that students know how to switch writing register to accommodate the new, complex genre of academic/professional reflection. Students involved in this project supported the relevance and usefulness of this reflection-infused approach to teaching disciplinary knowledge in law. They identified benefits for their learning and for their future professional practice. They also provided evidence, through their accounts and through their work samples, for us to use in our own reflections to improve our implementation of this task in the future.

Appendix 1: Pattern

Task-Orientated Teamwork Reflection (TTR)[1]

The Problem

Undergraduate students are often inexperienced in teamwork processes, particularly in professional contexts. Many of the skills related to working in teams that we would like them to acquire are tacit and can only be practised in group settings. And while students may be happy to work in groups, social relations are often conflated with team working relationships.

The Context

Reflective writing can be employed to make teamwork processes explicit. These processes may include things like: on-task communication, conflict resolution, priority setting, etc. Once useful teamwork processes are experienced and named, they are more available for effective learning through reflection.

This pattern assumes that most students have already received introductory treatment of reflective writing and assessment (including a framework, writing skill sets and knowledge of assessment associated with reflection).

[1] Task-orientated Teamwork Reflection http://wiki.qut.edu.au/display/draw/Task-orientated+Teamwork+Reflection+%28TTR%29, accessed 22 June 2013.

The Pattern

- Determine and establish the relevance and authenticity of the task in professional contexts. Also establish the need to adopt a team-based approach to tasks of this nature.
- Determine student competence in writing reflectively as individuals. For students who require it, direct them to tutorial and/or base materials that introduce the basic reflective writing framework, let them practise skills and provide an overview of assessment methods.
- Likewise, determine student competence in working collaboratively. For students who require it, direct them to tutorial and/or base materials that introduce a basic teamwork framework, let them practice skills and provide an overview of (teamwork) assessment methods.
- Provide details of the task as formal summative assessment. Pay particular attention to what parts of the assessment are team-based (where members receive the same result) and which parts are individually-based. Provide detailed assessment criteria (Resource 2), including samples of how they have been applied in the past. Scaffold the task carefully and in detail. For example, the task product may be team-assessed while reflections on process might be individually assessed. (Resources and notices posted to Blackboard
- Give the students a practice activity in team problem-solving with an exercise that shares some of the important elements of the assessable task. Highlight the need to uncover effective teamwork practices and principles (that are normally tacit), along with the difficulty in simultaneously engaging in problem-solving while gathering evidence for reflection. As part of the activity, set aside a subtask for team members to reflect on team and individual processes. This normally requires some explicit scaffolding (setting aside time, giving prompts, organising recording, etc.). Students should swap reflections and engage in peer-assessment using a simplified criteria set. The team should present their solution along with aggregated reflections to a wider audience.
- Continue scaffolding and monitoring of teams as the major task is completed.
- When assessment is finished, collect samples and gain permission for re-use (in subsequent semesters) from relevant students.

Relates Patterns

Double Sided Projects (DSP)

Resources

The *Unit outline and Blackboard site for LWB240* includes resources, assessment requirements and criteria for the Individual ePortfolio reflection assessment that

were provided for students. In the Week 2 lecture the ePortfolio reflection assessment was introduced and students were pointed to relevant learning resources, including an online ePortfolio module so students could learn about the ePortfolio, resources about reflective writing, the 4Rs model of reflection as well as an exemplar of a reflection using this framework. An FAQ for ePortfolio reflections was also provided.[2]

Appendix 2: ePortfolio Assessment at a Glance [3]

Extract from *LWB240 Equity* study guide:

Individual ePortfolio Reflection—All (Internal and External) Students 5 %

You are required to document, evaluate and reflect upon your own performance and skill development during your team letter writing assignment. This will involve recognising gaps in your knowledge and developing an action plan for future development by making an individual entry into the QUT student ePortfolio.

You will receive an individual mark for the ePortfolio reflection. This item of assessment is pass/fail. This assessment relates to learning outcomes 1–7.

How to Approach the ePortfolio Reflection

Learning resources to assist you with this task will be available on Blackboard. In particular, if you have not already completed the online ePortfolio module, you should do so by the end of week 4 and obtain a certificate of completion.

Learning resources available on Blackboard (Assessment/ePortfolio) to assist you with approaching this exercise include:

- instructions on how to complete this item of assessment
- information on, and links to the *Using the ePortfolio Module*
- information on the 4R Model of Reflective Writing, and
- an exemplar of a law student's reflection demonstrating the 4R model in an eportfolio reflection of skill development.

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[2] Task-orientated Teamwork Reflection http://wiki.qut.edu.au/display/draw/Task-orientated+Teamwork+Reflection+%28TTR%29, accessed 22 June 2013.

[3] Acknowledgement: This resource was developed with the assistance of Anne Matthew, academic in the QUT Faculty of Law.

ePortfolio reflection at a glance	
The topic	The topic will be made available on blackboard (assessment/ePortfolio)
Due date	Internal students: Your week 12 tutorial. External students: Thursday 23 May 2013
Word limits	The word limit for the reflection is 400 words maximum. *Material exceeding the word limit will not be read or marked*
Criterion referenced assessment	This item of assessment is marked against the criterion referenced assessment sheet (CRA) which will be available on blackboard
	You must submit a copy of the CRA sheet with your ePortfolio entry.
	This item of assessment is Pass/Fail. This means you will either receive the full five marks or zero. You will only receive 0/5 if you:
	do not submit or
	do not submit *on time* or
	do not submit *all the required documents* or
	submit an incomplete or unsatisfactory reflection when considered against the CRA
Submission	**External students**: Upload to the link on Blackboard.
	Internal Students: Bring to your week 12 tutorial
	a. two printouts of your ePortfolio reflection as uploaded to ePortfolio and
	b. two copies of the CRA sheet
	Neither internal nor external students are required to submit to assignment minder.
	Subject to faculty policies and procedures regarding extensions and special consideration, submission requirements will be strictly applied
Feedback	You will receive:
	1. Internal students will receive peer feedback in tutorials and feedback from your tutor during tutorials
	2. External students will receive feedback by way of written comments and/or corrections.
	3. a completed criterion referenced assessment sheet (indicating your standard of achievement for each of the assessment criteria)
	4. generic feedback will be posted on blackboard (assessment/results and feedback)

ePortfolio Reflection Topic

Prepare a reflection upon your skill development in any ONE (1) of the skills you developed in your Team Letter Writing Exercise from this list:

- Teamwork
- Communication—written

The reflection must address the 4/5Rs Model of Reflective Writing.

You can support your reflection with evidence/artifacts. These can be uploaded to eportfolio and also submitted with your reflection.

Appendix 3: Criteria Referenced Assessment Sheet—Pass/Fail ePortfolio Reflection

LWB240 EQUITY

CRA Sheet e-Portfolio entry

Marked out of 5 (5 % of assessment in unit—individual mark): PASS/FAIL

Students who pass (satisfactory attempt and complete submission) will receive 5/5.

Students who fail (unsatisfactory attempt or no submission or incomplete submission) will receive 0/5

STUDENT NAME: ______________________________

Criteria	To pass the following criteria must be satisfactorily met
1. Reflection upon experience—satisfactory reflection which follows the 4Rs model of reflection	
Reporting and responding	Satisfactory identification, description and analysis of key aspects of a relevant incident and issues
Relating	Satisfactory attempt at relating or making a connection between the incident or issue and your own skills, professional experience or discipline knowledge
Reasoning	Satisfactory attempt at highlighting in detail significant factors underlying the incident or issue by considering how the incidents and issues could be explained, by referring to your own knowledge and experience and relevant theory and literature
Reconstructing	Satisfactory attempt at reframing or reconstructing future practice or professional understanding
2. Satisfactory use of student ePortfolio and completion of online ePortfolio module	
Presentation in ePortfolio	Structure: The structure of your student ePortfolio entry satisfactorily complies with requirements of form, including maximum word/character length and 4Rs model.
	Professionalism: Your student ePortfolio entry is satisfactorily presented and sufficiently professional with satisfactory supporting materials (artefact attached).
	Organisation: Your description and reflection on your experience is sufficiently coherent.
	Communication: Written communication skills are of a satisfactory standard.
	Proofreading: Mistakes in spelling, grammar or use of language indicate lack of thorough proofreading
Completion of online ePortfolio module	Satisfactory completion of online ePortfolio module. Upon satisfactory completion of the online module you will be issued with a certificate of completion, which you should retain in your own records for production on request (i.e you do not need to submit a copy of the certificate of completion unless requested to do so). If you have previously satisfactorily completed the online ePortfolio module you do not need to complete it again this semester unless you wish to refresh your memory prior to writing and uploading your reflection to ePortfolio

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Chapter 8
Teaching Peer Review Reflective Processes in Accounting

Sue Taylor and Mary Ryan

Reflection		Foundation	Intermediate	Capstone
	Reconstruct		*	
	Reason			
	Relate			
	Report			
		Program Phase		

Trial reflection strategy plotted on the TARL Model (see Chap. 2)

1 Introduction and Background

Amidst increased calls for public accountability in the Higher Education sector at the global level (Taylor 2011) and the current move by the OECD to rank universities globally based on the quality of their teaching and learning outcomes (OECD 2010), universities have prioritised the need for increased transparency in assessment practices (Ecclestone 2001); (Mansell et al. 2009). The precise explicit systems and procedures articulated within this accountability agenda have often, however, seriously neglected the quality of student learning outcomes and failed to engage students, with the result that current assessment practice has been evaluated as seriously deficient (Angelo 1996); (Biggs 2003); (Biggs and Tang 2007); (Race 2003).

At the national level, at the heart of these failed outcomes for students are the tensions inherent in the Australian higher education institutional environment

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(Australian Government 2008). Institutions and their teaching staff face numerous challenges such as: financial restrictions, increasing student numbers, and the resulting fragmentation of academic programmes across flexible learning options.

Innovative curriculum and assessment design, which includes new paradigms of student engagement and learning and pedagogically sound technologies, have the capacity to provide some measure of relief from these internal and external tensions by significantly enhancing the learning experience for an increasingly culturally and educationally diverse and time-poor population of students as highlighted by Huijser et al. (2008). Any discussion of the use of a peer review process within an e-learning environment is, therefore, both important and timely.

It is important to note however that the current thinking around self and peer-review assessment highlights the need to broaden these self and peer-review concepts to include a reflective practices stance (Ryan and Ryan 2012a). That is, in order to achieve high levels of 'active engagement' by students, rigorous reflective learning processes need to be deeply embedded within the peer review process and carefully and explicitly scaffolded for students (Ryan and Ryan 2012a).

A critical issue, however, is that the process is neither an obvious part of peer review (for non-education-based academics) nor is it easily developed. Rather, reflection is a 'complex, rigorous, intellectual, and emotional enterprise that takes time to do well' (Rodgers 2002, p. 845). There is also evidence to suggest that reflective writing by higher education cohorts tends to be superficial unless it is approached in a consistent and systematic way (Orland-Barak 2005). Thus, while Bain et al. (2002) argue that deep reflective skills can be taught, for students to be able to successfully use reflective practices there must be a carefully scaffolded induction process incorporated into the self and peer-review tasks. These issues will be further elaborated within the context of utilising both innovative e-technology processes and the expertise of education-based experts in teaching and assessing reflective learning in higher education.

2 Phase One: Peer Review Process Adopted Without Explicit Reflective Practices

2.1 *Three Key Benefits of Peer Review*

2.1.1 Peer Review Benefit One—The Social Context of Learning

The first key benefit of peer review is bought into stark relief by social constructivism which highlights the critical importance of the social context of learning, emphasising the role of both teacher and learner in the development of complex cognitive understandings and the generation of new knowledge (Adams 2006; Vygotsky 1962). Importantly, consensus between individuals is held to be the ultimate criterion upon which to judge the veracity of knowledge. Peer learning and assessment is one such context that values consensus of quality from members of a

community of practice, rather than relying solely on teacher judgment or objective test scores. As highlighted by Wenger and Lave (1991), the idea of communities of practice is that learning occurs in social contexts that emerge and evolve when people who have common goals interact together to strive towards these objectives. These communities have the potential to promote innovation, develop social capital and facilitate and spread existing tacit knowledge within a group.

The social constructivist process model of assessment argues that the peer-review process was found to be particularly effective in improving students' work and in students' positive perceptions of the value of the activity when model answers were used (O'Donovan et al. 2004). As argued by O'Donovan et al. (2004, p. 13), these findings "arguably demonstrate that inviting students into the marking process can mean that assessment broadens out from merely the assessment *of* learning to become an effective learning tool in its own right, facilitating assessment *for* learning." In addition, the benefits of peer assessment have been highlighted as including the fact that students become more confident, independent and reflective learners, and they obtain a deepened understanding of the required learning (O'Donovan et al. 2004).

2.1.2 Peer Review Benefit Two—Peer Learning Networks

A second key benefit of peer review is that it has the potential to assist students from culturally and educationally diverse backgrounds in adjusting to university, with peers potentially acting as positive role models within a non-intimidating, informal environment. As highlighted in Ladyshewsky and Gardner (2008, p. 245) "communications between peers are less threatening than those that involve supervisors or authorities. Hence, enhanced disclosure, discussion and deeper learning outcomes are possible". The peer review process has the potential to lead to effective peer learning networks that students can draw on for the duration of their degrees, and potentially beyond. The advantages of these learning networks then include (Ladyshewsky and Gardner 2008): additional assistance with challenges from peers; more perspectives on problems; access to expertise; more meaningful participation; and the creation of an informal environment as opposed to the highly structured lectures and tutorials run by perceived authority Figures (Huijser et al. 2008).

2.1.3 Peer Review Benefit Three—Generation of an Iterative Cycle of Learning Through Formative Feedback

As highlighted by Rust et al. (2005) and Pearce et al. (2010), the level of the qualitative and quantitative feedback normally available to students involved in a major project is often limited to a final summative grade from time-poor, academic staff. "This approach is ineffective as part of an intended iterative cycle of learning, because there is no further opportunity for students to improve on their assignment.

This means there is little motivation for them to reflect on, or learn from this feedback. Thus, while the concept that students learn best when their ideas are exposed to the scrutiny of others is broadly accepted, in practice the type of feedback offered fails to maximise learning benefits. For writing tasks, formative feedback is well acknowledged as being valuable during the revision phase of writing (Pearce et al. (2010, p. 1–2)".

Thus, a third key benefit of the peer review process is its underlying potential to simultaneously reduce the marking loads of staff while creating opportunities for students to become involved in a continuous cycle of evaluating the work of their peers during its formative stages with all the benefits for students identified within the social constructivist literature. For example, critiquing peer submissions: provides students with a valuable perspective on their own work; encourages them to revise it; promotes a sense of community and collaboration; and helps students to become equipped for lifelong, independent learning (Rust 2007, 2009; Rust et al. 2003, 2005). Further, Sadler (2010) argues that we need to provide students with substantial evaluative experience not as an extra but as a strategic part of the teaching design. Such evaluative experience should enable them to recognise or judge quality when they see it and also explain their judgements.

2.2 Limitations of Peer Review

2.2.1 Staff Concerns

Within the context of the benefits provided by the peer review process, of concern to academic staff is how to address students' learning and professional development needs which will involve gaining appropriate support to both write inclusive assessment pieces for culturally and educationally diverse students and to ensure that all students are participants in this new approach to assessment. Thus, of practical concern to staff in terms of the adoption of any peer review process is the time commitment necessary to design, plan and administer the peer review process in class on a manual basis. Depending on how peer view is implemented, the organisational/administrative load associated with large classes can be significant, particularly if one of the aims is to protect the anonymity of reviewers (Huijser et al. 2008; Pearce et al. 2010).

2.2.2 Student Concerns

While the available literature highlights a wide range of benefits of peer review, there are a range of potential impediments to implementing student peer review, including Pearce et al. (2010); with students rather than staff marking the work, issues of validity, reliability, bias and fairness will arise; students may dislike evaluating another student's work; students can resent being required to review and comment on other students' work believing that staff are paid to complete these tasks; they

may lack confidence in their own ability to evaluate their peers' work and may similarly doubt the competence of other student reviewers; and some students may, on a cost versus benefit analysis feel that the time taken to provide a peer review is not compensated for by the comments received by the peer review they will receive in exchange.

2.3 Phase One: Minimising Peer Review Limitations—Introduction of E-Learning, PRAZE Technology

2.3.1 The Rationale Behind the PRAZE Technology—University of Melbourne

PRAZE is a sophisticated online system that facilitates flexible management of all aspects of peer review (Mulder and Pearce 2007). It allows staff to set up, customise and manage a peer review process within a subject, so that students can then anonymously review each other's work, send and receive feedback on their work, and/or carry out a peer self-review of group work. As highlighted in the on-line PRAZE support manual by Pearce et al. (2010, p. 13), their development of an e-Learning based, peer review process at the University of Melbourne (PRAZE) was motivated by "the desire to provide students with feedback that promotes a genuinely reflective cycle of learning". Students benefit both by being the recipient of comments on their own work but also through critically reviewing the work of others and reflecting on its positive and negative aspects.

The PRAZE process therefore has many similarities to systems used to assist in managing the reviewing of papers for a journal or conference, but it also has specific requirements unique to the teaching environment. This focus on a formative-based, reflective cycle of learning within the PRAZE peer review process was designed to overcome the previously highlighted issue of time-poor academic staff providing only a summative grade and feedback on the final version of a submitted assignment.

In addition to providing a continuous cycle of formative feedback, an e-Learning peer review process has the potential to minimise the major staff concerns related to the time costs associated with its administration. These costs concerns have been recognised by Pearce et al. (2010) who state that: "given the pedagogical merits of formative peer review are so well established, it is perhaps surprising that student peer review is not a more pervasive feature of university curricula. One reason is that administrating anonymous peer review without the aid of custom-designed software is so onerous that it remains a potent disincentive to implementation, especially when classes are large. Online tools promise to significantly reduce this burden, and are therefore an important part of the peer review landscape" (p. 1–2).

Student concerns related to uncertainty as to whether they have the skills and experience to mark the work of their peers are also potentially minimised given the highly structured, step-by-step marking guide that can be included within the online

review process. By providing an efficient and easy-to-use online tool for time-poor students, the costs related to any peer review completed are also minimised.

However, an important consideration in the adoption of online tools is the potential for the technology to ultimately fail to deliver one of the core principles or foundations of the peer review process: to actively engage students in a collaborative process as equal members of a community of scholars. Thus, while the time "costs" of staff and students can be reduced by e-learning technology, of concern to Pearce et al. (2010) and others, is where does that leave the social benefits of a sense of belonging to a university community, which are mostly acquired through face-to-face contact? Is it possible for this on-line technology to create a virtual sense of belonging which is equally as effective as face-to-face contact?

Section 2.3.2 below highlights the key features of the Phase One, independent trial of the PRAZE process and whether it has the ability to engage students in a sense of online community.

2.3.2 Phase One: AYB227—International Accounting (2012) PRAZE Trial of the E-Learning Process, Semester Two, 2011

The School of Accountancy, QUT Business School, become a trial member of the University of Melbourne's PRAZE e-Learning project in Semester Two, 2011. Within this Phase One process, in Week Seven of the Semester, the students in the second-year level under-graduate subject *AYB227-International Accounting* (*AYB227*) were asked to submit/upload their draft only of their major individual assignment via the PRAZE website and to do this anonymously, i.e. by student number. A step-by-step proforma of review questions had been set up within the PRAZE system which guided the students through their review of the peer task assigned to them and which utilised the major project's primary assessment criteria. The students were provided with a four-day submission phase and then a four-day review phase to allow for students who were ill, away on work-related tasks, or who had other assessment tasks deadlines to meet. The *AYB227* subject was specifically selected for involvement in the peer review process given its both culturally and discipline diverse students from across both Accounting and International Business majors within the Bachelor of Business degree at QUT.

With the objective of trialling the PRAZE process with a smaller cohort of students, Semester Two, 2011 was selected as the target semester for this trial process given that the main subject offering, in terms of normal student progression through the degree with then the largest student numbers, takes place in Semester One of each year. Of the 126 students in this, off-semester cohort, 102 students submitted their drafts and then 99 students of these 102 students completed their assigned reviews. The submission task was assigned 4 % of the overall 12 % for weekly task submissions, while the on-line peer review was assigned 12 marks within the overall project assessment total of 90 marks.

A voluntary and confidential survey process was conducted in written form and in class within the formally time-tabled Week Thirteen revision lecture. Of this

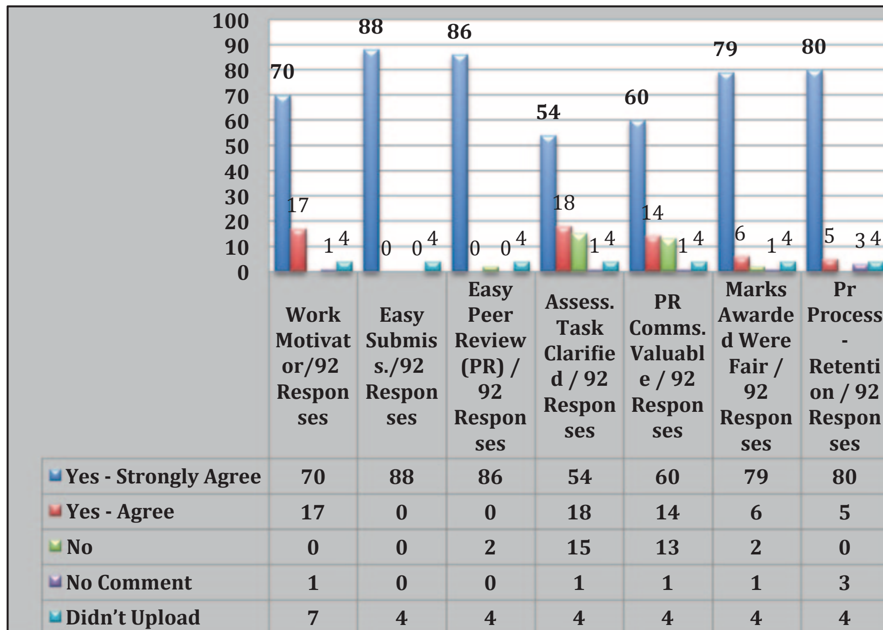


Fig. 8.1 *Phase one*, e-learning administered. *AYB227*: 92 peer review student evaluations, voluntary and anonymous PRAZE submission and review process

cohort of students, 92 completed the survey. The overwhelmingly positive results of this survey are set out in Fig. 8.1. The key positive issues revealed by the survey responses were that:

1. in responding to Question One in terms of what they perceived to be the key benefit of the peer review task submission deadlines and the marks allocated, the students clearly identified the peer review process as an excellent motivator to start the assignment early (87/92);
2. & 3) in terms of their experiences in using the University of Melbourne's PRAZE technology, the student responses to both Questions Two and Three, strongly agreed that both the PRAZE-related submission and review procedures were very easy to use (88/92 and 86/92 respectively);
3. in relation to Question Four which sought to determine whether the peer review process assisted the students to more fully understand what was expected of them in order to complete the set task, again there was significant student agreement with this statement (72/92);
4. a significant majority of students also strongly agreed that the quality of the peer review comments received were of great value to them (74/92); and
5. in responding to the final question of the survey, a significant proportion of the students believed that the marks awarded for participation in the peer review process were very fair (85/92) and that the peer review process should definitely be retained, and, if possible expanded to multiple reviews per student (85/92).

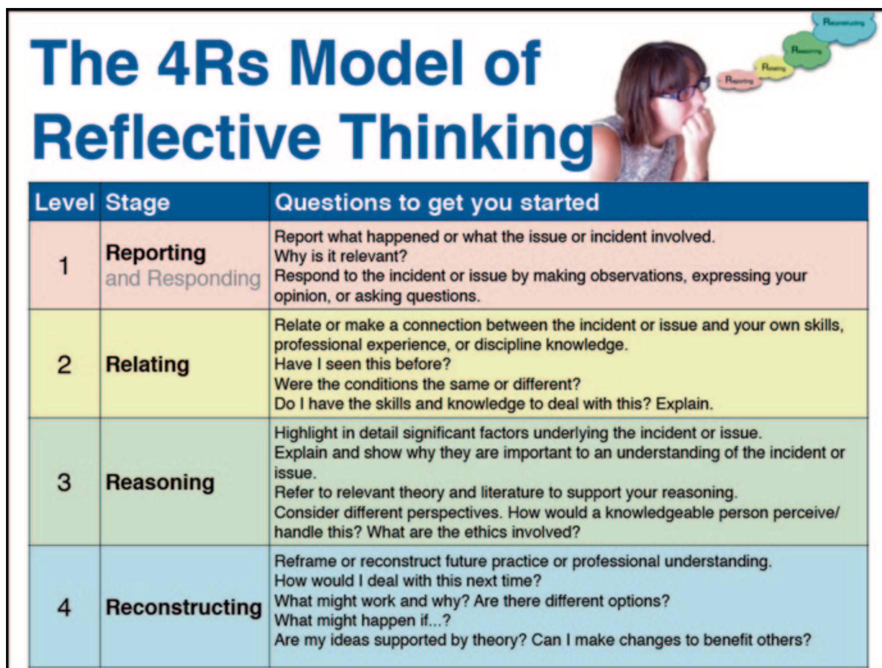
Of concern, however, were a range of verbal comments received from students who felt that they needed further guidance on how to more effectively write a constructive review of the work of their peers and in terms of how to best reflect on and then use the feedback they had received from their peer reviewers in order to improve the final version of their major project. From the perspective of the teaching staff within *AYB227*, none of whom held education-based qualifications, it was clear that advice would be needed from education experts in order to resolve the reflection-based issues raised by the students. In addition, in order to fully identify the student issues of concern, a survey would need to be completed within the subsequent *AYB227* cohort of students. These issues were addressed in Phase Two of this project as detailed in Sects. 3 and 4 respectively.

3 Phase Two—Step One: Pattern of the Teaching and Assessing Reflective Learning (TARL) Model Used: Embedding Reflective Practices in Peer Review Processes

3.1 Absence of a Systematic, Developmental Approach to Teaching Reflective Learning Across Higher Education Programmes/Courses

As highlighted by Ryan and Ryan (2012a, b), the importance of reflection in higher education and across disciplinary fields is widely recognised and it is generally included in university graduate attributes, professional standards and programme objectives. However, a key issue is that reflection is commonly embedded into assessment requirements in higher education subjects, without the necessary scaffolding or setting out of clear expectations for students. Also of concern is that researchers and commentators agree that there are different types or hierarchical levels of reflection that need to be taken into account when designing a peer review task. For example, Bain et al. (2002) suggest different levels of reflection with their 5Rs framework of Reporting, Responding, Relating, Reasoning and Reconstructing. Ryan and Ryan adapted the Bain model by collapsing Reporting and Responding into one stage as the information presented by students in these two stages was seen as too similar to make a separate distinction as detailed below in Fig. 8.2.

Also of concern is that, in spite of the rhetoric around the importance of reflection for ongoing learning, there is scant literature on any systematic, developmental approach to teaching reflective learning across higher education programmes/courses (Ryan and Ryan 2012a, p. 1). To overcome this gap in the literature and teaching practice, Ryan and Ryan have developed 'a new, transferable and customisable model for teaching and assessing reflective learning across higher education, which foregrounds and explains the pedagogic field of higher education as a


The 4Rs Model of Reflective Thinking

Level	Stage	Questions to get you started
1	Reporting and Responding	Report what happened or what the issue or incident involved. Why is it relevant? Respond to the incident or issue by making observations, expressing your opinion, or asking questions.
2	Relating	Relate or make a connection between the incident or issue and your own skills, professional experience, or discipline knowledge. Have I seen this before? Were the conditions the same or different? Do I have the skills and knowledge to deal with this? Explain.
3	Reasoning	Highlight in detail significant factors underlying the incident or issue. Explain and show why they are important to an understanding of the incident or issue. Refer to relevant theory and literature to support your reasoning. Consider different perspectives. How would a knowledgeable person perceive/handle this? What are the ethics involved?
4	Reconstructing	Reframe or reconstruct future practice or professional understanding. How would I deal with this next time? What might work and why? Are there different options? What might happen if...? Are my ideas supported by theory? Can I make changes to benefit others?

Fig. 8.2 *Phase two—step one*. Extracted from Bain et al. (2002) and Ryan and Ryan 2012a: the 4Rs Framework—reporting and responding, relating, reasoning and reconstructing

multidimensional space. We argue that explicit and strategic pedagogic intervention, supported by dynamic resources, is necessary for successful, broad-scale approaches to reflection in higher education (Ryan and Ryan 2012a, p. 2).'

3.2 The TARL Model and the Pedagogic Field

In order to ensure that the *AYB227* students receive the level of support needed to develop appropriate reflective habits, Ryan & Ryan's teaching and assessing reflective learning (TARL) model, as detailed in Fig. 8.3 below, has been utilised to reformulate the e-learning based, peer-review task.

