

Assessment as pedagogy: a means not an end

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Abstract:

Assessment design is a critical influence on pre-service teachers' approach to the teaching and learning relationship (Scouller, 1996). It acts as a signal to point students to what educators and institutes consider most important to learn (Boud, 1998). We are familiar with the beginning of the semester scene when students receive their course outlines. The teacher educator wants to focus on course goals, approach and learning intentions and how this particular course contributes to the development of an effective, reflective teacher. However, the rustle of the paper indicates pre-service teachers' eyes turning to the assessment tasks. Initially, for pre-service teachers a course can be understood as equal to completion of those tasks. Assessment experiences do not occur in a vacuum. Institutional language, priorities and 'ways of doing things' represent beliefs about the nature of teaching and learning and as such can both enhance or hinder such development.

The doctoral study from which this paper emerges sought pre-service perspectives on the contribution of course work to the development of a reflective neophyte teacher. The study indicates that pre-service teachers not only discriminate between course approach and assessment designs which are more likely to contribute to their development as reflective practitioners, they also demonstrate clarity about characteristics of assignments and courses which contribute to this end, in terms of both negative and positive factors. Factors identified by pre-service teachers include expectations related to the degree of thinking, personal ownership and self-awareness of assumptions and presuppositions. Student teachers identified assessment tasks with multiple phases which required them to commit to a position, then provided formative feedback as well as peer critique, followed by the opportunity to re-work the material to be effective in leading to personalised learning. Assessment tasks with these characteristics were seen to be more likely to interrupt the pre-service teachers' apprenticeships of participation and observation, be viewed as an integral component of course pedagogy and provide opportunities for 'ways of being' teacher as described in our conceptual frameworks. As Claxton and Carr (2004, p. 87) note, "It is not a matter of content alone, but students need to be ready, willing and able to engage profitably with learning".

Subsequent development of assessment tasks which include characteristics as identified by doctoral participants have confirmed their insights. Specific assessment examples will be described and discussed within the paper. Larrivee suggests, the path to development as reflective thinkers, learners and teachers "*cannot be prescribed*" but "*must be lived*" and involves "*infusing personal beliefs and values into professional identity*" (2000, p. 305). It appears that when assessment design and experience requires challenging thinking, self awareness, personalisation and ownership; includes multiple phases and is viewed as integral to the pedagogy that it is more likely to interrupt a technicist perspective of teaching and learning.

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Introduction

It has long been troublesome to teacher educators that despite an intention to do otherwise, beginning teachers tend to teach as they were taught (Feiman-Nemser, 1983; Lortie, 1975). The influence of teacher education programmes is often unpredictable and apparently indirect (Berry, 2004; Hatton & Smith, 1995; Kagan, 1992; Lowery, 2003; Zhou, 2002). Often interventions in a time of professional preparation are seen to be too little and too thin to separate them from what pre-service teachers' experience has taught them about teaching. Zeichner (1986, p. 142), well known in the field for his findings on this perspective, states:

. . . there is much evidence that pedagogical methods and content knowledge introduced to students in campus courses has little influence on the subsequent actions of students in classrooms even during initial training.

This paper recognises that assessment design is a critical influence on pre-service teachers' approach to the teaching and learning relationship (Scouller, 1996) and on the basis of findings from a doctoral study and subsequent work with those findings suggests that assessment design has the potential to have significant impact on pre-service teachers learning and subsequent practice.

Assessment tasks act as a signal to point students to what educators and institutes consider most important to learn (Black & Williams, 1998; Boud, 1998). Teacher educators are familiar with the beginning of the semester scene when students receive their course outlines. The teacher educator wants to focus on the course goals, approach and learning intentions and how this particular course contributes to the development of an effective teacher. However, the rustle of the paper indicates pre-service teachers' eyes turning to the assessment tasks. It is clear that for many pre-service teachers a course can be understood as equal to completion of those tasks. However, assessment experiences do not occur in a vacuum. Institutional language, priorities and 'ways of doing things' represent beliefs about the nature of teaching and learning and as such can both enhance or hinder such development. For a range of institutional, staff or student related reasons a mis-match can exist between what is heralded as critical in the learning and teaching process and what is required for assessment. Initially, this paper presents findings from one small section of a doctoral study which asked the question, *How does pre-service course work contribute to the development of the*

reflective professional? The remainder of the paper discusses recent examples of practice influenced by those findings.

