

# Integrating different forms of knowledge in the teaching qualification Diploma in Grade R Teaching

## Abstract

*From a view of multiple types of knowledge for a blend in teacher education, the paper discusses the need for epistemological diversity in the types of knowledge for grade R teacher education. I claim in this article that for epistemological diversity, innovative mixes of knowledge are required and that they have to be explicated. The argument of the article is that the decisions made by teacher educators when constructing a curriculum for a new grade R qualification are especially challenging because of the narrow purpose of the qualification. The paper offers an analysis of various models of knowledge types and mixes, outlining each one's purpose. Finally, the paper provides an epistemological distillation in a conceptual framework which can guide the process of curriculum making, offering all participants a chance to contribute to the layers underneath the patina of the painting that offers life to the curriculum.*

**Keywords:** Curriculum, policy, knowledge mix, knowledge types, teacher education, conceptual design, diploma in grade R Teaching, collaboration

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## Introduction

*If teaching is an art, then the colour palette is the knowledge mix.* – dr. Whitfield Green, Acting Director of Teacher Education, Department of Higher Education and Training

The educational climate in higher education is currently driven by a Department of Higher Education and Training (DHET) call to develop curricula according to the Minimum Requirements for Teacher Education Qualifications (MRTEQ) by 2015. This comes in response to educational challenges in this sector, for example the need to reinvigorate qualifications, to align qualifications to the Higher Education Qualifications Framework (HEQF) criteria, to promote closer links between theory and practice, to encourage active knowledge and to motivate applied knowledge sensitive to context (DHET 2010:6). Central to the debate around different types of knowledge in a teacher education curriculum are the many different interpretations of what constitutes appropriate *knowledge* and knowledge mixes for teacher education and how to package them. A new qualification, the Diploma in Grade R Teaching, hopes to address the needs of many practicing, but unqualified or underqualified, grade R teachers. These teachers may well be confident about their way of teaching. However, they have not been trained as students of teaching and may not have the pedagogical content knowledge (PCK)(Shulman 1987:8) and subject content knowledge to inform their practice.

### Narrow focus, broad context

The purpose of the new qualification, the grade R diploma in teaching, is specific and stated as a focused programme in the *Government Gazette* of 15 July 2011 (DHET 2011:44):

... to develop teachers who can demonstrate general principles, as well as focused knowledge and skills appropriate for Grade R teaching. The qualification requires a depth of specialisation of knowledge, together with practical skills and experience in a Grade R classroom teaching context ... [and] students are expected to gain experience in applying such knowledge and skills in the context of working with Grade R learners in a school.

A challenge arising from these requirements is to bridge the gap between theory and practice (knowing and doing), while teaching to the reality of the context. Korthagen (2001:2) points out that universities generally use propositional knowledge as their basis, assuming that the student teacher will be able to apply such knowledge. While the emphasis on knowledge in the *Minimum Requirements for Teacher Education Qualifications* (MRTEQ)(DHET 2011) is identified as one of the major shifts which necessitate current redesign and implementation of curricula amongst higher education institutions, there is a danger that policy compliance becomes the main driver for curricula. The emphasis on a variety of types of knowledge may encourage the perception that the design is an end in itself, thereby negating the continual cycle of curriculum design, implementation and evaluation. The DHET policy provides the criteria for accreditation but it does not necessarily reflect the disparate voices of

the stakeholders. However, the reference to “integrated and applied knowledge ... understood as ... the condition for ... fusing together and expressing different types of knowing in the moment of practice” (DHET 2011:10) implies a firm commitment to the interconnectedness of theory and practice. Green (2011) stressed this point when in September 2011 he pointed out, during an information session with higher education institutions in the Western Cape, that the knowledge mixes adopted by a programme “will enable the roles and competences within a qualification [...] If teaching is an art, then the colour palette is the knowledge mix...”

Since the broad South African context is characterised by diversity regarding teacher qualifications and experience, language usage, socioeconomic and cultural background, facilities and resources, the knowledge mix for a responsive teacher education curriculum will require sensitivity of curriculum designers. No one would disagree that teaching is a complex activity and the choices made about the different types of knowledge and the knowledge mixes (the colour palette Green refers to) created in the course of the design is no easy matter. To try to include as many types of knowledge as possible will result in overload and lack of depth, which is already a problem in undergraduate generalist foundation phase teacher education. The dualistic purpose of teacher education, namely educating student teachers to educate learners, adds to the complexity.

While the design of a new qualification has the advantage of starting with a blank canvas, the new Diploma in Grade R Teaching poses its own challenges. It is essentially a qualification with a sell-by date – it is envisaged that all teachers responsible for grades R–3 will ultimately have a B.Ed. degree in Foundation Phase Education. Currently many grade R teachers or practitioners are underqualified or unqualified, and it is surmised that improved teacher qualifications will not only have a positive effect on the quality of teaching and learning in grade R, but also impact positively on the rest of foundation phase and beyond (SAIDE 2011). However, without careful planning the diploma could fall into the category which Warford (2011:257) refers to as a “quick-fix teacher-proof” training scheme “hatched at the height of accountability movement(s)”.