To simplify the selection of possible approaches around the teaching of reflection, Ryan (2010), introduce the pedagogic field. This field can best be imagined as a two dimensional space where categories (or levels) of reflection are set against the development stages students experience across a course. Figure 8.3 highlights the pedagogic field with these dimensions. The dots represent specific teaching episodes or teaching patterns that are relevant for students at a particular stage in their course and that target a specific level (and sometimes a range) of reflection.

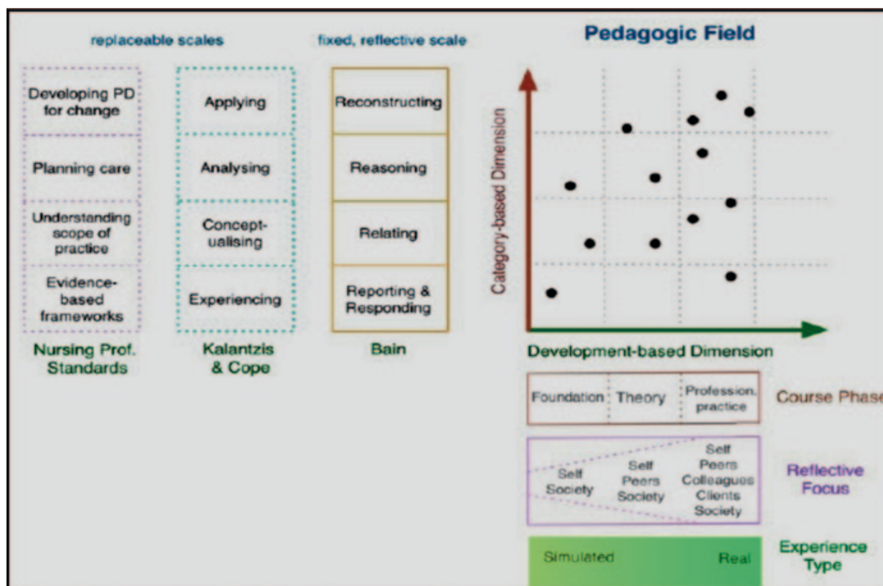


Fig. 8.3 *Phase two—step one*. The TARL Model–Ryan 2010: applying adapted levels from Bain et al. (2002)

With reference to their model, Ryan and Ryan (2012a, p. 6) highlight that the *category-based dimension* (vertical axis) captures the progression from rudimentary reflective thinking to more sophisticated thinking such as that set out in the 4Rs Model of Reflective Thinking (2010, p. 6). On the other hand, the *development-based dimension* (horizontal axis) tries to capture the varied demands on teaching as students progress through a program/course of study or act within different contexts.

3.3 Embedding Reflective Tasks Within AYB227

In terms of embedding reflective tasks within the *AYB227* peer review assessment task for Semester One, 2013, the TARL model highlights that the task is expecting the students, first, to move from a focus on the self as learners to a focus on peers (as per the horizontal axis in the TARL model). In order to achieve this transformation, explicit scaffolding in terms of appropriate reflective practices is required. Secondly, students need specific assistance in providing in-depth, analytical comments on the work of their peers (as per the vertical axis in the TARL model). Thus, in order to fully engage students in a collaborative, peer review task:

1. the students were provided with explicit support/ scaffolding in how to write a review. The major failing within the Phase One scenario was that there was no reflective process in place, which involved working with students to develop evaluative skills. Such support in Phase Two included annotating examples of

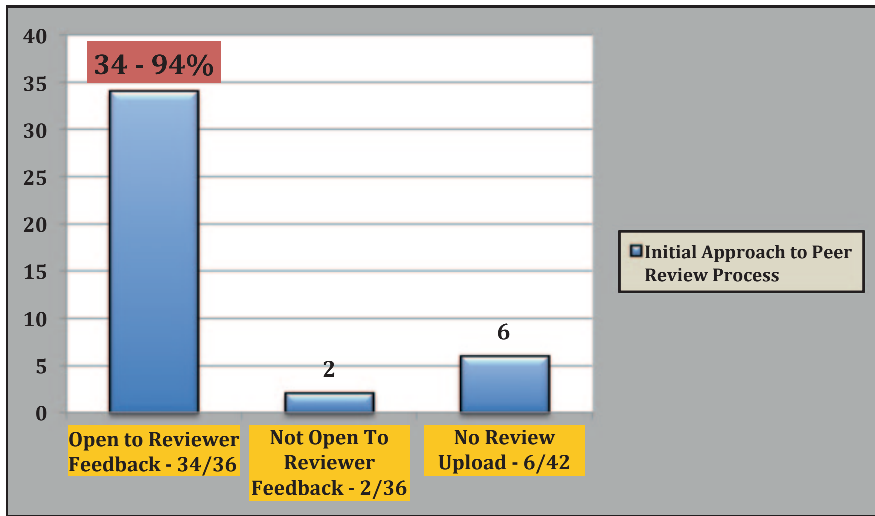


Fig. 8.4 *Phase two—step two*. Student survey results: Peer review (initial approach to peer review process), semester two, 2012

effective and ineffective reviews and scaffolding practice reviews of a sample assignment using reflective prompts that relate to the marking criteria; and

2. the students were also provided with initial support in terms of how to address the feedback received from their peer reviewers. This type of support was aimed at teaching students how to weigh up the feedback received in light of the criteria, and to justify a plan of action.

4 Phase Two—Step Two—Implementation of the TARL Pattern Utilised and Evidence Collected

4.1 AYB227 (2012/2013)—Introduction of Reflective Practices—Initial Survey

Given that the PRAZE peer review process had been highly valued and supported by the students, it was retained, unmodified, for use within the *AYB227* subject for 2012 and 2013. However, in order to guide the implementation of reflective practices reforms, two tutorial groups within the Semester Two, 2012 cohort of *AYB227* students were surveyed on a voluntary and anonymous basis within class. The key results from this survey are highlighted in Figs. 8.4 and 8.5. The initial response to the question of "how did you approach the peer review process?" was very positive with 94 % (34/36) of the students who participated in the survey (from a potential total population across both tutorials of approximately fifty (50) students) being 'open to reviewer feedback' as set out in Fig. 8.4.

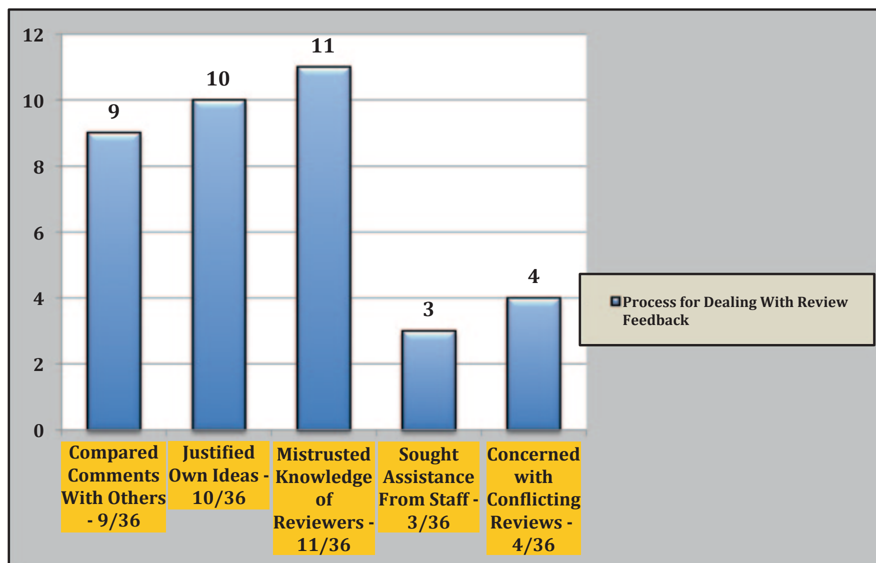


Fig. 8.5 *Phase two—step two*. Process for dealing with review feedback: 36/42 students surveyed participated in peer review process—multiple responses per student, semester two, 2012

However, in responding to the survey question of 'what was your process for dealing with the reviews received?' Fig. 8.5 clearly highlights that students did indeed have concerns with some aspects of the peer review process as it had been formulated within the Phase One context. For example, in responding to a question in the survey asking students to explain how they responded to/dealt with the peer review responses received from two different peer reviewers, the responses revealed significant issues of 'mistrust' and 'conflict' (15/364–2 %) in relation to how to best reflect on and process the feedback received as highlighted in Fig. 8.5.

In seeking to resolve these issues 33 % (12/36) of students sought advice from other students and staff prior to accepting their reviewer comments. In addition, Fig. 8.5 also indicates that 28 % (10/36) of students felt both 'confused' and 'hesitant' to move away from their own ideas and found themselves continually 'justifying their original arguments' against what they perceived were the 'attacks' of the reviewers. In seeking then to address these feedback-related issues of concern, a reflective approach was considered to offer a way forward in developing students' evaluative and transformative learning skills.

4.2 *Phase Two—Step Three—The Mandatory Reflective Practices Support Workshop*

In order to assist the students with the issues of concern highlighted in Fig. 8.5, in the week prior to the commencement of the peer review process, the *AYB227*,

Semester One, 2013 students were required to attend a reflective practices support workshop presented by Mary Ryan. This workshop focused on the two main issues of concerns raised by students in the Phase One and Phase Two peer review processes, which were that they needed assistance in terms of: (1) how to write a constructive review of their peers' work; and (2) how to address the feedback received from their peers. Students attending this workshop and participating in in-class discussions were awarded ten marks from the 120 marks allocated to the major, individual project (a 30 % assessment task).

In a voluntary and anonymous survey process undertaken in the final revision lecture which was conducted after the completion of all peer review processes, the response from the students to this support workshop was overwhelmingly successful. That is, 83 % (48/58) of the students (writing a peer review) and 90 % (55/61) of the students (effectively dealing with feedback) found the level of support provided by the workshop was useful to very useful in terms of maximising the benefits of the peer review process as highlighted in Fig. 8.6.

5 Critical Reflections on Lessons Learnt and Future Recommendations

The 4Rs framework (*reporting/responding; relating; reasoning; reconstructing*) is used to reflect on this implementation of reflective peer review. First, we *report* or identify the issues under reflection. The Phase One peer review process (e-Learning administered context) provided an excellent opportunity for the independent evaluation of one of the key themes identified within the peer review literature. That is, did the adoption of the PRAZE technology serve to benefit the time saving interests of full time academic staff, but with the result of failing to actively engage students and staff in a collaborative process as equal members of a community of scholars? Alternatively, was the e-learning process successful in genuinely creating a virtual sense of belonging even in the absence of "human tutors" (Huijser et al. 2008)?

We *reasoned* out the key elements needing to be addressed after Phase One. In Phase One the e-Learning PRAZE system delivered an extremely efficient, effective and easily mastered (by both staff and students) peer-review process, which allowed the students to engage widely in a collaborative, community of scholars' environment with only minimal staff involvement. That is, the PRAZE system provides a very successful, 'non-human' contact point for the students (Huijser et al. 2008).

In *relating* our findings from Phase One to our expectations of the peer review process, we found specific aspects to target in our teaching. Hidden behind the overwhelming success of the 2011 PRAZE-based, peer-review process were issues of concern that clearly highlighted that some students experienced difficulties in writing a constructive peer review and in effectively using the feedback received. These conflicts were further investigated throughout 2012 within the Phase Two context utilising a voluntary and anonymous survey. The results of this survey are as detailed in Figs. 8.4 and 8.5.

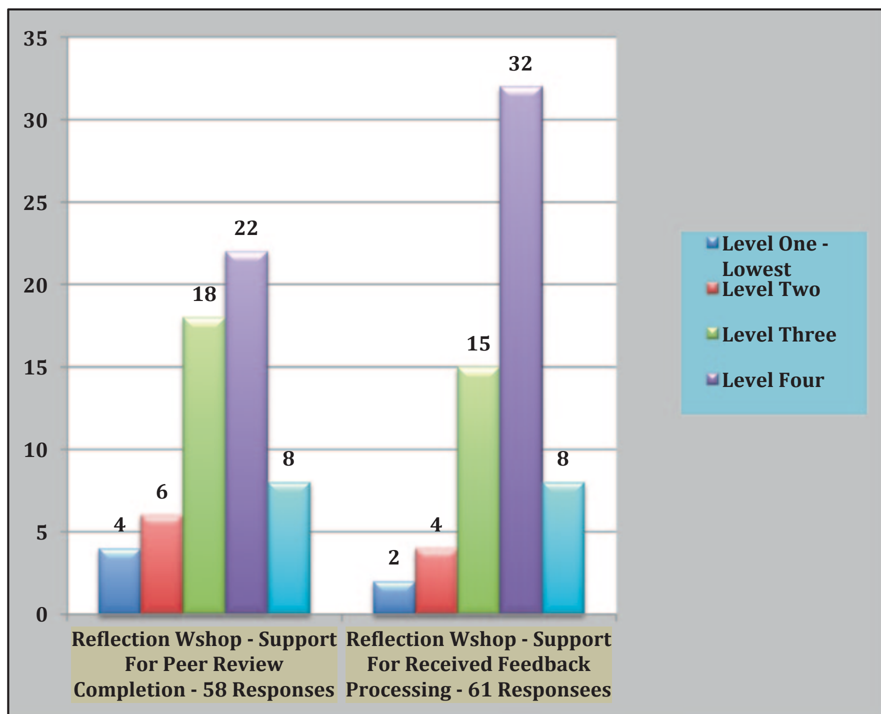


Fig. 8.6 *Phase two—step three*—AYB227 peer review student evaluations—voluntary and anonymous—level of support provided to students by the reflection-based, peer review support workshop—introduced prior to undertaking initial peer reviews, semester one, 2013

By utilising the Ryan and Ryan (2012a, b) TARL model (Fig. 8.3) it was clear to see that while the *AYB227* peer review task allowed students to focus on their own learning, which is appropriate, we were also requiring students to focus on peers (as per the horizontal axis in the TARL model). We realised that this more complex aspect of analysis required additional scaffolding. In addition, students, in being expected to provide written peer reviews, were being forced to move from basic reporting/responding along the vertical axis to high levels of reasoning and reconstruction. These transformations were expected without any formal scaffolding in place in terms of reflective practices. To address this issue, we needed to *reconstruct* our teaching practice. Therefore, a reflective peer review support workshop was introduced into the existing PRAZE e-Technology peer review process in *AYB227* in Semester One, 2013. As highlighted in Fig. 8.6, this workshop was overwhelmingly successful in assisting students to both write a constructive peer review and to effectively use the feedback received from both staff and peers.

The clear "winners" in the combined reflective practices and e-Learning-based peer review process are all of the relevant stakeholders: students, educators and the profession. While the key objective of the constantly evolving, peer review process was to guide students toward life-long learning, accounting educators have also

developed new skills as mediators and moderators in the process of assisting students to take ownership of their own learning within a low time cost environment. The accounting profession is also a beneficiary with post-peer-review students entering the profession with increased technical accounting and technology skills and non-technical skills in communication, teamwork, problem-solving and reflective self-management. Dissemination of the results of this project to the broader higher education community increases the dialogue related to new and, potentially, more relevant and educative modes of student assessment.

Part of our *reconstructed* practice in the future, will involve strategies that seek to increase students' active engagement in the support workshop process. In Phase Three of this project, the students, at their request, will be actively involved, during the support workshop, in small group writing of peer reviews based on prior *AYB227* assignment submissions. The objectives of this task are to: first, provide students with scaffolded practice in writing a review prior to writing reviews of their peers' work as part of the assessment requirements; and, secondly, allow an opportunity for the student receiving the peer review comments to discuss the feedback provided with their reviewer within the small group scenario.

In conclusion, the Phase One and Two approaches adopted in *AYB227* provide clear evidence that innovative assessment design, including a systematic, developmental approach to teaching reflective learning and e-Learning technologies do have the capacity to provide some measure of relief from the internal and external tensions currently faced by higher education staff and students. Of most importance is that these findings "arguably demonstrate that inviting students into the assessment process can mean that assessment broadens out from merely the assessment *of* learning to become an effective learning tool in its own right, facilitating assessment *for* learning" (O'Donovan et al. 2004, p. 330). One of our key learnings, however, is that students need explicit support to achieve the levels of reflective review that will lead to improved practice through independent self-management.

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Chapter 9
The Use of Multimodal Technologies to Enhance Reflective Writing in Teacher Education

Lenore Adie and Donna Tangen

Reflection	Foundation	Intermediate	Capstone
Reconstruct			
Reason		∗PRT	
Relate			
Report			
	Program Phase		

Trial reflection pattern plotted on the TARL Model (see Chap. 2)

1 Introduction

Teacher education needs to respond to the learning needs of the adult learner while modelling effective pedagogic practices and providing opportunities for practical teaching experiences. Knowles (1984) identified adult learners as self-directed, requiring experiential learning activities that are viewed as relevant to their learning context and that build from their prior experiences. Simulated learning experiences have been promoted for many years as a risk-free and controlled learning context that involves students in critical aspects of their future work without the pressure of failure (Cruickshank 1969; Dewey 1904). Simulated experiences also provide opportunities for students to receive feedback that is personalised to their learning needs (Roth 1989).

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Reflective practice following a simulated experience provides a context for students to analyse their performance in terms of the literature and theories of teaching and learning. Opportunities for students to reflect on their performance in simulated experiences have been identified as key to their learning (Amobi 2005). Darling-Hammond and Synder (2000) recommend that simulated experiences need to be informed by professional standards of performance and supported by other activities such as self-assessment, and the collection of artefacts (for example, videos of performance, lesson plans, and reflections) collated as a portfolio. Problematic for students in writing reflections after a simulated experience however, occurs particularly when the event entails stress for the student. In simulated performances students are often practising new skills and being judged by lecturers and peers. In this chapter, we consider the use of a range of technologies to assist students in their reflective process after an assessed simulated teaching experience. First, the teaching context and the research design are described. Following is an analysis of student responses and our reflections on the lessons that we learnt from the Prompting Reflection using Technology (PRT) teaching pattern.

2 Implementation: Influences and Evidence

2.1 The Context

The research question guiding this study addressed whether the use of a range of technologies enhanced the reflective writing process for one-year Graduate Diploma Education students. The study involved teacher education students enrolled in their first semester in a large urban university. Microteaching was chosen as an activity where students could engage in both vicarious and mastery learning experiences which provided opportunities for them to apply teaching theory to practise in a safe, simulated environment. By observing others and their own microteaching sessions, student teachers can reflect on what worked well, what did not work well and consider alternatives for their own teaching in schools. Important to microteaching is the process of self-reflection; however, results from previous studies (see Mergler and Tangen 2009), indicate that reflecting on their microteaching is an area of weakness for education students. The authors of this chapter believe that the process of receiving feedback from multiple sources on a task allows student teachers to reflect on their own teaching skills from a range of perspectives, and through a mode that supports their learning preference. In alignment with the Teaching and Assessing Reflective Learning (TARL) Model (See Chap. 2), each element in the process provides scaffolding to support emergent professional identities as reflective practitioners.

The assessment piece for this model was a group work activity that assessed the planning and delivery of a microteaching session with a strong component of self-assessment through reflective writing. An important part of the above process was to scaffold the student teachers' reflective writing. Scaffolded reflective writing as a form of assessment has the capacity to improve students' quality of writing about

how they are learning (Green 2011; Hume 2009). Dyment and O'Connell (2011) suggest that when students are guided to reflect deeply on their learning such reflection encourages them to contextualise their learning in relation to their current academic and future professional lives. Education students can be guided in how to connect the theories about teaching and learning to the practicalities of being a teacher. Dyment and O'Connell caution, however, that the quality of reflective writing can be dependent on the mitigating factors of whether reflective writing is optional or mandatory, whether it is assessed or not, whether students were given instructions on reflective writing or not, and the kind and quality of feedback students were given on their microteaching. We agree with Ryan (2011) that reflective writing is a complex pedagogy which, to be effective, needs a clear purpose and process. The scaffolding provided in this study included the provision of exemplars and direct teaching of reflective writing. As reflective practice was new to the majority of students, class sessions were spent on reviewing the reflective writing process using the 4Rs model of reflective writing. This included analysing exemplars of reflective writing and discussions of the marking criteria.

The process of using reflective writing as part of assessment has been used before with Graduate Diploma students (Bain et al. 1999), where it was found that written feedback was significant in the quality of reflection and the value of the reflection process. Additionally, there was a suggestion that there should be a deliberate attempt to identify the focus for reflection. Bain et al. found that when the focus was on the cognitive condition (e.g. textbooks, worksheets) for reflection, student teachers developed a good understanding of theory but did not extend their understanding of how to apply theory to practice, whereas when the focus was on the experiential condition (for example, field experience) student teachers rarely incorporated theory in their reflections so did not clearly make the connections between theory and practice.

Video-taping microteaching sessions as a means of self-analysis has been suggested as one way to assist education students in making the connection between theory and teaching practice. In the 1960s Samford University introduced videoed microteaching sessions as a way for lecturers and students to reflect on how to build a repertoire of teaching skills (Francis 1997). These early days of reflecting on self were focused primarily on the technical aspects of teaching. Today the emphasis of reflection has shifted to a focus on the process of thinking about ways to improve an understanding of teaching. For example, Yerrick et al. (2005) explored pre-service science teachers' reflections. They found that upon reviewing their video-taped teaching sessions, these student teachers realised that pupils in their classes were not learning. While the pupils nodded that, yes, they understood the scientific concepts, in reality they did not understand. The student teachers realised that they needed not only to redefine their notion of teaching science but also to better understand how pupils learn science. As a result of this reflective process, the student teachers changed not only their perceptions of teaching science but also their teaching practices. Having an opportunity to observe their teaching practices and reflect on what they *thought* they were doing compared with what they were *actually* doing was a powerful incentive for the student teachers to refine their teaching practice. This kind of scaffolded video-reflection has been used elsewhere (see Rich and Hannafin

2009) with similar results where student teachers, after viewing their teaching practices, engaged in deeper critical reflection about how they understand teaching and learning before making changes to improve their teaching practices.

In another study, Calandra et al. (2009) compared a group of student teachers who used videos for reflective writing to a group of student teachers who did not use videos. They found that those who used videos of their microteaching were more transformative in their thinking than those who did not; these student teachers explicitly addressed pedagogical content knowledge and were more responsive to the students in the class. An important inclusion in this research was a 'Framework for Reflective Pedagogical Thinking' to guide the student teachers in their reflections. This scaffolding device gave them clear steps for reflecting on their microteaching. When they watched themselves teach they had a protocol in common to follow as they went back and forwards through the data identifying things that they would not have remembered otherwise, or were unaware of in their teaching practices.

In our unit[1], previous iterations of this assessment task had presented a range of quality responses with many students unable to reflect at a deeper level of thinking that involved linking the events of their university presentation to theories of learning and to classroom teaching practice. Our aim for this study was to determine how students' reflective writing was enhanced by incorporating a range of technologies used to provide feedback on their microteaching sessions. The students' reflections were thus guided by their own self-assessment, written peer feedback, audio-recorded lecturer feedback and dialogue with the presentation group, and a video of their presentation.

The presentations were videoed by the lecturers using small, portable video cameras. Multi-function smart phones could also serve the same purpose, and were at times used by students. The video camera allowed for direct transference of the video data to the computer. In the PRT pattern it is important that the technical data is returned to students promptly so that they have full use of all of the feedback for their reflections. The video recordings of the microteaching episodes were loaded onto the lecturers' computers and were subsequently distributed to the students via the internet program Cloudstor immediately following the tutorial sessions.

After the presentation, class members completed a written peer assessment. The written peer feedback was guided through three Likert scale items regarding perception of content knowledge, use of inclusive strategies, and interaction with the class, as well as two open-ended comments inviting peers to discuss aspects of the presentation that engaged them in learning, and suggestions for improvement. The first open-ended question in particular, was framed to encourage peers to reflect on their own engagement with the lesson and thus their contribution to the success of the lesson. Reflection was promoted in this class in terms of performance as a presenter as well as a participant in a lesson. This written feedback was given to students in situ at the end of their microteaching session.

While peers completed their written feedback sheets, lecturer feedback was recorded using a Livescribe[c] pen, then downloaded and sent to the students along with

[1] 'Unit' refers to a semester program of study; 'course' is the program of study.

the video of their presentation. Livescribe[c] pens have the capability to record both written and oral comments. The pens were used by lecturers to record written comments during the microteaching session. This feedback was followed by the group self-assessment and a feedback dialogue between the presentation group and the lecturer directly after their microteaching session. This feedback was also uploaded onto the lecturer's computer and subsequently distributed to the students as an email attachment.

For their assessment, the students were expected to follow the four stages of writing as outlined in the 4Rs model of reflective writing and to include references to the literature in their 1000 word reflection, given that the purpose was to make connections between theory and practice. The students had two days after the presentation to record and submit their reflections for marking according to the set criteria and standards. The criteria for marking included a graduated scale involving evidence of critical analysis of their participation in the planning and presentation of the teaching episode in response to peer and lecturer feedback. This involved providing a brief overview of the planning and the presentation, analysing their contribution with reference to the literature and evaluating their performance to determine areas of strength, areas for improvement, and future plans for action.

3 Research Design

The study was conducted with forty-five graduate diploma students who were in their first semester of a one year teacher education program. The students were required to work in groups of three to four students to present a learning experience that would demonstrate to their class peers how a theory of inclusive teaching practice may be enacted in a school setting. The students had not yet participated in any practicum experiences, nor visited a school setting as a part of their program. As part of the assessment for the unit, students were required to write an individual reflection on their role in their group preparation and presentation of a learning episode. The thirty minute presentation was based on a scenario of a school staff meeting where the students were reporting on their teaching at this fictitious school setting. Students' comments on this scaffolded approach to reflective writing, and their written reflective responses have been analysed in terms of the 4Rs framework.

4 Student Responses

Analysis of students' reflective responses on their presentations showed that the 4Rs framework had provided a structure to the students' reflections. Furthermore it encouraged them to draw from evidence of their performance and consider this in terms of the literature and their own current perspectives on teaching and learning.

In this section, students' responses are analysed in terms of their responses to each of the reflective scales in the 4Rs framework.

Although considered the most straightforward section to write, the 'Reporting and Responding' section still requires students to consider the relevance of their actions as an opinion or by asking questions. Consideration of relevance was the defining feature of a quality response for this section. Examples of students' writing indicated their personal and insightful responses to this task. For example,

> Our activities focused on self-efficacy development and challenged students intellectually by engaging them in operational, recall, and higher-order thinking through critical analysis of an authentic text. I contributed significantly by researching and producing content, structuring and producing the lesson plan, and presenting our activities and their relation to theories of self-efficacy. I developed personally through group, self and time-management, and through experience in presenting to peers.

This example illustrates how students shared insights about their learning and professional development. Understanding one's own learning is important to becoming a self-directed learner who can set up opportunities for continued professional learning.

'Relating' required students to make connections between their microteaching experience, their own experience of education and their developing knowledge. This required the students to question and challenge some of their pre-conceived notions of teaching and education. In their reflections, the students related events in their presentations to knowledge of themselves and how they react in similar circumstances when they are scared or anxious or excited. This insight was then related to themselves as teachers, with consideration of how students may react. For example, students noted how their speech becomes faster when they know a topic well and they are excited to share this knowledge, but realised that this monologue was difficult to follow when reviewing the video, and would be difficult for students in their classrooms to follow. The necessity to provide clear, structured information to students was borne out through this review of their performance and through their personal reflection of events. Other students noticed the difference between their presentation of information to the class and their interactions in group activities. While some moved from a stilted group presentation to a comfortable and lively exchange of information when working with groups, others presented with confidence to the group yet wandered aimlessly during group activities. In their reflections the students evaluated these actions in terms of their life experiences, and in terms of their personal preferences as learners.

'Reasoning' required the students to identify a significant event and analyse this in relation to the relevant literature and theory. The examples provided are illustrative of how the students moved between their experiences, the theory and the feedback to start constructing their own identities within a professional practice.

> Before completing this activity, my ideas regarding teaching for diversity were based solely on my own memories of classroom pedagogy and gut-feelings. This activity has represented a strong learning experience for me as our topic 'Self-efficacy and Classroom Motivation' provided a little window into the way different learners are motivated in the classroom. I can now see how motivation for learning and self-efficacy play a large role

> in the way diverse learners learn and how best to motivate them. It has encouraged me to look at how I might use motivating techniques to encourage diverse learners to successfully achieve positive results, even if their goals are different.

> I admit that though I thought that teachers played a role in fostering self-efficacy I was not entirely convinced that we could affect it to a meaningful extent. Reading Fencl and Scheel (2005) and Bandura (1994) and then viewing the engagement of our peers with the activities we created really increased my optimism that teachers could make a considerable difference through increased awareness and adapted lesson-planning.