The study

The doctoral study which informs this paper was distinctive in two ways. First, it focused on the development of reflective teachers in terms of course/on campus work rather than field or practicum experience. Second, it sought participant rather than expert voice. The study sought to understand how pre-service teachers understood the contribution course work made to the development of a reflective neophyte teacher. Participants were enrolled in a three year Bachelor of Education (Teaching) programme - the initial¹ component of a programme preparing primary teachers for New Zealand schools. A critical reflexive interpretive methodology which sought authenticity within its meaning-making process developed from an initial consideration of self-study research methodology. Of particular importance was that the enquiry was authentic, participants' voices were valued and recognition was given to the implications embedded within the context within which the study occurred.

Data collection occurred in two phases over a two year period using a range of tools. The first phase involved two cohorts (Cohort 1, n=19; Cohort 2, n=20) of pre-service teachers enrolled in *Teaching of Science* (a methods paper) and included a pre-course questionnaire, a Gestalt-like activity, regular email reflections based on Hoban's (2000) categories of learning influences and meta-reflections (MR) in which each pre-service teacher discussed their development as a teacher of science based on analysis of their regular reflective writing. After all course grades were processed through the Board of Examiners, an invitation was extended to these pre-service teachers to release their course material as data for the study. The second data collection phase occurred some 18 months later at the conclusion of their initial three year programme and included responses from the same pre-service teachers from Phase One to a vignette and a three part final questionnaire focussed on pre-service teachers' perception of how the institute and its initial teacher education programme had prepared them as developing reflective professionals. Data drawn from final questionnaires are identified by the letters FQ.

¹ To gain full teacher registration, the initial three year degree programme is followed by a two year period of teaching in which the neophyte teacher, supported with an advice and guidance programme, develops a professional portfolio of evidence of effective teaching and ongoing professional development.

Overall findings

First, the study showed that the majority of pre-service teachers commence initial teacher education constrained by a technicist learning mold which hinders reflective learning. Education is seen as a commodity, something to acquire, teaching is telling and initial teacher education is dependent on the teacher educator providing the necessary tools and techniques so the beginning teacher can do the right thing. The broader study found that pre-service teachers' prior experiences not only influence the ways in which they practice as teachers, but also how they present themselves as learners. Pre-service teachers enter their initial teacher education experience with a very definite learning mold which is a hindrance to developing as a reflective practitioner. For example, Alibee² shares the challenge of undoing a reliance on a transmissive approach and replacing it with an active, critical and reflective approach:

In all of my reflections on prior knowledge it would seem I have definitely brought along with me to Science lectures some distinct patterns of learning. I am finding it hard to unlearn these old ways and learn the new ways. I admit the new ways are not hard to understand, it is the unlearning of the old ways that is proving to be the most difficult. (MR)

This initial approach to learning is shaped by pre-service teachers' previous experiences or apprenticeships. Well known within teacher education literature is Lortie's (1975) 'apprenticeship of observation' which refers to the fact that pre-service teachers believe they understand the process of teaching because of their 13 years *observation* within the schooling system. Less well known is Norsworthy's (2005) 'apprenticeship of participation' which suggests that pre-service teachers' approach to their teacher education is shaped by the nature of their previous *participation* in education – participation which has led to schooling success. However, often such participation rewards notions of 'presentism' (giving the teacher what s/he wants), getting the 'right' answer and a view of learning as 'task completion'. Viewed through what might be termed a technocratic perception and consideration lens, a course is equal to completion of the assessment tasks; viewed and experienced as external to course pedagogy and learning intentions. In the words of participant Abdooljaba, assessment is about "*fulfilling the criteria or achieving the outcome*", where "*students know what a lecturer prefers and so write to that*" (FQ). Participant voice within the study suggested that an uncritical stance toward initial teacher educational experiences shaped by these two apprenticeships is a hindrance mechanism when teacher educators seek transformative teaching and learning. Within such a technicist stance, pre-service teachers seek tools and techniques which they can apply in the 'real world' of

² All names are pseudonyms

teaching which, itself, remains a straight forward activity and assessments, including reflective activity, are tasks to be ‘completed’.