There is little doubt that South African education is currently experiencing an accountability movement with international, national and regional tests to measure our learners’ and teachers’ competence in predominantly mathematics and language. Both universities and governmental departments are spending huge amounts of money on quality assurance. The announcement of a new qualifications framework for universities can probably be seen as part of the accountability movement. An important question is, however, whether the accountability movement is primarily focused on the fiscal needs of the country or whether it is aimed at improving general wellbeing of its citizens and their environment – a situated wellbeing with transformative overtones. Samuels (2009:743) warns that the priority of policies is measurable output.

## The need for a wider lens

A wider lens may recognise the interdependence of policy, research, theory, practice and the integration thereof, resources, the personal construct of teaching of individual teachers and the importance of the school and the community context. Warford's (2011:257) plea for a *reconceptualising* of the professional mission of teacher educators "from knowledge transmission to cultural transformation" is a case in point. Sadovnik (2001:689) reminds us of Bernstein's (1977) differentiation between weak and strong classification where strong classification refers to a curriculum that is highly differentiated and separated into traditional subjects, whereas weak classification refers to a curriculum that is integrated and where the boundaries between subjects are fragile. Such flexibility may allow a knowledge mix that is responsive to both policy requirements *and* the complexities posed by the particular educational and social context in which the curriculum needs to function. Looking at the curriculum design process from this angle, the importance of developing a shared vision may precede the selection of types of knowledge according to policy. The vision, translated into graduate attributes, becomes the canvas. It reflects the voice of a faculty.

I would argue that the design approach described in the previous paragraph could assist in avoiding the trap of instrumentalism, marketisation, inflexible accountability systems or the traditional technical-rational model warned against by various authors (Van Manen, 1977; Cochran-Smith and Lytle, 2009; Luckett, 2001, 2009; Korthagen, 2010). Loosely framed within the conceptual fabric of the vision of a faculty, the selection of different types of knowledge and knowledge mixes are framed in the complexities of different contexts, also of different university contexts. Such a curriculum is flexible enough to remain a work in progress with both staff and student involvement. In such a curriculum there is also constant dialogue that may require adaptations. A curriculum like this answers to the need for balance with different types of knowledge articulating with each other. In the process of knowledge development in an integrated way of working with teacher knowledge, doors open to innovative linkages and for a teaching reality in which the curriculum, teacher educators, student teachers, the students' diverse teaching environments, as well as educational challenges in South Africa, all become active partners in knowledge creation. This may be a catalyst for a clear shift away from the traditional "received knowledge and curriculum" referred to by Cochran-Smith and Lytle (2009:2).

## National policy and knowledge construction

The recent policy on Minimum Requirements for Teacher Education Qualifications (DHET 2011) creates an opportunity for universities to redesign their curricula for existing qualifications and/or design for new qualifications. How then to harness this opportunity to create fully responsive curricula? Since curricula for education change is a regular phenomenon in South Africa (since 1997 with the launch of Curriculum 2005 the school curriculum has changed three times), the question needs to be asked if the changes in the latest policy for teacher education are simply structural, with a view to

control. Previous reforms have been criticised by Lockett (2001:50) who warned against the danger of the international trends of instrumentalisation and marketisation of knowledge. She pointed out the emphasis on form, rather than content and cautioned that the what and the how was still left to the providers (Lockett 2001:52). While this provides universities with the autonomy to interpret the policy freely, it also assumes that universities will spend time and effort on the conceptualisation of the whole such as Lockett's suggested solution of an "epistemically diverse curriculum" (Lockett 2001:49) with distinct possibilities of integration of different types of knowledge.

Some of the warnings regarding worldviews of instrumentalism and technical rationality are subtly addressed in the new policy. The policy states for instance that, "teaching ... is premised upon the acquisition, integration and application of different types of knowledge practices..." (DHET 2011:7). The policy also warns against a technicist approach relying simply on "demonstrable outcomes", failing to take into consideration varied contextual challenges. The policy further refers the providers to *six types of* (anticipated) *learning* underpinning the acquisition, integration and application of knowledge: Disciplinary, pedagogical, practical, fundamental and situational. I would argue that these are knowledge types, and that types of learning cannot be described by a curriculum, but has to be embedded in a psychology epistemology. What the policy describes are types of knowledge according to a specific view of teacher learning. Teacher educators are encouraged to "encapsulate" all of these knowledge types "in the notion of **integrated and applied knowledge**" (DHET 2011:10). The policy further claims a shift of emphasis by having foregrounded what is to be learnt *and* how it is to be learnt. This, the policy indicates, is evident from the explicit placing of "knowledge, reflection, connection, synthesis and research" (DHET 2011:7) – an integrated, rather than classification and collection code in Bernstein's (1971) terms. The foregrounding of types of knowledge for (types of) learning does indicate a break from the traditional curriculum structure, usually characterised by disciplines as organisers, as is typical of a positivist paradigm. The emphasis on types of knowledge and knowledge mixes also points at a shift away from the purely functional, where the competencies needed by the economy will dictate the outcomes. The plea for integration of theory and practice is another improvement, reminding us of the useful distinction made by Ryle in 1949 and cited by Rovegno (1992:69). Ryle wrote that there is a difference between knowing *how* to play soccer and actually *playing* soccer: Knowing *that* (an almost static form of knowledge) and knowing *how* (actively *doing* knowledge) are two very different things. The interdependent nature of the theory – practice relationship in the classroom and lecturing halls – constantly creates opportunities for new understandings (Lenz-Taguchi 2010:21).