Learning was evident in the reflections as students reviewed the videos and assimilated these reflections with their own self-assessment and with their peer feedback.

In reconstructing these events for future practice, students needed to imagine a professional identity for themselves. It was in this section where the opportunity to draw on the video evidence was most beneficial. For example, students wrote:

> Based on class feedback and from observing the video of our presentation, I should have handed out our activity sheets at the beginning of the lesson, and not while [my partner] was presenting. This was distracting for the class, and in the real world could interrupt learning.

> When I viewed the video I realized that on the big screen the wording was not clearly visible. I would use black writing next time. The background of the 'logical' slide needed to be faded out so the wording stood out better. When we presented the maths problem we should have given the group the opportunity to guess (intuitively) the angle and thus involve them more in the process of the lesson. At the end we could have produced the answer for the angle and the group would have had an insight into their logical manipulation of the initial intuitive guess.

> Having seen the recording of the presentation I am pleased with my eye contact and body language, and the pitch and tone of my delivery…

The interaction between knowing how to teach after having read their textbook and other sourced readings, and the social and cultural context of the lesson delivery was examined within their writing. While some students commented on their lack of interaction in the lesson, others noted these elements were a strength of their presentation. For example, one student commented that she was unaware of how serious she appeared and thought that she had smiled much more throughout the presentation. Another student related the wording on the PowerPoint slide to the importance of understanding design principles to support student learning.

Although students were aware of the importance of using a range of effective teaching strategies, their nerves during this first presentation contributed at times to a lack of engagement with the class. This was evident in practices such as a monotonal delivery of information that was often hard to hear from different parts of the classroom, and students having their back to the group or part of the group when providing information or instructions. One student on viewing the video realised that he had stood behind the desk for the entire delivery of the lesson content, and reflected on his positioning and movement in the class as a teacher. Students observed that as their lessons progressed, they began to relax and started to share their stories of learning about a topic and to use questioning to gain others' opinions and to delve deeper into the topic. They noted that as a result their voices grew louder

and the change in class engagement was obvious. Their reflections connected this observation of their practice with the value of classroom dialogue and the importance of repeating the key points of a lesson in multiple ways, in case some information was missed by students in one section of the lesson. For example, on observing the video and noting the confusion evidenced by many in the group activity, one student realised that providing a visual summary of the instructions rather than just verbal instructions would have improved group responses to an activity. Viewing the video also affirmed for some students that they had included adequate detail in their presentation in the allocated time, and that careful planning of lessons was essential to ensure success.

Another practice that was commented on by many of the students was the impact of their reliance on notes during the presentation. For this assessment, the students were required to research and present on practices that would support the teaching of diverse groups of learners. This was new knowledge for the students and resulted in many relying heavily on notes in their presentation. Assimilating the video footage with their lecturer and peer feedback, students came to see how their reliance on notes restricted their interaction with the class and interfered with the successful delivery of content. Their analysis of this observation led the students to suggest improvements to their teaching that included using different modes to present information, such as demonstration. This understanding, fuelled by an image of the transition in class engagement that occurred as they relaxed and became less reliant on notes, can inform teaching practice when the students commence their first practicum, to eventually become a part of the knowledge of how to be and act as a teacher.

5 Reflection on Lessons Learnt and Recommendations for the Future

Reflective writing is a valued professional skill in teacher professional learning and practice. Graduate diploma students enter a teacher education course as experts in a prior field of study but novices in the theory and practice of teaching. Within one year, they are expected to graduate with competent skills to effectively manage their own classes and facilitate student learning. As suggested in the developmental aspect of the TARL model (Chap. 2), it is imperative that students start to practise their professional skills early in the year in the relatively controlled teaching context amongst peers before they commence their first teaching practicum. These initial teaching presentations need to include opportunities for the students to reflect on their practice, and to start to think about and plan for improvement. The lesson segment that was delivered in this unit offered students a context to practise their skills, and to start to reflect professionally on their performance. The PRT pattern or *Prompting Reflections using Technology* supported this initial stage of reflective practice by engaging the students with multiple modes of feedback that included audio, visual and written feedback from the lecturer, their peers, and self. Due to the

short duration of the course, students were expected to reflect from the perspective of self and from a broader societal perspective that included the provided scenario of the presentation. Each of the class activities and the modes of feedback were incorporated in the unit with the aim of progressing student reflections from description to deep critical reflection.

The technologies that were incorporated in the unit provided students with opportunities to review their performance from multiple perspectives. The annotated examples of reflective writing provided students with models to guide their practice, and the explicit teaching of reflection added further clarification. We observed that students were engaged with these activities, continually moving between personal experiences and theory to reconcile their developing understandings. We understood our task in these processes as one of challenging beliefs while providing scaffolded opportunities for practice.

Disjuncture between the theoretical discourse of university learning and the enacted practice of classroom instruction was initially problematic for many of the students who viewed the two contexts as quite unrelated practices. Our aim of including reflective writing as part of university assessment was to ensure that all students engaged with this practice; however reflection as assessment was also a barrier for some students as they focussed on the compulsory nature of the assessment task rather than the value of the task to their professional development. The reflective thinking that they would engage in during their teaching practice in classrooms was considered a different practice to the reflective writing they were being required to complete as a university assessment. Some of the students were initially sceptical of the intrinsic value of academic reflection that required reference to the academic literature as supportive of their professional practice and as contributing to their developing practice and professional identity. While students indicated that they understood university reflections as involving theory, they saw the reflective practice they would do in schools as based on the practical issues of 'what went right or wrong in a lesson'. Our goal in including scaffolded learning activities relating to learning about reflective writing, and then multiple ways to receive feedback on their practice, was to guide students through this period of uncertainty. Opfer and Pedder (2011) identified that for new learning to occur some disequilibrium where beliefs are challenged is required. This process was apparent in the comment of one student who described the assessment task as initially appearing to be more about writing than reflecting, but after completing her reflection understood that the process of reviewing and reflecting was a part of the continuous learning she would do as a teacher. Other students, after completion of their reflective writing indicated their understanding of the value of this practice through their comments that reflective practice needed to be learnt early in their training and needed to be repeated in other parts of the course. Feedback by the lecturer and their peers contributed to challenging student beliefs about education, and facilitated the development of students' professional practice and identity.

Feedback has been identified as one of the most effective teaching strategies to progress student learning (Hattie and Timperley 2007). Feedback provided by their lecturer face-to-face and recorded with written comments, by their peers through

written comments, via the video of the presentation as well as their own self-reflection engaged the students in the deconstruction and then reconstruction of their performance, with the intent of challenging notions of teaching and being a teacher as a transformative process. Students appeared to use the audio-recorded lecturer feedback to inform their reflections, particularly when the feedback focussed on areas for improvement. The peer feedback appeared to be valued as an external prompt for reflection as the students considered their actions that led to the received peer comments. For example, one student commented that he had believed that his group had catered well for students with diverse needs, however his peer feedback had included that some of the terms that were used in the presentation were unclear to students who have English as a second language. As the university tutorial groups were made up of a number of students from a range of nationalities, students were reminded of the need for intercultural awareness in their teaching to ensure that all class members understand the meaning of the terms and phrases that they use. The feedback received by the students in this instance supported our core teaching in this unit of inclusive teaching practice, and the student's reflective response was evidence for us of his learning.

Our intention of incorporating the multiple technologies as feedback was to purposefully engage students in reviewing their practice and in critiquing their performance within a broader notion of themselves, their histories, their beliefs, and their thinking and reasoning. Viewing assessment as a social practice that occurs between teachers and students (Elwood 2006) encouraged us to find ways to involve our students in processes to understand themselves as learners. By including a range of ways to provide feedback to students on their microteaching episode we were addressing the diversity of our student group and providing multiple means for our students to construct, share and reconstruct meanings (Lave and Wenger 1991) through their reflective writing. We believe that the contribution of scaffolded practice and the range of technologies to provide feedback, modelled for students the inclusive practices of which we were teaching. This pedagogic practice was providing the context for the students to enter into a culture of professional practice and identity.

We are aware that students in a graduate diploma course come with a vast range of prior learning, work and life experiences, and with at times firmly established beliefs about teaching and learning. By establishing multiple forms of feedback, in particular, the video evidence, we were involving students in a community of learners as well as a means to critically analyse their own practice. To enhance this practice, we believe that our lectures need to provide students with scaffolded opportunities to view and critique video footage of other teachers, using the 4Rs framework. A multimodal approach to reflecting and learning about teaching and being a teacher involved the students as active participants in their professional development supported by a community of teachers and peers. Growth in professional knowledge was evident in this one semester as the graduate diploma teachers were guided to challenge and evaluate their personal understandings of teaching and their teaching performance in terms of the literature, and articulate this in their reflections.

We believe that the incorporation of video footage in the reflective process, in particular, provided an opportunity for the students to contextualise and understand the feedback from their lecturer and peers. Watching a video of their presentation provided both confirming and confronting evidence that enabled the students to critically reflect on their teaching strategies and to consider these from a viewer perspective, which encouraged transformative thinking and a self-awareness of professional practice. While video and audio technology has been used historically to develop student teachers' competencies for many decades, the cost and organisation was often prohibitive. With the increased ownership of personal multi-function phones, the incorporation of multiple technologies to support reflective practices should become a much easier practice to use and embed in teacher education. Our investigation supported a multimodal approach to reflective writing in which multiple forms of feedback, in particular the consideration of video footage, audio-recorded feedback, and peer written feedback, were pivotal to deeper analysis, and led to students making connections between theory and practice, and so facilitating the development of their professional practice and identity.

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Chapter 10
How Does the Use of a Reflective Journal Enhance Students' Critical Thinking About Complexity?

Jenny Kaighin

Reflection		Foundation	Intermediate	Capstone
	Reconstruct		✸	
	Reason		✸	
	Relate			
	Report			
		Program Phase		

Trial reflection strategy plotted on the TARL Model (see Chap. 2)

1 Introduction

This chapter reports on an Action Learning project that explores strategies to enhance students' understanding about complexity in social work practice. The first cycle tested a scenario-based strategy for teaching about complexity in social work. The second cycle developed this further looking at a range of strategies to develop students' reflections on the scenarios. The third cycle extends this work to the assessment process. As described below this third cycle responds to an identified need to better align the unit assessment with the Intended Learning Outcomes (ILOs) and the teaching/learning strategies. The third cycle is located in a second year youth work subject titled *Introduction to Youth Services (SWB207)*. The assessment used was a reflective journal. The question for this cycle is: *How does the use of a reflective journal enhance students' critical thinking about complexity?*

The teaching and learning strategy that the project revolves around is a scenario-based process I call the Soap Opera Strategy. I call it a soap opera because each week the story unfolds with a new issue or crisis for the fictional subject of the case

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study. Scenario based teaching and learning approaches are commonly used in social work education. However I believe a one-off case study, typically used in social work education, does not reflect the ongoing nature of the worker/client engagement. As workers develop relationships with clients their stories unfold and they may work with them on many issues, not simply the initial presenting one. I believe it is important that social work students develop an understanding of the ways that issues compound, as what has happened in the past impacts on what is happening now and what will happen in the future (Chenoweth and McAuliffe 2012).

The Soap Opera Strategy uses a fictional young person accessing a fictional youth service, over a number of weeks. Each week a new issue confronts the young person, soap opera style. In the tutorial students discuss the issues and consider potential responses. In one tutorial group, for example, the fictional person was a 14 year old transgender young person. In another tutorial group the story revolved around a brother and sister who were refugees from Somalia. The fictional cases were designed to challenge the students, to provide an avenue for examining their own values and beliefs about particular client groups and issues and to build their knowledge about youth work and the complex and compounding nature of the issues young people experience (Beadle 2009).

2 Rationale

As stated earlier this project is the third cycle of an ongoing Action Learning project. The first cycle took place in the same unit *SWB207*, with the same ongoing case where students consider their reactions to the issues and possible practice responses. The first cycle occurred in semester 2, 2010. The second cycle occurred in a First year subject called *The Human Condition* in semester 1, 2011. In this subject the fictional case was a family group and the students were not required to consider practice responses but were required to consider how their values and beliefs shaped their reactions to the unfolding case. Feedback from the previous two cycles identified that the Soap Opera Strategy is effective in engaging students in thinking about complexity. For example a student who is also a youth worker commented that the tutorial discussions about the ongoing case were identical to those had in practice and that 'it was as close to real life youth work you could get within the academic context'. However, as described below, alignment between assessment, intended learning outcomes and teaching/learning activities has been identified as an issue. This cycle aimed to respond to that issue through the introduction of a reflective journal.

Constructive alignment between the intended learning outcomes (ILOs), teaching/learning activities and assessment creates an environment that enhances deeper learning (Biggs and Tang 2007). Initially *SWB207* had a number of small tutorial assessments relating to the Soap Opera scenarios: a tutorial discussion; a 'case' discussion; and a written paper corresponding to the issue presented in one week. However none of the assessment tasks captured the ongoing nature of the learning. The intention of the Soap Opera approach was to engage students in the idea that issues compound, therefore assessment also needed to capture that, as did the ILOs. Consequently students in this unit are expected to:

1. Critically analyse the various theoretical and popular approaches/ constructions around "youth" and "adolescence";
2. Demonstrate an awareness of the complex and compounding nature of issues young people experience;
3. Critically reflect on the ways diversity and marginalisation impact on young people;
4. Identify and critically reflect on dominant and emerging human service practice approaches, policies and service delivery systems directed at young people in Australia;
5. Critically reflect on their own values, beliefs and how they inform their professional practice framework.

The assessment tasks incorporate a tutorial-based discussion focussing on one nominated week and the reflective journal, which covers weeks 6–13 where students are expected to reflect on the developing issues across all of these weeks.

3 Reflective Practice in Social Work

The concept of critical reflective practice has gained increasing dominance in social work literature over the past decade (Chenoweth and McAuliffe 2012). As the Human Services industry becomes increasingly professionalised, the need arises for more explicit links between knowledge, theory and skills. "A critical reflective approach narrows the gap between theory and practice and recognises the active role a practitioner plays in the integration" (O'Connor et al. 2008, p. 73).

Social work practice is value driven as well as theory and practice driven. Values form an integral part of a social worker's professional practice framework. The Australian Association of Social Workers (AASW) Code of Ethics (2010) describes three core values that underpin social work practice: respect for persons; social justice; and professional integrity. However, social work practice is not just informed by professional values such as those outlined by the AASW, it is also shaped by personal values (Perlman 1976). Adopting a critically reflective approach to practice facilitates an understanding of the impact that values, assumptions and beliefs play in a practitioner's response to a situation. Napier (2006) suggests that "practicing in a critically reflective way focuses conscious attention on the 'whole self' of the practitioner, the thinking, feeling, believing, acting practitioner" (p. 7). Social work practice is shaped by the integration of theory, practice wisdom, skills, professional values and personal values; and at times these may conflict. Reflective practice facilitates thinking about and learning from these points of conflict, striving to be value-fair by recognising the way values inform practice but seeking to minimise the impact.

Two important processes for reflection have been identified as "reflection in action": when a person is forced to stop, think and solve a problem on the spot; and "reflection on action" which occurs after action, when a person reflects on other ways of viewing and responding to the problem (Schon 1987). Reflection on action

has also been described as a practitioner's ability to reflect on how they approached a situation and developed new responses through "trial and error" Healy (2005). These forms of reflection have been linked to transformational learning, a "higher order, conscious thought process that enables one to begin to correct assumptions and distorted beliefs that may lead to revised interpretations of one's experiences and ultimately to new behaviours" (Mezirow cited in Plack et al. 2005, p. 200). Clearly adopting a reflective approach to practice is essential to good social work practice. The two questions that remain are (a) what role does social work education play in developing skills for reflective practice, and (b) how to assess the effectiveness of that learning?

4 Assessing Critical Reflection in Social Work Education

Reflective practice has been the cornerstone of social work education since very early days. It has long been recognised that understanding ourselves is key to good practice (Rai 2006). The development of reflective and reflexive practice, and critical thinking have been cited as two of the key outcomes for social work education (AASW 2012). The concept of critical and reflective practice is embedded in the Social Work course at QUT. In line with the systematic and developmental principles within the TARL model introduced in Chap. 2, the importance of critical and reflective practice is introduced in the first lecture of the first year core unit *Orientation to Social Work and Human Services* and it is built on throughout the course.

Reflective writing is commonly used to assess critical reflection. Assessment tasks take the form of reflective journals, critical incident analyses, workbooks or self-assessment tasks (Rai 2006). However, students can find the differences between academic writing and reflective writing challenging and at times confusing (Rai 2006; Ryan 2011).

Boud and Walker (1998) describe a number of problems associated with reflective tasks in Higher Education contexts. These include such issues as recipe following, where reflection becomes uncritically responding to questions. A further concern is intellectualising reflection. Boud and Walker suggest that if students feel they can't express themselves in conditions of trust and security they will resort to the safer option of an intellectual response rather than an emotional response. Another concern is inappropriate disclosure. This is something that has occurred in other units in the Social Work/Human Services degree where reflective journals have been used and students have disclosed issues of such a concern that counselling has been recommended.

An important concept that Boud and Walker (1998) discuss is the design of reflection within a formal learning context. They suggest that some students, knowing they will be assessed, censor their reflections to the extent they fail to engage with the experience and therefore avoid learning. The issue of how to assess and what to assess in a reflective task is an issue that has been taken up by many authors in a range of different disciplines (Burton and McNamara 2009; Plack et al. 2005; Kennison and Misselwitz 2002; Wong et al. 1995). English (2001) argues for

consideration of a range of ethical issues in regards to the use of reflective journals, including considering the ethics of assessment. She argues that being clear from the outset about what is required and what is acceptable is critical. To ensure the requirements of the task were clear I spent time discussing the criteria for assessment and also more general discussions about expectations and requirements. This was regularly reinforced by prompts during the tutorial discussions, for example I would often say ‘this could be something you explore in your reflective journal’. The draft assessment also provided the opportunity to clarify expectations and to prompt students to think more deeply about the issues, to draw on more research, and to reflect on their own responses to the issues arising.

Assessing reflective writing is one focus of the *Teaching and Assessing Reflective Learning in Higher Education* project introduced in Chap. 2. This project has identified that reflective writing is used and assessed in a range of ways that are not necessarily well supported. For example, students are often told to produce a reflective journal with little input as to how or what is expected, which makes aligning assessment very difficult (Ryan and Ryan 2010). The project also identified a lack of common language around what reflective writing is. Consequently in the development of the TARL model Ryan and Ryan (2013) propose the introduction of a common language that will align outcomes, strategies and assessment within a shared and recognised process. They draw on Bain et al. (2002) 5Rs model of reflection, modified as four levels of reflective thinking: reporting/responding; relating; reasoning; and reconstructing. It is suggested that assessment criteria be developed around these four levels, and that the capacity to engage at each level is built on over the years of the course, that is, in the first year, students reflect as novices in the professional field but by their final year, they are enabled to reflect as beginning professionals (Ryan and Ryan 2013). Hatton and Smith (1995) also identify different types of reflective writing that criteria can be developed around. These four levels incorporate:

1. descriptive writing—which they argue is not reflective;
2. descriptive reflection, which is a description of events, a justification for choosing to describe that event, and a recognition of alternate viewpoints;
3. dialogic reflection, which demonstrates a stepping back from the events. This reflection is analytical and integrative of other factors, perspectives and courses of action; and
4. critical reflection, which demonstrates awareness of multiple perspectives including historical and socio-cultural perspectives.

Clearly the aim is to support students to engage in the higher levels of reflection, scaffolding the process through description to deeper levels of critique and reflection, which will ultimately facilitate ongoing critical and reflective practice as professionals.

In developing the process and the criteria for the *SWB207* reflective journal I have drawn on the ideas raised by the TARL Model (Chap. 2). I am supporting students with information and a range of tools that describe reflective writing, including possible questions to facilitate reflective thinking (Bourner 2003). I developed the assessment criteria with the four levels proposed by the TARL project, although

using language more recognised in Social Work for example describing, applying and analysing instead of reporting, relating and reasoning. While I support the notion of a common language, I felt that introducing new words at this stage may be confusing. I gave students the flexibility to choose the form of the reflective process they used; it could have been a written journal but did not need to be. A number of students chose different modes for their reflections. For example, some wrote a public blog, hoping to draw from comments added to the blog as part of their reflection; another did a public photo journal; some students created a visual diary; others produced a video journal, and another completed her journal as a fictional conversation between herself and a colleague. All students submitted the first part of their journal for assessment in week 9, and were given formative feedback on both their approach and the content. This scaffolding resulted in a deeper level of reflection for the final assessment that was submitted in week 14.

5 Evidence and Feedback

In order to ascertain the learning implications of these reflective strategies, evidence was gathered through minute papers, a survey, informal feedback and the analysis of the reflective multimodal journals. These data were the catalysts for ongoing reflection and feedback, which contribute to ongoing improvement of the unit.

The minute papers were submitted for formative feedback in Week 9, in order to capture students' early reflections about the Soap Opera Strategy and journaling process. The survey was designed to capture students' reflections on the formative feedback provided about their journals. Details of data collection are as follows.

5.1 Minute Paper: Week 8. Anonymous, Completed in Tutorial

1. Identify a key learning for you in relation to the complexity of issues, resulting from the discussion of the young person's story.
2. What is one interesting thing you have discovered in doing your reflective journal?
3. What is one challenging thing you have discovered in doing your reflective journal?

5.2 Survey: Week 12. Anonymous, Completed in Tutorial

The first two questions were designed to build on evidence regarding the Soap Opera approach and engagement in thinking about complexity, this relates to the overarching action research question. The remaining questions focus on the reflective journal task, which was the focus of this cycle.

1. In what ways has the ongoing young person's story developed your understanding of the way issues connect?
2. Identify a key learning for you in relation to the complexity of issues, resulting from discussion of the young person's story.
3. Describe the method you chose for your journal; what prompted you to choose this approach?
4. What did you learn through doing the reflective journal?
5. Describe one aspect of your learning that surprised or challenged you.
6. Describe how you will you use what you've learned in the future.

5.3 Informal Feedback and General Discussion at end of Semester

A number of students provided informal feedback throughout the semester. The final lecture also provided time for a group discussion about the semester and the reflective journal.

5.4 Reflective Journals

The draft and final versions of the student's reflective journals were analysed to determine whether progress had been made toward deeper and more analytical levels of reflection between the draft and final version.

6 Results and Discussion

The question for this action learning project was *How does the use of a reflective journal enhance students' critical thinking about complexity?* The following analysis draws on Ryan's (2011) identification of focus areas for each level of the 4Rs model of reflective writing. The first level of reflection, Reporting and Responding, Ryan outlines as introducing the issue, using literature to explain why these are important and previewing key themes. The majority of students were able to engage successfully with the task at this level. This finding is also consistent with Dyment and O'Connell's (2011) review of a number of studies of reflective journal writing, which found significantly greater levels of low reflection than high or deeper reflection. They cite one study in which students wrote at lower levels of reflection 94% of the time (Wessel and Larin cited in Dyment and O'Connell 2011). At this more descriptive level *SWB207* students could identify each issue, and support their ideas about each issue with links to the literature. However the task clearly required a deeper level of thinking about how the issues connected and compounded, building their understanding about complexity. The majority of students were able to, in varying degrees, consider this complexity of the issues. For example, one student wrote:

> It has been really good to see how an issue such as homelessness can affect school attendance, family relationships, health and safety. It is created like a spider web with Jaimie in the middle and all the issues connecting to her and each other. Another wrote: Noticing the way the issues compound each other and compiled together was one of the most profound things I've learnt from the story. It made me realise that hardly ever do things happen in isolation.

Students were also able to reflect at the next levels of Relating (linking to self and professional practice) and Reasoning (using relevant theory to explain the incident or issue in more depth) (Ryan 2011). It was noted that students were more comfortable in the Reasoning space than the Relating space, in linking their thoughts to research. I believe students were more comfortable in this space because at one level it more closely resembles a traditional essay style of academic writing where a student is required to back up their ideas with links to the literature. As with more traditional academic writing tasks the depth that this level was engaged with reflected the quality of the sources the students drew on and the quality of the level of engagement with those sources to deepen their understandings of the issues/themes and why they were important. This knowledge building through the use of the literature was deepening their capacity to engage with the complexities i.e. that one issue can impact the other and also change the way the student understands the issue. For example a student wrote in their journal:

> Fook (2002) suggests that social workers should critically reflect upon assumptions in order to assess where they originate from and who they aim to serve. I believe that these issues should not be a problem for me as a worker, until it is a problem for Asli. I do concede that perhaps I am a little naive in thinking this and am simply trying too hard not to 'other' her, when in reality her religion etc may affect service delivery significantly?? This really links back to cultural competence and being aware and knowledgeable about differing cultures and being able to use this to tailor services when it is culturally appropriate. (King et al. 2000)

What is significant in the quote above is that the link between critical reflection and cultural competence was made following feedback I gave in the draft paper, the earlier version did not mention cultural competence. This student has moved from one level of reflection to a higher level, deepening her knowledge about the issues and about herself as a practitioner. Students also reflected on a deepening understanding of complexity in their survey responses. For example: *Just looking backwards through the story revealed how all the issues are still affecting the story. That was a big learning for me, because I knew that the issues compound but now I understand how.*

As identified earlier combining reflection with research has been highlighted as a challenge in reflective writing tasks (Rai 2006; Ryan 2011). Some students struggled with the difference between academic writing and reflective writing, as stated by a student in the first minute paper in week 8: *A challenge was writing not academically, more informally, very hard to change language.* Other students reflected on the difficulties of combining a reflective task with linking to literature: *I learned that that I find it very difficult to properly reflect when I have to find academic sources to support it.*. Another reflected: *I learnt that I need to think more from my own perspective and not rely so much on theoretical perspectives just to*

pass. These concerns were expressed in a number of the week 8 minute papers. By the survey in week 12 less students identified this as an issue. And in the group discussion the opinion was shared that feedback on the draft and continued discussion about how to write a reflective journal in tutorials and lectures alleviated some concerns about combining academic writing with reflective writing. Despite the challenges I believe that with a scaffolded approach such as the one I used, students can become more comfortable with linking reflection to research and can see how this deepens their learning.

At the level of Relating students were less confident and engaged less with the relating to self. Some students could relate to professional practice i.e. 'if I was the worker in this situation I would…'. However a deeper level of reflecting on self, on how their values and beliefs shape their understanding of and responses to the issues was a level that more students struggled with. This struggle was identified in the first draft where I consistently gave the following written feedback "As the story completes itself maybe consider in depth the challenges and issues it raises for you, not so much from a 'problem solving' perspective but from a deeper level of reflection about self and self as a practitioner. How might these challenges reflect your values and beliefs, and how might you respond". This comment connects students more strongly into the deepest level of reflection, that of Reconstructing, or 'hypothesise about different possible responses/actions, reframe future practice and show new understandings' (Ryan 2011, p. 105). An example of the way my feedback on the draft prompted the student to shift to a deeper level of reflection is evident in the following: excerpts from a student's draft and then final journal:

> Draft: I know I will face many challenges and hope that I can react effectively to the most relevant and important issues whilst evolving my knowledge and understanding of these issues in the following weeks.

> Final: I know I will face many challenges and hope that I can react effectively to the most relevant and important issues whilst evolving my knowledge and understanding of these issues in the following weeks. It will be important to reflect on my experiences and dilemmas in relation to the accountability of my actions as well as perhaps involving a professional supervisor to ensure decision-making and advice giving to Asli is appropriate. (Chenoweth and McAuliffe 2008)

Again at this level there were varying degrees of engagement. For example one student in her concluding comments wrote: *I have found this a challenging journey. I still have a lot to learn about working with young people, whether it be about their culture or other services and programs. I have found my biggest issue to be to maintain professional boundaries, and not becoming overly emotionally involved.* This student shifted to thinking about personal boundaries following discussions in the tutorials and feedback on her draft paper. Another reflected on her reaction to first reading the story: *I caught a reflection of myself and was surprised at the look on my face as I was reading Jaimie's story. I thought I was ok with the idea of transgender people but the look on my face told me otherwise*. This student then continued to explore these deeper level challenges throughout the journal, in many ways this student began reflecting at the highest level and continued to explore the story and her learnings from that space. Another student wrote in the week 12 survey: *I learnt*

that I constantly need to self assess myself and the way I perceive things. Sometimes it is easy to focus on smaller things, but this journal has allowed me to consistently look at the bigger ideas on how I can improve myself to in turn help others. This student's experience was that writing the journal prompted him to make connections and therefore understand the issues, and himself as a future practitioner, better.

Overall analysis leads me to the conclusion that a reflective journal is an effective tool for students to record their developing understanding regarding the concept that issues people experience are complex and compounding. The reflective journal was a useful vehicle for students to begin to consider the impacts of their own and others' values and beliefs on their responses to the issues raised in the scenarios provided, and to consider how this learning contributes to the ongoing development of their professional practice framework.

