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TEACHER EDUCATORS TALK ABOUT ENDURING UNDERSTANDINGS

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ABSTRACT

Teacher educators in tertiary education environments face similar challenges to teachers in other sectors when responding to the rapid pace of change across New Zealand educational contexts. "What is really important?" and "how to fit it all in?" are questions frequently asked about content. Using enduring understandings as a way of addressing these questions by identifying "big ideas" appeared to offer considerable benefits for one initial teacher education programme. This paper draws on a survey of teacher educators' experiences in using enduring understandings in the programme's compulsory professional studies papers to evaluate the effectiveness of this innovative approach. These teacher educators expressed approval of the implementation of enduring understandings and identified a variety of benefits. The study found that the development and use of enduring understandings enabled content revision and development to occur within existing policy guidelines. Furthermore there was increased teacher educator and student teacher talk around 'big ideas'.

INTRODUCTION

All education sectors are impacted by rapid developments in technology and the exponential increase in public access to information and expertise; by a sustained increase in the expectations of teachers' work; and by calls for greater accountability and relevance in curriculum content to prepare young people for their future in a post-industrial society. Questions about curriculum content such as "what is really important?" and "how do we fit it all in?" have become important ones for educators although they are not new. As McGee (1997) has pointed out, "... the whole matter of the 'best' knowledge to teach is controversial and problematic" (p. 109). Dewey (1938) asserted, for instance, that curriculum content should draw on individuals' life experiences. He argued, "Anything that can be called a study, whether arithmetic, history, or geography, or one of the natural sciences, must be derived from materials which at the outset fall within the scope of ordinary life-experience" (p. 73). Bruner (1966) saw content as important but considered it needed to be derived from beyond each learner's own experiences. He believed a learner's capacity to understand specific content and the various cognitive processes they used to develop their understanding to be just as important. Contemporary theorists such as McTighe and Wiggins (1999) have reiterated the importance of teaching for understanding. They hold the view that because there is "typically more content than can be reasonably addressed within the available instructional time, educators are obliged to make choices" (p. 10).

It seems inevitable then that the questions 'what is really important?' and 'how do we fit it all in?' would become a focal point for those teacher educators participating in a review of the compulsory professional studies papers taught to students in the Bachelor of Teaching Primary programme in a Faculty of Education. Consequently, the attendance by one teaching team member at a professional development seminar facilitated by Jay McTighe in 2008 led the professional studies teaching teams to adopt the concept of enduring understandings as a way of addressing the "big ideas, or the important understandings" we wanted our students "to 'get inside of' and retain after they've forgotten many of the details" (McTighe & Wiggins, 1999, p. 10).

Enduring understandings (EUs) were adopted at a time when the curriculum of our professional studies papers was under considerable pressure to accommodate increasing demands. These demands came from students enrolled in the compulsory papers, from our colleagues in the teaching profession and various stakeholders in the Bachelor of Teaching Primary programme. Our students contributed to these demands through their paper appraisal comments as they evaluated whether their professional needs for their future roles as classroom teachers had been met; primary school colleagues contributed through their engagement in professional conversations with our students and us about the changes occurring for them in their school contexts; and both our new and experienced professional studies colleagues debated and discussed what the important learning was and how it was going to be identified. Finally, prompted by the introduction of a revised New Zealand curriculum, the faculty's leadership team began to look anew at the Bachelor of Teaching Primary programme and papers. The intention was to facilitate the design of a curriculum that would accommodate innovations and initiatives without being overwhelmed by content.

The content of the papers in the Bachelor of Teaching degree referred to in this paper includes established requirements and they are subject to regulation and approval processes. This can contribute to what Weimer (2003) has claimed is a "coverage model" and we were aware that this kind of model had begun to lead to our students being told what they needed to know. However Weimer's assertion that tertiary teachers' key aim should be to "build their students' knowledge base and develop their learning skills and learner self-awareness" (p. 51) was one we agreed with, even though we knew any decision to let go of content would be a difficult one. This was mainly because our compulsory papers are part of a sequenced programme which comprises content critical to students' successful completion of their programme. Hence it was no surprise that "the

relationship between content and process" became an at times "complicated one, full of tensions and dilemmas" (Collier, 2011, para. 2). However because we had acknowledged that the research supports "letting go" of content, we were prepared to do so in order to develop a greater emphasis on what our students learn and how they learn (Barr & Tagg, 1995; McIntyre, 1993; Wiggins & McTighe, 2005).

