

## Preparing Quality Teachers: Making Learning Visible

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*Abstract: Teacher quality is recognised as a lynchpin for education reforms internationally, and both Federal and State governments in Australia have turned their attention to teacher education institutions: the starting point for preparing quality teachers. Changes to policy and shifts in expectations impact on Faculties of Education, despite the fact that little is known about what makes a quality teacher preparation program effective. New accountability measures, mandated Professional Standards, and proposals to test all graduates before registration, mean that teacher preparation programs need capacity for flexibility and responsiveness. The risk is that undergraduate degree programs can become 'patchwork quilts' with traces of the old and new stitched together, sometimes at the expense of coherence and integrity. This paper provides a roadmap used by one large Faculty of Education in Queensland for reforming and reconceptualising the curriculum for a 4-year undergraduate program, in response to new demands from government and the professional bodies.*

### Introduction

A good teacher makes a difference. Recent evidence-based research has shown that the good teacher is a significant factor in improving the chances for success for all students (see OECD, 2005; Stronge, 2007). Programs for improving teacher quality are seen as the lynchpin for education reforms. In the USA, under President Obama's economic stimulus package, \$400 million has been allocated to support teacher-quality programs (Klein, 2009). The Australian Government has committed \$550 million to the *Smarter Schools – Improving Teacher Quality National Partnership* (TQNP) agreement (Department of Education, Employment and Workplace Relations, 2010). The belief that teachers matter is not new to many parents, who know all too well the importance of who their child's teacher is (Knopf & Swick, 2007). But ideas about good teaching can be folkloric, and stem from people's partial and imperfect memories of their own schooling (Britzman, 2009). The complexities of the work of teaching are not easy to articulate, and good teachers make it look easy, to their students and onlookers.

The *Smarter Schools* initiative has targeted \$101.7 million for expenditure through teacher professional development and enhancing Professional Standards. The list of broad reforms includes "improving the quality of teacher training in partnership with universities" (Department

of Education, Employment and Workplace Relations, 2010). If standards and accountability measures are to be applied in the process of improving teacher quality, then Faculties of Education need to lead the way in defining, measuring and improving the preparation of quality teachers (see Au, 2009; Darling-Hammond, 2009). They are sites of both production and consumption of the latest and best research into effective teaching and learning. And a key part of the work of improving teacher quality begins with teacher preparation.

However, relatively little is known about the types of programs that prepare highly qualified teachers (Humphrey & Wechsler, 2007), and little has been done to improve them (Darling-Hammond, 2009). In Australia, the *Top of the class: Report on the inquiry into teacher education* (House of Representatives: Standing Committee on Education and Vocational Training, 2007) suggested improvements at every stage of teacher education, including a strengthening of its research base, funding better teacher education programs, and developing practicum partnerships. The *Smarter Schools National Partnership* (Department of Education, Employment and Workplace Relations, 2010) includes the development of a standards-based framework to guide reform in the accreditation of pre-service teacher education courses, as well as accreditation of teachers at the graduate, competent, highly accomplished and lead teacher levels. The framework is proposed as a quality assurance mechanism that will define the required competencies to be effective educators.

There are three key issues in the process of preparing quality teachers. Firstly, what pre-service teachers need to know and do in order to become quality teachers is important (Darling-Hammond & Bransford, 2005). A curriculum for preparing effective educators cannot be piecemeal. It needs to start with a solid foundation of the big ideas about quality teaching and learning (Koppich, 2000; Snyder, 2000). Along with the medical models, teacher preparation programs have long appreciated the benefits of what is currently referred to as Work Integrated Learning (Vick, 2006). The difference between being told what to do and constructing one's own knowledge has long been recognised in education, going back to Dewey (1938) and his insistence on the importance of both theory and practice for teaching and learning. In addition to Dewey's early but enduring notions, Shulman (1986) developed categories for the knowledges required of teachers – discipline/content knowledge, curriculum knowledge, and pedagogical knowledge. Further development and reconfigurations of Shulman's categories point to the integration of these knowledges across teachers' work (see for example Cochran, DeRuiter & King, 1993, and Hashweh, 2005). Knowledge of self and culture are additional to the original categories, drawn from later work by Shulman (2000, 2007) and others, such as Darling-Hammond and Bransford (2005), and Feiman-Nemser (2001).

Secondly, in the current climate of accountability measures and government funding tied to measures and standards, universities will find themselves with no programs to deliver if their programs fail to meet the mandated expectations. Critiques of this trend for the mandating of standards and systems for accreditation see this as indicative of the ascendancy of science as the solution to education problems (Cochran-Smith, 2004). Nevertheless, the current policy climate has seen new roles for State professional bodies in Australia, charged with ensuring quality through accreditation processes and linking ongoing registration with professional development. In 2006, a set of 10 Teacher Professional Standards were prescribed in Queensland (Queensland College of Teachers, 2006). The State professional body was charged with the monitoring of these standards, and they form the basis of the accreditation process for teacher preparation programs. The introduction of this new set of standards served as the catalyst for the process of curriculum reform described in this paper. Already, three years on, a new set of National

Standards were in development (Ingvarson, 2009), either merging with and/or replacing the 2006 State Professional Standards. In addition then to their attention to accountability requirements, Faculties of Education also need capacity to respond to new demands, all the while maintaining the integrity of the sound theoretical principles that underpin the design and delivery of a curriculum for preparing quality teachers.