7 Reflection

In requiring students to submit a draft version and then a final version both the process and the product of reflection were assessed (Burton and McNamara 2009). They argue that when the ability to engage in reflective practice is a desired attribute then assessing the reflective process is important. As has been argued above, reflective practice is central to social work practice, therefore the process of reflection is a skill to be learned as part of social work education. Finding a way to accurately assess the work is essential. The marking criteria were based on the 4Rs. As discussed above, the majority of students in their first draft did well in criteria one and two relating to knowledge of issues. Many did less well in linking to literature, and even fewer critically reflected on their own learning, values and beliefs and the way this learning connects to future practice. Simply describing what has occurred is identified by Biggs and Tang (2007) as surface learning. My intention was to encourage students beyond a level one or two reflection, and to engage in deeper learning. It became evident following the draft that this required a greater level of direct input from me, especially in tutorial discussions where I highlighted areas that might have provoked challenging discussions and suggested that they could record their ongoing reflections about that in their journal. This more directed input resulted in a deeper level of reflection in the final version of their journal and identifies a shift along the reflective scales as highlighted in the TARL model (Ryan and Ryan 2013).

The struggles faced in this learning process were, for some students, an opportunity to explore their values, beliefs and responses in relation to the story. One student in particular really struggled with her shifting responses in regards to the gender complexity of Jaimie, the young transgender person. In addition, more than one student discussed in tutorials and recorded in their journal the challenges 'working' with a transgender young person raised for them as Christians. In the second tutorial group there were a number of challenges in relation to race and religion. Interestingly for me there were two students of African descent who both had refugee backgrounds. The insight they bought to the discussions was invaluable. I was very

heartened to read in one of these student's journals that they were inspired by the discussions of other students and it helped to change their previously negative view of western social workers.

A learning for me that I didn't completely anticipate was that while trying to teach students about complexity, and using a client that may challenge them to do this, I also created a space for students to 'work' in a safe environment with three clients who came from target groups social workers have often worked badly with, thereby enhancing their capacity to work with these clients in the future. This is particularly true for transgender young people (Maberley and Coffey 2005) Social workers and human service workers have always worked with clients who are lesbian, gay, bisexual or transgender (lgbt), however the experiences of these clients has too often been ignorance, silencing and worker discomfort, often ending in a referral to 'a specialist service'. University does little to prepare students for working with these clients. Gender and sexual diversity are not well integrated into social work curricula in universities. Typically sexuality and gender diversity might appear as a one-off lecture which may alert students to areas of concern, but does little to develop confidence and competence in working with lgbt clients (Roberts 2005). The process of supporting students to move through the 4Rs is about engaging students to think more deeply about what they are learning, who they are and who they can be. What the journals and tutorial discussions revealed was: a challenging of values and beliefs about gender diversity and young people; an increasing knowledge of resources to draw on in practice; an engagement with the body of theoretical and practice based knowledge about gender diversity; and for some, a commitment to advocacy and action. Aiming to provide a teaching and learning opportunity about complexity has resulted in a cohort of students who may go on to be practitioners with a greater degree of competence and confidence in working with gender diversity. As someone who has long advocated for services and supports for lgbt young people the realization that this process may, in the long term, result in improved service delivery for this very vulnerable group of young people is, for me, the most important outcome.

I provided a range of resources on the unit homepage to support and guide students' reflections. A number of students reported that these resources were helpful and some framed their reflection using the questions in the resources. However, it could be argued that following a list of questions might result in a more superficial level of reflection—responding to questions rather than a more in-depth interpretation and analysis by students of their own thinking (Biggs and Tang 2007). As students become more confident in their capacity to reflect, their thinking is validated by feedback, and they are supported with resources, then reliance on structured questions might decrease in future reflective tasks. This finding is consistent with the TARL model proposed by Ryan and Ryan (2013) whereby students progress through to more deeper levels of reflection as the course progresses.

I also allowed students to choose the medium for their journal; this gave students an opportunity to work in a space they found more comfortable. By far the majority of students chose a more 'traditional' written style, however some used other mediums. This multimodal journaling approach worked in terms of engaging students

with the task, however, provided challenges with assessment. For example, assessing a photo against a paragraph is difficult when the response to a photo is largely subjective. Following the draft I requested that photos and other images be accompanied with a brief explanation of meaning for them, then I wasn't relying solely on my response to the image. I did observe however that generally those students who chose an alternative medium for their journal also reflected at deeper levels. This may have come from working in a more informal space, allowing creativity and a free flow of ideas that prompted deeper reflection. I aim to explore this question in future iterations of the Action Learning project.

8 Conclusion

Based on the evidence analysed here, I will continue to develop the reflective journal assessment task, building on student feedback and on my own reflections. I have shown how the depth of learning was enhanced by the supported use of a multimodal reflective journal and by providing feedback on their draft. The scaffolded strategies described above allowed me to provide feedback and ongoing support to assist them shift to increasingly sophisticated levels of thinking about their learning and professional practice. The first time I used the Soap Opera Strategy, I did not use a reflective journal, meaning that I was unable to capture the depth of reflections from students. Further, research suggests that the act of writing reflections enables deeper thinking and conceptual change (Mason and Boscolo 2000). In future iterations of the reflective journaling strategy, I intend to explore ways to assess the multimodal forms of the journal as well as to explore the idea that alternate forms of journals may lead to deeper reflections.

Students identified the value in completing the journal, both for this process and for future practice. A number of students stated that they would continue to find ways to reflect on their learning and on their work. This project has clearly demonstrated that a carefully scaffolded process of reflective learning is effective in developing students' capacities for critical thinking about complex issues in Social Work.

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Chapter 11
Teaching Reflection for Service-Learning

Jimi Bursaw, Megan Kimber, Louise Mercer and Suzanne Carrington

Reflection	Foundation	Intermediate	Capstone
Reconstruct			✶FBR
Reason			
Relate			
Report			
	Program Phase		

FBR reflection pattern plotted on the TARL Model (see Chap. 2)

1 Introduction

In this chapter we discuss how a teaching team within a Faculty of Education developed their approach for teaching pre-service teachers—university students who are training to become teachers—how to critically reflect on their experiences in a Service-learning program. Service-learning is pedagogical strategy that joins theory and practice. Through regular reflection on their experiences, it can provide opportunities to disrupt students' unexamined assumptions and beliefs, and promote their consideration of ethics, diversity, and equity (Butin 2010). The pre-service teachers were enrolled in a final-year core subject on inclusive education. For a number of

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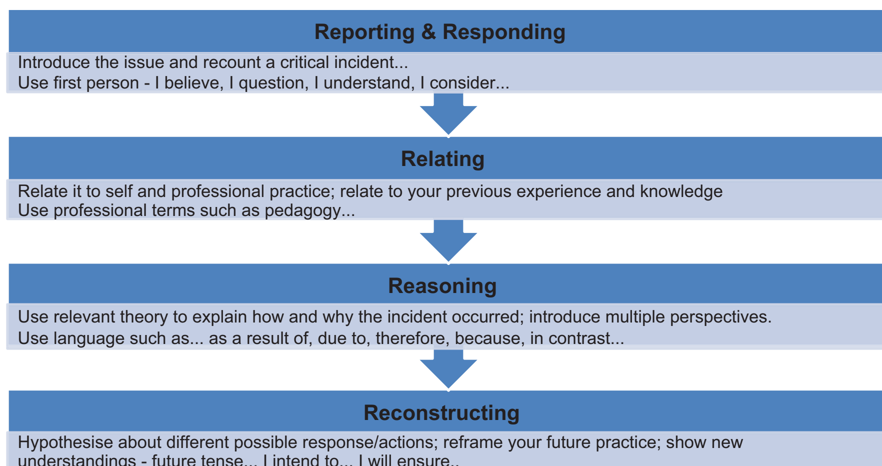

Fig. 11.1 4Rs Levels of Reflection. (Carrington and Selva 2010)

years we have used the 4Rs reflection framework, as outlined in Chap. 2 (based on the work of Bain et al. 2002)—reporting and responding, relating, reasoning, and reconstructing (Carrington and Selva 2010)—to help our students engage in critical reflection. We realised, however, that our students needed more explicit instruction and opportunities for meaningful practice. As noted by Russell (2005), "reflective practice can and should be taught – explicitly, directly, thoughtfully and patiently" (p. 203). As a consequence, we worked with our students to explore how a sequence of variations on the pedagogic pattern[1] of a Fishbowl reflection (FBR) technique ('fishbowling') used in conjunction with the 4Rs framework, could promote deeper critical reflection and discussion.

Fishbowling entails two rings of students—a small "inner ring" that responds to the tutor's questions about their Service-learning experiences and an "outer ring" that observes the discussion and takes notes in terms of the 4Rs, outlined in Fig. 11.1. As a whole group, students then review the activity and provide feedback. We found that fishbowling could make the 4Rs levels of reflection more apparent and meaningful (The full pattern is available at the project website http://www.edpatterns.net).

Before elaborating on our approach and outcomes, it is important to note that our Service-learning program is more than just making connections between academic learning and voluntary service addressing community needs. Our program, which is based on principles of social justice informed by critical social theory, is best described as a 'critical Service-learning' program. In the following sections, we discuss Service-learning, particularly within teacher education, the role of critical social theory, and the goals of transformational learning and perspective transformation. We then describe our approach to engaging students in critical reflective thinking (using the fishbowl pattern) and evaluating the depth of their critical reflections (according to the 4Rs), as shown diagrammatically in Fig. 11.1.

[1] See Chap. 2 this volume for an explanation of pedagogic patterns.

2 Service-Learning

Service-learning, which has its pedagogical roots in the work of John Dewey, Paulo Friere and David Kolb (Peterson 2009), can be conceptualised from multiple perspectives (Butin 2010). From a technical perspective, Service-learning is a pedagogical strategy joining theory with practice. Students' learning in the classroom informs their experiences in the community and their experiences in the community inform their theoretical understandings (James and Iverson 2009; Schmidt et al. 2004). From cultural, political and post-structuralist perspectives (Butin 2010), Service-learning is a way to disrupt students' unexamined assumptions and beliefs, as well as a way to promote students' consideration of ethics, diversity, and equity in their roles as professionals and citizens (Butin 2010).

Service-learning programs exist in disciplines such as business, engineering, education, health, and social work (Beere 2009; Hatcher and Erasmus 2008; Kenworthy-U'ren 2008; Lavery 2009). As part of any academic subject, Service-learning programs have clearly stated learning objectives and goals (Le Grange 2007). Students draw "lessons from the service through regularly scheduled, organised reflection and critical analysis activities, such as classroom discussions, presentations, or directed writing" (Kimber et al. 2011 p. 121). Students' experiences, and their reflections on them, enable them to move beyond a disciplinary-specific focus to one in which they consider the complex needs of communities (Bringle 2003).

3 Service-Learning in Teacher Education

Within teacher education, Service-learning programs are being integrated into Australian and North American universities. Some programs are embedded within inclusive education subjects (Carrington and Saggers 2008; Chambers and Lavery 2012). Others are embedded in subjects about developmental learning (Marchel et al. 2011) and citizenship (James and Iverson 2009) or used to support students making a transition (Donnison and Itter 2011). Service-learning programs are also integrated into teacher education courses as stand-alone subjects focusing on cultural awareness (Stachowski et al. 2008), social justice (Chambers and Lavery 2012), and diversity (Baldwin et al. 2007).

There are three major reasons for integrating Service-learning programs into teacher education courses. First, many pre-service teachers need additional opportunities for authentic learning beyond those afforded by practica (Colby et al. 2009). Second, to become effective inclusive classroom teachers, pre-service teachers need a deep understanding of the strengths and the challenges faced by students from diverse linguistic, cultural, and experiential backgrounds (Chang et al. 2011; Conner 2010). Finally, pre-service teachers need to believe all students can learn (Marchel et al. 2011; DETE 2005). Many pre-service teachers are successful

students from predominantly white, middle-class backgrounds who have limited understandings of diversity and difference (Carrington et al. 2010).

In Australia, the impetus for Service-learning in teacher education has been driven by similar forces as those described above. Several commissioned reports have indicated that the quality and extent of pre-service teachers' practica are inadequate (Butcher et al. 2003; House of Representatives 2007). To teach in increasingly diverse classrooms, pre-service teachers need opportunities to question their understandings in relation to self, schooling and society. Service-learning enables students to reflect on their assumptions and actions, develop skills in serving and leading, and experience meeting the needs of others (Carrington et al. 2010; Lavery 2009).

4 Service-Learning in Teacher Education at Queensland University of Technology

The Service-learning program at Queensland University of Technology is embedded in a core Bachelor of Education subject about inclusive education. The program, first implemented in 2005, was developed partly in response to the large number of pre-service teachers from white, middle-class backgrounds who had limited experiences of diversity and difference. To implement the state education department's inclusive education policy (Carrington and Saggers 2008), our students needed more opportunities to experience diversity and question their assumptions. Service-learning has provided pre-service teachers with the opportunity to develop more informed and practical understandings of marginalisation, segregation, and injustice.

To develop these understandings, pre-service teachers attend weekly lectures and tutorials, and engage in 20 h of voluntary service within community organisations. In the year this research was undertaken, 340 students and 90 organisations participated in the Service-learning program. Service organisations included: homework clubs for refugees; programs to increase Indigenous students' engagement in school; camps for children at risk; and post-school education programs for people with a disability. Reciprocal relationships with service organisations are central to Service-learning and have been developed over time to ensure our pre-service teachers' service reinforces and strengthens their academic learning while their academic learning reinforces and strengthens their service.

At the end of their Service-learning program, pre-service teachers complete an assessment task, a Sevice-learning Reflection Log. Scaffolded questions assist "students to link their experience in the community to their learning about inclusive education at university… to challenge their assumptions and beliefs … and consider their future roles as teachers" (Carrington and Selva 2010 p. 52). The tutorial reflection exercises based on fishbowling and the 4Rs of critical reflection, which assist the students in preparing their reflection logs, are discussed later in this chapter.

5 The Role of Critical Social Theory

Critical social theory developed from the work of The Frankfurt School in the 1920s and 1930s. Theorists who use this approach, "view society as a human construction in need of reconstruction" (Freeman and Vasconcelos 2010 p. 7). Critical social theorists believe members of social institutions can promote a dominant way of thinking that does not reflect the broader values and social/cultural experiences of all members. When such ways of thinking and practicing dominate institutions, "inequalities are taken to be natural occurrences" (Freeman and Vasconcelos 2010 p. 9). Thus critique enables exploration of different perspectives and opportunities for change.

Using a critical social theoretical framework in education is important because pre-service teachers often enter teacher education programs with unexamined assumptions, beliefs and knowledge about students, teaching and the role of schools in society (Carrington and Saggers 2008). Pre-service teachers' views have been formed largely in institutions that have had a history of producing inequality in opportunity and outcomes for students. Critical reflection can promote critique of ideas and practices, and develop intellectual teachers (Giroux 1983) who are prepared to question, disrupt the status quo and hope and plan for a better future for all school students (Greene 1986). Critical social theory in teacher education programs assists pre-service teachers to become "attuned" to their assumptions and values through self-reflection and self-criticism (Agger 1991 p. 111), thus engaging in transformative action that changes the way they view themselves and society.

6 Transformational Learning Theory and Perspective Transformation

Mezirow (2003) describes transformative learning as:

> learning that transforms problematic frames of reference—sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets)—to make them more inclusive, discriminating, open, reflective, and emotionally able to change. Such frames of reference are better than others because they are more likely to generate beliefs and opinions that will prove more true or justified to guide action (pp. 58–59).

Mezirow and Marsick (1978) identified 'perspective transformation' as the key to transformative learning. Perspective transformation is a process that "… occurs when individuals surface, evaluate and revise distortions in sets of assumptions … through critical reflection and discourse" (Kiely 2004 p. 7). Bursaw (2013) noted that:

> The goal of perspective transformation is to help learners to challenge their paradigms in a way that helps them either to expand existing meaning perspectives or create new ones. Ideally, this process will arm learners with meaning perspectives that can more readily enable them to interpret and act on increasingly ambiguous and challenging experiences (p. 24).

For transformation to occur, learners need to engage in critical reflection to investigate dominant power relationships and practices evident in society. The aim of this critical reflection process is to uncover hegemonic beliefs and assumptions and disrupt the status quo. Transformational learning is premised on individuals making meaning from within themselves through interactions and communication with other people (Kiely 2004; Mezirow 2000).

7 Critical Social Theory for Transformational Learning in Teacher Education

Service-learning, informed by critical social theory, has been used in teacher education to engage students in critical thinking that leads to transformational learning (Bursaw 2013; Carrington and Selva 2010). In Carrington and her colleagues' studies, pre-service teachers completed a Service-learning log to record their critical reflections and learning. The five-level framework developed by Bain et al. (2002) was adapted to four levels (see Fig. 11.1) to scaffold and assess pre-service teachers' reflective thinking and writing. The 4Rs framework has been instrumental in supporting pre-service teachers to experience transformational learning. Carrington and her colleagues' findings provide evidence of how pre-service teachers critique and read their world, and imagine how they could contribute to more inclusive schools. In reconstructing their vision of their future role as a teacher, the pre-service teachers have become more intellectual teachers (Giroux 1983) and potential change agents in the teaching profession.

8 Teaching Critical Reflection for Service-Learning in Teacher Education

To teach reflective practice "explicitly, directly, thoughtfully and patiently" (Russell 2005, p. 203), we used personal and collaborative reflection-in-action to interpret and improve our teaching of reflective practice to our students. Examples of classroom activities, combined with planned use of open-ended questions to promote critical thinking and transformational learning, are presented. Our ongoing collaborative reflection, combined with data gathered in student interviews, provides evidence for the development and effectiveness of the techniques described in this chapter.

To engage our pre-service teachers in critical reflective practice, we structured tutorials to support students to develop communities of learners willing to take risks and persist. Developing such communities necessitated equipping them with skills to critically 'self-facilitate' through their reflective process—about the curricular content and their service experiences, along with the deeply personal intellectual and emotional reactions they had to those encounters. Consequently, the goal

for teaching reflection in the Service-learning program was assisting students to develop the requisite critically reflective sensitivity for recognising their own pre-conceived notions and for meeting personally confronting experiences with questions that suspended judgments in favour of exploring alternative explanations.

It was important to encourage a truly open space for group discussions. Many students had deeply personal experiences during placements. Given the complexity of such encounters, it was essential students felt they could discuss their experiences without worry of reproof or judgement. To assist in establishing this kind of free-flowing and unhindered critical dialogue, we introduced the concept of 'controversy with civility' (Alvarez 2009). We encouraged students to be comfortable within themselves and with others in a place of 'controversy with civility'. Controversy with civility, a goal of some social change leadership development frameworks, entails growing a culture among students that embraces controversy but safeguards students from being overwhelmed by conflict (Alvarez 2009). Balance can be achieved through open dialogue about the group process, guidelines for discussions, and most importantly through the acknowledgment and validation of diverse and sometimes conflicting opinions.

After tutors facilitated such a conversation once, students opened up about their more controversial thoughts and reflections. They became more comfortable with open discussion and questioning of conflicting ideas and opinions. Taking on controversy with civility assisted students to be comfortable and skilled in critically, constructively, and openly questioning their own ideas and perceptions, as well as those of others. We wanted students to engage in deeply personal encounters and examinations of their shifting perceptions, thereby deepening their understanding of the social issues that underpin inclusive education; thus enabling them to develop agency around those issues.

8.1 Facilitating Critical Reflection

We used two methods to facilitate critical reflection. The first was reflective writing, which culminated in the Service-learning Reflection Log (Carrington and Selva 2010). The second was scaffolded class discussions. These methods of regular individual and group reflection complemented and enhanced one another. Personal written reflections gave students time to process individually before coming to group discussions, while group discussions scaffolded critically reflective questioning that could then be applied to journaling. In this chapter, we focus on the class discussions (See Chap. 11 for a more extended discussion on the use of reflective journaling).

The first step in implementing these class discussions was establishing a strong structure for critical reflection across the semester. The 4Rs framework provided a model for levels of reflection, but we also needed a comprehensive guide to establish and develop critical discussion and controversy with civility (Alvarez 2009). To develop the guide, we prepared a road map of the weeks and tutorial topics of the semester, taking into account how deep into their Service-learning the pre-service

teachers would be. We then developed a series of questions that would guide increasingly complex explorations of pre-service teachers' expectations, experiences, dissonances, and meaning-making. The questions provided a clear structure for facilitating pre-during-post service reflection and discussion (Eyler 2001).

We refined our practice working with two tutorial groups, consisting of a total of 40 students. Having two groups allowed us to trial a strategy with the first group, refine it for the second group, and then trial a further refinement with the first group.

8.2 Critically Reflective Discussions—Fishbowling

The second step in implementing scaffolded class discussions was using the Fishbowl pattern for facilitating dialogue among participants, thus expanding the understanding and knowledge of observers (OHCHR 2011). Fishbowling helped model questioning for critical reflection, support pre-service teachers in developing their confidence, skills and sensitivities, and provide opportunities for guided practice and critique of the process of critical reflection.

We used several variations of 'fishbowls' to achieve different goals in relation to pre-service teachers' engagement in critical reflection. In the first iterations of fishbowling, the tutor played a central role but control gradually shifted to pre-service teachers to facilitate discussions.

8.2.1 1-on-1 Format

We started fishbowling with a simple format involving one pre-service teacher in the centre of the room with the tutor. The tutor asked about the pre-service teacher's service and probed some of the students' observations to help them think more critically about their experience. Their classmates sat in an outer circle, observing and making notes about questions and responses. We describe this version of the fishbowl as the 1-on-1 model (Fig. 11.2).

During the discussion, observers listened carefully and took notes to build a personal bank of questions that elicited information and ideas in relation to the four levels of critical reflection. We used this format in the first weeks of semester so that students could quickly make connections among the fishbowl discussion questions, the 4Rs framework (levels of questioning), and their own reflective journaling.

The 1-on-1 discussion began with contextual questions such as: *Tell us about your placement? What are some of your initial observations? Are things as you expected them to be?*

These questions provided a foundation for exploring more deeply: *How do you feel about what you've seen so far? What have you seen that you did not expect and how did you feel about that? Do you feel like you're making a difference? What are you seeing in your placement that is aligning with what we're learning in the subjec*t?

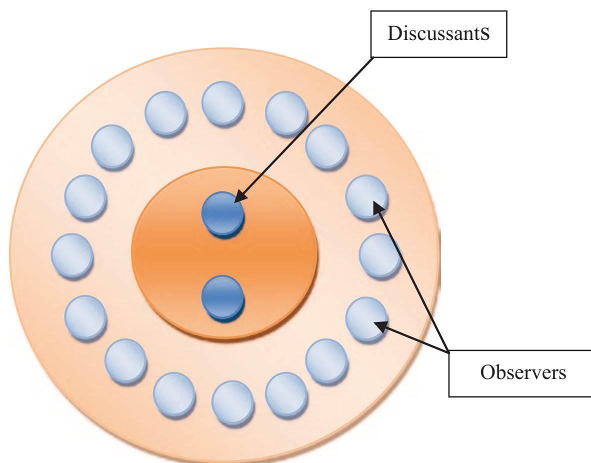

Fig. 11.2 1-on-1 Fishbowl Format

This 1-on-1 model was designed to achieve three goals. The first was to orient the students to this style of discussion and questioning. The second was to model asking good critical questions. The third was to enable students to evaluate questions in relation to the 4Rs levels of critical reflection. We used this format once or twice with different students in the first weeks of semester and revisited it from time to time to unpack particularly intense discussions among the group. It should be noted that the format is an introductory strategy and over-use could lead to disengagement.

8.2.2 Inner/Outer Circle Format

As the pre-service teachers developed confidence and understanding of fishbowling, we invited them into the 'discussant' circle to begin leading discussions. At first, the tutor remained within the discussant group as a facilitator, but then left as pre-service teachers became better at asking open-ended probing questions. This format gave multiple students practice in asking questions and helping their peers to reach a deeper understanding of their observations and experiences. As with the 1-on-1 format, observers analysed the interchanges and considered discussants' questions in relation to the 4Rs. At the end of each session, observers were encouraged to discuss their thoughts about the discussion and share with their peers the questions that seemed to elicit the most deeply critical reflective thinking (Fig. 11.3).

8.2.3 Free-Flowing Circles Format

The free-flowing inner/outer circle fishbowling was a dynamic format the pre-service teachers found particularly engaging. In this format, anyone who had questions to ask could step into the inner 'discussion circle.' As the discussion evolved, other

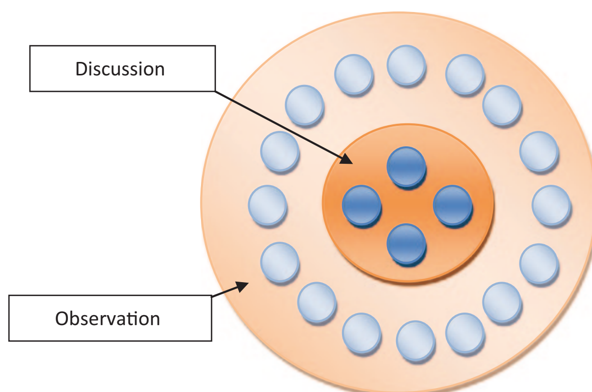

Fig. 11.3 Inner/Outer Circle Fishbowl Format

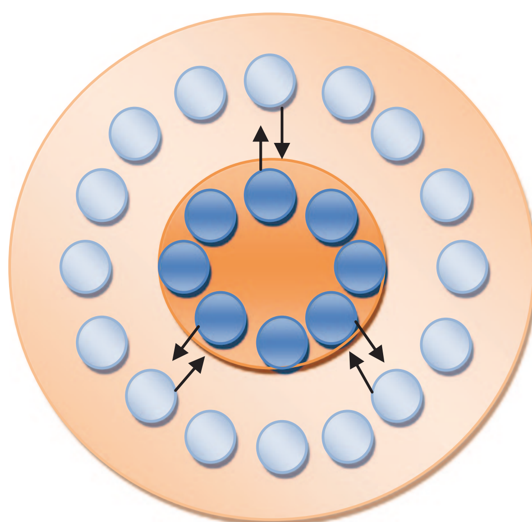

Fig. 11.4 Free-flowing Circles Fishbowl Format

students joined the discussant circle, while those who felt that they had no more to contribute returned to the outer ring. This format gave the pre-service teachers rich opportunities to observe and construct questions, to respond or consider how they would respond, and to continue analysing questions against the levels of the 4Rs framework (Fig. 11.4).

8.2.4 Outer Chain Format

The last variation of fishbowling we used was an outer chain format. We moved discussion circles to the outer ring. Each circle consisted of three participants, two discussants and one observer. The participants were encouraged to freely rotate roles after a period of engagement and feedback came to a natural close. This format is the most advanced form of fishbowling, requiring confidence in asking questions,

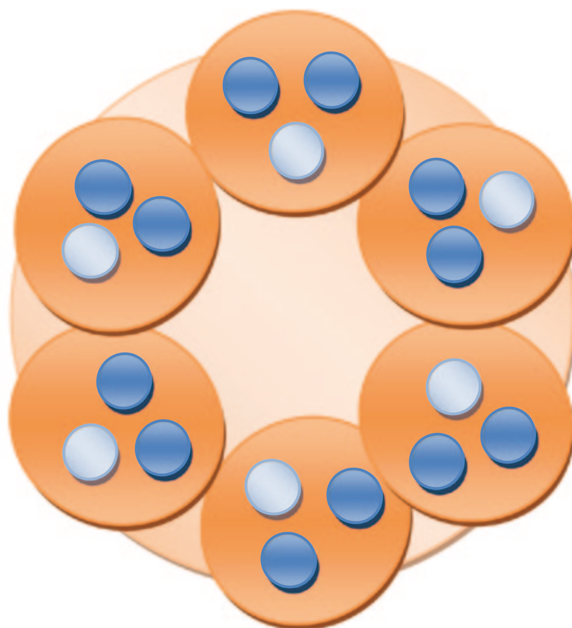

Fig. 11.5 Outer Chain Fishbowl Format

particularly at the levels of reasoning and reconstruction. Pre-service teachers found this format engaging. It provided them with multiple opportunities to ask, analyse, and respond to probing critical reflective questions (Fig. 11.5).

8.2.5 Getting in Deeper

After several weeks of moving in and out of various fishbowl formats, the pre-service teachers established proficient reflective discussion skills so we commenced shifting into the space of controversy with civility. Here we began asking the group if anyone had experienced something during their service placements that they found confronting, surprising, or unexpected. We then asked if they would be willing to explore that in the fishbowl. Most of the pre-service teachers agreed to do so.