Our intention was to facilitate deeper understanding where students could apply in different contexts what they had learned (Biggs & Tang, 2007). Hence McTighe and Wiggins' (1999) EUs, or the "big ideas" teacher educators wanted students to have a deep understanding of, proved to be highly effective in a revision of the compulsory professional studies papers. The EUs led to informed and purposeful educational decisions being made about our teaching and students' learning and assessment. As is consistent with McTighe and Wiggins' intentions, enduring understandings have helped

- when there was too much curriculum content and too many goals;
- when existing goals were too big or too specific (or obscure);
- when there was a misalignment between purpose, activity and assessment;
- to redirect activity-orientated content and teaching;
- encourage the "uncovering" (the big ideas, what is worth understanding, what has the most power or helps make sense of the content) rather than the "coverage" referred to earlier.

This paper discusses the review of the compulsory professional studies papers taught in the Professional Studies in Education (PSiE) department in the Faculty of Education at the University of Waikato. The subsequent implementation of the EUs and the experiences of teacher educators teaching in the papers where EUs provide the important ideas from which content has been developed are explored. Finally the relevance and usefulness of EUs are discussed.

THE REVIEW

The three professional practice and inquiry papers at each level of a three-year Bachelor of Teaching Primary degree programme, and a curriculum and assessment paper (taught in the students' final year) constitute the four compulsory professional studies papers. Paper outlines provide important information and are intended to be a contractual obligation not just a point of reference for students and educators. They identify and describe the key objectives for learning as well as the more usual information about assessment, readings and university regulations (PSiE, 2010).

An important element at the end of the academic year in the PSiE department has long been the collaborative review of papers by the teaching teams. Students' evaluations are a key feature of the review process with their voices taken into serious consideration. Traditionally, reviews have led to the addition of further achievement objectives (AOs) and content, rather than a reduction. However, as teacher educators responsible for the review and design of papers, we believed there was a way to re-examine the content and learning by focusing on "what is really important?", "how do we fit it all in?", and "what are the big ideas or EUs we want students to understand?" In November 2008, those teacher educators from the PSiE department who teach in the compulsory papers began an intensive review of the aims, AOs, content, current practices, teaching strategies, assessment and future directions for each paper (Earl, 2010). We were looking for a way to think differently about the compulsory professional studies papers in the programme and to think longer term rather than year by year. In addition, a more major review was timely, due in large part to the changing global context of tertiary education, and we wanted to become more "responsive and attentive to international trends" (Martin Davies, 2006, p. 1). Nationally, new and revised policies were affecting schools and initial teacher education programmes. For instance, the revised New Zealand Curriculum comprised new elements for educators from the primary and secondary sectors to "come to grips with" such as key competencies and values. In addition, there was increasing influence and activity by the New Zealand Teachers Council, especially in relation to the restructuring of monitoring and approval processes for initial teacher education providers, and the introduction of Graduating Teacher Standards in 2007. Locally, a third edition of the text *The Professional Practice of Teaching*, edited by Clive McGee and Deborah Fraser, had been published early in 2008. As a required text aligned to each of the professional studies papers, the book was, and remains, a key source of up-to-date information and critical thinking for students and teacher educators. While a number of the text authors

had taught in the compulsory papers, this was now not the case. Finally, an ongoing issue was the changing members of the teaching teams from year to year; hence it was important to provide clarity about questions to do with paper content for any 'new' team members as well as those in subsequent and concurrent papers.

At the time of the review, there were questions about how much overlap existed across these four papers and how much repetition there actually needed to be to adequately scaffold the development of students' knowledge and understandings. Lists of weekly topics within each of the papers provided limited information to teacher educators or students about what was important for students to know and understand or do as a result of their learning. Furthermore the list of AOs within each of the compulsory papers had continued to grow as a result of ongoing developments in policy and research in education. Consequently the number and formal language of these objectives were seen as potential barriers to effective teaching and learning in regular lecture and tutorial interaction and activities, and to student achievement when the usual time and institutional constraints were taken into consideration.

The resulting one-page overview across the four compulsory professional studies papers in the Bachelor of Teaching Primary programme provided a clear structure and direction for the development of understanding and content in the professional practice aspects of the programme. An additional benefit would be that with important understandings stated more explicitly, teacher educators would have greater autonomy to develop student-centred strategies and activities according to his or her own style, while still aligning with and maintaining required core learning.

