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Creating Space for Pre-service Teacher Professional Development During Practicum: A Teacher Educator's Self-study.

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Abstract: This article reports on my self-study of leading cohorts of Bachelor of Education student teachers through collaborative reflections applying reflective questions strategy during four weeks of residential practicum in a rural school. I explore the potential for reflective questions approach as an effective tool for reflection and professional learning in teaching and mentoring pre-service teachers. Data consisted of journal entries describing my experiences as classroom teacher and teacher educator and, of teaching and mentoring groups of students during residential practicum. Reading teacher education as text and, the audio recorded collaborative reflection conversations also provided data. Students' documented personal and collaborative reflections were additional source materials. Data analysis employed qualitative procedures of content analysis and coding to determine themes relevant to both my and student teachers' professional development. Engaging in this self-study based on reflective questions was essential for confronting my own assumptions and beliefs about mentoring and teaching teachers. This led to the growth of my and the students' critical reflection and quality of professional thought and, a re-examination of my approach to mentoring and teaching students during residential practicum. Findings also indicate growth of students' general pedagogical knowledge, confidence, independence and autonomy.

Introduction

The self-study presented in this article examines my experiences in teaching and mentoring student teachers through collaborative reflections applying reflective questions strategy during residential teaching practice (TP) in a rural South African school. As a teacher educator, new in the role of teaching and mentoring cohorts of Bachelor of Education (BEd) student teachers in the Rural Teacher Education Project (RTEP), I decided to research my practice through the implementation of this project to understand more fully my teacher educator practice. With my many years of experience and other teacher educator responsibilities in the university, my intention was to investigate my practice formally within this project.

The RTEP is a rural school-university partnership venture of the Faculty of Education. The project strives to re-orientate teacher education in the institution's education faculty to rural schools as major learning sites for pre-service teachers (Balfour, 2012). Cohorts of BEd students in second year, third year or fourth year of study get an opportunity to experience rurality during their residential TP in rural schools. This paper documents my experiences of teaching and mentoring three cohorts of BEd students in 2011, 2012 and 2013 within the context of their residential professional practicum. My role in the RTEP was to provide on-site leadership for effective in-field coordination. In this capacity, I was accommodated together with students at a guesthouse close to the school, drove them to and from school and, remained typically on-site at the school to provide immediate support and

help them stay focused on their professional dimensions. Every evening, I took students through collaborative debriefing and reflection sessions applying the reflective questions strategy.

In researching my practice as teacher and mentor, I discovered that despite my extensive experience as teacher and teacher educator, my snow domes were shaken. (A snow dome is a small glass orb which encloses a miniaturized scene. The orb contains liquid through which snow falls when shaken. When the shaking stops, the snowflakes settle and re-assemble). In my case, the snow represents that pool of assumptions and beliefs that I held about my work as a teacher educator, teacher and mentor for RTEP students. Throughout the TP sessions my snow domes were constantly being shaken. The purpose of my self-study is to examine my practice and experiences and the impact of the re-assembled assumptions and beliefs on my understandings of teaching and mentoring students during residential practicum. I addressed two questions: 1) How do student teachers experience and respond to my teaching and mentoring in the RTEP? 2) How can I develop/improve my teaching and mentoring of student teachers in the RTEP so as to contribute to effective professional development of pre-service teachers?

Why Self-study?

Self-study has acquired a scholarly and organizational presence in the international teacher education community and is recognized as a bona fide process and topic of interest and focus in teacher education practice and research (Zeichner, 1999). As a fast growing field of research congruent with changing assumptions about teacher education research and practice and, growing research attention to the role of experience in the learning process, this paper attempts to contribute to knowledge in this field. It points teacher educators to ways in which they can better understand their practice (Allard, & Gallant, 2012) and its influence on student learning within the demands of their roles as academics.
Important insights into unpredictable features of teacher education surface when we focus our attention on our work as teacher educators (Loughran & Northfield, 1998; Olsher & Kantor, 2012). Our observations, investigations and explorations are critical as they enable access to the complexities of teaching and learning about teaching, essential in shaping the landscape of teacher education itself. For this reason (at least), self-study research of teacher education practices is progressively valued by teacher educators (Allard, & Gallant, 2012). In so doing, others also become encouraged to examine more closely their own teacher educator practices.

For many, self-study has become an empowering way of examining and learning about practice while simultaneously developing opportunities for exploring scholarship in, and through, teaching (Loughran & Northfield, 1998). Self-study thus, stimulates us as teacher educators to continuously pay attention to our teaching and, our students' learning; which are high primacies, intrinsically interrelated and constantly interacting with one another. This interplay between practice and scholarship can then be quite attractive to other teacher educators as their work becomes more all-inclusive as opposed to being compartmentalized into distinct sections such as teaching, assessment, research, etc.