This method enabled discussion of perceptions, preconceived notions, judgement and reciprocity. Once students described their experience, we asked them questions such as*: Why do you think that may have happened? What makes you think that? Are there other possible explanations for what you experienced? What are they? (we might invite others to propose possible explanations) What questions does this raise for you? Who at your placement could help you answer these questions?*

Using this process enabled us to coach students through dissonant aspects of their experience; helping them to suspend judgment while they explored more deeply the possible meanings of these unsettling experiences. Students became eager to share experiences they did not understand or found confronting. They became adept in questioning their own perceptions as well as those of others. The need for

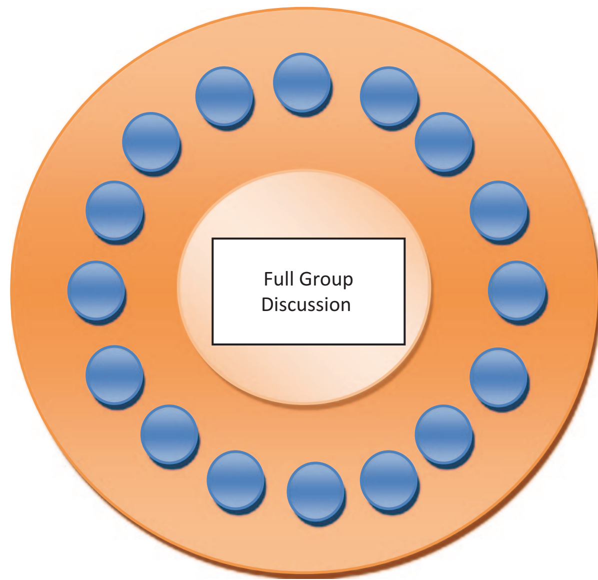

Fig. 11.6 Full Group Discussion Format

the fishbowl process disappeared as the group established safe-enough discussion parameters (controversy with civility) and questioning skills. By the end of the semester, we were having open and engaging full-group discussions (Fig. 11.6).

8.2.6 Student Comments on Fishbowling

To better understand student experiences and aid our own reflection on the Fishbowl technique, we sought feedback from students. Five students participated in focus groups with an interviewer external to the teaching team. A sixth student provided written responses to the interviewer's questions. An external interviewer was engaged so that students could be free to express any negative or critical comments they wished to share. Interview questions focused on two domains—developing reflective practice at university and developing as a reflective practitioner. Semi-structured interview questions drew students to examine the reflection activities they engaged in and whether they found them useful in completing their assessment.

For these students, fishbowling assisted them to reach deeper levels of reflection and to complete their reflection log. Some students were aware of the different fishbowling formats and the ways that their tutors had moved through them. Student A commented:

> We were given the opportunity in tutorials to express experiences, in various formations, pair, group and whole class discussions, in fishbowl activities. It enabled an innovative approach to learning, with others offering relevant suggestions, comments, considerations and feedback, that was not necessarily seen by you… [the subject had] more interactive activities that enabled the thinking/reflective process to become more in-depth.

Fishbowling increased students' engagement (Student C). It was more enjoyable "when there was more participation from the outside cause… it kept other people engaged with the opportunity to then come in if you had another thing to direct at them". Use of inner and outer circles took account of students' learning styles, providing them with "the opportunity to then come in and speak if they wanted to" (Student D). Students C, D and E found the whole group discussion helpful. It allowed "everyone … a chance to put their opinion in even if they weren't in the centre" (Student C), "And identify the reasoning that you had thought of" (Student D). They provided students with reassurance from tutors (Student E).

These students thought fishbowling would help them with completing their reflection log "because you would constantly refer back to what was said in the class and maybe it would stimulate an idea of connecting it back to your own experiences" (Student D). The reflection activities enhanced their learning as they "enabled me to underpin the differences of certain actions/programs had on particular individuals and in turn the community. Additionally, strategies I could implement in my future classroom to support my students to develop critical reflection knowledge and skills" (Student A).

This student cohort was also part of a larger study (Bursaw 2013), which focused on students' transformative experiences in Service-learning. Data yielded as part of that research indicated that students perceived a need to examine emerging issues. For Bursaw, the facilitated examination of those dilemmas and ambiguities was at the heart of the critical analysis of learning and transformation for those students. Students described the experience of examining these dilemmas and ambiguities "as being at the crux of the kinds of epiphan[ic] moments they had identified as being transformative" (p. 130).

8.2.7 Reflecting on Fishbowling

Reporting and Responding Facilitated group discussions proved a powerful tool in assisting students to reflect deeply on their service-learning experiences as well as to facilitate reflection among themselves. We learnt a lot about using the Fishbowling technique to its maximum advantage. We often switched between formats—1-on-1 to inner/outer to chain or 1-on-1, or inner/outer to free-flowing to a whole group discussion—depending on the topic under discussion and the apparent comfort and confidence of the pre-service teachers involved in the discussion. Part of our journey entailed trialling formats and finding their most appropriate use. In early sessions there is value in starting with a 1-on-1 format and moving quickly to an inner/outer circle. It then may be suitable to add chain formats to help everyone remain engaged and obtain practice. As the group matures, starting with free-flowing inner/outer circles and chain formats is engaging and can maintain the reflection. As issues begin to emerge, however, returning to inner/outer circles or even 1-on-1 formats can be powerful for taking the reflection to more critical depths before moving into full group discussions.

Relating Through fishbowling, students were prompted to reflect on their Service-learning experiences. We asked questions to help them link what they saw in the various organisations and what they were learning about inclusive education in the university subject. Students could relate their own involvement in schools to the example of the challenges of supporting a young person in a leisure program who is excluded from society. We prompted students to think about what they saw in the organisations, and challenged their personal and society values about difference through reflective questioning. The students were expected to read chapters from a textbook each week and this sequence of topics provided a scaffold for the reflection process: Relating, in tutorials.

Reasoning Fishbowling's strength is the use of multiple formats that can flexibly 'ease' students into a practice not often facilitated in classroom spaces. As a scaffolding tool, fishbowling can help students learn how to have open critical dialogue. Fishbowling is especially powerful when combined with controversy with civility to create a safe space and habituate openness to critical questioning and reflection among students.

Reconstructing The final process of reflecting involves students thinking about their future role as teachers. Such transformation has occurred through the Service-learning program, engagement with the subject content and the process of guided reflection in the tutorial activities such as fishbowling. We want our teachers to demonstrate an inclusive ethical framework for teaching (Carrington and Saggers 2008) that is not only respectful of difference but actively seeks to remedy the ongoing exclusionary practices in schools and society. This component of reflection is where we see students making strong statements about their personal teaching philosophy and clearly articulate how their Service-learning experience has prompted them to think and act differently as a teacher.

9 Conclusion

In this chapter we have discussed the use of fishbowling in conjunction with the 4Rs framework to enhance pre-service teachers' reflective practice in a Service-learning program. Reflection is central to Service-learning based on critical social theory that has as its aim, transformational learning. In considering the techniques and processes used by the teaching team, we have gained greater insights into using fishbowling. We learned that the 1-on-1 format can be used only a limited number of times and that it is best used in the early stages when developing an understanding of the discussion process. We also learned that it is valuable to move between more complex formats over the period of one or two tutorials to ensure that students develop sufficient understanding of each format and process as well as the confidence to engage in critical reflective discussion with their tutor and peers. Through fishbowling and writing their scaffolded reflection logs, the pre-service teachers became adept at questioning and critiquing their own and other students' perceptions

of their Service-learning experiences. As a result of our experiences and feedback from our pre-service teachers, we concluded that a combination of involving students in deeply critical reflective fishbowl discussions, as well as evaluating their thinking and questioning against the 4R levels of reflection, is a powerful pedagogy for transforming students' thinking about their role as teachers.

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Part III
Pedagogical Integration of Reflective Learning

Chapter 12
An ePortfolio Approach: Supporting Critical Reflection for Pedagogic Innovation

Lynn McAllister

1 Introduction

The QUT Student ePortfolio (QSeP) was first conceived, in 2000, as a whole-of-university 'tool'. It was the first institution-wide ePortfolio implementation in Australian higher education. The 'tool' has evolved to be a core QUT program. QUT was recognised as a leader in the ePortfolio field, with QSeP earning the Australian Learning and Teaching Council (ALTC) Program Award in 2010. The institution-wide status of the program is crucial as it enables ongoing, central support for program users. Support, for both academics and students, is recognised as an essential requirement that underpins the impact of the program as pedagogy, at QUT.

The current chapter provides case studies that exemplify the capacity of an ePortfolio approach to foster pedagogic innovation in higher education. Section 12.1 sets the context for the case studies that follow, providing a brief history of the development of the QUT Student ePortfolio. The potential of QSeP to enable pedagogic innovation at QUT is briefly outlined through connections to the QUT vision for learning and teaching, the notion of deep learning and the flexible model of support for users of the program. Section 12.2 presents four practice case studies. The chapter concludes with Sect. 12.3 that provides a reflection on ePortfolio support across QUT including points for sustainability of the program.

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2 Section 1

2.1 The QUT Student ePortfolio Program

The Queensland University of Technology (QUT) Student ePortfolio Program (QSeP) is premised on the belief that critical reflection is central to ePortfolio learning and central to enhancing the individual learning outcomes for all students, regardless of background. The program encompasses: (1) the ePortfolio tool; (2) policy directions; (3) a flexible mixed-mode model of engagement—the Planned Flexibility Model; (4) support from a team that consists of technical and learning staff; (5) online and print resources; and (6) workshops and training. The program guides students to reflect meaningfully on the diverse range of learning experiences, both at university, in the workplace and in the broader environment. Through critical reflective practice, students develop the ability to recognise and understand their knowledge and skills development and to plan for future learning experiences as a lifelong and life-wide pursuit. They make connections between university learning, broader life experiences, and professional and career goals and aspirations. The program is integral to the QUT learning experience. Feedback from current students, alumni, academics and employers suggests this innovative approach to learning has a positive and sustained impact on the formal learning, lifelong learning and future professional development of QUT graduates, by encouraging deeper learning.

Conceived as a whole-of-university approach, the design and development of the ePortfolio Program began in 2002 with a multi-disciplinary team selected from Information Technology Services, Teaching and Learning Support Services, Careers and Employment, and the Division of Technology, Information and Learning Support (TILS) Executive. Faculty members assumed key participant roles in the reference group. In September 2003, the University piloted the ePortfolio tool among a small cohort of postgraduate coursework library and information students. Following evaluation of the initial pilot, a second pilot expanded the project to 4000 students across multiple schools in first semester, 2004 (McCowan et al. 2005). In 2005, the ePortfolio was released to the entire QUT community of 40,000 students. At the time of initial development, three basic categories of electronic portfolios were identified from the literature: (1) structured (having a predetermined organisational structure); (2) learning (enhancing learning processes by reflection); and (3) showcase (presenting accomplishments for employment or promotional purposes) (Greenberg 2004). From its inception, QSeP was designed to incorporate each of these three categories. The online tool is a place where students can create, store, catalogue, retrieve and present experiences and activities demonstrating the development of graduate capabilities and professional standards and competencies.

The ePortfolio program has been used across all discipline areas since inception. It is available to all students. Students may engage with ePortfolio through subject-based activities or as independent activity. Graduates maintain lifetime access to the ePortfolio as QUT alumni. Academics are supported to use the ePortfolio autono-

mously to meet learning and teaching goals. While ePortfolio use is not mandated at QUT, web statistics indicate approximately 8000 new ePortfolio instances are created, annually. QSeP is centrally supported by a small multidisciplinary team within the Division of Technology, Information and Learning Support. Engagement with both the online tool and the pedagogy has developed as practitioners share practice at QUT, across the Australian ePortfolio community and through international collaboration. The purposeful embedding of ePortfolio, within subjects and courses of study, ensures that students have multiple opportunities to engage with ePortfolio learning at QUT. The broad stakeholder engagement, from the initial design phase, the central location of the support team within eLearning Services and the flexible nature of engagement, support, and evaluation have been crucial to the ongoing maturation and innovation of ePortfolio pedagogy that has occurred at QUT.

2.2 ePortfolio: Innovative Pedagogy for Enhanced Learning and Teaching

The nature of ePortfolio pedagogy is student-centred and personalised, asking students to draw on personal experiences and understandings in connecting aspects of their learning and development. It is based on critical reflection and demands that students develop critical reflective writing skills. Experience has shown that student outcomes are enhanced where the ePortfolio approach includes clear guidance in use of the online tool. Ryan and Ryan (2013) suggest that a scaffolded approach to developing critical reflective capacity is necessary. ePortfolio pedagogy, at QUT, is evolving to enhance student outcomes and is currently a mature approach centred in critical reflection or self-enquiry.

The QUT Blueprint and Manual of Policies and Procedures (MOPP) engender a culture that sets the scene for individual and collaborative pedagogic innovation particularly in the areas of work integrated learning and deep learning approaches. QUT is the University for the 'Real World' with a focus on student development in line with vocational aspirations Queensland University of Technology (QUT), (2011). Work integrated learning (WIL) is a high priority at QUT and contributes to the innovation of ePortfolio pedagogy. Recently, research has shown it is the quality of WIL rather than the quantity that is crucial; that in order to provide meaningful learning opportunities, WIL must be "reflective, embedded and experiential". Students must be reflecting on experience and must be able to apply theory to practice (Dickson and Kaider 2012, p. 64). ePortfolios and associated reflective activities have been recognised as useful in tracking the progress of a student's employability (Pegg et al. 2012).

The QUT Blueprint notes that we will "develop a range of purposeful educational experiences that inspire student involvement, effort and deeper learning" (QUT 2011, p. 5). Deep learning can be encouraged by tasks that require students "to ask questions of themselves as they are learning" (Smith and Colby 2007, p. 207), a core requirement of supported critical reflection. In the early years after implementation, interest was aroused in the 'technology' aspect of QSeP. This early

Fig. 12.1 The planned flexibility model

practice has led to more-recent academic interest in using the approach to effect pedagogic change.

Recent faculty consultation on virtual and blended learning initiatives, including the embedding of ePortfolio, indicates that academics find innovating new teaching approaches time consuming. Tight (2010) found that current academic workloads make it very difficult for academics to "pay as much attention to teaching as they would like to do" (p. 215). In the current Australian higher education environment academic workloads are already stretched between research and teaching. Academics remain, however, enthusiastic about the potential to innovate and to enhance their learning and teaching experiences. The growing interest in ePortfolio innovation, together with concern for academic and student workloads, provides impetus to review and redesign support strategies. The Planned Flexibility model of engagement has been a significant enabler, for academics and students alike, of engaging with ePortfolio pedagogy.

The Planned Flexibility Model of Engagement and Support The Planned Flexibility Model (Fig. 12.1) of engaging with students and staff developed over time. Since inception of the program, the ePortfolio team felt a flexible approach, that

is, a multifaceted approach that personalises and contextualises available support resources, could best enable ePortfolio uptake for students, academics and professional staff across the institution. While the ePortfolio team is small in terms of 'people-hours', its central location gives access to a range of expertise, such as technical, pedagogic and policy direction, which enables effective resource development. The flexibility of this strategy was formalised in 2006, with adoption of Action Research Framework (ARF) to underpin both evaluation and engagement, as shown in Fig. 12.1. The ARF cycle supports the "bringing together action and reflection; theory and practice, in participation with others" as we aim to develop the program to best fulfil user needs (Reason and Bradbury 2001, p. 1). The flexible nature of the model enables the ePortfolio team to meet changing needs of our users and provide timely, as-needs support for ePortfolio innovation across QUT. It is distinctive in its capacity to support the diverse range of ePortfolio activities across QUT. The model enables effective engagement, support and evaluation of the program. Specific examples of support resources are included in the following case studies.

3 Section 2

3.1 ePortfolio Practice

3.1.1 Introduction

The following case studies evidence ePortfolio practice at QUT. Each example outlines the subject/course context and briefly describes the ePortfolio task that students undertake for assessment in each subject/course. Evidence to suggest the deep learning that has taken place is suggested through student feedback and evidence from student work samples. Significant issues that arose and support resources required are detailed and relevant user feedback given.

The teaching teams involved in the following case studies recognised that innovating pedagogy based on the ePortfolio could help develop students as deep learners and so make the most of their learning at QUT. Reflective practice is "the 'engine' that shifts surface learning to deep learning" (Lockyer et al. 2005, p. 50) and is central to the ePortfolio approach. The ePortfolio approach is an excellent enabler of the key tenets of the Teaching and Assessing Reflective learning (TARL) model introduced in Chap. 2. Through critical reflection, either across a whole course (aligned with the TARL model), as in the Faculty of Health, or during concerted learning episodes, as in the Virtual Law work Placement (VLP) students have the opportunity to develop deeper learning. Students are challenged and supported to better understand their chosen profession, to begin to build a professional identity, to fully appreciate the significance of formal learning pursuits by connecting formal learning to previous and work based learning and experience, and to become

lifelong and life-wide learners. The student comments provided in the case studies indicate the deeper learning that has occurred as a result of the ePortfolio related assessment tasks involving critical reflection. They also indicate issues arising from the ePortfolio approach.

Butler (2007) identified common issues and challenges with ePortfolio use:

- student buy-in; there needs to be purpose for using the ePortfolio
- the need for exemplar ePortfolios
- lack of guidelines for students (usually limited reflective experience)
- potential workload increase for teaching staff
- difficulties of assessing ePortfolios
- need to learn the technology

These issues have been evident in practice at QUT and are generally managed through collaborative support strategies. Over time new issues and challenges emerge and inform support strategy development.

3.1.2 Case Studies

Science and Engineering Faculty—Bachelor of Information Technology Learning activities in this first year, first semester, introductory IT subject were redesigned to engage students in critical reflection through the ePortfolio and help them make connections between the course and the profession. The coordinator wanted to help students "*see what they wanted to be*", and what skills they needed. Teaching staff had recognised over several years that many students beginning the Bachelor of IT had misconceptions and fixed, unrealistic ideas of what types of jobs existed in the IT sector and of the non-technical skills they needed to develop. "*Some of our students think they will be sitting at a desk by themselves all day ... playing and designing games*" (IT, Tutor). Teaching staff noted that many of their students seemed largely unaware of the skills and abilities they would need to find work in the sector. This lack of awareness can contribute to student anxiety and attrition from the course. The subject coordinator recognised the need for students to understand what being an IT professional really meant.

The subject assessment tasks engaged students in exploring and investigating the IT sector, the types of workers needed by the sector and the skills and abilities required of an IT professional. They developed critical reflections making connections to personal skills, abilities and goals. The nature of this task suggests deep learning through self-questioning. Students were motivated by the focus on 'the work place' and career aspirations. The evidence developed for assessment was stored in the ePortfolio so it would remain available for students' future employment seeking. The tutors reported that student reflections indicated they had found out a lot about working in the IT sector and about the skills they would need to develop "*the [ePortfolio] exercises helped them make better Major and Minor [and whole-Course] choices ... this is crucial for first year ICT students*" (Subject coordinator).

The student centred approach of ePortfolio also met First Year Experience initiatives to help students avoid 'feeling lost with what they can and want to do'. "*…the ePortfolio wasn't hard…. I learnt more about myself … I have some of the skills*" (Student).

Issues and Support In the initial semester of the ePortfolio approach, tutors were trained so they could deliver practical sessions for the large cohort, to ensure the technology aspect of the ePortfolio would not be a barrier. Many of the students found these sessions "*a waste of time*" as they were comfortable learning the technology through the step-by-step guides. The support strategy was changed to provide online guides and optional sessions, for future semesters. Teaching staff found this more effective but noted issues with the guides not aligning with assessment descriptions and requiring further revision. "*the multi layered tutor support worked well; the drop in sessions are a good idea; next time the step-by-step guides, will need to align with the assessment requirements; the terminology reflection vs experience is confusing for the students*" (Subject coordinator). The need to provide scaffolding for students to undertake critical reflection emerged as the most pressing issue. Students found the reflective writing a challenge. The teaching approach was amended to include tutorial support for reflective writing with more-frequent submissions and feedback opportunities. The lecturer noted that students needed a structured reflective framework such as the 4Rs (adapted from Bain et al. 2002) to support reflection.

Faculty of Health—Bachelor of Nursing The ePortfolio program has driven innovative pedagogy in the Bachelor of Nursing and Master of Nursing Science (Nurse Practitioners) courses of study. The ePortfolio approach has been embedded into assessment tasks, which supports and encourages students to develop critical understanding of their development as beginning Nurses or as Nurse Practitioners and helps demonstrate, by the end of the course of study, that they meet the relevant Australian Nursing and Midwifery Council (ANMC) Competencies. This pedagogical approach challenges students to understand themselves as nursing and advanced nursing professionals.

In 2009, the ePortfolio was embedded into existing assessment requirements in the Bachelor of Nursing to try to improve students' awareness of the ANMC professional competencies prior to undertaking a third-year Clinical Placement. Students are required to enter critical reflections on clinical practice events to provide evidence of learning against the ANMC competencies for the registered nurse. The ANMC competency set was built into the online tool to help students organise content and focus reflections. The ePortfolio now underpins all Clinical Placements in the course.

Issues and Support Nursing students (typically) found the ePortfolio technology a barrier, possibly due to prior experiences with traditional paper-based clinical reflections. They were also challenged to develop a critical depth of reflective writing. These two issues require careful management to support students in the ePortfolio assessment. In early semesters, support activities focussed on lab-based tutorial sessions where students worked through each element of the mechanics of

the ePortfolio tool. They could then refer to print based guides for further direction. This was time intensive for the support team for short periods of each semester. Recent development of animated online guides has led to the lab-based tutorials being replaced by optional drop-in sessions that students may choose to attend (Academics may still request lab-sessions if desired). The online and printable guides and frameworks for reflection are accessible through the Learning Management System (LMS).

The issues encountered in students developing critical reflective writing skills required the focused support of the 4Rs framework. The 4Rs Framework for Reflection, as outlined in Chap. 2, supports students to develop an insightful and critical approach to reflection. The framework assists students to move from rudimentary reflections, which are largely descriptions of experiences, to critically analysed responses which evidence growth and learning during the placement. The subject coordinator developed exemplar reflections to help students recognise the difference between descriptive and critical reflection. Subject coordinators have observed a significant development of the critical nature of student reflections over the years, although they could still be improved. "*They are definitely thinking more carefully about their experiences and what they have learnt, ... students are not having to repeat the reflections so much ... they are of a higher standard than the first time*" (Nursing Unit Coordinator 2010).

In the early semesters following the introduction of ePortfolio use, Bachelor students only developed ePortfolio in the final year of their course. This emerged as an issue; students felt frustrated with the technology and disengaged with the idea of building an ePortfolio as it was "*already third year*". Over time, this led to the ePortfolio approach being introduced from 1st year.

Student feedback indicates they value the ePortfolio activity. The feedback demonstrates the students see ePortfolio as an activity that supports transition to practice and further professional development: "*This will be useful over my life as I can prove my competency to practice ... in case I am audited*" (Nursing, Student) (In Australia, nurses require annual registration and must be able to prove competency if audited), and "*ePortfolio has really helped me make a capstone of my degree*" (Nursing, Student).

Faculty of Health—Master of Nursing Science (Nurse Practitioners) In the Master of Nursing Science (Nurse Practitioner), students develop a professional ePortfolio as one element of the course assessment. The professional ePortfolio evidences how the students meet the ANMC Nurse Practitioner Competencies which are built into the online tool. Each student builds the professional ePortfolio using the QUT Student ePortfolio online tool in conjunction with the 4Rs framework. The Course coordinator has commented on the deeper learning apparent in the unit as a result of the targeted reflective activity in the ePortfolio: *"Their level of reflection has definitely improved since I introduced the ePortfolio"* (NP Course Coordinator 2012), "I find they are teaching each other…which is a good sign…I didn't expect that" (NP Course Coordinator 2013).

Issues and Support Nurse practitioner students are experienced nursing professionals returning to formal study. They are typically (though not always) 'not comfortable' with technology. The flexible support model enables individual, point-of-need assistance with the online tool which has been *crucial for these students to create the professional ePortfolio*.

In 2011, the subject coordinator requested development of an exemplar ePortfolio to overcome the issue of student anxiety relating to assessment expectations. The exemplar shows students a possible structure for organising the ePortfolio and also access to a range of reflective writing styles in the exemplar content (released with permission, by previous students). The exemplar was released in 2012 and has reduced the number of student emails and associated academic workload. It has reduced student frustration, which can reduce cognitive overload (Angeli and Valinides 2009) giving students increased capacity to engage with the critical reflective writing.

Students have very recently requested that the professional ePortfolio be a staged assessment requirement, across the course (rather than an end of course submission), to help them manage the task and to give formative feedback for developing reflections. The ePortfolio team and subject teaching staff will seek to develop a strategy to offset any potential increase in academic workload.

Currently, students receive an introduction to the ePortfolio program and a demonstration of the technology during the residential week at the beginning of the course. During the course, students may request 'study group' or individual assistance, as required. The animated online guides, printable guides and frameworks for reflection are accessed through the LMS. At the end of each year, the ePortfolio team meets with nursing academics to inform development of resources for the following year. Feedback from unit coordinators indicates the flexible support strategy meets current needs in ePortfolio use and informs development of resources. "*the new online step-by-step guides are essential…the whole activity wouldn't have worked without them; at this stage I wouldn't change a thing*" (Nursing, Subject Coordinator). The content of student reflections indicates students are moving from 'learner' to 'teacher' showing deep learning outcomes "*In my presentation [attached] to the FRMs, I led discussion regarding the appropriate use of adjunctive investigations … the session was well received by the registrars*" (NP Student 2012).

The ongoing innovation that has occurred in the Nursing discipline has led to wider uptake in the Faculty of Health where subjects in Social Work and Public Health courses have embedded the ePortfolio to enhance learning and teaching outcomes by helping students develop an understanding of how they meet the relevant professional practice standards and competencies. The ePortfolios provide enhanced outcomes for the students who can then use the ePortfolio content to support employment goals.

Science and Engineering Faculty—Master of Information Technology, Library and Information Studies The ePortfolio program has supported the professional practice subject in the Master of Information Technology, continuously, since the implementation pilot in 2003. It is the most mature embedding of this pedagogy at

QUT and has informed uptake across other disciplines. In the Professional Practice subject, library and information students complete a Professional Portfolio as the major assessment. Development of the ePortfolio is staged, with submissions at the end of each semester. Students receive formative feedback to help them develop their critical reflection and structure the ePortfolio. The completed ePortfolio is submitted for summative assessment at the end of the course.

Students critically reflect on events from voluntary and formal work placements, guest lecturers, industry networking events and prior units of study to develop evidence of attainment and development of the Australian Library and Information Association (ALIA) core skills and knowledge. ALIA is the professional association for library and information professionals in Australia and offers membership from student level. The assessment task develops students to transition to the formal ALIA Professional Development scheme where, as Information Professionals, they can work towards the ALIA Certified Professional post nominal status. Library and Information students played a significant role in the early development of the tool. Both academic and student users continue to inform development of the program.

Issues and Support The current assessment practice is at a mature stage after ten years of development. During 2003/2004 ePortfolio pilot project, feedback from the library and information lecturers and students informed development of the online technology to better facilitate critical reflective practice. Issues such as the technology barrier, student buy-in and lack of assessment guidelines were significant as both the tool and the approach were new. These issues were managed collaboratively through targeted support and resource development. Student buy-in was much improved in 2006, through the provision of lifetime access to the online ePortfolio space where students evidence their skills and abilities. This may support a range of purposes over the years, such as formal and informal learning episodes, career goals and professional development. In the early years, students struggled with the whole-of-course assessment and the current staged submission approach was developed to help students manage the task through regular submission and developmental feedback. (Note in the previous case study current nurse practitioner students are asking for a similar assessment strategy.)

In recent years, the library and information students are at liberty to use the critical reflective process of ePortfolio in conjunction with their chosen online space or social media. Many choose the QUT online tool as it is built within university systems that overcome issues of privacy, security, long term storage and stability. Some students join ALIA and use the professional ALIA ePortfolio. Others use blog, wiki and similar freely available software. The ePortfolio team supports critical reflection, provides guidance on use of the QUT tool and maintains and develops online animated and video resources for the Library and information cohorts.

Library and information students value the ePortfolio activity as it supports them in looking for employment and promotion. One student reported "*the ePortfolio has contributed so much to my confidence as an information professional ... I have done so much by the end of my first year ... I can really see how I can write about my skills on the ALIA core skills and knowledge set…*" (Library, Student). They

recognise the role of ePortfolio in making the most of their learning opportunities. "*Yes it's great, I can adapt the ePortfolio to my own leading needs ... into the future*" (Library, Student). "*When you are reflecting on your learning ... you remember what you have done*" (Information management Student 2009).

Faculty of Law—Virtual (law) Work Placement (VLP) In the Bachelor of Laws, the QUT Student ePortfolio supports a range of assessment activities in the Virtual work placement (VLP). The VLP is a third year elective subject designed to support students to develop an understanding of their professional area of study and also to develop a personal professional identity.