BACKWARD DESIGN AND DEVELOPING THE ENDURING UNDERSTANDINGS

The overview helped us come to know that we had been making assumptions about our students, in particular that they would develop their understanding guided by specific achievement objectives. This knowing led to a proposal that the concepts of backward design, essential questions and EUs from McTighe and Wiggins' (1999) work be used as the basis for our review. We considered a backward design approach would support an alignment between our teaching purposes, learning activities and assessment to support students' learning, and to develop content that explored EUs we had identified as the "big ideas" that comprised

transferrable concepts (McTighe & Wiggins, 1999). Further benefits of a backward design approach for our purposes appeared to be that it would be effective in not only addressing crowded curriculum content but when there were too many AOs or they were too broad or specific.

However, our development of EUs differed from McTighe and Wiggins' (1999) backward design approach in two ways. We didn't begin with and review the detail of our assessment as they suggested. Rather we began by identifying the core content within and then across the papers, deciding to specify one essential question per paper. A number of different but linked EUs were developed under the overarching statement for all compulsory professional studies papers, that teaching is a personal, relational and complex endeavour. Furthermore instead of beginning with assessment in our decision-making, the EUs informed the design of the assessment, which comprised a variety of assessment methods to enable students to demonstrate their understanding during and at the end of each paper.

Most importantly, the EUs in each paper identified key messages and provided a common vision of what was considered important in each. They were designed to be succinct and more readily remembered and understood, thus increasing the likelihood of their application in teacher educator-student interactions. A further intention was that new members of the teaching teams could more easily identify, know and understand "what is important?" in each paper and develop strategies for "how do we fit it all in?". In addition, the EUs opened up further questions and uncovered the complexity of teaching and learning for students and teacher educators.

The review and development process for EUs proved to be more straightforward than expected. This appeared to be as a result of using the EU and essential question format, the degree of shared vision and understanding already in place (most likely due to most of us having worked collaboratively in the teaching teams for these papers for some time), and the existing clarity around paper descriptions, aims and content as recorded in the outlines. While there was significant discussion and debate about specific word choice and inclusivity, as would be expected from a group of teacher educators, any concerns were alleviated by a commitment and agreement to review the EUs at the end of 2009.

As Weimer (2003) has pointed out, the kind of commitment we made to teaching and learning challenged us to "revisit long-held assumptions about who's responsible for

what in the teaching-learning process" (p. 48), and that this is highly effective. Indeed we did find that the introduction of the EUs changed the ways we handled "central elements of instruction like course [paper] design and assessment" (Weimer, 2003, p. 48) and that our new commitment changed what we did with students in lectures and tutorials.

IMPLEMENTING THE ENDURING UNDERSTANDINGS

The EUs are the big ideas that as teacher educators we are tasked with implementing in ways that are meaningful for our students. The overarching statement along with the specific essential question and EUs are located at the front of each paper outline. These are explicitly introduced and applied in all lectures and tutorials to clarify the intentions for learning, shape content, and develop students' understanding. While the intention is for students to learn specific content, we also want them to be able to develop and identify models for understanding other, similar content that they are likely to meet during their university studies and eventually as classroom teachers (Wiggins & McTighe, 2005).

OUTCOMES

The teacher educators involved in the papers using the EUs were surveyed using an online questionnaire (Earl & Ussher, 2010). The survey looked at three aspects: relational culture, co-construction and use of EUs. Sixteen staff members from the PSiE department who teach in the primary professional studies papers were emailed information about the study. Eight teachers responded to the survey. The next section of this paper will focus on responses related to the EUs. Participants were asked to recount their knowledge and experiences as they related to how the EUs were developed, how they had influenced their practice as teacher educators and how they were continuing to do so.

The use of EUs as a way of identifying the "big ideas" within and across these papers has had a variety of benefits for both teachers and students. Teachers, both new to the department and those with experience teaching in these papers, expressed approval of the use of EUs over lists of objectives. Having a shared understanding of content through the development of EUs appeared to have given teachers a feeling of being on the "same page":

The EUs have provided me with a clear platform for the development of specific content and valid assessment in the papers I lead and teach. In particular making the EUs explicit to students in lectures and tutorials each week has ensured we are "on the same page" when it comes to their learning. (Jenny)

Having these agreed EUs in place gave me both security and freedom in my teaching practice. Security, because I was more confident of being on the "same page" as other lecturers in the paper, and freedom because I was able to try out new ideas in my tutorial sessions. (Kerry)

The EUs, being succinct and limited in number, have increased the teacher talk (during team meetings, lectures and tutorials). The intentions for learning have been made more explicit and coherent and helped students to develop a "bigger picture" of their learning.

