Axioms, Assumptions and Tensions: Unveiling Knowledge Developed Through Self-study

CONTEXT
Much of what is known about teacher education impacts little on the work of teacher educators or on student teachers' learning about teaching (Lunenberg, Korthagen & Swennen, 2007). One reason to account for this situation is that traditional approaches to researching, understanding and describing teacher educators' work have failed to capture the kinds of issues important to teacher educators in developing their knowledge of practice (Berry, 2007). The search for new forms of representation that can portray the complex and personal nature of knowledge required by teacher educators and that can assist teacher educators as they grapple with problems encountered within their work is, therefore, an important task of teacher education. We propose that one pathway to change in teacher education is through making the tacit explicit in our work as teacher educators. In so doing, the pedagogical reasoning and “larger purposes…goals…and deeper questions involved in teaching and learning” (Senese, 2007, p. 50) may be uncovered, examined and shared amongst the community of teacher educators.

Each of us has been engaged in self-study research that aims to articulate the tacit embedded within our work as educators and that has led to the development of particular forms of knowledge representation: axioms (Senese, 2002), tensions (Berry, 2004; 2007) and assumptions (Brandenburg, 2007). We believe that these representations hold potential, both as a language for describing practice and as frames for studying practice, and in so doing, may be considered a way forward in developing knowledge of teacher education that impacts not only our own practice, but that of others.

In this paper, we explore the approach taken by each of us in making explicit our knowledge of our practice through addressing three questions:
• What representations did each of us develop?
• What did we learn as educators about how these forms of knowledge representation worked as pathways to change for us, and for our students?
• How might others use the knowledge representations we have developed in guiding their own pathways?

ROBYN: ASSUMPTIONS
Using assumption identification and interrogation as a lens to examine my practice has revealed new knowledge about my beliefs and practices as a mathematics teacher educator. (New knowledge in this context refers to that which I did not know and/or consciously consider prior to conducting my self-study). Using Brookfield's (1995) categorization of assumptions as a framework–paradigmatic, prescriptive and causal–allowed me to see that assumptions are compounds of sub-assumptions which are complex and incredibly interconnected and paradigmatic assumptions are difficult (if not impossible) to alter. However, it was through the process of articulating my assumptions and holding them up for explicit scrutiny that I came to see the power of such a tool in learning as a teacher educator. In this way, self-study methodology enabled me to make meaningful connections and ongoing modifications between “pedagogy and research design” (LaBoskey, 2004, p. 842).

I realised that my research design needed to be both flexible and responsive so that the data I was gathering informed my understanding of new knowledge by introducing innovative practices with preservice teachers, such as, Roundtable Reflection (Brandenburg, 2004b, 2008), partner or buddy teaching in schools, a triad of written tools for reflecting on practice, and negotiation of content and assessment. I constantly re-visited data and through transcription of roundtable sessions, for example, issues in my teaching and learning and the preservice teachers’ experience of my approach surfaced. For example, one assumption that I examined was that preservice teachers maximise their learning opportunities by participating verbally in Roundtable discussions. From analysing the data in an intensive way, I learnt that silence (or absence of verbal dialogue in classroom interactions) did not necessarily mean disengagement, but might reflect active resistance, fear, and contemplation; that an authority of experience develops with certain types of experiences; that it is important for reflection to be more than retell; that reflective traction represents an entry point for the reflective process; (Brandenburg, 2008) and that complex layers of understanding under-
pin preservice teacher learning. However, even with my conscious and sustained efforts to be less dominant in dialogues with preservice teachers, altering ways of operating is extremely difficult.

Knowing more about the impact of my teaching was (and remains) insufficient and it was not until my practices came to be reshaped, remodelled and refined that the influence of using assumptions as a lens to stimulate the production of (new) knowledge became almost blindingly apparent. For example, Roundtable reflective practice has altered. All preservice teachers now initially write an experience/question to be examined. They shared this out loud, so as to give voice to all and one participant is nominated as a summariser who then presents a summary of the discussion/issues at the following roundtable. Each assumption that has been explicitly examined has provided meaningful information about pedagogy and through self-study I have been able to more fully enact (Loughran, 2006) this pedagogy in my teaching.

**MANDI: TENSIONS**

The notion of tensions emerged from my self-study research (see Berry, 2007) as I considered the struggles I faced in developing my own practice and those of other teacher educators reported in the literature. I recognized similarities between our various experiences and from these similarities a broader connecting framework of tensions emerged. Conceptualising practice as tensions seemed to capture well the feelings of internal turmoil that many teacher educators (including myself) experience in their teaching about teaching as they find themselves pulled in different directions by competing concerns, and the difficulties for teacher educators in learning to recognize and manage these opposing forces. Typically, tensions focus on the following areas:

- **Telling and growth**
  - between informing and creating opportunities to reflect and self-direct
  - between acknowledging prospective teachers’ needs and concerns and challenging them to grow.
- **Confidence and uncertainty**
  - between making explicit the complexities and messiness of teaching and helping prospective teachers feel confident to progress
  - between exposing vulnerability as a teacher educator and maintaining prospective teachers’ confidence in the teacher educator as a leader.
- **Action and intent**
  - between working towards a particular ideal and jeopardising that ideal by the approach chosen to attain it.
- **Safety and challenge**
  - between a constructive learning experience and an uncomfortable learning experience.
- **Valuing and reconstructing experience**
  - between exposing vulnerability as a teacher educator and maintaining prospective teachers’ confidence in the teacher educator as a leader.