In any context for effective teaching and learning, an important aspect is a shared sense of the whole task, the purpose, and the ultimate goal (Feiman-Nemser, 2001). This is the third issue and the major focus of this paper: making learning visible. There is an irony in the serious gaps that can develop between the principles of good teaching and learning that are being championed as the key ‘content’ in a teacher preparation program, and the actual manner in which these programs are designed and delivered. One of the first points at which these gaps can develop is at the beginning stage of program design, where the curriculum is mapped.

The conventional practice for introducing staff and students to most university programs of study is the production of either a grid or a linear version of the program. Lists of the title and code of each individual unit of study, by semester and by year, are generally organised into a grid or a matrix – referred to variously as the ‘Course Summary Sheet’ or similar. Students are directed to enroll in four units each semester, followed by the next four in the sequence and so on. But there is more to being a good teacher than completing a number of individual units of study in a set order or, as some students do, in a ‘choose-your-own-adventure’ sequence, re-ordered to fit around work and other commitments. And there is more to delivering a teacher preparation program than allocating individual staff members to deliver a sequenced series of individual units of study. The logic and coherence of the program can be lost to students and staff alike.

The model for curriculum mapping described in this paper was trialled successfully in a large Faculty of Education, with over 100 full time faculty members, and over 4,000 enrolled students. After an 18-month period of consultation and collaboration across all the stakeholders, the reconceptualised curriculum map made learning visible – to teaching staff, students, and the professional body. Building on the lessons learned from the successes of this undertaking, a step-by-step model for curriculum reform is provided here, seeking a balance of informed prescription and informed professionalism (Luke, Weir & Woods, 2008). Firstly, the key literature on preparing quality teachers is reviewed, including attempts to define quality teaching, and the overall goals of the quality teacher preparation program. Tensions between competency-based approaches to determining quality and other discourses of professionalism are also discussed. Next, a visual text is described, beginning with the ‘big ideas’, including Shulman’s categories (1986). This text worked to establish common understandings and shared goals across the Faculty, and a framework for the change process. Finally, the capacity for the model to meet current and future needs is addressed. The purpose here is to build a model for curriculum mapping that makes learning visible to students, staff and other stakeholders. The model can be useful for evaluation of curriculum, systematic development and improvement, and research into the effectiveness of teacher preparation programs.

### **Leadership: Defining Teacher Quality**

Some of the qualities of a good teacher are the same as they ever were. At the same time, teaching in new times demands new knowledges and new understandings. Key quality indicators

can work to shape programs aimed at improving teacher quality. But Darling-Hammond (2006) cautions against defining teacher quality too narrowly. Teaching is both a profession and a vocation, and quality teachers demonstrate professional attributes that go beyond a formal qualification (Darling-Hammond & Bransford, 2005). Tensions arise when the central prescription of teaching expectations and measures that come from policy makers and regulatory bodies collide with talk of professionalism that encompasses attributes like cultural sensitivity, provision of safe learning environments, and an understanding of the needs of student learners (Garcia, 2006). Finding a balance between informed prescription and informed professionalism is crucial (Luke et al, 2008).

When it comes to preparing quality teachers, additional tensions arise when managing change in established teacher preparation programs. Firstly, all established programs are palimpsests (see Davies, 1993), with each new innovation overlaying, competing, overlapping and sometimes obscuring earlier messages. Erasure is not always complete, with many old ideas proving resilient and enduring. In some cases, the original theories and principles have been 'lost', and neither staff nor students consider why, how, or indeed whether, content and practices are still relevant, or even the best option. Secondly, Fullan's (1993) insistence that teachers must act as agents for change can also create tensions, particularly in teacher preparation programs that rely heavily on an apprenticeship model for training and induction into the profession. The mantra of the so-called theory/practice gap is invoked when Faculties of Education take the lead and draw on cutting-edge research to address notions of teacher quality and, at the same time, prepare their students for successful practicum experiences, which often require them to demonstrate mastery of the status quo in classrooms. The central issue here is the need for faculties to confront the issues of "how to foster learning about and from practice *in practice*" (Darling-Hammond, 2010, p. 42).

The teacher preparation program represented in this paper leads the way in preparing teachers for new times. The process of program renewal was guided by the most recent research and literature on teacher education, and faculty who were driven by a number of imperatives, including: embedding Indigenous perspectives (Phillips, 2008); high equity/high quality education for all (Luke et al, 2008); and preparing teachers for change, not the status quo (Fullan, 1993). The new program successfully met the requirements of the accrediting body. But, rather than a list of competencies that can be ticked off, the program captures a robust understanding of preparing quality teachers and insisted on the broader views of what constitutes quality. This particular curriculum design models the principles of student-centred learning, which is developmental and cumulative, and depicts learning and teaching as holistic, complex, co-constructed and interconnected.

### **Accountability: High Stakes**

Performance-based assessment of teachers and quality, and the current obsession with results on standardised tests as the primary determinant of teacher quality (Payne & Knowles, 2009), is contentious. For one thing, when student performance is linked directly to measures of teacher quality and incentives or penalties, then equity issues are compounded. All students have the right to access to well-prepared, quality teachers. Secondly, learning is not a homogeneous process and can be influenced by family contexts, institutional contextual factors, and physical and emotional factors (Hibel, Faircloth & Farkas, 2008). And when social problems are

identified as educational issues (Vandenbroeck, 2009), the blame-the-teacher rhetoric places more pressure on teachers who are already leaving the profession at alarming rates (Behrent, 2009). The question of links between accountability measures and educational effects remains largely unanswered. But accountability regimes are not antithetical to demonstrable improvements to quality. In any case, in the current climate of increased systems accountability, faculties must provide programs that meet the requirements of the regulatory bodies. When funding is tied to accreditation processes, the stakes are high.