The VLP gives students the opportunity to:

1. Prepare a letter of application, resume and response to selection criteria from a job advertisement, in order to apply for employment as a law graduate;
2. Work independently, manage and prioritise time effectively to achieve goals, embrace innovation, manage change productively as it occurs and take responsibility for their professional learning and career development;
3. Complete a workplace project by being a productive and co-operative team member or leader and applying existing legal knowledge, research, reasoning, critical analysis and problem solving and workplace skills in a real world context;
4. Understand and develop the communication skills, literacies and technologies required to interact in the workplace;
5. Develop professional social and ethical responsibilities in the context of completing a team project in a real world context in the virtual workplace (LWB422 Unit Outline Semester 2 2012)

Assessment for the VLP comprises an application for placement, online discussion of participation, project report and ePortfolio entries. The ePortfolio component requires students to document, evaluate and critically reflect on their performance and development during the placement, in particular to recognise gaps in existing knowledge and skills and to develop an action plan for future development. The ePortfolio pedagogy guides and supports students to recognise and monitor their employability skills, plan for career goals, take responsibility for future learning, develop as confident professionals and set a habit for ongoing reflective practice. Students submit three ePortfolio reflections. The ePortfolio is formatively assessed by a member of the ePortfolio team giving feedback that guides the students to develop their reflections to clearly evidence learning in the work-based context and the significance of this learning; to raise awareness of the importance of developing and honing graduate or employability skills in conjunction with discipline skills and knowledge; and to articulate a plan for future professional learning and development. The final submission is summatively assessed by the unit coordinator against the criterion referenced assessment (CRA) marking rubric. The ePortfolio innovation in this unit provides students with the opportunity to increase their awareness of the legal profession and the range of both discipline specific and generic skills and knowledge required as a legal professional.

The current assessment task is the result of four years of implementation and evaluation, review and redesign. Students use the 4Rs framework to support their reflective writing. The ePortfolio assessment has been refined and the marking criteria developed in a continuous process of review. There has been evident maturing of the ePortfolio assessment, as the issue of grading of reflections has been more clearly understood since development of the marking rubric.

Student feedback as well as the level of reflection evident in work samples indicates the deep learning outcomes. "*I used the Tuckman's team model to better understand how my team was working … in future I would try a more dynamic form of meeting*" (Law, Student reflection)

> without the ePortfolio framework I could have gone through this and not really seen what went wrong … now I know what I have learnt (Law, Student)

Issues and Support Students are introduced to the ePortfolio within discipline. They access the animated online guides and reflective frameworks that can be made available through the LMS. The ePortfolio team role in providing formative assessment on the initial submission has helped manage the academic workload. "*I wouldn't be able to do this without your [team] support for the activity*" (Law, Subject coordinator).

4 Reflections on Supporting the QUT Student ePortfolio

In reflecting briefly on the current support activities, I believe the flexible model of support and the centrally located multi-disciplinary team are the key enablers of ePortfolio practice at QUT. I believe they will be crucial to the sustainability of the program as uptake increases and embedding matures across the disciplines. Being able to draw on high level strategic leadership, engage technical expertise, and collaborate with curriculum experts is significant in enabling focused support for all users—students and academics. We are able to develop technical enhancements to improve functionality of the tool, for example, creating a search function to allow academics to group students' ePortfolios by tutorial group for marking. It is very important for the ePortfolio team to be aware of projects and initiatives that could support or be supported by the ePortfolio, for example, in recent years the DRAW project, First Year Experience (FYE) initiatives, Transitions Out Project and Work Integrated Learning activities have natural intersections with the ePortfolio program. I believe having an awareness of such initiatives is a sustainability factor as it enables the team to be proactive in promoting the ePortfolio program to academics. Although it can be challenging, it is also very rewarding, "*through the ePortfolio they [students] have gained confidence with self-awareness and connectedness with the 'real world'*" (Transitions Out Project, Chair 2009).

As ePortfolio practice has matured and is aligned meaningfully with learning objectives of subjects and courses of study, lack of student engagement due to a lack of purpose for using the ePortfolio has declined. In recent years, the technology barrier

is less evident perhaps because students are more accustomed to technologies outside university. Current challenges for both academics and students relate more to contextualising the critical reflective process and reflective writing. The emphasis is now on supporting students to develop critical reflective skills. Over the years it has been challenging to explain reflection as a critical academic pursuit. 'Reflection' is often poorly understood by students who may or may not have undertaken explicit critical reflection tasks during prior formal learning experiences. The term is conceived differently in different discipline areas. I have found it helps to use the term 'critical self-inquiry' when talking about reflection with engineers and scientists. Students may be asked to 'critically reflect' or to do 'critical self-enquiry'. I would like to develop discipline-specific exemplars of critical reflections to provide students with better support models. This is just one example where projects and initiatives can support ePortfolio pedagogy. The DRAW project has developed a range of resources that have proven very useful in helping academics and students connect with 'critical reflection' in different discipline areas.

I know from supporting reflective practice over many years that students can be moved to deeper or more critical reflection by using reflective frameworks to guide their reflective writing. The frameworks ask the kinds of questions that a mentor or critical friend may do. Aristotle noted long ago that 'although able to think alone, even the wisest individual will be better able to think with the aid of others' (Papastephanou 2010, p. 450). He also noted the value of questions (preferably from a mentor) to focus reflection. The role of frameworks is to ask these questions. I know from anecdotal evidence collected during support sessions that many students begin to understand reflection when reading the frameworks. I believe that students develop more meaningful or deeper reflections when it is well supported in the discipline. They are also then very likely to use the structure of the online ePortfolio tool (the inbuilt skills, standards and competencies sets) to structure a very effective ePortfolio of evidence of their learning. Unfortunately critical reflection rarely seems to have a high priority with students as it can be very time consuming. "It is not by muscle, speed or dexterity that great things are achieved, but by reflection, force of character, and judgement" (Marcus Tullius Cicero). It remains a challenge to inspire students to value critical reflection as a powerful learning approach.

I am passionate about the ePortfolio approach as I have seen it benefit many students in different ways, helping them overcome anxieties by clarifying personal goals; plan for and get excited about learning; develop a professional persona; make the best of their QUT experience and simply increase their overall satisfaction with their chosen field. As an ePortfolio team member, I work to ensure sustainability of the approach. I think the evaluation cycle, although potentially time consuming, is worth the effort. It draws qualitative and quantitative user feedback, from multiple sites, to underpin the development of the ePortfolio support resources and technology, and this is appreciated by users. As uptake of the ePortfolio approach increases, academics are looking for greater functionality from the technology. User feedback indicates the need for improved support for large group assessment and the capacity for students to personalise the space and to release the ePortfolio beyond QUT. Development to address user-requests is planned for 2014. I believe the collaborative

and collegial culture of the ePortfolio team augurs well for the future of QSeP as context-based, focused support and development of the ePortfolio program will be crucial to supporting academics and students to realise their learning and teaching goals.

5 Conclusion

This chapter has shown how the QUT Student ePortfolio program has supported academics and students to achieve learning and teaching goals through pedagogic innovation. The background to the ePortfolio program and the flexible support model provided broad context to the case studies. The case studies were subject-based. Each case study detailed student assessment tasks based in critical reflection and using the online ePortfolio tool to develop ePortfolios for assessment. Feedback from lecturers and students as well as content from student reflections provided evidence of deep learning outcomes. The issues and challenges highlight the need for a flexible model of support to overcome barriers and develop resources that effectively support student engagement with the process. The chapter draws to a close with reflections on supporting ePortfolio practice at QUT noting points for sustainability of QSeP approach. Issues and challenges will continue to arise and require focused effort to ensure the ePortfolio learning approach leads to quality learning and teaching outcomes for students and academics.

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Chapter 13
The Social Life of Reflection: Notes Toward an ePortfolio-Based Model of Reflection

Kathleen Blake Yancey

1 Introduction

Reflection can take many forms and serve many purposes; it can also be situated in different ways. For some, it—be it self-assessment, account of process, or synthesis of learning—has been constructed as an individual activity. For others, it is a social activity that, like other forms of learning, puts individual account, perception, inquiry, and judgment into dialogue with those of others. This latter definition of reflection relies on the contexts of self and of others for the making of meaning that is unique. And yet, in many schooling contexts, particularly in the United States, curricula don't offer many sites or locations for reflection; regardless of the discipline, reflection—if it's included at all–tends to be an afterthought or a marginal activity, and even in classes where it accompanies portfolios, too often it is *expected from* students rather than *designed into* the curriculum.

What might happen if reflection were intentionally designed into the curriculum is a question I've explored for over twenty years; toward that end, I've theorized it as both practice and product, one that is both individual and social. Influenced by Donald Schön's work on reflection (*Educating the Reflective Practitioner: Towards a New Design for Teaching and Learning in the Professions*: 1987) in various disciplines—including education, architecture, and medicine—I have also theorized three "moments" of sometimes-overlapping classroom-based reflection, especially for the act of writing:

- *reflection-in-action,* the process of reviewing and projecting and revising, which takes place within a composing event;
- *constructive reflection*, the process of developing a cumulative, multi-selved, multi-voiced identity, which takes place between and among composing events; and

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- *reflection-in-presentation*, the process of articulating the relationships between and among the multiple variables of writing and the writer in a specific context for a specific audience (Yancey 1998, p. 200).

In theorizing this model, I have located reflection-in-action as an accompaniment to a given text (and all of its instantiations) and reflection-in-presentation, at least potentially, as an accompaniment to a portfolio of texts in which a student contextualizes the portfolio materials. What I had not fully located in terms of a site of practice, until recently, was the more experientially based constructive reflection, that practice linking old knowledge, new learning, and dynamic identity. Thus, although I had theorized reflection as social, what I had not done was to create a model of reflection that was very social.

Here I bring together three factors—an environmental ePortfolio, curricular design, and reflection as a regular, systematic, reiterative social activity—for two purposes: first, to explore what we might call the social life of reflection; and second, to consider how designing a social life of reflection into a curriculum changes both what and how students come to know and do.

2 The Social Life of Information: The Social Life of Reflection

In *The Social Life of Information*, John Seely Brown and Paul Duguid (2000) take up questions centering on information, knowledge, practices, processes, and learning—and how they can work together to form a learning ecology. In drawing distinctions among these terms, the authors observe first that information is not knowledge and that processes are not practices; and second, that processes, which are often outlined in the manuals that employees consult in addressing a problem, are aligned with information, with what's thought to be known about a given phenomenon. In contrast, practices, which rely on a group of workers sharing tacit knowledge about that phenomenon, both as they seek to solve a problem that has defeated process-directed remedies and as they encounter each other routinely, *transform* information into knowledge in what Brown and Duguid call "the practice in the process." In addition, they note that knowledge is different than information in three ways: knowledge "usually entails a knower" (Brown and Duguid 2000, p. 119); knowledge appears "harder to detach than information" (Brown and Duguid 2000, p. 120); and knowledge seems to "require more by way of assimilation. Knowledge is something we digest rather than merely hold" (Brown and Duguid 2000, p. 120). To show us the relationships between information and knowledge and between process and practice, Brown and Duguid provide a narrative illustrating the value of practices in an account of how copy repair-people sought to repair a "finicky machine": (Brown and Duguid 2000, p. 103). Having followed the stipulated procedure—as it appears in information–to no good effect, one representative "summoned a specialist" (Brown and Duguid 2000, p. 104), and together they

alternated between experimenting and telling stories, in these activities—characterized by collaboration, narration, and improvisation–coming to what Brown and Duguid call a

> a collective understanding of the machine. Eventually, late in the day, the different cycles achieved the collective understanding. The machine's previously erratic behavior, the experience of the two technicians, and the stories they told finally formed into a single, coherent account. They made sense of the machine and as a result could fix it and satisfy the customer. (Brown and Duguid 2000, p. 104)

Importantly, this set of practices–collaboration, narration, and improvisation–isn't limited to occasions when the prescribed remedies fail, but rather takes place routinely as representatives daily encounter each other and as they chat, in a set of exchanges that often appear to be "time wasting" but that are, instead, a reiterative practice of peers serving as "critical resources" for each other:

> The constant exchanges the reps engaged in are similar to the useful background updating that goes on constantly in any ordinary work site where people simply become aware of what others are up to because it's evident. There, too, this sort of chat usually passes unnoticed unless someone objects to it as "time wasting." Yet, though only a fraction may involve directly informing others about explicit business matters, this talk is valuable. Chat continuously but almost imperceptibly adjusts a group's collective knowledge and individual members' awareness of each other. Providing information directly is a little like the chiming of an alarm clock. This constant chatter is more like the passage of the sun across the sky, a change hard to see directly yet one that continuously reorients people to the progress of the day. The reps' chatter stood out, however, because the process view assumed that they worked alone and had adequate resources in their training, tools, and documentation. Time spent together would, from the process perspective, be non-value adding. It might at best be the sort of problem someone might try to remedy with British Telecom's canned chatter. But, as [the research] showed, the reps provided much more than comforting noises. They were critical resources for each other. The informal and extracurricular group helped each member to reach beyond the limits of an individual's knowledge and of the process documentation. (Brown and Duguid, 2000, p. 102–103)

In other words, processes provide a background against which practices can be collaboratively articulated; together they constitute a knowledge-making activity that Brown and Duguid (2000) establish as process/curriculum and a practice/extracurriculum.

Students are not workers in the Brown Duguid sense, of course, nor are they expected to solve problems in the same ways as the copier repair-people; university problems are different still, and there are good reasons for students to develop canonical knowledge. At the same time, there are parallels between this account of workers' knowledge-making and the way learning seems to work in schools and universities. Put differently, in learning and in making knowledge, both processes and practices are needed, but they function differently in different sites, one way in the workplace, another in the university site. As I have explained elsewhere (Yancey, *Teaching Literature as Reflective Practice*, 2004), postsecondary education, much like a Brown Duguid knowledge process, operates largely on the basis of a *delivered* curriculum explicated in documents articulating the school canon: catalogue copy, syllabi, assignments, and outcome statements. Students enact the curriculum, however, bringing it to life; in this formation, it's an *experienced* cur-

riculum that, like the Brown Duguid extracurricular practices, students create *in response to* the delivered curriculum.

If this comparison holds, I asked myself, even if only in terms of the heuristic value allowing us to see dimensions of education that are otherwise invisible, how might I provide opportunities for the "chat of practice" inside the delivered curriculum? And as important, how might I build in reflection as not only a text accompanying an ePortfolio, but also as a synthesizing activity that would bridge process and practice? How would I, in other words, build into the curriculum the social life of reflection?

3 Models of ePortfolios

It's commonplace in US higher education writing classes for faculty to require portfolios including reflection, especially when faculty are engaged with social constructionist pedagogies positioning students as both learning and constructing knowledge. In this context, faculty have been using portfolios for over 25 years, first in print and now, increasingly, in electronic formats. Generally, the model favored in the US is what I've called a compilation model, one that is collected, compiled, and composed at the end of the term (Yancey, "The (Designed) Influence of Culture on Eportfolio Practice," 2013); in this model reflection, rather than being a continuous, exploratory, and synthesizing practice, is likewise confined to the end of the term and often focused, paradoxically, on students' arguing that they have met outcomes whether they have or not. In contrast to that is an ePortfolio model developed in the UK for student teachers by Julie Hughes, one I've described as environmental: it provides space for working *throughout* a term as well as space for reflection that supports learning and is culminating (a model that is similar to the one described in Chap. 12 in this volume). Working with students entering college through the auspices of "widening participation," Hughes has as her specific goal assisting those who traditionally have not attended postsecondary education to succeed–as developing teachers in schools–by helping them progress in their educational program; graduate; and make a successful transition into secondary classrooms. To facilitate this progress, Julie has designed a portfolio providing a continuous online space for students to engage–with each other, with her, with the materials of the class, and with their related extracurricular activities. The purpose of the portfolio is to support student teachers as they leave college, begin working as teachers, and continue adapting in their own classrooms what they have learned at university. Hughes's choice of an ePortfolio platform supported this purpose as well since, at the time of adoption, it offered then-current cutting edge technologies for dialogue instant messaging, a blogging tool, and a texting tool—congruent with a classroom animated by a social constructionist philosophy.

At the same time, Hughes had another purpose for this portfolio: providing a continuing space for students to "document learning as it occurs" (Hughes 2009, p. 53). As Hughes explains, this second purpose expands both our understanding of portfolio and our use of it: it's portfolio as way of being and as material text.

> Eportfolio then can be seen conceptually as a way of being and of interacting as well as an artefact. The shift to genre allows us to rethink learning landscapes as the potential for reassembly and re-presentation challenges and potentially destabilises traditional notions and methods of learning, teaching and assessment which are often fixed in time and contexts and controlled by the institution rather than the individual. (Hughes 2008, p. 1)

As I planned a graduate course in rhetoric—beginning with Aristotle and Plato but focusing largely on twentieth century rhetorical theorists (e.g., I. A. Richards, K. Burke, M. Bakhtin, G. Anzuldua, H. Gates)–I found Hughes' model of ePortfolio promising. Like Hughes, I understand my classes to be informed by a social constructionist philosophy; dialogue has been a central modality in them. But I'd not used portfolios of any kind nor reflection in my prior rhetoric classes, in part, I suspect, because it seems a particularly canonical class. Typically, students have entered without any formal education in rhetoric, and typically, this will be the only class in rhetoric they will take. As important, I wasn't quite certain what purpose portfolios would serve in this kind of class. But I found myself increasingly interested in this environmental ePortfolio model, and for four reasons. First, a year earlier, I had adapted this model–with some success, I thought–for a graduate class in composition theory, and I was interested in seeing how this model might support students working with more traditional materials. Second, given that portfolios have student reflection as their centerpiece, using portfolios in the class would prompt me to make reflection an important part of the course, an addition that I thought would enhance students' learning even without the portfolio. Third, students were already thinking together in an electronic common space, our class blog, and I thought that electronic portfolios would extend and complement both space and activity. And fourth and most important, I appreciated the concept of an ePortfolio as a space where students, in Julie's terms, *could document learning as it occurs*, could use their own thinking as a source of knowledge and their thinking and learning in dialogue with others likewise. In sum, rather than defining the portfolio as a culminating site whose sole purpose was the review of past thinking, I borrowed Julie's more capacious conceptualization in the hope that this model of the portfolio would be live—that is, salient in ways the completion model isn't always.

4 The Site of the Social Life of Reflection: Rhetorical Theory and Practice

In several ways, the portfolio-based Rhetorical Theory and Practice was very like the other versions of the course that I've taught. As in other iterations, it was a reading-intensive course engaging students in complex discussions in class; it required one shorter formal assignment and one longer one suitable for a conference presentation; it included multiple informal writings, almost evenly split between those submitted to me and those posted on the blog, that together constituted a significant part of the grade (20 %). Collectively, these formal and informal assignments were intended to help students achieve the "multiple" purposes of the course:

> On one level, the course provides students with a quick historical tour of rhetoric in the western world, beginning with the ancients but focusing especially on the twentieth century. On another level, the course acts as an exercise in keywords defining rhetoric through the ages, with one set taking center stage, only to be replaced by another, only to have this set revised or reiterated or remediated by another. And on still another level, we'll consider how rhetoric helps us understand and analyze experience and events. Certainly not least, on a fourth level rhetoric helps us create knowledge. Altogether, through these lenses and perspectives–including historical, theoretical, topical, and medium-related—we'll find that both the theory and practice of rhetoric is a talisman for ways we understand ourselves as individuals, in community local, and in the world, which today means through multiple channels and in communities globalized. (Yancey 2013, syllabus)

Likewise, my assumption was that students successfully completing the course would be generalists who would have good ideas about how, when the course concluded, to pursue areas within the scope of this definition of rhetoric:

> After completing the course, we'll be able to identify general contours of rhetoric and plot how they developed; we'll be able to cite key works and key figures of the field and comment on how they talk to, around, and across each other; and we'll be able to explain what the current issues and questions are and how they are likely to influence the field in the future. (Yancey 2013, syllabus)

But given my interest in fostering a social life of reflection, this rhetoric class was unusual, more specifically because of the electronic portfolio; the blog posts; and the reiterative reflective writing keyed to three central "thought" questions defining the course.

Because the class has many kinds of assignments, my syllabus typically includes a short glossary; the first new entry in the course glossary addressed the electronic portfolio. Contrasting the way students would be likely to define portfolio, I provided a definition of our ePortfolio as a "rich thinking space." A portfolio, I said,

> *typically means a compilation model showcasing someone's work created through collecting, selecting and reflecting that is completed at the end of a given period of time—a unit, a course, a program, even a degree. In this class, we'll work in a different kind of portfolio model, an environmental portfolio providing space for you to archive work and to reflect upon it as we go. Think of it as a materially rich thinking space.* (Yancey 2013 syllabus.)

The first night of class I showed students the ePortfolio that I had created especially for the class (Fig. 13.1); and having met the class, I then posted my thinking in my portfolio-as-thinking space, theorizing on-screen about why it might be that nearly all of them walked in the door with the same understanding of rhetoric, that is, about why it is that even today, rhetoric retains a fairly narrow definition of persuasion:

> So the first night of class was interesting: each of us seems to have a working definition of rhetoric, often located in key terms created in classical times. Reading across what we think, there's an emphasis on persuasion… I wonder in fact if rhetoric retains its emphasis on persuasion, at least in part, because of its origins, especially its interest in practicing in legal and legislative contexts. But as we expand our sphere of activity, our sense of how rhetoric can be employed widens, and its emphasis on persuasion is likewise lessened. (Yancey 2013, ePortfolio)

Within two weeks of the beginning of the term, students created their portfolios as well, each sending me a link: I read them and responded.

Fig. 13.1 My ePortfolio created specifically for the rhetoric class

The homework assignments, which I call Summary, Respond, and Reflect, or SRRs for short, were also included in the glossary. When in the 1990s I designed the one-page SRR as a homework assignment, I intended it to help students and me see what students thought they had read; I often used them as a mechanism for beginning class; and I could spot check the SRRs to see how well students were reading the texts in question. I also knew how useful summary-writing could be for later, more formal work incorporating summaries. The SRR thus asked students to use one third of the assignment as a space to summarize the reading. The second third of the SRR is designed for response, by which I mean react—did you like it or not; was it confusing or troubling or affirming?—in large part because, as I've learned from students, sometimes they cannot engage with the reading until they have processed and articulated their own reaction to the text, especially if it's less than a positive one, and often in the course of that processing, students create a very different meaning of the reading. And the last third of the SRR is for reflection, which in this case is linked to connection: connect this reading, I ask, to other course readings, to class discussion, to reading and discussions in other classes, to life: make sense and meaning of the reading through reflection. Since I first used SRRs, however, I have elaborated them from a single genre into a family of genres, as my glossary explains:

SRR's come in three forms:

- First, a general SRR = Summarize; Respond; Reflect (connect to class, readings, other classes/experiences; raise questions)
- Second, a focused assignment with its own directions
- Third, a collaborative SRR, often focused on how you are reading a given text or asking you to read across two or more theorists (Yancey 2013, syllabus)

And last but not least, I'm clear about which of these assignments is individual and which is social: each one is marked, either as "Submit" to me, or as "Share," which means to post on the blog. In addition, the criteria for blogs posts are social in nature: when posting, students are to "*provide context; connect your observations/ post to earlier ones and to readings; help us all see anew*" (Yancey 2013, syllabus).

But for this version of the course, as indicated above, I created a third category, a *collaborative* share, and I organized four different collaborative groupings—each student wrote with a single partner; in a group of 3–5 colleagues; in a second group of 3–5 different colleagues; and in a different pairing—such that each person wrote with nearly every member of the 17-person class. In addition, while the early SRRs asked for summaries of single texts, the collaborative SRRs asked for analysis, interpretation, and evaluation in response to questions that are still in search of answers. For example, in response to readings focusing in Mikhail Bakhtin, students were to consider "what antecedents do you see for this view of rhetoric? How is Bakhtin like them, and unlike them?" Likewise, after having read scholars of difference and feminism, students were to put these scholars' views of rhetoric in dialogue with more canonical understandings: "What does the experience of this second population add to rhetoric; alternatively, how does it complicate what we thought we understood about rhetoric?" And in addition to looking to the past, students were also invited to speculate about the future of rhetoric: "Do the Lunsford/ Ede distinctions between classical and modern rhetoric hold? Do we need to revise them in light of Zappan's observations about digital rhetoric?" In sum, through these differentiated, often shared, and often collaborative SRRs, the course features designed the social life of reflection into Rhetorical Theory and Practice in three specific ways: in response to readings, in response to each other, and in response to our emerging definitions and understandings of rhetoric.

In designing the course for a social life of reflection, I also thought in terms of key terms or vocabulary. We know that key terms are central to a discipline (Williams 1985), and as a normal practice, my syllabi include key terms, and the syllabus for this iteration of the course did as well:

> *Key Terms* All disciplines and fields of inquiry are defined by their vocabulary, and a map of these terms, created by an expert, is a defining feature of expertise. Our key terms in this course include *rhetoric, text, polis, kairos, situation, dialectic, meaning, heteroglossia, rhetorical canons, signifying, genre, word, utterancy, digital, medium, culture, technology, knowledge, representation, epistemology, space, community, theory, processes/practices, communication, participatory, democracy.* (Yancey 2013, syllabus.)

What we educators haven't fully appreciated, however, is how important key terms are for reflection, and in the case of reflection, research has demonstrated that without key terms, students default to earlier key terms that may or may not be appropriate for the new learning (Yancey et al. 2014). Providing students with a glossary of key terms, in other words, helps them develop or expand or complicate a *language* of a field or discipline that they use to think with about the discipline. This research also shows that, much as in the case of the Brown Duguid (2000) process/practice divide, students will incorporate their own language into the new vocabulary, in this

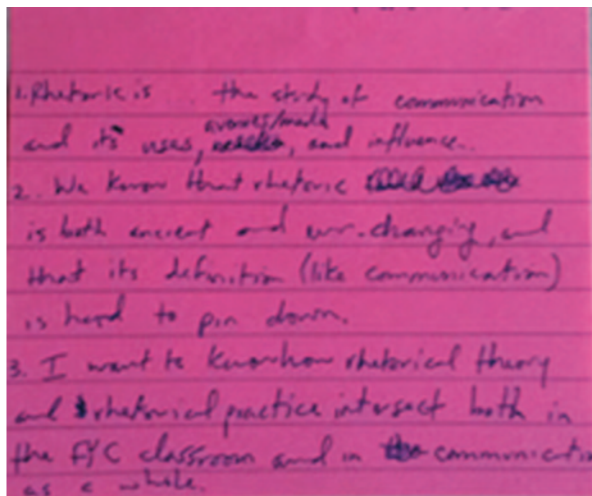

Fig. 13.2 A post-it reflection from the first class

process bringing the new terms to life in the context of prior learning, both school and non-school based. Similarly, research in ePortfolios and reflection, chiefly that of Carl Young, working with pre-service teachers ("The MAED English education electronic portfolio experience: What pre-service English teachers have to teach us about EP's and reflection, 2009), speaks to the role of reiterative practice in working with such vocabulary. As he explains:

> Another strategy for helping students develop the skill of reflection is to have them reflect upon the same item multiple times over the course of a semester, year, or program. I developed two assignments directly connected to disciplinary and professional practice that were required artifacts for all: (1) literacy statement/definition; and (2) technology statement/definition. Students completed versions of their statements/definitions at the beginning, midpoint, and conclusion of their program experience; in other words, reiteration was built into the model of reflective practice. Each time, students reflected upon the previous version as well as drew upon new material introduced into their methods courses as a means of crafting a more detailed and informed statement/definition. They also completed a final reflection in which they compared the various versions and described the experience. (Young 2009, p. 190)

For the portfolio-based rhetoric class, I didn't want to begin with statements, but rather with questions that we would return to throughout the course. To maintain a focus, the number of questions, I thought, should be limited. To prompt sophisticated thinking, each needed to be expansive and capacious. On the first night of class, I gave each student a post it and asked them to respond to three questions (Fig. 13.2):

- What is rhetoric?
- What do we know about rhetoric?
- Why do we want to know about rhetoric?