Three axioms, each containing a degree of tension, perhaps even irony, have grown out of my role as staff developer and now have played a significant role in my venture as an English teacher. These three axioms do not just intertwine, but interact with each other to produce something greater than the sum of their parts.

- Go slow to go fast;
- Be tight to be loose;
- Relinquish control in order to gain influence (Senese, 2002, p. 47).

Distilling my learning to axioms kept those learnings in front of my mind. I also discovered that only when I reference these axioms on a daily basis do they consistently influence my practice. They act as guiding principles and constant reminders of what I strive for in my teaching. They also help me explain to others the reasoning behind my teaching behaviours. In that way, they assist me in making the implicit explicit. As Loughran
(2006) noted, “...axioms are another way of capturing the essence of practice in practice whilst simultaneously portraying a sense of holism so necessary to managing pedagogy in a fruitful way” (p. 72-73). When talking with others about my philosophical and theoretical stance, I can summon the axioms as practical ways to actualize my beliefs. Consequently, they become a topic of discussion and reflection for me and for others.

[The value lies]...in the development of ways of knowing, or the professional knowledge of teaching and learning about teaching. This is demonstrated by the ways that Senese and Berry and Loughran, for example, have come to frame and name their practices. Their learning through self-study has enhanced their sense of what it is they have come to know, and importantly, are now able to articulate for themselves and others. (Loughran, 2002, p. 245).

Now, five years later, I am concentrating not on the knowledge or product that I generated in fashioning these three axioms but on the form of and process of creating the axioms. I first grasped the defining qualities as well as the proportions of the axioms; then I was able to exploit that knowledge to examine other practices and beliefs (tensions and assumptions) that I held but had not yet formally analysed. Interestingly, the process of creating the axioms incorporates the self-studies that Mandi and Robyn write about in this paper.

Producing an axiom goes like this: I choose a result I would like to achieve, consider the tensions that exist in achieving that result, analyse the assumptions made, which usually consist of the easy or apparent way to achieve that result, and then, ask myself, “What would be the outcome if I did the opposite of what I assume will work?” The axioms embody assumptions and inherent tensions in teaching into something that I can analyse, manipulate, and communicate. Discovering the composition of the axioms has provided me with another tool to assess and influence my practice while being able to share it with others.

I first wrote about these axioms in 2002 when I was analysing my secondary English teaching over several years. They may or may not have applicability to anyone else. But the process that I now discovered for creating the axioms may be of use to other teacher educators. That discovery is what excites and empowers me in this stage of my self-study. I have found that revisiting my previous self-studies not only affords me with perspective, but also deepens my own understanding of myself as a teacher educator. Ultimately that influences how I teach and how I think about teaching and learning.

A renewed appreciation of and interest in the original three axioms provides a way to communicate the implied or underlying beliefs in my teaching. I have written before of the deep doubts about my practice. Those doubts propel my continued reflection on and study of my practice, so I view doubt as positive (Senese, 2004; 2005; 2007). But when I speak authoritatively about my own beliefs and practices, preservice and even in-service teachers may be daunted. Being aware of this potential pitfall assists me in avoiding it or in addressing it outright. The axioms serve as a way to discover, examine, and discuss beliefs and professional knowledge about teaching and learning in an investigative way.

OUTCOMES

Our focus in this paper has been on eliciting less tangible but nonetheless powerful drivers of how we have and continue to develop our understanding of pedagogy, and specifically of the new knowledge that influences the enactment of pedagogy in our teaching contexts. We offer an insight into the ways that assumption hunting and examination, tension identification and examination of axioms act as guides that underpin our self-study research process. We all speak of our desire to understand our practice and the impact of practice in deeper ways. However, in doing so, we also respond to a criticism of self-study that suggests that predominantly, self-study falls into the category of “enabling professors [and teachers/teacher educators] to learn from their own experiences in the classroom and improve subsequent instruction … The researchers … are less concerned with what their investigations can contribute to broader generalizable claims about teacher education” (Grossman, 2005, p. 428). This is not to say that we offer a blueprint for doing self-study per se, but rather we offer reflections on our research process (and the systematic development of knowledge by collating and analysing data over time) and anticipate that these representations of our learning, in our contexts, might contribute to the broader education conversations. We therefore ask:

• Does each teacher educator need to keep reinventing the wheel, developing his/her own pathway?
• In what ways might the representations that we (and others) have developed be used by other teacher educators to inform their own pathways to change?

We are keen to explore with participants in our session how the representations we have developed resonate with them, framed through the following question: How might the exemplars we have developed advance the collective knowledge of teacher education and facilitate transformation in others (teacher educators, preservice teachers)?

REFERENCES