Secondly, and a source of hope for teacher educators, participants indicated factors which contribute to breaking such an approach to teacher education. This alternative approach to which participants attributed the potential of developing a reflective professional teacher is characterised by valuing the pre-service teachers’ complex experiences as learners in order to develop more “*sophisticated and nuanced conceptions of teaching*” (Kitchen, 2005, p. 200) and, in comparison to a deficit mode of teacher education, seeks to scaffold and support pre-service teachers on a journey of self-awareness toward strong self-efficacy in terms of self as teacher. This resounds with the notion of being professional and with Palmer’s observation that “*in every story I have heard, good teachers share one trait: a strong sense of personal identity infuses their work*” (1998, p. 10). It appears from the data that pre-service teachers’ personal connection as indicated through ownership of learning and thinking of self as professionals, tend to occur simultaneously. This connectedness to self and one’s beliefs appears to be critical, if not central to the process of teaching (Dewey, 1938; Hollingsworth, Dybdahl & Minarik, 1993; Palmer, 1998). The sense of personal connectedness, increased self-awareness and characteristics of being professional identified in the broader study, appear critical to “*developing a context within which to hang learning that is personal to my own philosophy*” (Mary, FQ) and pre-service teachers within this study identified some of the ways in which this is developed and experienced.

The adjacent graph indicates factors identified by pre-service teachers as influential in moving them away from a technicist stance toward becoming a reflective professional teacher. The graph clearly indicates that the two most influential factors are the *course approach* and *assessment design*. These two factors are inherent in the notion of *pedagogical connectedness*. Such insight behoves us to “teach in ways commensurate with the ‘messages and practices’ that was the content” (Loughran, 2006, p. 7). In other words, rather than *learning about* something, pre-service teachers can *learn by inhabiting* or living the learning. These ideas reverberate with Eisner’s (2002) call to move the initial teacher education focus from *episteme* (formal theory) or *phronesis* (practical knowledge) on into

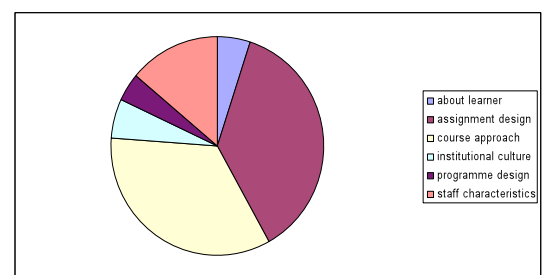


Figure 1: Contributors to development of reflective practitioner as identified by pre-service teachers.

artistry because it is within artistry that the notion of knowledge viewed as embedded and resident within self appears to be understood. He claimed:

Teachers, for example, are not regarded now as those who implement the prescriptions of others but as those most intimate with life in classrooms. . . . Teachers are collaborators in knowledge construction and bring to the table of deliberation a kind of insider knowledge. . . . Teachers have what some call lived experience (Connolly & Clandinin, 1998). The body is now considered a source of knowledge; at least a species of knowledge has become embodied. It is intimate. To know has taken on a biblical meaning. (2002, p. 381)

His reference to a biblical epistemology affirms that theory and practice can never be separated. The known and the knower are inextricably intertwined and related expressions of self (Bullough, Clark & Patterson, 2003). As indicated in the graph above, a significant influential teacher education component is found in the design of assessment tasks.

Assessment task design

Findings indicate that pre-service teachers not only discriminate between course approach and assessment designs which are more likely to contribute to their development as reflective practitioners, they also demonstrate clarity about characteristics of assignments and courses which contribute to this end, in terms of both negative and positive factors. Influential factors identified by pre-service teachers include expectations related to the degree of thinking, personal ownership and self-awareness of assumptions and presuppositions. Student teachers identified assessment tasks with multiple phases which required them to commit to a position, then provided formative feedback as well as peer critique, followed by the opportunity to re-work the material to be effective in leading to personalised learning.