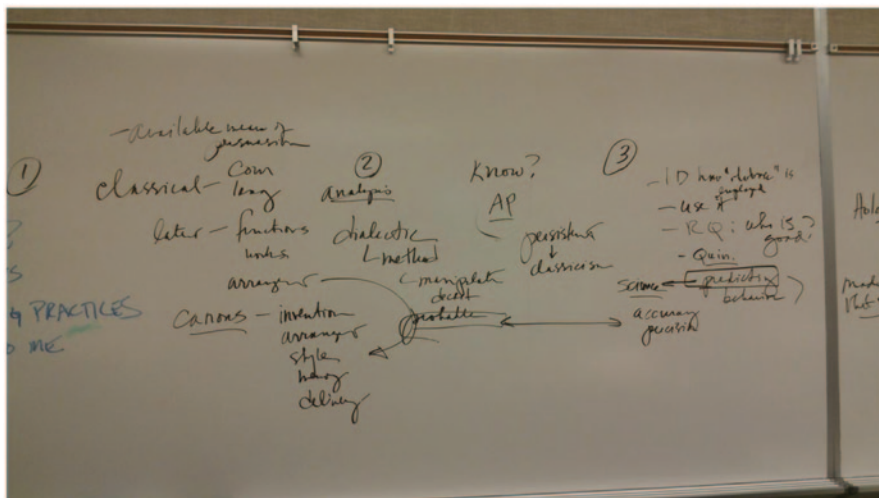

Fig. 13.3 The class whiteboard: a space for discussing student post-it reflections

After students completed the "post-it exercise," we began discussing the topic of the class–rhetoric as they defined it; what we knew about it; and why we might want to know about it—in the activity taking the individual responses to the class questions and bringing them into the social community of the class. I asked students to engage in this activity two other times, each by means of a post-it, with the post-it's increasing in size, from small to larger to large, since they would have more to share as the course progressed. And each time I responded, typically with questions of my own. In this way, then, I used the questions to frame the class as I asked us to engage in question-based discussions including individual learning and social learning. Thinking in terms of the questions, in other words, became a kind of practice, a schema and heuristic, a point of departure to which we consistently returned (Fig. 13.3).

Close to the end of the term, when students were preparing to compose a reflection contextualizing the portfolio, I asked them to use the same three questions as a heuristic and to focus on five key terms locating their sense of rhetoric as they thought in terms of the questions. More specifically, I suggested that in the ePortfolio, they would think about rhetoric generally, through its definition; would think about rhetoric through a favored lens provided by the key terms they selected; would think about rhetorical theorists and the implications of theories helping us see how and why studying rhetoric is advisable. Put differently, I didn't ask students what they had learned about rhetoric, or how they had learned, or how much they had learned–or how well–but rather about what rhetoric seemed to be to them now, how we might know that, and why, after all, that matters.

Schedule

Jan 7	Intro to course; rhetoric as key term.
Jan 14	*Beginning the Discourse* READ: **Bitzer**'s Rhetorical Situation (Bb). READ: B&H: General Introduction, 1-17; Classical Rhetoric, 17-36. SHARE: an example of rhetoric in culture (one page: ALSO TO BE INCLUDED IN EPORTFOLIO) SUBMIT: report on one journal: how does it define rhetoric? (one-page)
Jan 21	NO CLASS: MLK *Background: Where It all Began. (Anxiety of Influence; Burden of the Past and the English Poet)* READ: B&H **Plato**'s *Phaedrus* 80-87; 138-69 READ: B&H **Aristotle**'s *Rhetoric* 169-241 SUBMIT: SRRs on each of the above texts. ALSO TO BE INCLUDED IN YOUR EPORTFOLIO. Create ePortfolio and forward the link
Jan 28	*An Historical Split and Another Voice* READ: B&H **Ramus** 570-74; 674-98 READ: B&H **Astell** 841-62 SHARE: (co-author with 1 other person): What do Ramus and Astell contribute to rhetoric?

Fig. 13.4 The (linear) schedule for the course syllabus

5 Curricular Design, Curricular Consequences

A syllabus is at once an outline of a course and a contract (Swales 1990). It projects a linear path of learning, but we know that learning, like the social life of information, is dialogic, less straightforward trajectory than progressive tacking. How to fold in or weave the "chat" of practice into the delivered curriculum was my task, reflection the vehicle. In planning the course, I knew what I needed to do was not to map forward progress so much as to weave in various strands of a social reflection. Toward that end, I identified several strands of the course that I plotted throughout the course (Fig. 13.4).

- Individual work based on the canon submitted to the instructor—the SRR's but other work as well.
- Individual work shared with the community—the class; the blog
- Work conducted in pairs—on the blog and explicitly assigned and in classroom groupings
- Work conducted in collaborative groups—on the blog and in classroom groupings

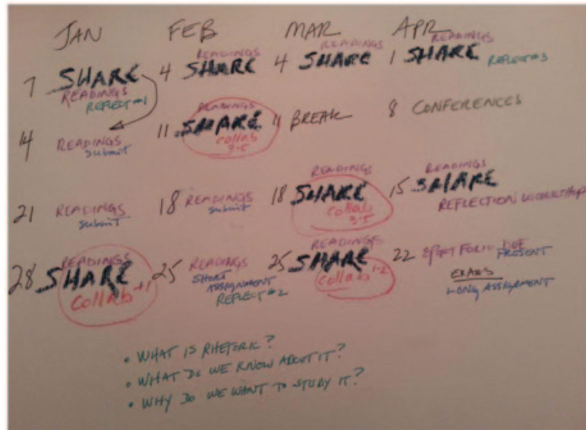

Fig. 13.5 Design notes for the class

I am not sure, however, that what I did was to plot or to weave; both are metaphors that take me somewhat astray. Plotting suggests that I know the end, weaving that both the design and use are mine. Another way to think about it is to say that the course functioned as something of a palimpsest, with different layers of activity—reading individually, writing individually, composing blog posts individually, in pairs, and in different collaborative groups, but in the context of always returning to the three central questions that were themselves interacting (Fig. 13.5).

As important, in this process, I have learned many lessons. I learned on the first night of class that these students did know something about rhetoric; they had much to learn, it's true, but they had much to give as well. I learned that, as the blog demonstrated, students had to negotiate among themselves when thinking about the contribution of different theorists or the future of rhetoric; such negotiation is sign of functioning and helpful collaboration (Burnett 1993). Sometimes, students were able to do this to good effect; other times, they reported out separately. I learned that students appreciated having a specific space dedicated to thinking and that when it was time to make sense of what they'd learned, they brought drafts to class and engaged in peer review. Nearly all of them asked me for response as well; and many of them made what I'd call unexpected connections. One student, for example, began his reflection by telling a story about a literature class that only in retrospect seems linked to rhetoric, another about how his religious background influenced what he encountered, a third how rhetoric helped her theorize her own bilingualism and identity. Others talked about useful tensions between production and analysis of rhetorical texts, or given all that had been learned in the course, the need to start over, to begin again with a new definition of rhetoric. And what I understood about this portfolio and this reflection that I'd not seen before is that the environmental model, hosting a social life of reflection, provides a place for synthesis otherwise unavailable, a place where students, drawing from the documentation of their own learning in the portfolio, can make sense of what they have learned in the context of their own interests and prior knowledge, where they can write themselves into their own rhetorical theory.

Perhaps, most important, I learned about a reflective curriculum, a curriculum *in* reflection that is *part and parcel of the curriculum in rhetoric*. In other courses, like writing, it feels more logical or congruent to include a curriculum in reflection because reflection is part of the model in that it's a part of the composing process itself, which is the content of the course. And even so, in first year composition, we are only now developing such a curriculum (see Yancey et al. 2012). But a rhetoric class in graduate school, that's a different context, and it was less clear what such a curriculum in reflection might look like. I'm not persuaded that the social life of reflection, as theorized here and designed into this curriculum, is all of it, but it is, I think, a major and significant part of it. And what I am as certain of: my theory was, and is, that the social life of reflection is located in interaction and in reiteration, that an environmental portfolio provides an hospitable place for such a life.

6 Conclusion

Brown and Druguid (2000) remind us that narration, of the kind I asked my students to engage in and of the kind I have shared here, is critical for learning: in this regard, they echo Lee Schulman (1996), whose theory of reflection involves "occluding the flow of practice" (np) and preparing to share our learning with others. We need narration, like reflection, to help us solve problems, both as individuals and as participants in a larger community, where we can "draw on the collective wisdom and experience of the group" (np). As important, reflection provides a vehicle for synthesizing such collective wisdom and experience, especially through constructive reflection, that "process of developing a cumulative, multi-selved, multi-voiced identity" (Yancey 1998, p. 200), in this case taking place "between and among composing events" (Yancey 1998, p. 200) as well as between individual and co-authoring blogging, classroom discussions, and reiterative reflections. To support the social life of constructive reflection, I designed a curriculum with both delivery and experience built into it, with reflection mediating among the lessons I hoped I was delivering and the ones that students experienced, where students engaging in a practice in the process could invent knowledge and self.

Collectively, these concepts—curriculum design, the environmental portfolio, and a curriculum in reflection—provide structure for and facilitate the social life of reflection.

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Chapter 14
Leadership Enabling Effective Pedagogic Change in Higher Education

Nan Bahr and Leanne Crosswell

1 Introduction

One thing that doesn't change in higher education is that leading pedagogical change is difficult (Southwell et al. 2008). This tends to be because academics are recruited for their specialized knowledge and are respected for their deep and principled understanding of how knowledge in their discipline is best learned and communicated. In the discipline of teacher education, of course, the knowledge is about education, teaching and learning, pedagogy, ways into curriculum, assessment, and student engagement. This tends to mean that Faculty have well-formed and concreted ideas about how best to approach learning in their courses. Leadership for pedagogical change around reflective writing in a Faculty of Education thus presents its own challenges. However, a Faculty of Education is a microcosm of the Higher Education Institution writ large. Hopefully discussion of the distributed leadership model and approach, which framed the introduction of reflective writing across our Faculty of Education, will assist others on a similar journey. We know that the imperative for pedagogical change is confronting academic teams in a wide range of disciplines.

Since the 1990's teaching and learning in higher education has experienced dramatic change, driven by unprecedented shifts in funding, wider student access, ICT development and various socio-economic factors. Universities have increasing student numbers, drawn from progressively more diverse backgrounds and who have expectations of flexible learning options and value for money. Current academic staff can be arguably categorized into the more senior staff who find themselves working in institutions that are unrecognizable from the universities of their own student days, and the ever increasing numbers of newer staff working in a context

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of rapid change, large teaching loads and amplified regulation and surveillance. Over the past decade the importance of quality teaching and learning has emerged as a key competitive factor for universities in attracting students. Teaching and learning has become a high ticket item for universities with many of them now appointing executive leadership positions to oversee it within Departments and Faculties—the Assistant Dean Teaching and Learning (ADTL). Thus, it is a common understanding that leadership is critical for creating environments capable of flexible, creative and sustainable approaches to pedagogical change (Bryman 2007; Scott et al. 2008). The role of the Assistant or Associate Dean (Teaching and Learning) is generally an appointment for someone who has shown effective teaching and learning practice. This chapter will add to the literature around the role of the Assistant Dean (Teaching and Learning) by describing the leadership responsibility and skill set that can support effective pedagogical change (Aziz et al. 2005; Debowski and Blake 2004).

This chapter will reflect on our pedagogical change experiences as a Faculty of Education team as we've worked to introduce reflective writing into our courses. Our team comprises an Executive Dean who in her engagement with staff is openly supportive of the changes, an Assistant Dean (Teaching and Learning) who works to identify champions and to provide opportunities for them to explain and influence, course coordinators who lead teams of academics to cohesively implement initiatives across their programs, and of course the unit coordinators and tutors who are charged with the responsibility of working with actual students. Pedagogical change all started with a particularized concept of leadership. Leadership for our Faculty is not directive, or transactional. We have built a distributed leadership environment (Spillane 2012), which connects with the type of leadership described by Mintzberg (2004):

> Effective leadership inspires more than empowers; it connects more than controls; it demonstrates more than it decides. It does all this by engaging—itself above all and consequently others. (p. 143)

This chapter is a reflection in both form and content. We write about the introduction of reflective writing using the reflective writing genre. We have constructed the writing as reactionary and positioned, point and counterpoint. We each respond to the topic at hand from our own position within the pedagogical change ecology. We are the Assistant Dean (Teaching and Learning) and one of the key course coordinators for the introduction of reflective writing into our preservice teacher education courses. We write from our position within our Faculty of Education that is one of the largest in Australia (approximately 5000 students spread across two campuses and online), in a metropolitan University that is also one of the largest in the nation (approximately 40,000 students on three campuses and online). As a Faculty we provide one of the more comprehensive suites of specializations in the field of education in Australia to our students. Our Faculty professional and academic staff number around 200. This chapter will consider change within this context and will discuss general leadership, pedagogical leadership, and tensions and resolutions. We write, in turn, so that you as reader can experience our two positioned lenses on the issues underpinning the introduction of reflective writing in our Faculty.

2 Leadership

2.1 ADTL Reflection

I believe that the leadership of the Assistant Dean (Teaching and Learning) (ADTL) is a vital element for all aspects of course development and implementation. I reflect here on the theme of leadership for teaching and learning in higher education, from the perspective of my role as ADTL for our large Faculty of Education.

As a leader in Higher Education, I see the ADTL role as a little unique. While I am responsible for teaching and learning quality, I have no part in direct line management of the contributing parties. Some research has painted the ADTL role as focused strongly on curriculum leadership (Southwell 2008), but in the case of promoting and supporting reflective writing as a key teaching and learning approach, the ADTL role extends to leadership of pedagogy, assessment design and implementation, and the nurturing of an effective community of practice that binds academics who contribute to an academic program; the academic team.

The cohesion of the team needs to be held both in time, and across time, to ensure program goals are systematically attained. The program goals that I have always set my sights upon have been high-level quality assurance, clear outcomes visioning, and an entrepreneurial approach to pedagogical innovation. I see these outcomes as a product of collaboration, support and gentle influence. That is, they arise from distributed leadership and concertive action (Gronn 2000).

In academic circles, leadership is often defined in terms of research impact factors, or industry consultation reach. An academic may be described as “a leader in the field”. This Academic leadership is not the same sort of leadership required of an ADTL. Academic leadership is not usually seen as a responsibility to others at a personal level. Academic leadership qualities include critical thinking, scholarly insight, command of the field, and publication rates. Academic leadership is, therefore, an attribute or suite of attributes that can be measured through productivity rates and the quality of that productivity. As ADTLs are senior academics, they also require these attributes, but these do not have purchase when considering leadership for teaching and learning. The leadership for pedagogical change is simply not like that. As an ADTL, I draw on the principles of distributed leadership and concertive action as described by Gronn (2000) to engender a quest for enhanced pedagogy and a team approach to pedagogical change. That is, the ADTL leader provides the impulse for people to work together to form and work to shared goals. The leader will need to identify and rely on distributed pockets of expertise to frame the pursuit of these shared goals. This relies on a broad footprint for formal and informal communication, and continual farming of ideas and showcasing of innovation.

Distributed leadership is established when an ADTL can enable an open culture. I have endeavoured to provide a series of events and workshops for academics to consider each other’s approaches respectfully. I have constructed teams and hosted their meetings. Academics are included in forums where they are encouraged to openly reflect on their approaches and work together in small teams to plan sequences for teaching and learning connecting the innovative ideas together and

providing ideas for each other. Their contribution to the sequence of study was deprivatised as academics discussed the course outcomes, threshold standards, and graduate watermarks. My role as ADTL has been to highlight key desired outcomes and then to host and cultivate the discussions and designs for teaching and learning.

In some ways the individual is lost to the team when distributed leadership and concertive action is employed. I see the ADTL leader as being responsible to the academic team and to the student experience. In turn, the academic team members are responsible to the course learning sequences and to their students. This is unfamiliar territory for many academics who tend to have a very individualized approach to their work, and are openly rewarded for it through promotions processes and various esteem measures. There is often a feeling that they, as resident experts, should row their own boat for teaching and learning in their units. They may have responsibility for the subject matter of their parcel of knowledge and to their students, but they may not feel connected to the work of other academics who may contribute across the course of study for a student cohort. Team work across a course is hard to engender. It does not come naturally to entrust other academics to lay the foundation for, or to continue work with reflective writing. But this trust and collaboration is vital to enliven the growth of reflective writing developmentally. I believe the employment of distributed leadership and concertive action is fundamental here.

For the reflective writing venture in our Faculty, leadership involved a statement of vision that was made public in a variety of ways. Some of these included Chair's reports to Teaching and Learning committee, project updates at Faculty and Course leadership team meetings, hosted workshops and showcases on the theme of reflective writing, identification of units where reflective writing would fit and enabling the unit coordinators to talk about their approaches. Basically the idea was to profile the fact that something was expected and to provide opportunities for academics to learn from each other and to share their initiatives. Individual catch up sessions with each course and program coordinator involved a discussion of how reflective writing was working in their courses. This was a comprehensive multipronged approach that aligned to the basic premise of distributed leadership, which is fundamentally that the vision is set and all members are responsible for designing their path to achieving the vision. The players needed to see themselves as part of a team but with space for their own expertise to frame their work. Each course coordinator needed to see that they were responsible for supporting their course team to provide cohesive and connected development for students through their teaching across the programs. In my view, this is important for sustainable and enduring influence.

Essential for this particular initiative has been the identification of champions. These champions needed to have overall ownership of the project, needed to have unquestioned expertise in the area, and needed to be proactive in development and dissemination of ideas to support the initiative. In the case of this reflective writing project, the champions self identified and convinced me of the value of their project for introduction across the faculty. Effective engagement with reflective writing in teaching and learning was rewarded through simple public acknowledgement and comment through line managers for individual academics.

One of the key burdens of the ADTL is providing leadership for the development of teaching capability. It is not sufficient to say to people that something is a good

idea and they should embrace it. The ADTL must provide opportunities for individualized support and advice in a way that doesn't undermine acknowledgement of the specialized expertise of each academic. For this project I relied heavily on the champions to conduct workshops, online discussion forums, and small team meetings. The champions published prolifically and their materials were announced and made available across the Faculty. An adviser (Learning and Teaching Developer) from the Faculty Teaching and Learning Office worked individually with academics to help them to design their assessment and to ensure that there was a platform of assessment for learning in each unit. This multifaceted and distributed leadership model was particularly effective in maintaining relationships across the Faculty while relentlessly moving the Faculty forward with the pedagogical initiative. This approach engendered a sense that this was a shared venture rather than a directive that required compliance.

2.2 Course Coordinator Reflection

I am course coordinator for Graduate Entry teacher education programs to prepare students as teachers for Middle Schools, Primary and Secondary contexts. I am also a unit coordinator for elements of these courses that prepare students specifically for their field placement blocks, and evaluate their demonstration of achievement of professional standards for beginning teachers. My courses comprise 8 units in a year of study for students who are already graduates from a first degree that was not in the field of education. This means that my responsibilities involve working with and leading up to 20 academics (sessional and full time) in the conduct of the programs. Our engagement with reflective writing culminated in a capstone unit *Teachers as Reflective Practitioners*, a part of which required students to draw together their reflections across the course to support their demonstration of growth and achievement against the professional standards.

I expand on two of the key points raised by the ADTL about her leadership approach in our Faculty. Firstly, the role of the ADTL as critical in creating an environment that facilitates a collegial team approach to leadership within the faculty. Executive leadership is a significant enabler in ensuring effective and widespread uptake of any teaching and learning reform (Debrowski and Blake 2004). The ADTL acts as an enabler of pedagogical change by establishing a collegial and capable community, as well as being able to effectively exert influence at various levels across the faculty. To effectively embed a consistent approach to pedagogical reform, such as a faculty wide approach to reflective writing, it is critical to have a broad sense of learning community that values the reflective writing process (as established by the ADTL). It also requires the program coordinators to ensure that there are common processes and approaches throughout programs that support students to move from foundational skills to more sophisticated ways of undertaking reflective writing.

Secondly, the ADTL has discussed the importance of the team and the distributed leadership through the team by the ADTL. This team is comprised of academic staff

appointed to coordinate programs for individual degrees (program coordinators) and lead the various teaching staff in each program. One of the key challenges for bringing about effective and sustainable pedagogical change is the capacity and level of leadership skills of the program coordinators. This team often consists of academic staff with little prior experience in leadership in higher education contexts. Furthermore, this program leadership role will just be one element of their overall professional responsibilities. Research indicates that there are little formal programs to support the development of leadership skills in learning and teaching contexts (Aziz et al. 2005; Debrowski and Blake 2004; Montez 2003; Yielder and Codling 2012). These staff seem left to rely on their own intuition and those surrounding them to guide their leadership processes and decisions, and often take a 'just-in-time' as well as a 'just-for-me' approach to developing these leadership skills (Scott 2006). Thus, in many Faculties the ADTL who does not have a line management of these staff, plays a significant mentoring and guiding role in developing leadership skills and attitudes for this group (Scott et al. 2008).

I have used my team meetings, individual catch ups, and demonstrations of my own practice to entice and support my team as they have experimented and developed their capabilities in using reflective writing in their teaching. It has been vital that my team have identified the Faculty champions and the wider web of support for them to find their own way in their areas of specialization. This approach has helped us to grow a shared venture with respect for our own pockets of expertise.

3 Pedagogical Leadership

3.1 Course Coordinator Reflection

Pedagogical leadership is a concept that in its very name identifies two key actions of teaching as an academic. While pedagogy is commonly defined as the method and practice of teaching, the wider educational field considers it to be a more complex and contested concept. Pedagogy, in its broadest sense incorporates the epistemological, socio-cultural and moral aspects of what is learned and why it is learned as well as encompassing the decisions made about the enculturation of learners within a context (MacNeill et al. 2005). Pedagogical leadership aims to engage and influence others in their pedagogical choices, with the intent of improving learning for students. In the previous section we discussed leadership in higher education in its more general sense; in this section we will unpack pedagogical leadership in regards to pedagogical reforms, including a focus on reflective writing practice.

The ADTL has pedagogical leadership responsibilities for the entire Faculty teaching and learning vision, directions and alignment. At the next level of leadership, the staff who are responsible for the individual degree programs are often referred to as program coordinators. They lead the implementation and review of

each program and are responsible for aligning the teaching teams practice with the core teaching and learning vision of the Faculty. Importantly, while the program coordinators work closely with the individual unit coordinators and their teams of tutors, they do not control pedagogical choice at the unit level. Instead they need to 'lead' through suggestion, feedback and influence. The unit coordinators at the 'chalk face' ultimately make the pedagogical decisions about how and what content will be taught and what pedagogy will best serve the current cohort of learners at a unit level. Unit coordination is a role that is usually allocated to academic teaching staff with core discipline expertise required for the unit, not necessarily with any previous experience in pedagogical leadership. In fact, until recently it had been commonplace in Australia for new academics to have little or no expertise in teaching and learning in higher education contexts—let alone be strong leaders for pedagogical reform. Thus, to ensure a systemic approach to pedagogical reform the program coordinators need to take an active and ongoing role of working with each unit coordinator.

As a program coordinator I most commonly work with unit coordinators as they implement units and respond to student and teaching data after each teaching cycle. Over the past years I have seen a spike in the use of reflective writing as assessment tasks. Problematically, some of these reflective writing tasks are presented to students without scaffolding or clear expectations (Ryan and Ryan 2013). Without these critical elements it is highly unlikely that student work would demonstrate metacognition, critical thinking or deep learning. If reflective writing tasks are to develop critical reflection and transformative learning for students, then reflective thinking and writing skills need to be explicitly taught (Finlay 2008; Maarof 2007). Additional to this, tasks need to be thoughtfully scaffolded with carefully constructed prompts (see Carrington and Silva 2010; Moon 2004; Ryan and Ryan 2013). Thus, for units that use reflective writing as assessment I ask unit coordinators where the unit explicitly teaches the required skills to ensure quality student thinking and learning outcomes. The sorts of questions I have my unit coordinators consider include:

- *How* will the learners reflect?
- What *depth or level* of reflection will the students be expected to demonstrate?
- What *developmental stage* of the overall program be the students?
- What *previous skills or models of reflective writing* have the students used?
- What are the *resources* available to support student writing and learning?

These questions have helped academics in my teams to make their ideas explicit and thereby enabling others in the course implementation to align their practices providing a much more cohesive and developmental experience for students. It also enabled us to engage in meaningful discussion regarding the value of reflective writing in the development of an effective professional. I was able to support these discussions with resources that argue that case convincingly (e.g. Boud and Walker 1998; Branch (Jr) and Paranjape 2002; Carrington and Silva 2010).

3.2 ADTL Reflection

Reflective writing is not a favourite for many academics for their teaching and learning approaches. Far too many assessment submissions are superficial, pedestrian, and descriptive. The deep and critical engagement of students in the reflective writing process is often lacking and this clouds the value of the approach as a legitimate platform for the demonstration of disciplinary high order thinking. Of course the problem here is that the students have not been appropriately developed in their reflective writing. They have not been effectively introduced or nurtured. The academics are unable to see the deep value, because they have not seen the benefits of appropriate and consistent teaching and learning investment. This presented as a key barrier for the introduction of initiatives around reflective writing in teaching and learning.

For this project, pedagogical change depended upon two things:

- Leveraging expertise,
- Vision without constraint.

In order to ensure buy in from across the Faculty, the right expertise needed to be communicating the key ideas for reflective writing. As discussed, champions were essential to the success for the project. There are many types of pedagogical initiatives that need to take hold as we embrace change in higher education, and the ADTL will not be a recognised expert for each of them. As an ADTL it is vital that I leverage expertise for any desired change. It would be ineffective to try and assert my own expertise where it wasn't recognized. I feel I have a responsibility to be informed, and to provide a conduit for communication, but not to claim the expert champion mantle for the project.

I believe that my ADTL role requires me to provide vision without constraint. For reflective writing, my vision was that we would have a cohesive and developmental approach to reflective writing built into pedagogy and assessment across our courses. I asked that team leaders should engage with the champions for support through individual contact and engagement with the wide variety of forums that were conducted. This was the extent of my influence and I consider it to have been 'without constraint' in that I did not dictate how the vision would be achieved. I didn't tell academics what specific pedagogies or assessments they should use, and I didn't tell them how to engage with the champions. I believe that this is an approach of respectful influence. I certainly provided feedback on successes using the quality assurance and course evaluation data that is collected across the semesters, and I provided an ear for those people who were not so successful in their innovations. I believe that this approach has worked well, as we have effectively established reflective writing in a developmental framework across all of our courses, and all academics appear to be embracing the vision.

4 Tensions and Resolutions

A number of key tensions can arise around the use of reflective writing in university contexts. This is hardly surprising given the lack of clarity about what reflective writing actually is, what it is being used for, as well as the sophistication of the processes involved (Finlay 2008). Some of the concerns emerge from the perception that reflective writing is mere naval gazing, requiring low-level uncritical intellectual engagement and unconnected to theoretical frameworks. Certainly poorly constructed reflective writing tasks will result in superficial description of practice or self-justification of certain approaches that fail to critique practice and practitioner assumptions (Loughran 2000). Not having a clear structure or even establishing a less appropriate model serve to diminish the impact of undertaking reflective writing. For example, taking an instrumental or mechanical approach (such as using a checklist model) does not encourage students to work through their own "uncertainties, questions and meanings" and can serve to reinforce dominant socio-cultural assumptions and practices rather than developing innovative and critical thinking professionals (Boud and Walker 1998, p 193). Arguably, it can also create a dangerous belief in students that undertaking reflection is a simple and unchallenging task. As the other authors in this publication have demonstrated, well-constructed reflective writing tasks are powerful devices for examining and transforming practice and creating opportunities for deep learning. Convincing my team of this has involved personal support, gentle coercion, and acclamation for innovation, providing forums for sharing and learning, and dissemination of evaluation results. The distributed leadership approach has extended to me and has framed my engagement with my team. We have come to agree that reflective writing requires explicit teaching and development, connections and development across a course of study, models and exemplars, and an active disinclination to descriptive discourse. We have also come to agree that reflective writing is an essential component of development for a job ready professional in the field of education.

Conclusion

Distributed leadership has been the backbone for innovation across our Faculty's venture into reflective writing. We have learned that connection with expert champions in an environment of team sharing builds shared understanding and a clear vision. The impact of having a clear vision 'without constraint' has enabled specialist academics to bring to bear their own expertise in teaching and learning for their field while ensuring they are working toward a cohesive and developmental experience for students across their course of study.

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Chapter 15
Sustainable Pedagogical Change for Embedding Reflective Learning Across Higher Education Programs

Michael Ryan and Mary Ryan

1 Introduction

The Developing Reflective Approaches to Writing project (Ryan and Ryan 2012) advanced a systematic, cross-faculty approach to teaching and assessing student reflection in higher education. A starting point was the conceptualisation of a *pedagogic field* for reflection where dimensions of pedagogic choice were represented. The resulting model, Teaching and Assessment for Reflective Learning Model (TARL), which we elaborate in Chap. 2, is a flexible framework to assist such choice by university teachers in different disciplines and at different stages of a program. While such a model, along with the associated pedagogic pattern language, may assist individual university teachers and their units of study, it is insufficient in itself to sustainably influence the teaching that might be embedded across a whole program[1].

