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Theorising a model for teaching and assessing reflective learning in higher education.

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Theorising a Model for Teaching and Assessing Reflective Learning in Higher Education

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Abstract

The importance of reflection in higher education, and across disciplinary fields is widely recognised; it is generally included in university graduate attributes, professional standards and program 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 on any systematic, developmental approach to teaching reflective learning across higher education programs/courses. Given that professional or academic reflection is not intuitive, and requires specific pedagogic intervention to do well, a program/course-wide approach is essential. This paper draws on current literature to theorise 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 multi-dimensional 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.

Key words

Reflective practice

Teaching practice

Reflective learning

Theorising a Model for Teaching and Assessing Reflective Learning in Higher Education

Introduction

The value of reflective learning is widely accepted in educational circles as a means of improving students' lifelong learning and professional practice in higher education (Rogers, 2001). A critical issue, however, is that 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). Bain, Ballantyne, Mills & Nestor (2002) argue that deep reflective skills *can* be taught, however they require development and practice over time.

Reflection, or reflective practice, has a long tradition and stems from philosophy, particularly the work of Dewey (1933) on reflective thinking for personal and intellectual growth. Dewey's approach is considered to be psychological, and is concerned with the nature of reflection and how it occurs. A more critical and transformative approach to reflection, which is rooted in critical social theory, is evident in the work of Friere (1972), Habermas (1974) and others who have followed their lead (see for example Hatton & Smith, 1995; Mezirow, 1990). Schon's (1983) work on the 'reflective practitioner' has also influenced many scholars interested in the work of professionals and how 'reflection-in-action' and 'reflection-on-action' can influence their professional education. Schon's approach is steeped in practice, particularly in building theory from practice. His ideas about improving practice through reflectivity and theory-in-use have inspired much debate around the role of espoused theory and theory-in-use. Schon favours theory that is built from everyday practice, however this view has been criticized for not moving beyond the immediate situation and for potentially perpetuating hegemonic or normalising forms of practice rather than enacting change at a broader level (Gur-Ze'ev, 2001). Such diverse theoretical underpinnings mean that reflection is multi-faceted and can be interpreted in various ways (Fund, Court, & Kramarski, 2002; Moon, 1999).

This paper seeks to draw on current literature and learning theories to conceptualise a new, transferable and customisable model for teaching and assessing reflective learning in all higher education courses which seek to develop student' capacities to enhance their learning

and their professional practice. First, we review current approaches to reflection and identify key gaps in the applicability of such approaches. Next, we outline our proposal for a model that takes account of different theoretical approaches and is compatible with professional standards from different disciplines. Finally, we discuss a current project, which seeks to validate our proposed model using evidence from different disciplines in higher education, and using an innovative new concept of online *pedagogic hubs*.

Approaches to reflection

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 Reporting, Responding, Relating, Reasoning and 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 posit a depth model, which moves from description to dialogic (stepping back to evaluate) and finally to critical reflection. Similarly, a large body of literature around nursing praxis highlights critical reflection as integral in relating theory to practice and stresses the importance of the dialectic in moving from developing to refining to reshaping knowledge in the field (Connor, 2004; Cowling, 2004; Kilpatrick, 2008; Newman, 2002). 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 nursing (Tarlier, 2005).

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

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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 & 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).

This approach to learning and reflection posits the task of education as one of supporting a learning process that is both cognitive and social (Kalantzis & Cope, 2008). That is, learning involves both the cognitive process of incorporating new knowledge into existing schemas, but it also involves the cultural conditions and opportunities for learning in the social context. The way that one learns or comes to know is at the core of education, and meaningful learning involves reflection (Moon, 2004). Transformative learning as suggested by Kalantzis and Cope (2008) is a similar process to transformative reflection as proposed in this paper. It is a socio-cognitive process, which involves interrelated ways of knowing, each of which can be developed by teachers. They suggest that we learn by 1) experiencing new ideas, contexts or behaviours and making sense of them according to what we already know or have experienced; 2) that we identify and theorise about these phenomena as we place them into our existing schemas; 3) that we analyse these new concepts in terms of their underlying features and how they sit within the broader social, cultural and historical context; and 4) that we are able to apply this new knowledge in culturally recognisable or creative new ways in different contexts. The teacher has a pivotal role in developing learning that includes reflective analysis and application of new knowledge.

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 & 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 strategy outlined by Barney and Mackinlay (2010) as a way for students and lecturers in an Indigenous Australian Studies course 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

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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 can not 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 & 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.

Methods for approaching the conceptualisation of 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 as cited in previous sections of the paper, along with transformative and social/cognitive learning theories (eg Kalantzis & 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 first year undergraduate) or 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, Maton, & Martin, 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 & Mackinlay, 2010; Fitzgerald, 2009; Singh & 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. Direct teaching, rather than just provision of student resources, is integral to this approach (Haigh, 2000).