When assessment tasks are an inherent component of teacher education pedagogy, they have potential to transform and sustain an alternative way of perceiving and thinking about learning and development. In contrast to Abdooljaba's view, participant Peter Piper claimed that they "*challenge us to think, explore and expand*" (FQ).

In this respect, two characteristics of assessment tasks emerge from the data as particularly effective. The first of these positive characteristics is the requirement for pre-service teachers to personally connect with the learning experience in such a way that it leads to ownership and justification of content through higher order thinking such as synthesis and evaluation. Throughout the study and as indicated by Peter Piper above, pre-service teachers consistently drew attention to the importance of having their thinking and presuppositions challenged.

Typically, this was through being involved in higher order thinking – either in response to questions posed by others or those which they posed themselves. Pre-service teachers indicate assessment tasks require both strong personal connection (such as developing a personally owned rationale) and this higher order thinking process (such as evaluation or justification) to avoid a completion mentality. Assessment tasks most likely to contribute to the development of a teacher who is reflective about their thinking, require pre-service teachers to process information through a personal filter and sense of fit. In other words, assessment tasks which were influential were deemed to be “*personal to me*” (Kava, FQ). According to Kava, such assessment tasks get “*me to dig deep into personal values, looking at character, something I have struggled with*” (FQ). This same sense of personal connectedness can be illustrated when Lily (FQ) identified a high level of self-awareness in assessment tasks which “*make you think carefully about how you are forming your ideas and what is informing your attitudes/involvement*”. This sense of connectedness is at the heart of the reciprocal processes of learning and teaching and yet when it comes to assessment design, our own experiences suggest that an objectivist epistemology reigns. Palmer (1999, p. 1) asks why this sense of connectedness appears difficult to be valued as academically valid, “*when we know with considerable certainty that it is connectedness that allows us best to pursue our mission, the mission of knowing, teaching, and learning?*” He answers the question, noting the academy’s commitment “*to an epistemology, a way of knowing which claims that if you don’t disconnect yourself from the object of study – your knowledge will not be valid*”. And yet, paradoxically, we realise that transformative learning does not come without a “*deep and often costly investment of selfhood*”. For Palmer, such a view is “*morally deforming*” because “*it sets students at arm’s length from the world they are studying; they end up with a head full of knowledge but without any sense of personal responsibility for what they know, no sense of connectedness to the world that their knowledge reveals to them*” (1999, p. 2).

The second characteristic valued by pre-service teachers is the inclusion of multiple phases which enable them to an initial committed response. Such phases may be discrete events and include discussion or submission of drafts for feedback and dialogue or may include the pre-service teachers reflecting back over previous reflections in order to bring forward some understanding which is then reviewed or justified in the light of related literature and its implication for future practice. A multiple phased assignment may include one component being foundational for another. Some students, such as Tania, wanted this ‘follow-up’ or

revisiting phase as she viewed it to be critical to “*ensure improvement*” (FQ). This sense of improvement or growth is another factor valued for its contribution for its development of a reflective practitioner. Typically, as identified by pre-service teachers in this study, feedback information they receive on assignments comes after teaching on the topic is completed and when they are least likely to benefit from such. However, in a multiple phased task the final assessment task component may require pre-service teachers to indicate how they have responded to peer or teacher feedback in the foundational component – thus making the feedback educative (Groundwater-Smith, Ewing & Le Cornu, 2003). While time consuming, this process enables relational connection through mentoring and modelling of critical, reflective thinking where the teacher educator scaffolds, in the Vygotskian sense, as a critical friend. Pre-service teachers value embedding feedback into the assessment task for its contribution to their learning. This second characteristic encourages ownership of learning through meta-reflection across those phases. Such an assignment avoids a ‘one right answer’ approach characteristic of those that sustain the technocratic perception and consideration lens. Multiple phases in assessments have the potential to encourage the disposition for, and tendency toward, meta-cognition and the ability to manage a sense of disequilibrium. Assessment tasks with these characteristics were seen to be more likely to interrupt the pre-service teachers’ apprenticeships of participation and observation, be viewed as an integral component of course pedagogy and provide opportunities for ‘ways of being’ teacher as described in our conceptual frameworks. As Claxton and Carr (2004, p. 87) note, “It is not a matter of content alone, but students need to be ready, willing and able to engage profitably with learning”. This study found that assessment experiences which enable personal connection leading to ownership, self-awareness, and justification and which include multiple phases or facets have significant potential for the development and sustaining of a professional perception and consideration lens. This process of “*questioning one’s own learning, or thinking about one’s own thinking*” (Loughran, 2006, p. 93) contributes to an understanding of assessment as part of the transformational learning journey. What is clearly important in this process is that pre-service teachers are involved in the ‘deliberation of insider knowledge’ to which Eisner (2002) referred.