Nevertheless, curriculum jargon can be manipulated to provide the correct words and ticks for the templates required by accreditation bodies. The authority of knowledge, packaged as a discipline, has long thrived and stood in the way of synthesis and connectedness in tertiary education. The choice of packaging is not always made transparent to either staff or students. As Samuel (2009:743) said, even curriculum policy is never neutral. An official policy such as MRTEQ (DHET 2011), interpreted and

then packaged by a few individuals representing staff, does not guarantee a pedagogic route relevant to the greater good of education. The choices we make as curriculum designers reflect our frames of reference, revealing our preferences in terms of values, assumptions, understandings and goals. The point is not to criticise these choices, but rather to highlight the need to reflect on our understandings as a staff and how we judge the efficacy of our approaches to curriculum (McKenna 2003:223).

## **Faculty vision and knowledge construction**

In this section of the article I will narrow the focus of the discussion to examine the policy implications for a specific qualification – the Diploma in Grade R Teaching. Once a faculty or school of education has decided on its vision, there is a need to analyse how vision, general policy requirements and specific requirements for the intended qualification articulate. The policy document (DHET2011), does not actually prescribe a particular paradigm. However, the emphasis on concepts such as *active* knowledge, different types of knowledge, the notion of integrated and applied knowledge, transformation and the importance of reflection, could find a comfortable home in a constructivist epistemology. Although there is mention of the importance of context change and diversity (DHET 2011:7, 10), it is not foregrounded as structural determinants. If the epistemology in which the faculty’s vision is predominantly located, corresponds to that of the official policy, there is a better chance of congruency in the design.

### **Tensions in knowledge construction: What is the purpose of epistemological diversity?**

The purpose of the diploma is also foregrounded by the policy. A certain tension can be observed here between the need for “focused knowledge and skills appropriate to Grade R teaching” and on the other hand, the need to be able to “demonstrate general principles” of teaching (DHET 2011:44). The candidate is required to train both as specialist and as generalist, presumably with the emphasis on school knowledge and pedagogical knowledge. The policy specifies that fifty percent of credits must be focused on developing grade R. However, this emphasis is somewhat misleading since a specialist in grade R cannot train with a lens exclusively trained on grade R. Within the context of South Africa there is hardly a *typical* grade R learner. Grade R is part of the foundation phase and as such the introductory year to formal schooling. Although the learners might be in more or less the same age bracket (4½ to 6), their socioeconomic background, the parenting they enjoy, their home language versus the language of learning and teaching, their learning environment and their teacher’s age and qualifications may all play a role in their ability to realise the aims of a grade R school curriculum. The inclusion of a knowledge mix grid adds to the frustration of the design team – while it is apparently meant to force a show of integration of types of knowledge, it contributes to fragmentation by forcing a superficial classification.

## Reconceptualising the boundaries of knowledge

While a developmental approach will foreground stages of development and “school readiness”, a postmodern approach may foreground the diversity (Ryan & Grieshaber 2005:34). Ryan and Grieshaber (2005:44) also comment that postmodern theories

provide student teachers with techniques for analysing knowledge that enable them to see how knowledge exercises power and therefore offer new insights into addressing issues of diversity.

They go on to say that tensions arising from this kind of discussion will offer new insights into coming to terms with diversity and so “generate new knowledges ... of what it means to teach young children in postmodern times”. Jennifer Sumsion (2005:213) is even more to the point when she says:

If we are to transform early childhood education we need to create spaces in which we can critique constructively and challenge what we may have previously taken for granted.

That universities have been tasked to design and implement a diploma qualification for grade R teaching may be interpreted as a sign of more independence for the foundation phase sector from the general education and training band. Foundation phase teachers also need the academic depth of knowing *why* as well as *what* and *how*. Banks, Leach and Moon (2005:337) advocate a total reconceptualisation of the relationship between knowledge and pedagogy. They allude to the notion that novice teachers seem to focus primarily on didactics – a prescriptive type of pedagogy – which lack the flexibility of pedagogic knowledge. Here one is reminded of a warning sounded by Max van Manen (1977:209), pointing out that the emphasis on competency and performance based teacher education prevents “more consequential” questions to be asked regarding the quality and purposes provided by a curriculum. Perhaps a distinction between subject knowledge, school knowledge (subject knowledge transformed for school application) and pedagogic knowledge with the personal subject construct of the teacher at the heart of the dynamic interaction between these categories of knowledge, will take us closer to a curriculum responsive to the needs of the student teacher. Banks et al (2005:337) further argue that such a sophisticated and dynamic presentation of knowledge construction in teacher education reflects the “web and weave” of a teacher’s daily work and gives recognition to the complexity involved.