For me, one of the main benefits was being able to refer back to the EUs with students, to show them how our tutorial activities contributed the "big picture" of them becoming strong teachers. (Frances)

They provide a focus for the papers being taught—and help anchor the content. They are a useful reminder of the conceptual core of the papers. (Anon1)

The EUs are a bit like sign posts on a journey, they help to provide direction and to check that you are still travelling in the right direction, you may take a wrong turn every now and then but they bring you back on to the route you are going. (Anthony)

Having the overview across the four compulsory professional studies papers means students can see the way concepts are developed, increasing in breadth and depth across the programme (see Figure 1).

CONCEPTS TEACHING IS A PERSONAL, RELATIONAL AND COMPLEX ENDEAVOUR	PROFESSIONAL PRACTICE & INQUIRY 1	PROFESSIONAL PRACTICE & INQUIRY 2	PROFESSIONAL PRACTICE & INQUIRY 3	CURRICULUM AND ASSESSMENT
	What is a teacher?	How do theories inform teacher philosophy, decision-making and practice?	What issues impact on me as a teacher and on teachers as a professional group?	How does assessment evidence inform teacher decision-making and practice?
NZ teachers and learners work in a unique cultural context.	NZ teachers recognise the unique bicultural context in which they work. Teachers are responsive to cultural diversity.	Teacher- student relationships impact on teacher effectiveness and student learning There is a relationship between culture and learning.	Teachers work in partnership with their communities. Teachers respect and nurture learners as individuals.	Teachers match assessment practice to learners and contexts.

Figure 1: An example of the development of one concept through enduring understandings across the papers.

The use of this coherent approach for the professional practice elements of the programme has also clarified and made accessible for students some of the Faculty of Education's broader messages about what important understandings they need to have. This has been achieved in a way that the more dense and complex wording of documents such as the Teacher Education Academic Rationale and Goals do not appear to have successfully managed to do. This framework aspect of a "bigger picture" is also consistent with current practices in primary schools:

The EUs provide a framework which continually ensures that the paper content is related to a central theme, this is very much like how schools have a big idea they develop their teaching from. This big idea (EU) is a reference point for developing material for lectures/tutorials, they are also reference points for the students for them to refer to so that they can see if they are developing towards these understandings, or to identify questions that are being raised for them by the content in relation to these themes. It may be that the questions are challenging these understandings as well. (Anthony)

They have helped me to create a big picture of what the whole paper is about when at times I kind of got lost when I first taught each of them (PPI1 Undergrads and PPI2 and PPI3 Grads). Luckily I was used to Enduring Understandings as at Kimihia we worked with a term concept and big ideas (integrated topic planning), which were underpinned with EU—I think this scaffolding helped me a lot. (Tracey)

The use of EUs has supported teacher educators in developing a consistency of content rather than requiring a consistency of student experience across their tutorial groups. The clarity of the EUs has allowed them, as individual teachers, to try out a greater range of activity ideas in tutorials while continuing to develop EUs. Teacher educators now believe they own their creative processes, they seek to personalise and renew their teaching practices, they value differences in teaching styles, acknowledge individual strengths and they differentiate learning. Tutorial activity ideas have been gathered from the literature, observations in schools, professional development, and guest speakers. All of these factors have contributed to the effective implementation of the EUs.

In our relatively small teacher education programme, students talk to each other often about their study and experiences. A result of this can be a perceived discrepancy between what is experienced by students as they participate in different tutorials with different tutors. They may see this as not "covering" the same as others in readiness for assessable tasks. The adoption of enduring understandings to focus our programme enables students to understand that different tutorial activities can be used to achieve the intended understanding. Enduring understandings have empowered the lecturers to adapt their own tutorial activities while assuring students that important learning is being addressed. (Bill)

In my role as programme coordinator for the primary degree, I know that in the past we have had feedback from class representatives about tutorial classes varying in content and student insecurity over the perceived inconsistency of learning content based on what they "do" in class. In the last 2–3 years this has not been an issue. (Kerry)

In PPI1 individual lecturers are able to plan and facilitate the content and activities [of tutorials] however they wish. (Tracey)

When I first started teaching these papers I realised how much there was to cover each week—the EUs gave me confidence that I was "on the right track". The EUs did not restrict me ... instead they provided structure within which I could move. (Frances)

Students now see more explicit modelling as the teacher educators' teaching approaches reflect who they are as individuals. This modelling has also allowed and encouraged students to consider their own personal and professional development, and recognise teaching as the personal, relational and complex endeavour it is acknowledged to be within each paper (as opposed to a prescribed checklist of best practice to which they feel the need to conform). The students have begun to understand that their learning is about identifying "what is important" rather than focusing on "what they have done". This has reinforced that the learning activity is simply a tool for learning and developing understanding, that it is not an outcome in itself.