The catalyst for the curriculum renewal process described in this paper was the reconstituting of the State Professional Association and the introduction of their new accreditation requirements (Queensland College of Teachers, 2006). In order to be eligible for accreditation, teacher preparation programs were required to detail how the 10 Professional Standards were addressed across the program. In the main, the indicators for each of the Standards suggest a technical approach to measures of quality teaching. Each of the 10 Standards are expanded with the provision of a number (sometimes up to 15) of dot point 'indicators'. These indicators are organised under two columns, categorised as 'Practice' and 'Knowledge'. A third category, 'Values and Attitudes', is indicated by a single generic statement which is added below the Practice and Knowledge columns of dot points. This statement is the same for each Standard. Faculty concerns over a '101 competencies' approach to preparing quality teachers was shared by the Queensland College of Teachers (QCT), and the holistic approach taken to the mapping of the renewed curriculum was positively received – by both the College and the faculty.

There are many stakeholders when it comes to the question of what pre-service teachers need to learn and do in order to prepare for quality teaching (Darling-Hammond & Bransford, 2005). Teachers in schools have firm ideas about what students on practicum need to have learned and be able to do (Fullan, 1993; Hall, 2005). Most commonly, issues are raised around content, curriculum knowledge and 'behaviour management'. Feedback from graduating students unfailingly calls for "more time in practicum". With a change in Federal Government and an 'Education Revolution' agenda, quality teaching has been placed firmly in the public arena. While the QCT was the initial driver for program renewal, Shulman's (1998) notion of a professional community was important to the process in order to "monitor quality and aggregate knowledge" (p. 516). The 18-month process of consultation and collaboration incorporated input from: employing bodies, schools, funding sources, unions, State and Federal government policies, students, faculty staff, and community representatives. The task for the curriculum renewal process was to demonstrate coverage of all requirements across the program to the satisfaction of the professional bodies, while maintaining the integrity of our wider agenda for preparing quality teachers.

### **Making Learning Visible: Coherence and Connectedness**

Faculties of Education find themselves in the unique position of teaching about teaching. There is an obvious need to 'practice what we preach', and in the current climate of universities that promise 'real world learning' and student satisfaction, accountability to students is also important. A course for preparing teachers should, wherever possible, teach through example, demonstration and modelling. While some differences are apparent between adult learners and young learners, many of the core principles of good teaching can be modelled through the design and delivery of their course.

Good teaching is learner-centred. Like the school students they will soon be teaching, university students bring increasingly diverse experiences and needs to the classroom, and the design of their curriculum needs to be responsive to their ways of learning, while at the same time accountable to the university and its administrative requirements. Today's students are reportedly tech-savvy; they supposedly spend all their time on the Internet; they click and drag; they rip, burn and edit; they are time poor (Haseman, 2002). A caution against such generic and normalising descriptors is all too obvious. Some pre-service teachers are school leavers. Increasingly, others are mature age and changing careers, or returning to the workforce. Some are the first in their families to attend university. Others are international students.

Student-centred learning in the tertiary context does not mean that all learning at university level should be discovery oriented, or that direct instruction should be eschewed (Schwartz & Bransford, 1998). But students need to be able to see the purpose and connectedness of what and how they are learning, and their accumulating knowledges are important to quality teaching. The same need for transparency applies to the teaching staff as well as the administrative staff who are charged with enabling the systems for large numbers of students and staff.

What follows is an explanation of the process used for curriculum renewal that involved a broad community of practice, with membership that included the entire faculty and the stakeholders beyond the university.

### **Features of the Model**

The model described in this paper makes visible the goal, the pathways, and the various components of a program for teacher preparation. Each decision in this exercise in curriculum renewal was informed by engagement with key research and literature. The key features of the model are:

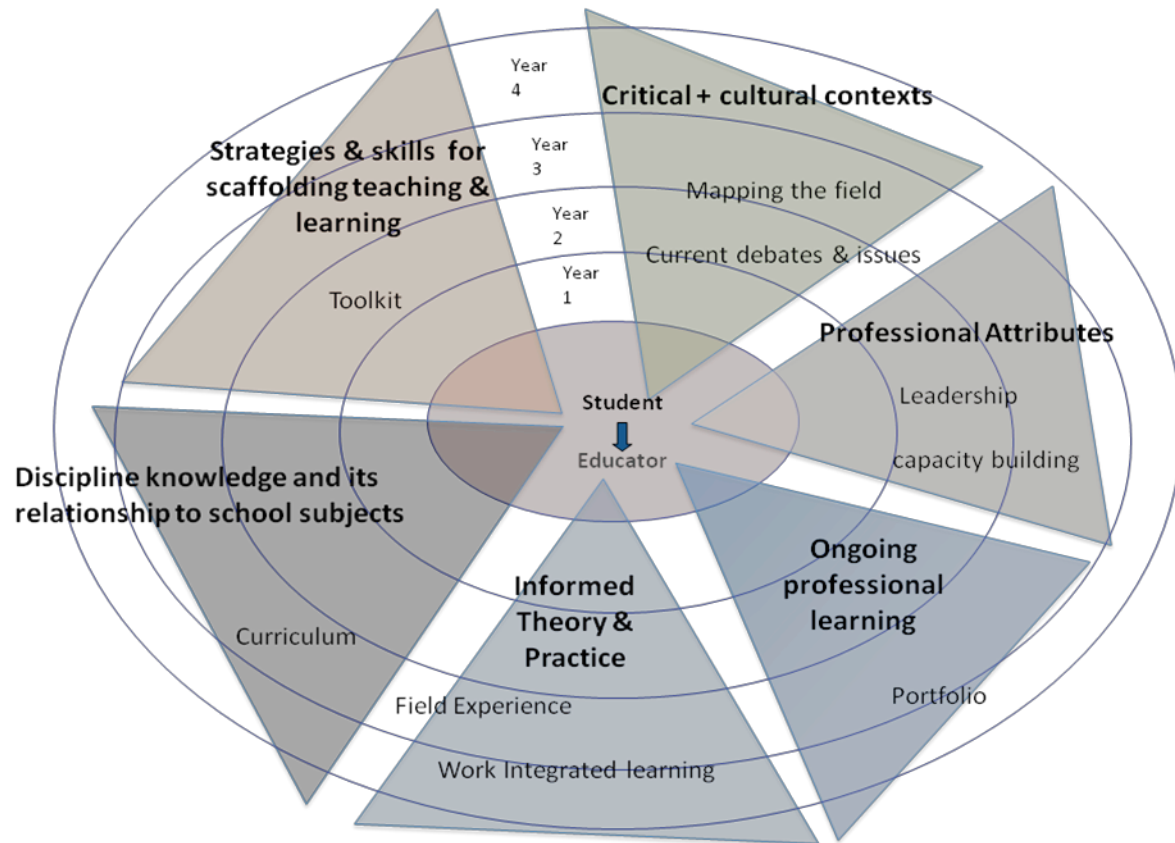
- A visual semiotic that captures both the complexity and coherence of the work of teaching, and disrupts the linear or grid framework for program design and student progression. This visual text has capacity for communicating a cognitive map which displays both detail and big picture. (Chandler, 2002; Tatto, 1996)
- A holistic and connected schema based on sound theoretical underpinnings that provides a comprehensive map of various knowledges, skills, techniques and attitudes. (Darling-Hammond & Bransford, 2005; Dewey, 1902; Shulman, 1986, 2000, 2007)
- The curriculum design insists that learning is co-constructed, and builds and accumulates across the years of the program. (Feiman-Nemser, 2001; Snyder, 2000)
- The capacity to map specific content, disciplines, single units or suites of units. This serves two purposes. Firstly, the logic, relevance and coherence of the program can be appreciated by all stakeholders. Secondly, future developments, refinements, and refashioning can be accommodated while still maintaining the integrity of the program. Core concepts and principles can be genuinely embedded across the program in a systematic and developmental way. (Bruner, 1977; Cohen & Hill, 2000)
- Planning, learning and design elements are made visible for students, staff, teachers in schools, professional organisations, policy makers, and the wider community. This model enables curriculum evaluation, planning, and research. (Cochran-Smith, 2005; Darling-Hammond, 2010; Donovan, Bransford & Pellegrino, 1999)

The following section sets out the five stages of the curriculum renewal process described in this paper, with explanations of the purpose for each step. This is followed by some suggestions for further developments and applications of this model, currently in trial or under consideration. Finally, the paper returns to the key points raised at the beginning of this paper, and talks back to some of the issues that are currently gaining ascendancy in debates over teacher quality.

### **Stage One – The Visual**

The visual matters. There are any numbers of examples of the power of the visual to effectively capture and convey complex thinking (e.g. Freud's iceberg model to represent the conscious and subconscious mind). Figure 1 was introduced to the whole of faculty (teaching staff and administrators) as a means for capturing at once the common shared goals and the logistics of designing/renewing a program for preparing quality teachers. The diagram proposed the content, scope and sequence of the program (Tatto, 1996). It works firstly as a visual text (Chandler, 2002), showing at once the interconnectedness and coherence of program design (Kennedy, 1991). Staff were invited to track their existing work onto this curriculum map, identifying any gaps, either in the current program, or the map. The new Professional Standards were also tracked across this map.

The work of Figure 1 is more than simply an organiser or a means for demonstrating coverage of 'a thousand competencies'. It works as a powerful metaphor, communicating complexity and coherence, order and chaos, units and the whole. This visual says that the process of preparing to teach is firstly seen holistically, and then also in connections – not as a linear series of single, individual units.



**Figure 1: Mapping the Curriculum**

From the start, staff and their pre-service teachers can come to appreciate the complexity and cumulative progression of knowledge acquisition. When this model is shared with students, it serves as a powerful learning tool. It provides for metacognitive understandings about learning, and at the same time makes visible some of the principles of curriculum design. Through this visual text, the design, purpose and implementation of the program are made visible, and this holistic view becomes part of the learning experiences for students and staff.

### **Stage Two – Knowledges**

The curriculum map is divided into sections, each representing what pre-service teachers should learn and be able to do (Darling-Hammond & Bransford, 2005). Each of these sections is expanded and developed across the four years of the course.



### ***Mapping the Field: Critical and Cultural Contexts***

A broad understanding of the field and its current issues, debates and experts is essential to preparing to teach (see for example Goodlad, 1984). Good teachers are advocates for quality education, and must engage with these debates and bring their informed opinions and arguments. Pre-service teachers need crucial lenses for understanding and analysing education agendas — the political, the social, the critical and cultural, the psychology and science of teaching and learning. Who are the ‘experts’ and what do they have to say? What are the current issues and debates? Ways of seeing and knowing the world have a powerful effect on what and how teachers will teach children. Without an appreciation of the place of research, theories and policy, the teacher can only draw on the intuitive, or trial and error, with no strategies for reflective practice. Modern day classrooms have much more recognised diversity than in earlier times, and demands on the curriculum are much more complex. Intuition alone is no longer enough, if it ever was.