Hedges and Cullen (2005:67) agree with Banks et al when they argue that the developmental psychology and philosophical views, for example child-centeredness, may have neglected the importance of the subject knowledge of the teacher. Hedges and Cullen (2005:367) found the early years literature polarised on the role of subject knowledge, but quotes Anning and Edwards (1999) who found that teachers who are confident about their own subject knowledge, were better able to recognise learning potential in play-based experiences. A sociocultural perspective (Hedges 2004:36) shows that mediated and co-constructed learning in children’s play experiences is an “active, complex and contextualised process”. Hedges continues her argument by pointing out the importance of intersubjective pedagogical relationships in early

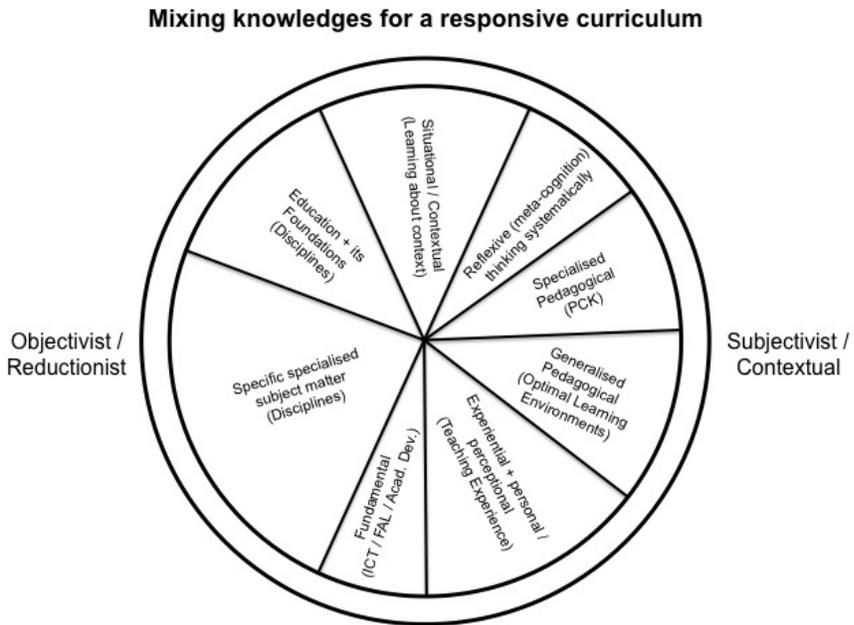
childhood learning. The knowledge and teaching of subject knowledge, against this background, becomes essential for the teacher, since she or he needs to take cues from the children's interest to effect an integrated and discovery pedagogy (Hedges & Cullen 2005:75). Hedges and Cullen's study, albeit limited to New Zealand, also reminds one that the Diploma in Grade R Teaching must make provision for a strong subject knowledge base from which to teach young children who are being prepared for grade 1 formal education – something that in-service practitioners who have not had the opportunity to study for a long time, might find particularly challenging.

## Knowledge mixes

The MRTEQ (DHET 2011:11) makes a distinction between “general pedagogical knowledge” (that is knowing about, for example, learners, classroom management and assessment) and “specialised pedagogical content knowledge”. The policy also puts a high premium on supervised and assessed school-based experience. It states that learning from practice includes the study of practice (knowing *that* and knowing *how*). Practices must be analysed and theorised in “a variety of contexts” (ibid:8). Clearly a balance is needed between the study of practice and the actual doing in practice, ultimately aimed at a form of “practical wisdom” (Shulman 1998:520). Epistemological and ontological aspects of the art of teaching are integrated, recognising the limited power of the teacher educator, policy and curriculum to control the experiential learning of the student teacher. Instead of simply learning *how* to teach, the student must become *a student of teaching*.

One way of addressing the tension between a static knowledge collection code and an integrated code recognising active knowledge creation, is to look at the actual proportion of knowledge types in a curriculum. Figure 1 gives an example of how the proportions of various types of learning or knowledge could be assembled, depending on the purpose of the curriculum. The three segments on the left shows the aspects usually foregrounded in a traditional teacher education curriculum. These are representative of the so-called “expert knowledge” given to students fully cognitive in nature – knowledge that is “fixed, timeless and objective” in the words of Korthagen (2001:23). The five segments on the right could possibly be interpreted as Korthagen's “knowledge of concrete particulars”: Flexible, subtle and “congruent to the situation at hand” (2001:25). However, the distinction between knowing *that* (reductionist and objectivist) and knowing *how* and *why* (contextual and subjectivist) is probably better suited to the purpose of the diagram. It shows us a how a balanced knowledge mix can represent a diversity of knowledge. It also acknowledges the important role of the contextual and perceptual.