The purpose of this paper is to outline an approach where pedagogical change around student reflection is integrated into the design and operation of a whole university course. We have named this model Embedding Pedagogical Change (EPC). As such, this paper serves to complement earlier project work by supplying the means for the development of student reflection on a wider scale. Although the two models (TARL and EPC) act on different levels of time (years rather than semesters) and scope (whole programs as distinct from discrete units of study) they are connected by some common processes, such as the production of pedagogical patterns.

[1] We use the term 'program' to refer to any course of study that extends over multiple semester-long subjects. Typically university programs are measured in years of undergraduate study.

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This paper will provide an argument for, and a representation of a model for holistically and sustainably embedding pedagogical change around student reflection. It will begin by characterising general issues around curriculum development in higher education. The pertinent problem of embedding pedagogical practice into a course, particularly for high-level dispositions such as student reflection, will be highlighted. A concise literature review provides the grounding for a preliminary model. The methodology section describes data collection and analysis methods that were used in an attempt to validate the preliminary model within the bounds of a case study defined by the project's scope. Incorporation of this analysis into a revised EPC model will be represented graphically with two time-based perspectives. Finally, a discussion of issues around the implementation and further validation of the EPC model will conclude the chapter.

2 Characterising Curriculum Development in Higher Education

Universities tend to be very stable organisations and are inclined to resist change, particularly of curriculum and associated pedagogical development. The reasons for this stability are varied, but Evans and Henrichsen (2008) single out university cultural factors as being responsible. In particular, Rae (2007) points to deep-seated cultural and organisational factors of universities, which act as barriers to curriculum development and reform. While discussing the changes required for "employability" to be embedded across the curriculum, he observes that these factors combine to frustrate such initiatives. Universities tend to have dis-aggregated management models with different agents acting across organisational units or within educational programs, often working in isolation with a consequent reluctance for any one group or person to take on responsibility for reform. In addition, Rae suggests that universities tend to be introspective, especially towards academic discipline concerns, and this tendency also acts to resist broader initiatives.

"Employability" is just one of a number of broad initiatives currently calling for curriculum reform in higher education. Others include creativity, collaboration, information literacy, and of course, the focus of this chapter, *student reflection*. Knight (2007) labels such a group as "wicked competencies", because their integration into academic programs is especially problematic. A "wicked problem", is described as something that resists a definition, involves people with contrasting world views, has changeable constraints, and is rarely "solved" in the traditional sense (Rittel and Webber 1984; Conklin 2006). Jackson (2006) discusses the complex problems of integrating creativity into the higher education curriculum, and notes that creativity is rarely explicit, tending to be treated instead as "omnipresent". In addition, creativity is hard to define, includes contrasting perspectives and is only apparent in variable contexts. Dixon (2011) likewise describes collaborative learning as a wicked competency.

Wicked competencies may be addressed, at least in broader terms, by simultaneous treatment across major component parts. To tackle the problem of embedding employability into university programs, Rae (2007) recommends the adoption of such a broad holistic approach. In a different field, Jackson (2006) suggests three avenues for embedding creativity: establishing an imaginative curriculum; providing sympathetic leadership; and supporting the ingenuity and persistence of committed teachers in pedagogical change. Even this decomposition of the problem into three parts is not without difficulty. Barnett and Coate (2005), in their plea for general curriculum reform in higher education, argue that even the notion of "curriculum" is not well understood. Similarly, in an Australian context, Hicks (2007) argues that where the "curriculum" term is employed, it is usually limited to discussion around content or as part of some other agenda. But Hicks believes that, as a holistic concept, "curriculum" has significant unifying potential in higher education, particularly in the case of embedding generic teaching and learning improvements into courses.

While high-level competencies, such as reflection and critical thinking are highly valued as graduate capabilities (Oliver 2011) and increasingly codified in professional standards of many disciplines (see, for example, DEEWR 2011), obvious issues arise when attempting to reform relevant curricular to incorporate them. Wicked competencies require a coordinated and systematic approach, yet university cultures tend to resist change in these terms.

3 Theorising Pedagogical Practice in Higher Education

Teaching in higher education has undergone significant transformation due to a variety of influences including: increased accountability; shifts in social and economic conditions; the emergence of new technologies; and the development of better understandings of how students learn (Light et al. 2009). With these changes has come a renewed interest in how university teachers develop their pedagogical craft (Laurillard 2002). At a practical level, Carr and Kemmis (1983) introduced action research as a model to represent the continuous refinement of practice that teachers engage in. They advocate progressive cycles of planning, acting, observing and reflecting to improve teaching practice over time. While practical action research can be used to represent professional activity for continuous improvement, two sub-domains of pedagogical practice, *curriculum* and *technology*, are particularly significant.

The concepts of pedagogic discourse and recontextualising discourse developed by Bernstein (2000) offer a useful way of looking at the relationships between discourses of subject and content of pedagogic practice (what is to be taught—the curriculum) and the theory of instruction (how it is to be taught, and the rules that govern this). Any reform agenda must account for these relationships during implementation, as these are highly contested spaces in higher education. Pedagogic discourse is the set of rules for embedding instructional discourse in regulative discourse. It

is a principle rather than a discourse, in that it selects and creates specialised pedagogic subjects (instructional discourse), and embeds these within a moral discourse of social order (regulative discourse) (Bernstein 2000). The instructional discourse refers to knowledge and skills of various kinds and their relations to each other, for example the selection, sequencing, pacing, elaborating and evaluating of knowledge and skills (Singh et al. 2005). The regulative discourse orders the conduct of teachers and students—what is allowed or expected of each party entering pedagogic relations. Pedagogic discourse then, is the process of delocating a discourse from its original site of effectiveness (e.g. the disciplinary field) and relocating it to a pedagogic site (e.g. the curriculum, the tutorial room). During this transformation, a gap or a space is created, in which ideology can play (Bernstein 2000). Pedagogic discourse is thus generated by a recontextualising discourse. This recontextualising principle creates recontextualising fields, with rules of access for agents with practising ideologies. This principle is crucial in determining levels of autonomy in education. Bernstein distinguishes between the official recontextualising field (ORF) constituted by the state and its selected agents and departments; and the pedagogic recontextualising field (PRF) consisting of pedagogues in schools and universities, specialised educational research journals and professional organisations. Levels of autonomy in university teaching depend upon the effect that the PRF can have on pedagogic discourse, independently of the ORF.

University teachers are subject to a variety of ORF imperatives encompassed by the 'curriculum', whether it appears as formal textual statements (e.g. course/program accreditation guides), or as broader directives of government and professional regulating bodies (e.g. professional standards). When course and subject designers transform these imperatives from different curriculum sources into teaching programs, student activities and materials, they are in the process of forming a specific 'pedagogical discourse' (Bernstein 2000). As such this can be a contested space within and between academic groups and departments trying to exercise control over content and form of curricula and pedagogy. This is high-level communicative activity involving complex operations of de-locating, re-locating and re-focusing the provided curriculum in ways that are suited to a specific group of students within a unique instructional setting by staff with particular ideologies. This recontextualisation process involves higher education teachers in a continuous refinement of their teaching work and an ongoing struggle for autonomy. Importantly, the ways in which these pedagogues use the spaces or gaps that are created in the transformation process, can determine the success of any pedagogical or curriculum reform agenda. For example, in practice, a university may introduce a broad initiative (e.g. work-integrated learning, reflective writing, etc.) and require inclusion into the curriculum. However, implementation is a different matter, because a considerable amount of recontextualisation and potential contestation over the control of the rules of pedagogic practice may occur. That is, what counts as successful pedagogical practice, and how this is implemented, form part of the pedagogic discourse that is created by all of those entering this pedagogic field. Thus, it is crucial to account for the power and trust relations between these parties, and their individual ideologies in any model of sustainable reform.

University teachers must also work within a technological setting that engages them in similar high-level interpretative activity. But this time, the imperatives are embedded in technologies rather than within (curriculum) texts. For example, a university may require that teaching be conducted virtually, through a course management system (CMS). Such a technological imperative places constraints on, and opens opportunities for, the pedagogy that may be adopted. In general, people often re-purpose and customise technologies to suit their needs. Feenberg (1998) describes this autonomy as "reappropriation" and argues that it occurs because the designers of technologies rarely anticipate the scope of practical use. This is especially apparent when a technology conceived outside educational boundaries is reappropriated for pedagogical purposes (e.g. using a social networking application like Twitter in a teaching and learning context). The key point to be made here is that reappropriation of technology necessarily engages a teacher in continuous refinement of their practice. For example, a digital video camera may be used to capture performance of a student in order to stimulate reflective writing. It is likely that considerable reappropriative effort would be required by a teacher-designer before this technique was included into their teaching repertoire, particularly if their class was large, if video content preparation was complex and/or if the students were largely unskilled.

The two processes we have discussed above, recontextualisation and reappropriation, are similar because, even though they operate on different sources (curriculum and technology), they both require high-level interpretative work and ideological 'buy-in' for effective pedagogical design. Because of this, they involve university teachers in pedagogical refinement that is progressively iterative as the action research representation suggests. Rarely are curriculum imperatives or educational technologies made available that don't require such careful and extended treatment. Further, recontextualisation of curriculum and reappropriation of technology are processes that require agency on the part of the teacher and course designer. This agency is exercised within, and influenced by, the limits of the field of production of the discourse. However the possibility of the 'discursive gap' (Bernstein 2000, p. 30) or 'margin of manoeuvre' (Feenberg 1998) can open up alternative possibilities and can change the power relations at play within the field. For this reason, pedagogy, and the power and trust relations between pedagogic stakeholders, hold central positions in the model that follows.

4 Different Dimensions of a Curriculum Integration Model

In this section we trace the development of a preliminary model in order to characterise the fundamental domains and processes associated with the task of embedding student reflection across university courses. The model developed here was preliminary because it preceded validation in the field and was subsequently revised into a more complex one.

Because the teaching of wicked competencies is best handled in a holistic manner, the work of Shulman (1986) provides a good starting point. In the field of teacher education, Shulman identified two significant sources of knowledge about teaching: pedagogy and content. Rather than treating each separately, he argued that expert teaching involves working holistically, at the intersection of these knowledge forms. For example, using this model, student reflection would not be taught separately as an isolated skill, but would be integrated with content (or discipline-related) learning activities. This holistic approach, (labelled PCK) has more recently been refined to include the role that technology plays in teaching. Mishra and Koehler (2006) introduced Technological Pedagogical Content Knowledge (TPCK) as a general model for expert teaching practice because of the increased prevalence of knowledge about technology in contemporary instructional contexts. They argue that this representation works because it captures the dynamic and transactional relationships between the three components. A study of these relationships is key to our emerging model. We propose that Bernstein's recontextualisation (at the boundaries of curriculum and pedagogy) and Feenberg's reappropriation (at the boundaries of technology and pedagogy) can be identified as significant and parallel representations that can be productively incorporated into a model of pedagogical change for university teachers.

As we have argued, university structures, such as courses, are generally resistant to change. So it is useful for a model characterising pedagogical change, to strategically locate forces that might sustainably promote such reworking. In a review of models concerning organisational and pedagogical change in higher education, Evans and Henrichsen (2008) identify top-down, bottom-up and incremental approaches. Fullan (2003) critiques bottom-up approaches for their lack of scalability. In contrast, Evans and Henrichsen argue that purely top-down (or managerial) approaches are likely to meet resistance and rejection by practitioners. They promote a mixed approach, based on long-term strategic incrementalism after Cuban (1999), where strategic long-term goals are established (at the "top") in parallel with incremental operational work (from the "bottom"). In the preliminary EPC model these imperatives are represented as arrows emanating from both the course leadership and practitioner levels. The negotiated resolution of such mixed imperatives remains a challenge for the sustainability of pedagogical change around student reflection.

Dancy and Henderson (2008), when discussing Science, Technology Engineering and Mathematics (STEM) teaching in higher education, observe that curriculum reform and resource development are insufficient in themselves to carry effective pedagogical change. They argue that *participatory* pedagogical development by teaching practitioners can lead to the better understanding needed for improved outcomes. Such collaborative activity by university teachers represents a challenge for there are many impediments to its formation. However, an approach based on the ongoing refinement of pedagogical patterns (McAndrew et al. 2006) at least provides a tangible focus for on-going pedagogical development. The refinement of pedagogical patterns by a group of course practitioners can be recognised as a

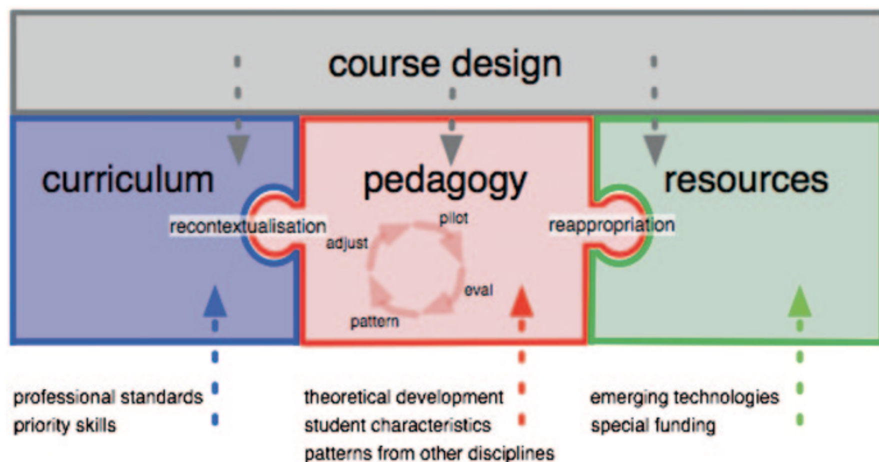

Fig. 15.1 The preliminary EPC model

distinct phase in an action research cycle of development. This helps to ensure that initiatives (such as student reflection) remain embedded in a course.

The preliminary EPC model was constructed in order to account for a variety of approaches thus identified. Meeting the complexity of curriculum, pedagogical and technological resourcing imperatives in higher education through holistic thinking lead to a representation of overlapping domains, based on Mishra and Koehler (2006). Overlapping areas are foregrounded so that recontextualisation and reappropriative processes can be identified. Managerial and collegiate imperatives are represented as arrows for they are significant influences that need to be negotiated. Finally, the internal dynamic of pedagogical refinement that includes a stage for the development of pedagogical patterns ensures a measure of practitioner participation through progressive refinement of their teaching. Figure 15.1 is an early depiction of the model that preceded validation by course leaders.

5 Methodology

The literature is relatively sparse in terms of models that theorise around the central issue of this project: how to embed pedagogical change associated with the teaching of reflective writing and assessment into higher education courses. For this reason, a qualitative and exploratory approach was chosen to theorise a response to this question. Thus, two sources of data informed the conceptualisation and validation of the EPC model. The first source, as we have described above, was from the relevant literature associated with embedding pedagogical change into higher education courses. The second source involved field collection of data from course and program leaders who were part of the DRAW project. Four stages were conducted:

1. Initial model conceptualisation from the literature
2. Checking the model for face validity, with relevant practitioners (course coordinators)
3. Refinement of the model
4. Further validity checking with a different group of practitioners

Interviews of approximately one hour each were conducted with seven program leaders across four faculties. An open-ended interview protocol was developed around: identifying wicked competencies and how they were integrated into a course; identifying general course specific processes that assisted integration; and validating the emerging EPC model.

Three interviews were conducted with the preliminary EPC model, with all of these interviewees from the same faculty (Education). Subsequently, four further interviews were conducted with a refined model in four different faculties (Law, Creative Industries, Business and Health). Each interview was transcribed and open coded (Strauss and Corbin 1998) and the emergent categories were compared with the developing model.

Because the preliminary EPC model (subsequently labelled the *course-wide view*) was not validated by the first group of interviewees, an additional perspective (labelled the *course-long view*) was adopted as a major refinement for the second round of interviews.

The methodology adopted has significant limitations that restrict the scope of the findings. First, the course coordinators were asked about an extremely complex activity in a short interview. Second, student reflection is positioned quite differently in discrete academic discipline settings (this limitation became a finding in itself). Third, only a small number of course and program coordinators across the university were sampled. However, the interviews elicited rich data particularly around course leadership processes designed to embed pedagogy. More significantly, a small set of common categories emerged from across the majority of case interviews. These are discussed in the next section.

6 Data and Results

The participants in the first set of interviews were shown the Preliminary EPC Model (Fig. 15.1) along with a brief explanation. They were asked to respond to the model as a depiction of the significant factors influencing how they went about embedding pedagogical change in their programs of study. None of the interviewees regarded the model as a good representation of these factors. They were however eager to discuss other factors that they felt were important. We interpreted this response as a failure to establish the face validity of the model.

One of the key emergent constructs, labelled *requisite trust*, was not part of the initial EPC model. However, it was quickly established in the first round of interviews and was subsequently confirmed as significant in the second round, when a

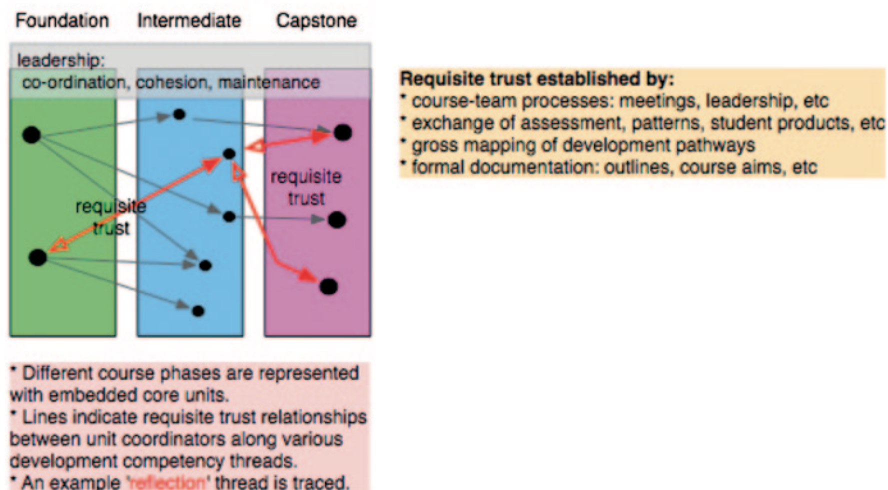

Fig. 15.2 The EPC course-long view

modified model was presented for validation. One interview informant described it as "*like passing the baton to the next person in a race*." This construct refers to a necessary condition for pedagogy associated with a competency developed over a course: namely, each university teacher needs to *trust* other teachers to either have developed, or develop further, the competency (in this case, student reflection). But this trust works both ways over time. For example, a university teacher is unlikely to contribute to the development of the competency if she knows that subsequent units will not make use of or build on this work. Examples were provided of instances where, without requisite trust, university teachers either ignored their part in competency development, or in one particularly contrasting case, attempted to address fully the teaching of a particular competency, without relying on other teachers (in effect, attempting to fully develop the competency in one semester rather than over a multi-year course). Because *requisite trust* was strongly identified by the interview informants, it became the central construct in the modified EPC model (represented below in the course–long view, see Fig. 15.2). In this view, a course is arbitrarily broken up into three phases based on time (labelled Foundation, Intermediate and Capstone). Not all courses embody this structure but it is reasonably common, especially with undergraduate courses that build competencies over years. Overlaying the phases are elements of leadership that provide the conditions for requisite trust to be fostered.

Just as requisite trust was missing from the preliminary EPC model, the groups of *people* involved in teaching the course were similarly not explicitly represented. The interviewees often referred to characteristics of this group as being critical to

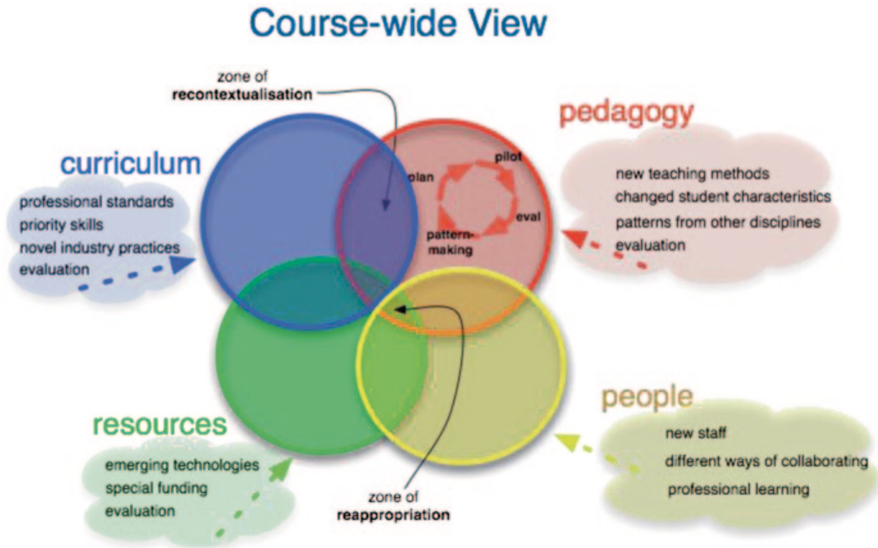

Fig. 15.3 The EPC course-wide view

embedding reflective pedagogy. This was manifest in a number of ways. For example, processes involving the teaching team, such as regular meetings, were seen as essential for teaching techniques to persist (particularly assessment). Other coordinators related problems caused by turnover of teaching staff, so that there was a demand on them to induct new staff to course structures and teaching/assessment methods. The micro-politics of a teaching team was also significant, influencing what roles and contributions were assigned to different people. Because this construct was so strongly identified by the interview informants, another domain was added to the preliminary model and was labelled "People" along with some relevant influencing factors (see Fig. 15.3).

All of the interview informants verified that embedding reflection into a course was a *wicked* problem. This construct was a key outcome of the preliminary EPC model: to be incorporated, a competency ideally needed to be addressed simultaneously over four domains (curriculum, pedagogy, people and technology). Different dimensions to this construct were identified. For example one course coordinator described how the "*absence of shared understanding of how teaching is done can make embedding difficult and fragile*." Another coordinator remarked that "*course coordinators don't have much agency, [they only] have weak authority*". Some observed that over time, courses "drift" and that pedagogic components that were once embedded were gradually lost. This may happen because of changes to teaching staff or because initial documentation has lost its relevance. Finally, the extent of "wickedness" was related to the size of the course. For small courses (and programs within a larger courses), simultaneous treatment of the four domains was easier

because there were fewer teachers and more opportunities for shared understandings. For example, in the Creative Industries faculty, a small course was described where teachers collaborated in an open studio (a co-located teaching space), thus enabling the ready inclusion and development of successful teaching techniques.

All informants saw student assessment as a crucial to embedding pedagogy around reflection. It was seen variously as: a *starting point*; a significant *token;* or valued for its *obduracy*. In two instances, assessment practices around reflection initiated backwards planning towards pedagogical design. For example, a CRA (criterion referenced assessment) document was written and then "*reverse-engineered*" into a teaching technique. As a token, an assessment instrument is important "*because it signals to the students what is important*". In relation to teaching staff, "*assessment pieces are the major purveyors of how this competency was/will-be handled.*" One informant observed that "*If its not assessed it won't be taught.*" Finally, it was observed that despite regular review, assessment instruments were relatively stable, especially in comparison to other course documentation. Because of this, the embedded teaching practices associated with particular assessment practices were more likely to be sustained. Assessment was not included in the first EPC model but was subsequently added to the Course-long view.

Data were collected across a range of discipline settings including Education, Business, Law, Creative Industries and Health. The relationships between student reflection (as a competency) and discipline knowledge varied considerably across these settings. At one extreme (the Health Faculty) reflection was seen as "*a core part of social work where much is predicated in an understating of the self.*" In this case, reflection occupied a central theme component of the curriculum and was embedded widely across the undergraduate course. In contrast, with the Business faculty, there was a demarcation between formal discipline components and competencies such as critical thinking (where student reflection was positioned). Generally, across the five settings, the position of discipline-reflection relationships formed a continuum, from centrality to periphery. Because reflection was considered central to the discipline of Social Work (and similarly in Education), student reflection was well integrated into study programs, with an emphasis on reflective writing and assessment. In Business (and to a lesser extent, Law) student reflection tended to be positioned as an auxiliary skill on the periphery to the formal discipline (with fewer opportunities for reflective writing and assessment). Thus, this positioning had a marked influence on pedagogy: how student reflection was developed, treated and assessed.

Thus, the analysis elicited five major categories, namely: requisite trust; course groups; wickedness; student assessment; and discipline cultures. One of these categories strongly resonated with a theoretical concept embedded in the preliminary model (wickedness) but the others were emergent and novel. Key concepts and processes associated with the preliminary model (e.g. technological reappropriation) were not seen as significant by the interviewees and did not appear in the coding. Others, such as recontextualisation were discussed, but in 'conformance' rather than 'contestable' terms. Specifically, interviewees discussed the relevance of student

reflection in terms of current and anticipated professional standards. However, this was often framed in terms of translation into staged pedagogical practice rather than as interpretation and a chance to intentionally design pedagogy.

7 Discussion

To embed pedagogy into a university undergraduate course, particularly teaching practice that addresses a high level disposition such as reflection, is a challenging issue. In this study, the data confirmed the characterisation of this endeavour as a "wicked" problem. The nature of university environments coupled with the complexity of organising a coherent course suggests that a holistic approach to course design is appropriate. The EPC course–wide perspective attempts to capture such an approach by highlighting critical areas where such design thinking is appropriate. The refined model does not advance particular solutions, but rather frames the boundaries to productive course design. In particular, the labelling of fields into re-appropriation and re-contextualisation provides a pathway to better understanding the (sometimes contested) issues involved.

The discovery of "requisite trust" as an important component to sustain pedagogical change was a significant finding. This construct is not apparent in the published literature nor is it typically represented in official course documentation, but it was quickly and comprehensively identified in the data. Conditions under which requisite trust might be formed and reaffirmed were not investigated, but they would be worthy of further long-term research. Requisite trust is an important component in a collegiate approach to course design around the development of high-level competencies. It is worth highlighting because it can serve as a useful counterbalance to approaches that are primarily top-down or managerial in nature.

The study uncovered evidence of significant collegiate–managerial tension in course design. So while requisite trust was a prominent relation that helped sustain pedagogical change, there were plenty of examples in the form of course documentation, in which change was mandated from above. It is possible to explain and better understand this tension in terms of the work by Bernstein (2000) and Feenberg (1998). The contested fields in the overlapping regions of curriculum, pedagogy and technology are where the agency of the teacher meets the mandates of the course, discipline, or institution. For example, while many professional standards are incorporating reflection as an essential competency, the "re-location" of this imperative into a specific pedagogic discourse with its associated technological framing—in a manner that is coordinated across a whole course, requires considerable and extended negotiation across different levels of course design and participation. Ideally, the tension is resolved "in the middle" using approaches such as Cuban's (1999) long-term strategic incrementalism. For example, a course leader might decide to establish a pattern language around the pedagogy of student reflection, but give over agency to the teaching staff for its incremental refinement over time.

The discipline setting, particularly its relationship to reflection, has a profound influence on the pedagogy adopted and applied across a course. Both views of the EPC model had to remain quite general in order to be inclusive of the five faculties informing the study. The discipline-reflection positioning is unrepresented in the model, however, Barnett and Coate (2005) explore this issue in their schema for broadly characterising the different higher education curricula (humanities, science and professions). These domains differ in their emphasis on, and relationships between, three schemas "knowing", "acting" and "being". We could expect that a discipline, such as social work, where there is a strong connection between "acting" and "being", would stand in contrast to a scientific discipline, with an emphasis on "knowing" and "acting", In the former, the type of evidence used to reflect upon learning and plan future practice, includes emotions and affect. In contrast, the latter draws upon empirical evidence and 'hard' knowledge to reflect on and plan future action. These differences necessarily influence the ways in which a reflective pedagogy is embedded and sustained. The current study had insufficient scope to explore the discipline-reflection positioning deeply because it only emerged from the final set of interviews. Further study into this construct might go some way to explain different pedagogical and assessment practices across the disciplines, as evidenced in the patterns described in earlier chapters.

8 Conclusion

Student reflection (and its instantiation in reflective writing and assessment) is just one of a constellation of competencies that may be developed over an undergraduate course. The EPC model attempts to frame quite general conditions and operations that might inform strategic course design. Other significant contextual factors, such as discipline setting or local organisational policy, need to be taken into account before the model is applied. However, the model does provide an important starting point because it represents some significant elements that need to be considered.

Course designers must deal with a foreground-background dilemma: where pedagogical decisions must be made by alternately focusing on discipline knowledge or competency targets. But the two are co-dependent, especially when reflection is the competency being treated. Reflection is really only productive when it is performed by the students around their own positioning in the discipline field. And discipline knowledge becomes particularly meaningful when a student reflects on performance (or imagined performance) in realistic settings. The EPC model provides an alternative to simply basing course design on discipline elements, that is, its canonical structure. It does this by privileging pedagogy and explicitly identifying contested areas and productive relationships in the recontextualisation of curriculum.

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