### ***Professional Attributes***

There is more to being a teacher than acquiring knowledge and passing exams. When all the content and strategies and curriculum are stripped away, teachers teach what they are (Boomer, 1982), and it is their attitudes and values that will make a difference. Knowledge of self and culture (Darling-Hammond & Bransford, 2005) means that teachers have a sense of who they are and what they believe in. At the very least, teachers need to lead by example, and leadership and capacity building (Shulman, 1998) include the demonstration of personal and professional levels of proficiency with literacy and numeracy. Such attributes do not come ‘naturally’ to all students, and it is important to build in scaffolding for this development. For instance, group assignments are often contentious for students, and can be antithetical to a system that measures performance by ‘Grade Point Average’, yet learning to work as a productive member of a team is important in any school. Other attributes, such as leadership and management, are equally important to the preparation of quality teachers. Theoretical understandings are important and, at the same time, it is important for students to have opportunities to develop and practice these as personal attributes and build capacity. For instance, resources are allocated to support programs of volunteer work, not in units labeled as such, but as the process required for learning about teachers and learners and community. The successful completion of assessment tasks also requires the development of skills and attributes such as time management, meeting deadlines, mentoring, and capacity building – though the reason and purpose for such requirements might easily be lost to students and staff.

### ***Portfolio: Ongoing Professional Learning***

According to Boud (2000), for students, assessment is the curriculum. That is to say, time poor students of the ‘click and drag’ generation see no point in ‘wasting time’ on work that is not assessed. Authentic assessment tasks connect with students’ experiences, and have a purpose that is obvious and real. Portfolios, projects, group tasks, and presentations can work as assessment strategies and authentic learning experiences for students. At the same time, students learn the importance of these principles of assessment for the pupils they will soon be teaching. As

students progress through the four years of the program, they map their own learning by building a portfolio. On graduation, the final portfolio contains the latest and best evidence of the student's achievements, knowledge, capacities and reflective practice. Principles of assessment for and as learning (Hargreaves, 1997; James & McInnis, 2001) are modelled through this approach to curriculum and, in addition, pre-service teachers need to understand the purposes and work of assessment practices in their own teaching.

***Field Experience: Work Integrated Learning***

Traditional models of practicum in teacher education programs have gone fairly unchanged for the best part of a century. The taken for granted belief is that students spend time engaging with 'theory' on campus and with 'applications' in classrooms. But, as Zeichner and Miller (1997) more recently queried, who is to say that the more time a student spends in one classroom with one teacher the better prepared they will be? Practical and hands-on experience is important for effective learning, and Dewey (1902) made this point a century ago. But Dewey also insisted on a theoretical platform to inform that practical experience. Good teachers are researchers (Falk & Blumenreich, 2005), and learn to ask the 'why' questions. They consider and weigh up options, and generate and analyse evidence on which to make their informed decisions about their developing practices. Broader contexts for 'Work Integrated Learning' (WIL) (Cooper, Orrell & Bowden, 2010) have also been built into this model, and field experience is connected with the other components of the program (Cochran-Smith & Lytle, 1999). An integrated approach to WIL makes connections across school experiences, dialogues with professionals, families and community members, and theories – including cultural, political, psychological and social.

***Curriculum: Discipline/Content Knowledge and its Relationship to School Subjects***

Good teachers have to 'know their stuff'. In Shulman's (1986) analysis, teachers need: discipline and content knowledge; curriculum knowledge; and pedagogical knowledge. For some, this section represents the 'nuts and bolts' of the work of teaching – to be able to design and plan engaging and intellectually challenging learning experiences for a diverse population of learners. This includes learning about assessment, and the role and use of curriculum documents. The model makes it clear that this section, while crucial, on its own is insufficient for articulating what it means to be a good teacher.

### ***Toolkit: Strategies and Skills***

A teacher can be an expert with discipline and curriculum knowledge, but unless they can first manage, engage, challenge, assess and reward their students, they will not optimise their chances for learning and success. When pre-service teachers begin their early practicum placements, it is not uncommon for them to struggle with enacting cutting edge pedagogies when ‘behaviour management’ issues, for example, get in the way. Experienced teachers draw on a number of ‘tricks of the trade’ that have become so automatic that they hardly know how to articulate them. If pre-service teachers are equipped with a toolkit of ‘never-fail’ strategies they can draw on across a range of situations, they stand more chance of success with their earliest teaching experiences. The model places issues like management and leadership in a more complex context, while recognising that some ‘tricks of the trade’ work like a charm for teachers throughout their careers.

### **Stage Three – Transitions and Development**

Once faculty teaching staff were in agreement on the common and shared goals of the program and had completed an initial mapping of their existing units against this model, the next task was to consider the developmental nature of the program design, and how pre-service teachers would best build a cumulative sense of what it means to become a quality teacher.