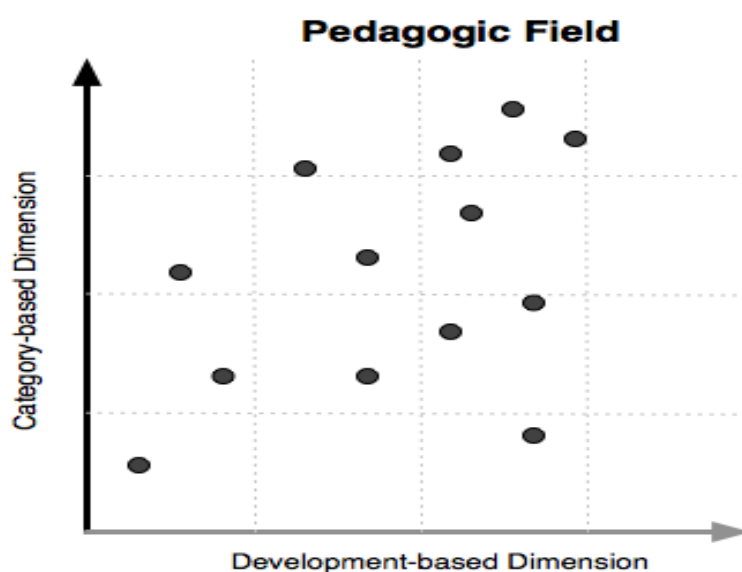
A new model for reflective learning and assessment in higher education

In this section we explain our transferable and customisable model for Teaching and Assessing Reflective Learning (TARL), as developed through the methods explained in the previous section. The chief purpose of this model is to describe the pedagogical 'landscape'

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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 learning 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). **Fig 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.

Figure 1 Pedagogic Field



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 & Krathwohl, 2001; Kalantzis & 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

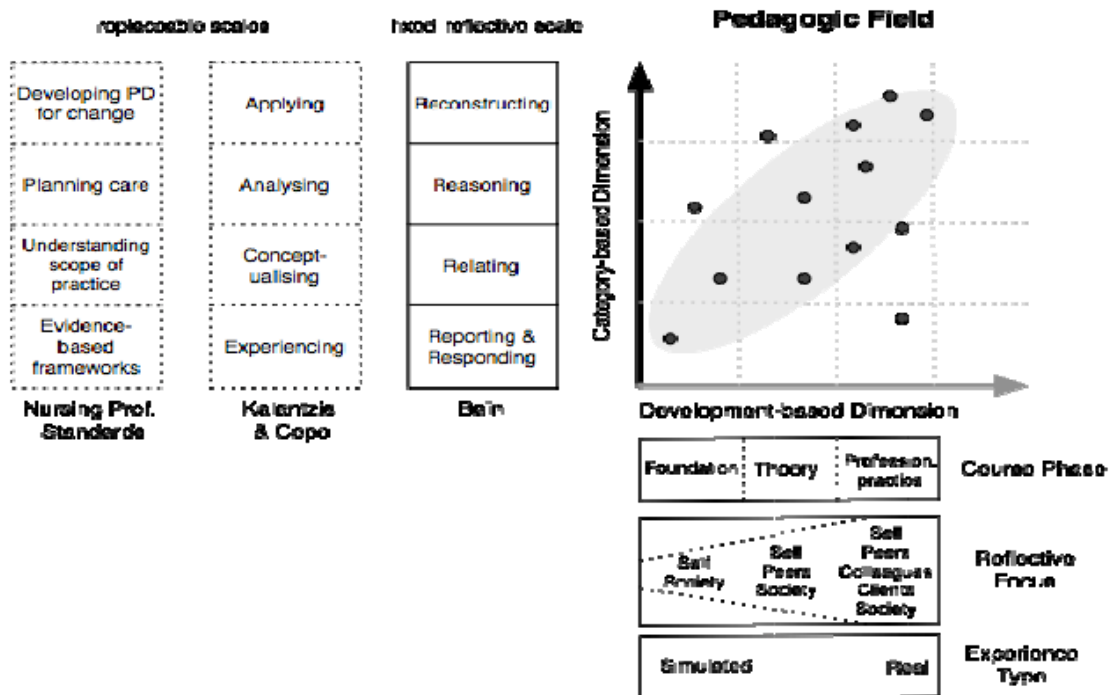
knowing in different disciplines (see **Fig 2**). For example, cognitive-based system theories such as that proposed by Ackoff (1989), in which one starts with *data* input, uses the *information* in different ways, generates new *knowledge* by incorporating it into existing knowledge schemas, then applies this knowledge in ways that indicate levels of *wisdom*. The 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 recognise 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 & 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. **Fig 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.

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Figure 2 The TARL Model



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**). 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

& 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**) 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 Figure 2) in a move away from a 'smorgasbord' approach to reflective activities.