**Figure. 1: Proportions of a knowledge mix for the Diploma in Grade R Teaching. (From Luckett [2001] and Korthagen [2001]).**



Finding balance through thoughtful debate, thereby working towards coherence through the design of curriculum, is indeed a far cry from the “jockeying for space” (Banks et al 2001:338) of subject discipline communities often associated with curriculum design for teacher education. Here one is reminded of the comment that sustained inquiry and reflection is not something over which any one subject has the monopoly (Russell, McPherson & Martin 2001:44). If the question is whether the curriculum articulates as a coherent whole from the perspective of the student teacher, the design process has to be much more than disciplines establishing authority through credits and timetable practicalities. The process of curriculum design could, in fact, take a page from the ALACT model (Korthagen 2001) which prescribes that we should not begin with “us” (teacher educators), but rather with “them” (the student teachers and their needs). In the case of the Diploma in Grade R Teaching, this is a particularly pertinent aspect, since the diploma is in the first place meant for the in-service practitioner often lacking knowledge about why they are doing what they are doing. In order to “begin with them”, the curriculum may need to start with the experiences of the students, working gradually towards a reflexive paradigm, where alternatives in different contexts are investigated and acted upon.

However, beginning with the student teachers’ needs also relates back to the structure of the school curriculum to be implemented by the student teachers. The traditional subject boundaries of the school curriculum tend to dictate the structure

of the B.Ed. and therefore the diploma for reasons of transfer and articulation. The question arises whether a teacher education curriculum can reflect a traditional composition of specified types of knowledge predominantly identified by a school curriculum, yet still serve the purpose of a progressive vision of education. I would argue that the potential for any teacher education curriculum to open spaces rather than filling them, to focus also on human enactment rather than different types of pure knowledge and to work towards a cohesive synergy rather than simply maintaining disciplinary boundaries, can become undermined if it is simply a question of filling old wineskins with new wine. The potential for a curriculum responsive to a “reality in process”, to borrow a term from Paulo Freire (1970:35), might be aborted in an overtly narrow vision of what the “specialised purpose” of such a diploma should be.

Rather than trying to interpret the official requirements in MRTEQ as a recipe for securing accreditation and conforming to quality assurance requirements, I argue that the *mixing of the colours* (types of knowledge), should become a process unique to the curriculum design and enactment of each faculty according to their vision for the teaching and learning of their student teachers.

## **Working towards coherence in knowledge mixes**

While the policy lens provides curriculum designers in teacher education programmes with guidelines for the design of curriculum, the conceptual lens holds it together – it serves as cohesive device. Curriculum should function as a systemic whole of interactive aspects all directed towards quality teaching and learning.

I will now discuss the role of knowledge types as I see them applied to curriculum design for a teaching qualification. As a “scheduling device” (Rogers 1997:684), knowledge conceived as specific disciplines makes little contribution to an interacting whole, such as a curriculum. It does not reach out to the life world of the students who will study the curriculum. Because they will most likely see the knowledge as disciplinary and based at a university, I would argue that such knowledge may remain a static product removed from the active life and work of a faculty. There is a proviso, though, in the knowledge education project in teacher education. Rovegno (1992:69) contends that universities make the “fallacious assumption” that making connections between the reality of the classroom and the theoretical knowledge acquired at university will be a straightforward process for novice teachers. This lack of connectedness between theory and practice, the life world of the student and that of the “knowledge world” of the university poses a major challenge to the curriculum. It comes as no surprise that coherence is one of the characteristics of more successful programmes (Hammerness 2006). It is also one of the most difficult processes in curriculum design and implementation.

In the working group where I am located our aim is to find a conceptual framework for curriculum design and implementation in which the role of epistemological diversity and (mixed) knowledge construction are drivers. Yet an underpinning philosophy which guides our choices and holds the curriculum together is as important. Our

philosophy is to construct around the principles of connectedness, “less is more” and transformation (Robinson & Rousseau 2012).

The following table reflects some of the ways in which the literature has packaged knowledge in curricula for teacher education. Each model will be analysed against the following criteria:

- Clarity of purpose
- Function of the *knowledge* domain
- Knowledge *diversity*
- *Connectedness* of different types of knowledge
- *Theoretical framework* underpinning the model

**Table.1**

	<b>Conceptualising curriculum change (Barnett et al 2001)</b>	<b>A proposal for an epistemically diverse curriculum for South African higher education in the 21<sup>st</sup> century (Luckett 2001)</b>	<b>Developing fundamental principles for teacher education programs and practices (Korthagen et al 2006)</b>	<b>Re-imagining teacher education: Connecting the spaces between vision, context and curriculum (Robinson &amp; Rousseau 2012)</b>
<b>Purpose</b>	To conceptualise key patterns of change in the undergraduate curriculum.	To produce a “thinking tool” for an epistemologically diverse curriculum, with three challenges to SA curriculum designers: Instrumentalisation and marketisation of knowledge, postmodernism and scientism.	To generate principles of practice to guide responsive teacher education programs that will make a difference.	To design a theoretical framework for a curriculum of which a key design principle is to prepare reflective teachers for a changing world.
<b>Role of knowledge</b>	Three curriculum domains are identified: Knowledge, action and self.	Four interacting types of knowledge: Propositional (foundational), practical, experiential and epistemic.	Content knowledge is created around students’ experiences, questions and concerns.  Three clusters of principles: Views of knowledge and learning Program structures and practices Quality of staff and organisation	A distinction is made between learning to know, to do, to be and to live with others (Delors Report 2001).