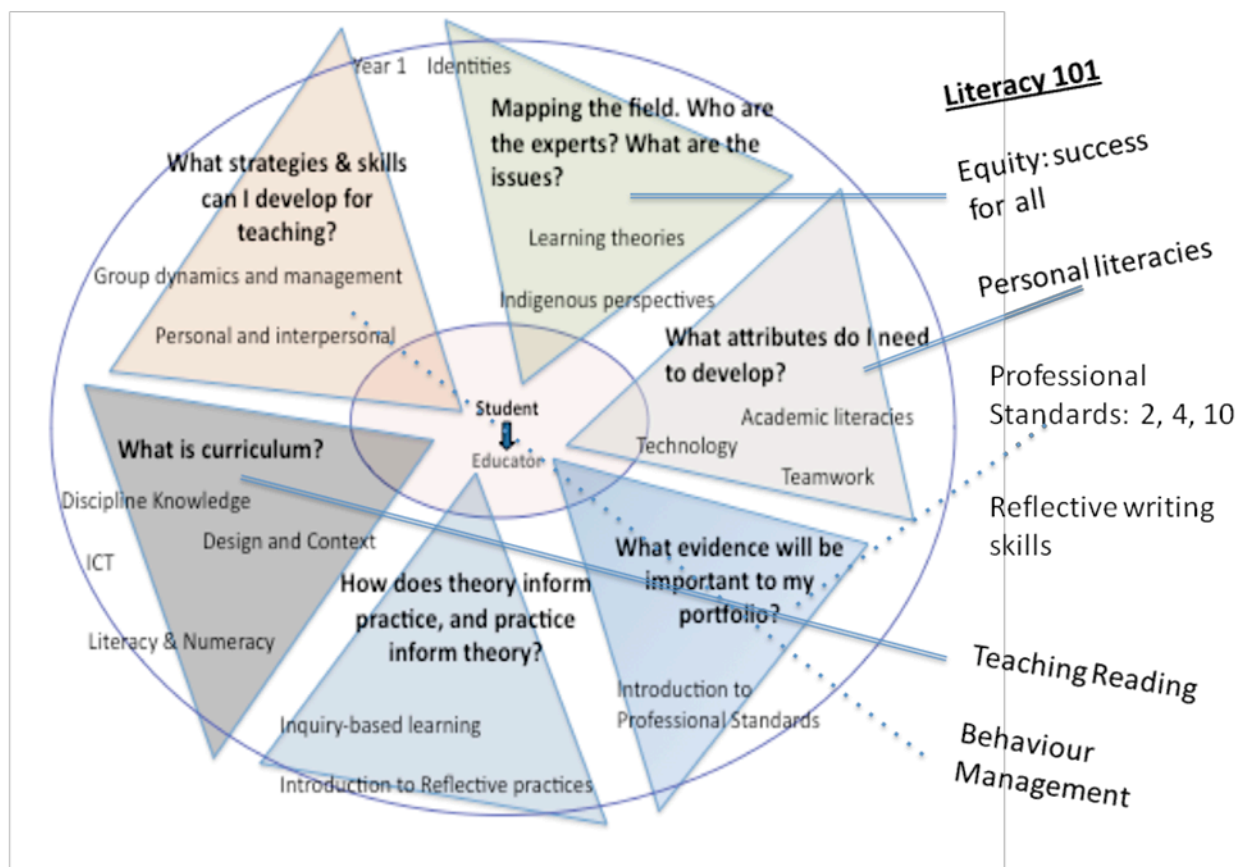
Student feedback can include comments like “[we’ve] already done sociology in first year, why do we have to do it again in third year?” There are two possibilities here. Either, the students are missing the point of a second unit on sociology. Or, they really are meeting the same content and material year after year. Problems for program designers emerge here — the repetition problem and the omission problem. With a developmental pathway (Bruner, 1977; Snyder, 2000) included in curriculum design, individual units of study can be mapped with logic and sequence — a clear sense of what comes before and after. When this logic and the design principles were made visible to the teaching staff, the need for further conversations became apparent. Through a series of ‘splice meetings’, staff met with unit coordinators across semesters and across years, and together they mapped scope and sequence pathways that enabled clear pictures of their own work, and where it sat in the bigger picture of the program.

In their first year of study, students are introduced to the language and field of education, and are equipped with new lenses through which they are prompted to examine the beliefs about teaching they bring with them on entry to the degree (Krause, Hartley, James & McInnis, 2005). In second year, with these new lenses, students are placed for the first time in schools as a ‘teacher’, and their focus is on learning, learners and teaching. In their third year, after their initial placement experiences in schools, they revisit some of their earlier theoretical frameworks (e.g. sociology), but now they make connections between theories and practices. They also build their repertoire of teaching knowledges and strategies. In their final year of study, students are transitioning out of the university and can be experiencing a mixture of excitement, anticipation and maybe even trepidation about their imminent entry into the profession (Brooks, Benton-Kupper & Slayton, 2004; Prushiek, McCarty & McIntyre, 2001). An approach to program design that takes this developmental progression into account will recognise that what a student is ready to hear in first year can be quite different from what captures their attention in their final year.

Figure 2 shows detail of one first year unit, mapped in the next step of this approach to program design. This new layer expands on Figure 1, and each of the concentric circles

representing a year level was mapped in more detail across the dimensions of the program. For the reasons discussed earlier, this model deliberately does not start with discrete units/subjects. Nevertheless, for equally obvious reasons, including the pragmatics of managing and administering a large program, it is necessary to be able to identify where specific units sit within the program design, and where and how specific topics are covered.

For example, a ‘curriculum unit’ like Literacy 101 will focus on particular curriculum/discipline knowledge and, perhaps, the toolkit. But it will also include some attention to current debates. It will make connections between theory and practice. And it will contribute to the student’s developing portfolio. Given the current political climate around education, schools today will most assuredly look for evidence of students’ abilities in literacy and numeracy when interviewing a graduate. When units are mapped against the model in this way, both students and staff can see the logic and the position of a unit in the big picture. Staff can understand they play a part in a bigger scheme, and their one unit does not have to do all things, nor will it be the sole ‘gatekeeper’ to the profession. Staff responded to the mapping model with comments such as: “I can leave out some of what I do, I hadn’t realised students already get a lot of this in XXX. This means I can concentrate more on XXX.” Students’ responses indicated a greater understanding of the connectedness of the course as a whole: “Ah, now I see the connections. This all makes sense ... at the time, I just thought: we’ve already done this. We did it in first year.”