In the past there had been a tension between specifying the detail of what is to happen in tutorials, for consistency, and our belief that there is no such thing as one single best practice. Using enduring understandings would counter any student concerns that tutorial content varied too much across groups. As teachers we would be free to convey, and develop these understandings in our own way, allowing for greater personalization and responsiveness. This would support the belief that variation in teacher practice is a good thing reflecting teachers as individuals and professionals. (Kerry)

Sometimes I like to stop midstream in a tutorial, “step outside of the lesson”, and provide a sort of meta-commentary, pointing out the reasons for the choices I make whilst teaching. Inevitably these choices relate back to the EUs of the paper. I think making things explicit like this helps students to see how these “big ideas” can influence our teaching practice. (Frances)

The EUs have made clear and accessible what we think is important because we consistently talk about them, and use specific words. For students, the relative simplicity of the language has meant the intention and meaningfulness of learning activities have become more explicit, increasing the clarity of the important ideas. Students are encouraged and more likely to ask questions which open up rather than close down learning. Nevertheless when first working in specific papers, students and teacher educators take time to become familiar with EUs:

I have to admit I forget what they are and when I am planning tutorials or discussing an assessment task that states “covers EU 2, 3 & 6” (for example) I flick back to see what these EUs are—because as yet I don’t know them without looking them up still. (Tracey)

It takes time to get used to thinking about the EUs. Reading through the EUs each week before I do any teaching preparation helps. That way they are at the forefront of my thinking and are more likely to be evident in tutorials I prepare. (Frances)

Having EUs instead of specific AOs has meant we are able to more easily integrate changes in policy and new initiatives year by year without major revisions to our learning goals; for example, ensuring our papers address National Standards, Registered Teacher Criteria, and National Administration Guidelines revisions. In recent years the development of the paper outline has primarily been the responsibility of the paper coordinator as the leader of the teaching team. As an official document, the paper outline is generally developed in the weeks prior to the beginning of teaching and at times prior to the confirmation of the teaching team. However, focusing the curriculum content of a paper through EUs has meant that accommodating new developments, new team members and initiatives from policy and research can be immediate. Importantly, EUs have provided for a more co-constructed and collaborative approach by the teaching team throughout the teaching of the paper rather than establishing content at the outset and not wavering from it.

However, along with the positive feedback on the implementation of EUs, the survey responses have also indicated the need for further refinements to both EUs and our practices in using them.

I would be keen to review and rewrite the EUs for “Curriculum and Assessment”. The EUs for this paper were identified last in the review process and they were written to fit the framework that had developed. These EUs fit very well and no one would disagree with them but if writing a list of EUs for assessment without the framework I believe the results would be different. In fact a couple of us have done this exercise. The list of EUs we came up with is too long but it would be good to have another look with the wider team. (Kerry)

Ensuring a shared understanding of specific EUs for the week across the teaching team has depended on, and required, rigorous critical discussion during weekly team meetings, which in the past had at times been rushed. An annual review of the identified EUs and our understandings and refinement of what we mean underneath these broad statements at the department level is now not only required, it is necessary.

The enduring understandings are really only just beginning to influence my practice—there is still not enough conversation about them and what they actually look like (i.e. across the department—the conversations do take place in teams). (Anon2)

The EUs both within and across papers have helped us to revise, redesign and justify our assessment tasks, and sustain the integrity of the papers within the Bachelor of Teaching programme. Ensuring a broad alignment of individual assignments across the paper with specific EUs has proved to be relatively straightforward. The assessment moderation of assignments has also been a process supported by the identification and clarity of key messages for both teacher educators and students. However, it has already been recognised that further refinement of the alignment between EUs and assessment tasks is desirable:

In relation to assessing these I think that we need to be more astute at ensuring the EUs are explicit in our assignments, so that the students can clearly see what is sitting in behind the actual task they are undertaking. This I think would provide more clarity for them in undertaking the assessment tasks. (Anthony)

CONCLUSION

EUs have provided a more concise and accessible way of sharing the intended learning with colleagues beyond the PSiE department. Teacher educators in other departments who teach curriculum and education papers know what we have been trying to achieve and there is now greater opportunity for making links. Developing this cross-department communication further and making explicit links for students between papers will certainly require our joint attention.