Knowledge diversity	<p>The knowledge domain: Discipline-specific competences</p> <p>The action domain: “Doing” competences</p> <p>The self domain: Developing an educational identity in relation to the subject areas (becoming a “reflective practitioner” or a “critical evaluator”)</p>	<p>Both practical and experiential knowledge focus on “doing”; the propositional and epistemic focus on the theoretical.</p> <p>Propositional knowledge and applied competence should be balanced by personal competence (experiential knowledge) and reflexive competence (epistemic knowledge).</p>	<p>Three requirements for change are clustered into “Views of knowledge and learning” where learning about teaching is characterised by:</p> <ol style="list-style-type: none"> <li>1) Conflicting and competing demands</li> <li>2) A view of knowledge as a subject to be created</li> <li>3) A shift in focus from the curriculum to the learner</li> </ol>	<p>The different types of learning mentioned above are translated into graduate attributes, clustered as cognitive, performance, dispositional, motivational and reflective (Shulman, 1998). These can be linked loosely to these types of knowledge: Cognitive (knowing that), performance (knowing how) and personal/social (dispositional, motivational and reflective).</p>
Connected-ness	<p>Three interlocking circles, dynamic in its interaction according to the knowledge field it serves. The challenge is not only to ensure adequate representation and balance of the three domains, but that they are integrated.</p>	<p>The unit of design is the whole programme rather than separate modules. The idea is to produce knowledge workers, rather than knowledge collectors.</p>	<p>A synergy of teaching and learning is implied. It suggests an interconnectedness between the principles.</p>	<p>The image of a circle enclosing the types of learning, the core design principles and the graduate attributes, reflects a commitment to connectedness within an optimal learning environment.</p>
Theoretical framework	<p>The “performance” and “employability” focus is interrogated with emphasis on human and intellectual development.</p>	<p>The emphasis is on knowledge creation and a curriculum responsive to authentic and relevant contexts, with students taking responsibility for their own learning and with the potential for personal transformation.</p>	<p>The emphasis is on creating knowledge through experience rather than empirically generalised abstractions from practice.</p>	<p>A principle of “educating” teachers rather than “training” them suggests deeper levels of learning, including the dispositional. The authors identify with the idea of “value creation” rather than “knowledge transmission”.</p>

Each of the models described above gives us a sense of the types of choices faculties of education have to make, should they decide to embark on curriculum

design as a creative process with a reform agenda. In the next section we are going to look at some of the patterns emerging from the analysis of these four models.

## **Patterns of change in a teacher education curriculum**

Curriculum is an ongoing project, even though it is occasionally given a push by a national initiative such as the one currently experienced in South Africa. Universities have the choice of considering such national initiatives as an unnecessary control mechanism or as an opportunity to interrogate the what, the why and the how of teaching and learning in their faculty. A number of issues are raised as challenges within the international and national scholarship around teacher education curriculum. Solutions abound in the form of different models looking at types of learning or types of knowledge. In spite of covering a period of 12 years, the examples of models we looked at have a number of commonalities.

Each of the models seems to be seeking ways of moving away from the traditional university emphasis on the cognitive, propositional knowledge and to steer clear of the all-consuming power of “marketisation” and “employability”. All the models discussed here acknowledge the importance of practical learning, while foregrounding the importance of authentic and different contexts where students are encouraged to create knowledge by using their judgement (informed by knowing that and knowing how) in the human and messy world of the classroom. There is a focus on the professional development of the student teacher, including the personal perceptual and social aspects. Students’ own unique teaching experiences can be compared with the patterns and regularities of empirically generalised abstractions from practice and so move towards a “practical wisdom” as part of a lifetime learning curve (Shulman 1998:520).

Another similarity between the models discussed, is the acknowledgement of the importance of both conceptual mastery and technical proficiency. The need for integration amongst the types of learning and knowledges is recognised. This implies the need for staff to collaborate towards negotiated understanding of the purpose and underpinning principles of their programmes, collaborating on its design and committing to an ongoing reviewing process. The potential of reflective practice as a means to assist the student in bridging that gap between the universalised knowledge and the messiness of the classroom is evident in three of the four models (Barnett, Parry & Coate 2001; Korthagen, 2001; Robinson & Rousseau, 2012).

The literature consulted for this study fully acknowledges the complexity involved in the process of curriculum design. Many studies indicate that disciplinary loyalty is still the most binding concept amongst academics (Barnett 2001:436). There are warnings against a complete shift towards doing and performing rather than knowing and understanding – the danger of a model which focuses on practical experiences as if separate from the theoretical input. Korthagen (2006:1021) refers to three aspects that haunt teacher education in the 21<sup>st</sup> century: Firstly, the complaints from graduates, parents and politicians about the irrelevance of teacher preparation “for the reality of

everyday practice in schools”; secondly, the body of research presenting evidence of a reality shock, followed by a “wash-out” effect experienced by new teachers; thirdly, there are new conceptions of teaching and learning such as constructivist views, situated knowledge and recognition of the importance of experience.