**Figure 2: Developmental Mapping of Program Components across First Year, and an individual Unit of Study, ‘Unit Literacy 101’**

The model thus maps a staged progression of the program which anticipates and responds to needs, builds on experiences, and shows the processes and effects of thoughtful scaffolding and co-construction of meaning (Bruner, 1977; Snyder, 2000). The content considered appropriate for the first year is determined in response to each of the big questions. Similar considerations are given to the mapping of each year. The final year includes a focus on capstone experiences and principles (Collier, 2000) and supports students in looking back and looking forward. Reflecting back over their four years, the coherence and relevance of their program is redescribed. Looking forward, students are informed about the need for resilience, in anticipation of some of the highs and lows experienced by beginning teachers. The capstone experiences are designed to help the students pause, take stock, and reflect while they still have the support of their community of co-learners (Cochran-Smith & Lytle, 1992; Darling-Hammond, 1996).

At this point in the process of curriculum renewal, staff were able to examine existing units of study alongside the set of Professional Standards, and identify gaps in the existing program. The next stage involved addressing these gaps through a number of means.

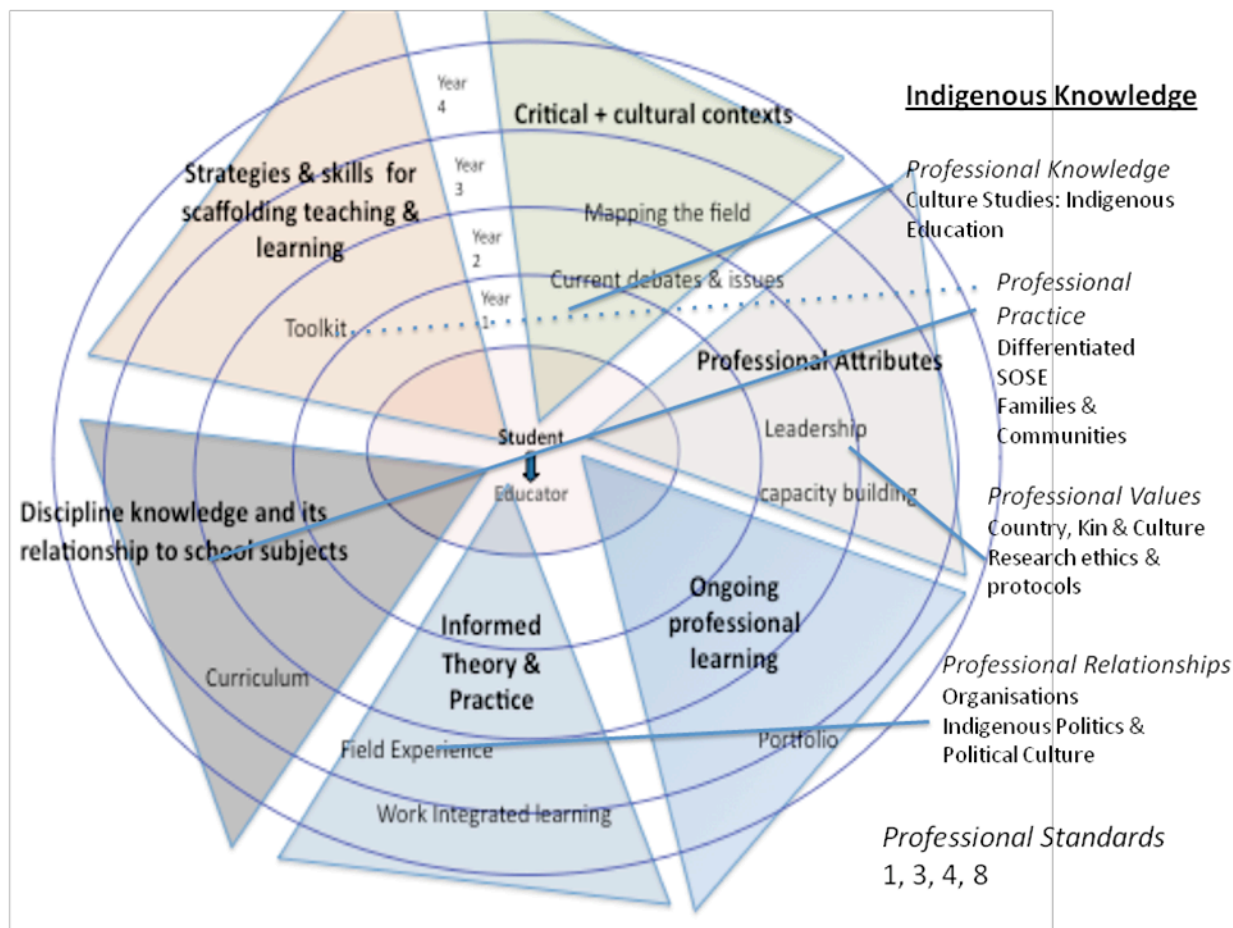
#### **Stage Four – Mapping Different Components**

This section of this paper explains another dimension to this model – the capacity for responsiveness and flexibility. Teacher preparation programs are rarely static, and need to be able to keep pace with the ever-changing demands on schools and their teachers. In a large university, such changes can be daunting, particularly from a logistical and systems point of view. The model presented in this paper provides possibilities for meeting the needs of students, teaching staff and administrative systems with both efficiency and integrity in times of rapid and constant change.