There is potential for further research too. This could involve the gathering of student voice by going beyond the anecdotal stories and paper appraisal feedback. This would undoubtedly further our commitment to the use of EUs. Further innovations could include the development of EUs for post-graduate study. Teacher educators working at this level have already expressed an interest in EUs for their papers and programmes, and discussion with leaders of our Early Childhood and Maori Medium programmes has led to expressions of interest in developing EUs. Such innovations could lead to a substantial review of similarities and differences of teacher educators’ experiences of using EUs in these programmes.

As stated earlier, our EUs are underpinned by the overarching statement, that *teaching is a personal, relational and complex endeavour*. Our review of the papers and the development of our EUs have also been personal, relational and complex, and we continue to work to create opportunities that overtly link practice and theory. Importantly, because of the personal and relational nature of teaching we need to be vigilant and ensure the links between our conceptual framework and the content of lectures and tutorials are clear. We must also help students make links between our EUs and the curricula of other papers by taking time to find out about the prior experiences that have contributed to our students’ knowledge and understandings. If we know what goals and aspirations they have for their learning, we can make sound decisions about content and the teaching strategies we use to motivate them and engage them in learning that is rigorous and relevant.

A further influence on our thinking has been the development work on reflective

journaling by our first year Bachelor of Teaching students. In the journals we have attempted to move the writing of our students from recalling facts and responding to a teaching episode or event. We encourage them to explore the important ideas and attempt to reason and reconstruct these ideas from and across a wider range of experiences (Bain, Ballantyne, Packer, & Mills, 1999). The intent was, and remains, to have students further investigate the implications of each important idea for practice—both observed and their own. Students have been encouraged to use their existing reflective journals to make the links themselves. E-portfolios are currently being considered and may provide a further opportunity for students to demonstrate that they recognise the EUs in both theory and practice; and to make links between the Graduating Teacher Standards and EUs in their programme's curriculum.

The teacher educators involved in the development and implementation of the EUs identified a number of benefits for teachers and students. These benefits included being on the "same page", increasing teacher talk around the "big ideas", providing a framework for the development of students' understanding of the bigger picture (consistent with practice in primary schools) while allowing room for individuals to use a variety of approaches and activities in tutorials. Although not yet as obvious to the newer teaching team members, those who are more experienced have identified that fewer EUs and the clarity of their wording made them more memorable than a list of AOs. The EUs are seen as broad enough to readily enable revision and inclusion of changes in policy, priorities and research without wholesale changes to the official documents, in particular the paper outlines.

Having developed EUs which communicate the important understandings for learning in specific papers, teacher decision-making and students' assessment work has become more supported. Furthermore greater coherence across the compulsory professional studies papers in the programme has become clear. At the time of writing this paper, the EUs continue to be shared and discussed in teaching team meetings; with students in lectures and tutorials; and with faculty and school colleagues. EUs are now provided to guest speakers to help them with the development and communication of their presentation content. Further refinements through reviews of the EUs and our use of them in practice within and across departments are intended to more fully embed the use of EUs in the Bachelor of Teaching programme. Due to the complexities of teaching in a tertiary teacher education context, we are aware that we will need to regularly review and revise both the Bachelor of Teaching programme and each paper within it—the EUs will help us to do this. Having established that there are a number of benefits for students in this primary undergraduate teaching degree, our interest is now turning to consideration of the appropriateness and best use of EUs in other programmes, and at other levels. Thanks to our adaptation of understanding by design, we are in a good position to create and modify the curriculum within the existing framework.

This innovative process that we have engaged in has caused us to pause, review and revise the purpose and content coverage of each compulsory professional studies paper. During this period we have critically reflected and worked on our own teaching practices by incorporating dialogue about teaching and learning into our meetings and professional conversations. We have made a good start in moving ourselves as teachers to become much more inquiry focused, from transmitters of knowledge to investigators and co-constructors of understanding. Our start was in the creation and development of EUs that now give coherence and depth to students' learning experiences. Our observations suggest to us that the EUs have increased, enhanced and enriched students' engagement with teaching and learning, as well as their curiosity and critical thinking. Significantly, they have created a reason for us to continue to talk about the important understandings we want our students to have.

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