To Korthagen’s list, we can probably add the lack of recognition of the role of perceptual knowledge and metacognition. Robinson and Rousseau (2012:108) refer to the need for coherence which is largely dependent on the willingness of staff to buy into a coherent vision of “what can be” rather than “what is”. They argue for a connectedness between knowing, doing, being and the ability to live in harmony with others. In addition to graduate attributes reflecting the traditional cognitive and performance domains, they advocate with Shulman (1998) the inclusion of the dispositional, motivational and reflective domains. Lockett (2001) also refers to the importance of collaboration amongst staff members. Once teacher educators acknowledge the need to look beyond the boundaries of their disciplines at possible ways of collaboration towards coherence, the framework which emerges from a shared vision may offer guidelines to a more responsive curriculum.

## **Moving towards a framework for the new Diploma in Grade R Teaching**

Is the MRTEQ sufficiently responsive to the complexities as discussed here? I argue that this new official framework has gone a long way in encouraging applied and integrated knowledge. However, the danger is that policy compliance becomes a substitute for a collaborative process of curriculum design and is used by curriculum committees to complete templates designed for accreditation purposes, while staying in keeping with the positions, specialisations and identities of “what is”.

Faculties and schools of education could, in fact, gain a lot by using the ongoing debates around the what, the why and the how of the curriculum as the core of staff development. Russell et al (2001:46) remind us that without opportunities for dialogue amongst members of staff, “contention and division can fracture collaboration and undermine coherence”. The what, how and why of a teacher education curriculum remain work-in-progress. Its flexibility in design and implementation needs the staff as a design team to keep looking at both “what is” and “what could be”.

Yet Morgan and Roberts (2002) call the process of obtaining support from university staff who are subject specialists, “herding cats”. Russell et al (2001:46) may well hit the nail on the head when they blame the publish-or-perish environment and the selective research interests in universities for the neglected status of program development, co-ordination and teaching. Lockett (2009:451) also refers to a culture of competition amongst university staff, rather than cooperation. This phenomenon is probably driven by the university system of encouraging self-advancement through research and publication, with undergraduate teaching taking a backseat. In addition, there are also the operational issues which tend to dictate: The staffing, the timetable, disciplinary boundaries, a managerial culture which classifies categories of

knowledge – regulative rules and operational issues dictating and thereby weakening a conceptual framing that may have led to a more responsive curriculum. Seen from this perspective, the elements of coherence and collaboration are not only challenged from outside through instrumentalisation, but also by academia itself through the narrow lens of personal interest. Pleas for help from novice teachers and a lack of evidence that the financial investment in educational research renders an equal return in educational reform, are not popular topics in faculties and schools of education. Gravett (2012:4) refers to the tendency to “interest student teachers in particular theories”. She adds, “I would add that these theories are often lecturers’ ‘pet theories’ or theories emanating from their research interests”. The contest between theory with a capital T (Korthagen 2001) and practical wisdom informed by a professional, rather than a purely academic curriculum, may still prevail for a long time.

I argue that faculties and schools of education should use curriculum as their staff development agenda, encouraging staff members to debate the complexities of teacher education with each other and their colleagues, thereby developing a shared language of curriculum. This should strengthen South African teacher education and its capacity to curriculate for “new times” (Ryan & Grieshaber 2005:1), while expanding the boundaries of the existing interpretations of types of knowledge for teacher education. National policy should be seen as only one of several tools and motivations available to faculty to construct a relevant and responsive curriculum.

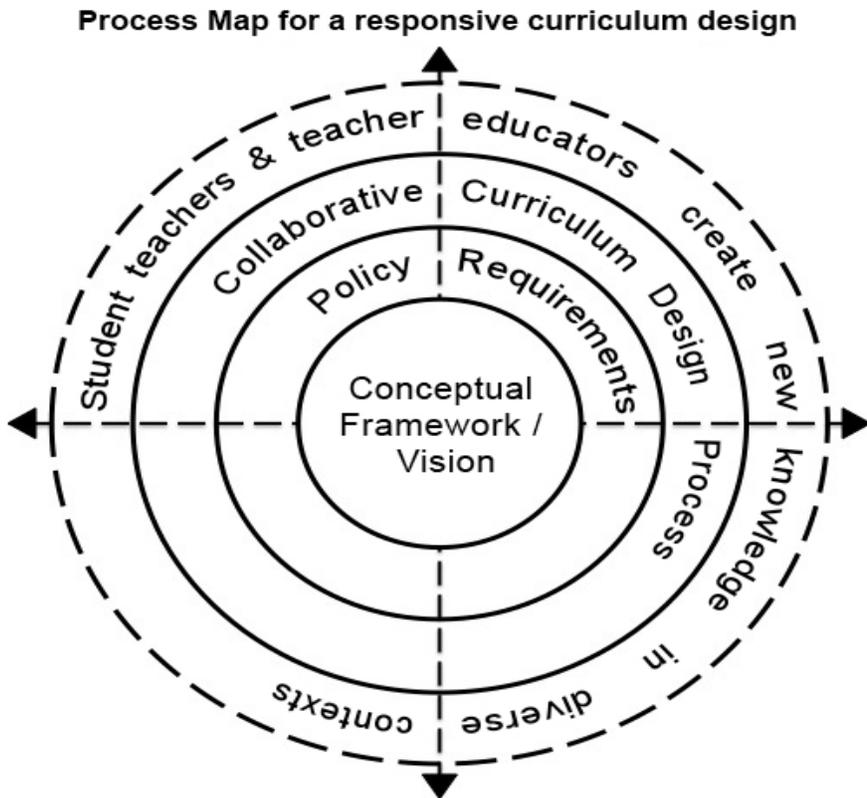
Figure 2 demonstrates how the curriculum design process can encourage collaboration amongst teacher educators, thereby promoting ownership. The process starts with the staff reflecting on their vision for their graduates (inside circle). This vision for a particular qualification needs to be framed within the vision of the faculty. At the same time the challenges (for example the diversity of prior learning and language) posed by the target group in relation to the purpose of the qualification, must be acknowledged. The discussion should ultimately result in a conceptual framework flexible enough to sustain ongoing framing and reframing against the backdrop of change.