While the Dewey, Shulman, and Darling-Hammond cascade provides the solid theoretical underpinnings for the program design, it is often a matter of the more discrete elements such as ‘behaviour management’, ICTs or assessment that are of more immediate interest to students, staff, teachers and professional bodies. New priorities and policies, such as sustainability or Indigenous education, also demand timely response. In the past, when a new priority was identified, the general response was to shuffle, remove or combine existing units, creating a space to drop in a new unit to address the new imperative (Phillips, 2008). The already crowded curriculum leaves little room for simply replacing an old unit with another. Instead, alternative approaches to curriculum improvements and developments are required – and these changes need to be authentic and effective. Figure 3 shows how plans for genuine embedding of Indigenous perspectives across the program were treated as a priority.

In the spirit of reconciliation, the faculty identified as one of its goals that Indigenous studies be embedded in the curriculum. Since 2001, the university has expressed commitment to these principles: “[...] QUT has since 2001 adopted a Reconciliation Statement and Indigenous Education Strategy to make explicit our commitment to improving educational outcomes for Indigenous Australians and addressing Indigenous issues in teaching and research” (Queensland University of Technology, 2008). Without a systematic approach, this has only been achieved at the mercy or the whim of an individual, or left to the serendipitous, or remained as merely rhetoric. Faculty agreed that Australia has a sorry history when it comes to the treatment of the Indigenous people, and education is essential if past wrongs are to be addressed. This is not

simply about learning to teach in classrooms that might include Australian Indigenous students. Led by the work of experts in Australian Indigenous studies, the program aimed to address the need for all Australian teachers to have sound understandings and knowledge of Indigenous culture and ways of knowing, in order to bring this to every Australian classroom (Lampert & Phillips, 2005). It was understood that if graduates are to demonstrate this respect and knowledge as part of their professional values and attitudes – their identities – then this is not achieved through the simple inclusion of one unit.



**Figure 3: Embedding Indigenous Perspectives across the Program**

As figure 3 shows, in their first year, students complete a core foundation unit that introduces students to understandings of race, culture identities, bias and whiteness, and the power of these factors to shape teachers and learners. At key points in the following years, this foundational work requires further development, more specifically in curriculum and pedagogical knowledge (Phillips, 2008). Hence, with this model, specific content and specific units can be ‘mapped’, implemented and assessed by specific people with the appropriate expertise. The same approach can be applied to other important program components, such as ICTs, sustainability, and even ‘behaviour management’.

### **Stage Five – Re-mapping, Reflecting, Revising**

As the last stage in the curriculum renewal process, each Unit Outline was revised (over 80 separate units of study) to include Professional Standards, aims and objectives, and assessment tasks that were consistent with the principles outlined in this paper. The new curriculum was then presented to the various advisory committees. This meant the new program was subject to the scrutiny of the administrators, the university boards, representatives of the undergraduate student body, and representatives from the broader community, including schools. Finally, the program was accredited, having met the requirements of the professional body. The curriculum map now provides a framework for ongoing evaluation, further developments and improvements, and planned research into quality teacher preparation programs.

### **Conclusion**

Good teachers make a difference that leads to improved student outcomes (York-Barr & Duke, 2004). The starting point for good teaching is in teacher preparation. There are wide variations in the form this preparation takes. Most recently, the government response to teacher quality issues has turned to the mandating of a literacy and numeracy test for graduating teachers before their registration to teach (see Masters, 2009). The current climate of high stakes testing has not overlooked teacher preparation programs, and it seems that the blame-the-teacher rhetoric is being pushed down to the teacher educators (Behrent, 2009).

Like their colleagues in schools, teacher educators need to be ‘adaptive experts’ (Hatano & Oura, 2003) who understand the importance of efficiency and innovation, accountability and differentiation, outcomes and multiple entry points. There is a compelling case for making visible the complexities of preparing quality teachers who will bring ‘informed professionalism’ (Barber & Sebba, 1999) to their work in schools and classrooms. The model for curriculum design presented in this paper is one attempt at capturing the knowledges, skills, values and attributes required of good teachers, and mapping these common goals and a pathway to achieving them.

It is too soon to make claims about the success of this major programmatic reform if measures are linked to student outcomes or reported student satisfaction. Evidence-based data is needed on the efficacy of teacher preparation programs. It will be some years before the first graduates work through the 4-year program described here. Longitudinal research which follows graduates into their first few years of teaching is relatively new, at least in Australia (see Ewing & Smith, 2003; Ingvarson, Beavis, & Kleinhenz, 2004). Teacher education institutions can no longer sit apart from the quality teacher agenda that is being robustly pursued at the local school level, and at national and international levels. The model presented in this paper provides scope for research and development in the early years of teaching and induction into the profession.

In the short term, there is evidence to support some claims for improvements to the program. Over 80 unit outlines have been revised, and faculty staff are clearly identifying the unique features of first year/final year units and the relevance of assessment tasks to portfolios. The process also clearly enriched the community of practice, with increases in cross-faculty and cross-disciplinary conversations and collaborations. Specifically-targeted projects were supported, including the development of a Service Learning unit and a Capstone unit, as well as ongoing developments to an ePortfolio tool connected directly to the Professional Standards.

Everybody has a stake in education. From policy makers to politicians to the wider society, there are always calls for changes to education and schools. If teachers are to resist bouncing from one government reform to another, they need a strong sense of what education is for, and what they are for in education. Good teachers do make a difference, and for those who are preparing to enter the profession, and those who look to teachers and have a stake in the work they do, this model can go some way to capturing what it takes to be a good teacher.

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