Working with the assessment related findings

Subsequent to this study and its findings, we have sought to increase opportunities for assessment learning experiences to include multiple phases; personal connection leading to ownership and justification of learning, and self-awareness (on a range of foci) as a focus for

learning and personal professional growth. While we are continually aiming to improve assessment task design, feedback from both teacher educators and pre-service teachers indicate that the insight from participants in the original study has much potential to bring about the transformative development and change teacher educators seek and recent work is now reported.

Example 1: Teaching Mathematics and Numeracy

The first example is from a first year paper. Previously an assignment in this first of two dedicated papers focused on the teaching of Mathematics and Numeracy pre-service teachers were required to develop a unit plan of four lessons which they handed in for grading against established criteria. This has now been supported by two other phases of development. After the pre-service teacher has developed the detailed four lesson unit plan, they develop and present to a group of peers a summary of the unit and the pedagogical knowledge which informs it with examples which illustrate the reasons why they planned things the way they did. Each pre-service teacher is expected to explain the key mathematical ideas involved together with their Specific Learning Intentions and resources and to engage the peer group in a few questions or activities. Their peers then provide feedback to them. The assignment description clearly notes: *It is expected and encouraged that some fine-tuning of unit plans will follow the presentations and assessment feedback from colleagues BEFORE the submitting of hard copies.*

The material submitted for grading now includes the final polished unit plan together with a short reflection on what they learned from their presentation and peer feedback, outlining what they changed and why. Once again the adjusted assessment task clearly enables responsibility and ownership and encourages the process of reflective consideration and ongoing learning and development.

Example 2: Planning, Assessment and Evaluation paper

This second example is from a second year paper. Previously an assignment task in the paper called *Planning, Assessment and Evaluation*, required pre-service teachers to provide a written scholarly rationale for the role of assessment in authentic learning. Subsequent to the findings from the above study this has been adapted to also require that pre-service teachers present a short summary of that rationale to a small group of their peers, who provide feedback against collaboratively developed criteria for the oral presentation. Each pre-service teacher is also required to assess their work against the criteria and identify the grade they think they deserve and why. Where marked differences occur between their self assessment and that provided by peers and lecturer, they are required to comment

on the reasons why this may be so. Such a process contradicts prior experiences and challenges pre-service teachers' expectations of teacher/learner roles. The final submission reports thoughtful consideration of and response to feedback from both teacher educator and peers and how this has or has not been influential. Pre-service teachers have reported that they gained much self-knowledge through the process of developing and using criteria and then reflecting on their own responses to feedback. "*Individuals come to know themselves by becoming conscious of the sources of their perspectives*" (Cranton, 2006, p. 141). Such self knowledge is liberating and transformative.

Example 3: Reflective Practitioner paper



Previously, within a paper called, *The Reflective Practitioner*, participants' theoretical understanding of the process of reflection and its contribution to effective teaching or leading was sought through an essay. Over the past three years participants, instead of such an essay, have been required to present a personal crest, or shield with five visual components supported by a scholarly paragraphs to explain and justify choices of the visual components. The results have been transformative due to their ability to require personal connection and consideration. One example, as illustrated here, enabled a teacher to describe the role of reflection in her learning and teaching in terms of her skill with surfing (surfboard), her being Maori (koru), her artistry (ballet dancer), her desire to grow (colour green) and finally by her commitment to engaged learning through discernment (Suniami).

When we understand what we believe and its roots ... then we become free to choose whether or not we want to maintain that belief. Without knowing the source of our assumptions, it is difficult to feel free to question them. (Cranton, 2006, p. 85)

Effective assessment tasks can provide a tool for this process.