The principles and attributes generated by the framework should next be aligned to policy requirements, as seen in the MRTEQ (DHET 2011). Since policy is an authoritative and “neutral” voice, this step in the process invites less debate, although it’s very “neutrality” may lead to conflicting interpretations. The danger here is to sacrifice some of the principles in the first stage (conceptual framework) to interpretations of the policy on the grounds of technical requirements. A case in point is the policy requirement of 60 credits at NQF level 7 for the Diploma in Grade R Teaching. This is at variance both with the entrance and the exit requirements, since the diploma is in the first instance meant to upgrade the qualifications of level 4 and 5 practitioners, allowing them to attain a maximum of 180 credits into the B.Ed. foundation phase – a qualification which usually only assigns level 7 credits to the exit level of that qualification.

Once the policy requirements and the essence of the conceptual framework has been harmonised, the collaborative curriculum design process can begin. Even at this

stage, staff should be encouraged to think in terms of different types of knowledge and its possibilities for connectedness between disciplines, rather than disciplines as silos of expertise. Throughout these first three steps, the curriculum leadership of the faculty or qualification needs to guide by constantly referring back to the design principles which emanated from the first stage of the process. Once the design is completed at macro (qualification), meso (learning areas) and micro (subject) levels, implementation and enactment can start. This last, and ongoing, phase (outside circle) should be characterised by constant review, in consultation with students and collaboratively through staff development sessions.

Figure 2. A possible process map for curriculum design in teacher education



The DHET has provided universities with a minimum requirement structure and some philosophical guidance in their policy document. Following through on the analogy of teaching as an art and the palette being the knowledge mixes, we could have an artwork painted by numbers, taking the knowledge mix grid as a literal summary of what is intended by the department. This may, in fact, allow improved

control through a matrix, and force universities in the direction of a national curriculum for teacher education.

On the other hand, faculties and schools of education could opt for an “art jamming” model – infinitely more messy due to its free form style – but conducive to growing a coherent vision in the faculty and a collaborative energy to sustain it. The prescriptive nature of the Curriculum and Assessment Policy (Department of Basic Education 2012) serves as a reminder that “harnessing” education, and more specifically early education, (Schweinhart 2005:2), may shift the attention away from the need for teachers to respond effectively to diverse student populations. A responsive teacher education curriculum needs to give the candidates the analytical tools to become active knowledge professionals. Ryan and Grieshaber quotes Popkewitz (2005:3) in saying that postmodern teacher education should involve moving away from a mastery model to active examination of how knowledge creates boundaries and possibilities – the ability to reflect critically. This can become a reality if the process depicted by the outside circle in figure 2 is interpreted as an ongoing project involving both teacher educators and students in knowledge creation.

The combination of a traditional emphasis on a developmental approach, coupled with a prescriptive curriculum, as well as prescribed materials for early childhood education, can act as a strong force against the recognition of the diverse needs of learners from multiple backgrounds. A curriculum designed to recognise the need for critical and reflective attributes in teacher education and implemented by a staff well aware of the complexities described here (figure 2), may have a better chance of steering a faculty away from a fragmented and boxed knowledge agenda. In comparison, a process orientation recognising the importance of an epistemological diversity of knowledge types and multiple lenses to observe these types of knowledge becomes an ongoing project with staff and students; the “recontextualising agents” referred to by Fraser (2006) and Luckett (2001, 2009). The glue holding together the process of designing and implementing a curriculum would be in the orientation and disposition of those involved in the process: Academic rigour characterised by multiple lenses, looking beyond the boundaries of the traditional types of knowledge for new combinations and articulations while maintaining a critical reflective stance. It is the constructive alignment with the foundations of the programme that needs to be prioritised (Russell et al 2001).

## Conclusion

The metaphor from which this article took its cue is that of teaching as an art, with the colour palette being the knowledge mix. In Eisner’s book *The educational imagination* (1994:154–156) it is stated that

[...] because teaching can be engaged in as an art, is not to suggest that all teaching can be characterized as such. Teaching can be [...] wooden, mechanical, mindless, and wholly unimaginative. But when it is sensitive, intelligent, and creative – those qualities that confer on it the status of an art – it

should [...] be regarded [...] as an example of humans exercising the highest levels of their intelligence.

While the metaphor remains useful, the last word should probably go to John Loughran (2006:177): “A search for balance may well comprise the journey, finding harmony is no doubt the challenge”.

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