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Implications for application of the model and further developments

In the current project, involving Faculties of Education, Health, Law, Business and Creative Industries at an Australian university, we are endeavouring to use our model to develop a systematic approach to teaching and assessing reflective learning in higher education. These faculties were included because we were aware of attempts to embed reflective practice into faculty units. The Faculty of Built Environment and Engineering at this university has since approached us, and is now involved in trialling resources with the original five faculties. As an integral aspect of resource support for our model, we have drawn from the work of the pedagogical patterns project (Bennedsen & Eriksen, 2006; Sharp, Manns, & Eckstein, 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**). Pedagogical patterns seek to capture effective practice in teaching and learning. They are the essence of tried and proven strategies (Bennedsen & Eriksen, 2006) that have been written using a pattern language to enable transference across contexts and disciplines. In the current project, we have written patterns from (2-5) academic staff in each of the participating faculties, as a way to document and share excellent practice around reflection that is already occurring at this university.

Volunteer academic staff members (n=25) drawn from participating faculties have trialled, or are currently trialling these patterns (some with modifications to suit the context). We are now at the point of analysing these patterns and work that students have produced within the trials, in order to situate the patterns within the pedagogic field of our model. Due to space constraints we do not explain specific examples of our patterns or hubs here, rather our purpose here is to present the conceptualisation of the model and associated resources in the pedagogic landscape of higher education.

Refining and sharing the model

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*.

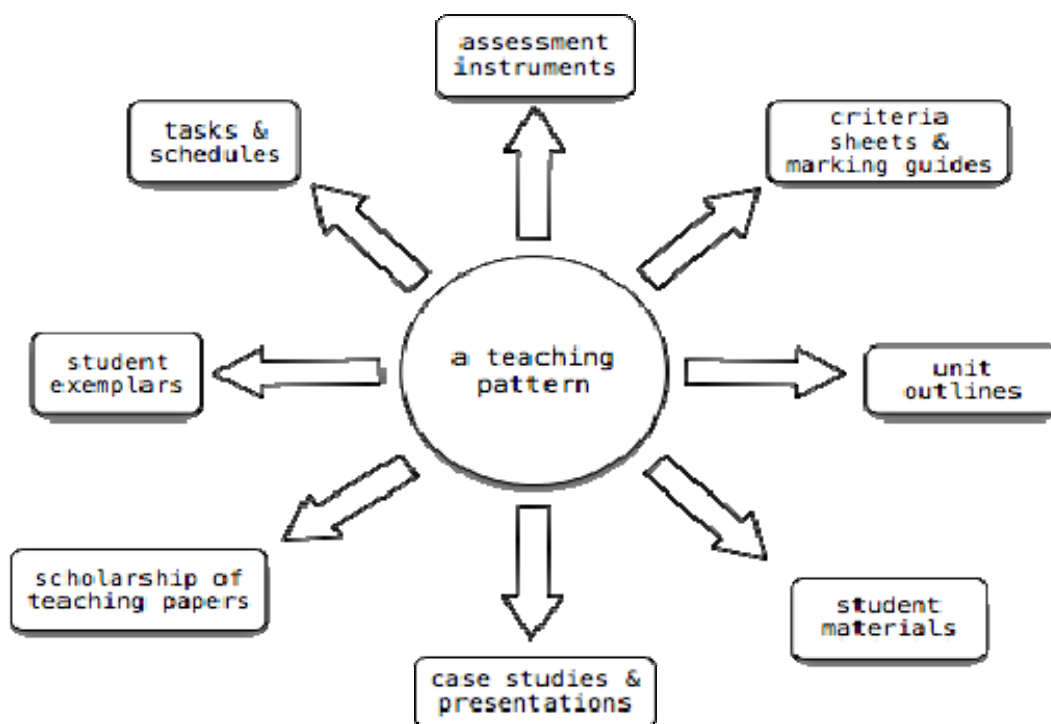
Pedagogic hubs can help pedagogical patterns come alive for users, and can share the ongoing work in the pedagogic ‘community of practice’ (Wenger, 1998). We developed the concept of online *pedagogic hubs* (see **Fig 3**) through our work with faculties involved in the current project to capture the 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 Figure 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

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patterns or tasks; presentations by staff and students; scholarly articles about, or related to, the pattern; and online forums to facilitate staff reflections on 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. These hubs are currently under development within the project as pedagogic patterns are trialled across faculties.

Figure 3 Pedagogic Hub



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). Prompts can be provided to help structure the reflection through the levels (see **Table 1**).

Table 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?

The shared language can be embedded into assessment descriptions and criteria sheets, along with student resources and pedagogic patterns and hubs. The current project is trialling the use of this shared language, across disciplines, within a variety of pedagogic patterns, and intends to collect data in relation to the implementation of assessment and pedagogic strategies that foreground this language. Anecdotal evidence from lecturers, along with students' assessment results in trial subjects thus far; indicate positive effects of well-

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scaffolded reflective assessment tasks. More formal data are currently being collected through interviews/questionnaires with lecturers, focus groups with students, and student work samples. These data will be analysed for evidence of the dimensions of the TARL model and if and how these dimensions are enacted in practice. Work from the trials, including pattern modifications, student resources, assessment criteria and student work samples will be added to the pedagogic hubs for a rich resource on reflective learning and reflective practice.

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.

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