Example 4: Personal Integration and Professional Inquiry (PIPI) paper

The final example which includes both multiple phases and development of personal ownership and sense of responsibility is found in the third year *Personal Integration and Professional Inquiry* strand paper, *Being and Becoming: Teacher as Professional*. Here students experience researching their own practice, for as Loughran (2004, p. 212) notes, "*Student teachers' learning about teaching can be substantially enhanced through teacher preparation if a student teacher as researcher stance is adopted*". The process involves capturing up to one hour of teacher talk through audio taping self on practicum. This is then transcribed and analysed leading to the pre-service teacher choosing an area of professional practice they wish to improve. A small literature review follows to provide insight and understanding for such improvement. On their next and final practicum, the pre-service teacher then observes changes in their practice which they perceive result from their improved understanding and confidence. After this they write a meta-reflection to identify what they have

learned. Each section of the process becomes a component of a formal report which is submitted for summative assessment. Throughout the process there are opportunities for formative feedback, mentoring, Vygotskian scaffolding, and interaction. Over the last three years, we have noticed a substantial movement in terms of ownership of the process. The following examples from recent reports are chosen for the degree to which they reflect common observations from pre-service teachers:

From Susan

Through the research process I have obtained many 'gems' of learning that have transformed my teaching and learning both in theory and practice. The research has challenged me both personally and professionally and I have gained insights into my own teaching that was not possible before undertaking this research. . . . The collecting and analysing of data, which presented findings that were at first a shock to me, became a real blessing by the end of the year when I had the opportunity to explore literature to inform and improve my practice with great success. I learnt how to use effective questions in the classroom by planning before each lesson using the framework of Bloom's taxonomy. I also improved in the quality of my reflective practice with the use of effective questioning to guide my thinking.

From Jane

The process of collection of data obtained from practice gives an opportunity for self development and professional development. A professional must have an ability to self critique and obtained detailed knowledge of one's own practice. . . . I have obtained insights which have challenged my thinking, provoked and inspired me to think about making changes in the teaching I examined. . . . My attitude has changed in different areas having completed this research project. This includes my attitude towards literature which is available to those in the teaching profession. I now see that researchers and educators articles can be beneficial for teachers and improve one's practice. I am now more willing to engage in genuine self critique as previously I would have, if possible, avoided it for a feeling that it isn't worthwhile.

Hoani

As the end of study nears, the foci for the PIFI course this year has been on becoming a professional. This has not only been a required task but also a personal journey through professional and personal development. Because the research carried out was in relation to my own specific teaching, the study has been specific and enabled ownership throughout the process. This particular structure of research is a lot more effective than having someone dictate to me on the improvements needed to my teaching practice. I have been responsible for collecting and collating the data myself and have benefited from being so immersed in my professional development.

Fiona

I feel I have grown as a professional and in the skills that a professional requires – for example taking ownership of my own growth and development through research. I am also more critical and observant of my own practice.

Conclusion

Skeptics among us might say that these pre-service students also have learned to give the lecturer what they want. However, recent research which follows students through their first two years of teaching suggests that the sense of hope which the initial findings gave is well founded. The design of transformative initial teacher education courses which value pedagogical connectedness demonstrate that the path to becoming professional “cannot be prescribed” but “must be lived” and involve “infusing personal beliefs and values into professional identity” (Larrivee, 2000, p. 305). The influence of apprenticeships of observation and participation and the consequential tendency toward technicist perspectives are powerful and cannot be underestimated. However, Grootenboer (2003, p. 30) argued that:

Teacher education courses are uniquely positioned to provide such interventions between school experience and future teaching experience. The need to make maximum use of this opportunity is obvious and compelling. However currently there remains little evidence as to how this might be achieved.

It appears that when assessment design and experience are viewed as integral to pedagogy, include multiple phases which require challenging thinking, self awareness, personalisation and ownership and a self-generated sense of responsibility they are more likely to interrupt a technicist perspective of teaching and learning and have influence beyond the task. This paper suggests that well designed assessment tasks which are an inherent component of teacher education pedagogy and which require ownership, personal connection and include a multiple of phases contribute to the evidence which Grootenboer claims to be missing.

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