While self-study may be viewed as a natural outcome of the re-emergence of reflection and reflective practice that got the education community obsessed in the last two decades (Pinnegar & Russell, 1995) it aims to, and transcends reflection. Self-study generates questions about the very nature of teaching about teaching in teacher education (Korthagen & Kessels, 1999) and is critical in theorizing teaching scholarship, because it generates and makes public, teaching knowledge and learning about teaching to inform teacher education communities and education at large. This self-study is intended to stimulate professional
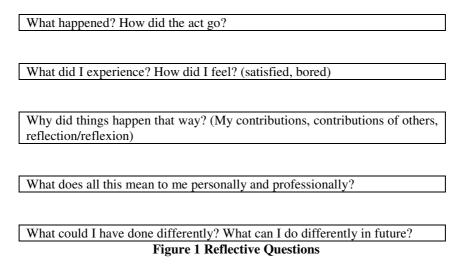
growth to enhance practice and, provide evidence to the teacher education community "that we are learning from what we are discovering; that we reframing our thinking and transforming our practice in defensible ways" (Olsher & Kantor, 2012, p. 158). In other words, the study generates, represents and makes knowledge of teaching practice accessible to and usable by other teacher educators.

Again, contributions of a self-study drawn from the lived experiences of a teacher educator committed to practice improvement might be recognized as a valid and legitimate input to academic knowledge as another example of teacher educator as researcher. Loughran (2005) indicates that, self-study is improvement-aimed and, "looks for and requires evidence of the reframed thinking and transformed practice of the research, which emerge from an evaluation of the impact of those development efforts" (p. 6). This self-study grew out of teacher educator's desire to critically investigate and analyze their practice in teaching and mentoring students through collaborative reflections, applying reflective questions rather than adopting traditional strategies of guiding and advising (Loughran, 2005*)*. Using questions would enable the trainees to examine their practice independently and, better identify, understand and manage their classroom experiences and complexities which would also enhance their professional growth.

Reflective questions

After my PhD, I was fortunate to be offered a position for Post-Doctoral studies in rural education where I had to mentor and support cohorts of student teachers in the Rural Teacher Education Project (RTEP) during their four week residential practicum. One of my key responsibilities was to take these pre-service teachers (herein called students) through collaborative critical reflection sessions every day. It is my conviction that multiple opportunities and formats for reflection need to be explored in order to develop teachers' capacities for critical reflection and consequently professional development. However, one of the first questions that I asked myself on assuming this role was how and whether I would effectively promote reflection and professional development in these students. Through reflections and professional reading, I realized that further to traditional modes of fostering reflection such as journaling and, video recording and playing back (Harford & MacRuairc, 2008) reflective questions could be a powerful tool for promoting reflection as they bring classroom experiences and complexities into focus and, help trainees connect knowledge, practice and learning (Olsher & Kantor, 2012). Through this self-study, I examine my teacher educator practice through a credible and insightful model that scaffolds students' collaborative reflections while promoting a socio-constructivist philosophy of shared learning (Harford & MacRuairc, 2008). Scaffolding in this context refers to supporting students to attain a level of reflection beyond their current ability.

I developed a template of reflective questions (Figure1) adapted from Minott (2008) and Korthagen and Vasalos (2005) typologies for reflection. First, I asked the RTEP leaders for their comments on the questions and, then piloted them with a different group of students in May 2011. In each case modifications were made. Again, before and, after using them for the first time with each cohort, I discussed them in great depth to obtain students' perspective. The questions would provide a framework for students' reflections in daily journaling and collaborative reflections. Engaging pre-service teachers in collaborative critical reflection can heighten the problematic nature of teaching practice making it more observable to them (Olsher & Kantor, 2012). This is vital for teacher educators who wish to transcend traditional methodologies of giving 'tips and tricks'.

What happened? How did the act go?

What did I experience? How did I feel? (satisfied, bored)

Why did things happen that way? (My contributions, contributions of others, reflection/reflexion)

What does all this mean to me personally and professionally?

What could I have done differently? What can I do differently in future?

Figure 1 Reflective Questions

Olsher and Dreyfus (1999) concluded that question-asking strategy is essential for learning and motivates independent learners who take responsibility for their learning. More recently, researchers have found that questioning presents an active learning strategy for processing information profoundly and assimilating it as knowledge (Deluty, 2010; Sriram, 2002). Active participation in inquiry empowers learners to transform their reality and as Deluty (2010) suggests, "the ability to ask reflective questions is at the root of all change and progress" (p.3). I considered that reflective questions would promote deep reflection and help students resolve their teaching uncertainties while enhancing independent learning, thinking on and about classroom experiences and teaching/learning. Moreover Loughran (2005) indicates that this creates opportunities for meaningful learning about teaching experiences without relying on simple transmission of information.

However, during these collaborative reflection sessions, in particular while working with the 2011 student cohort, I began to sense some discomforts in my mind, raising some questions about my strategy. I noted in my journal:

> These students discuss classroom experiences and in their reflective journals answer all questions identifying personal and professional learning points in great detail but, are they really genuinely professionally developing? (Personal Journal 19 July 2011)

This sense of dissonance relates to what Loughran (2005) calls "a living contradiction" (p.7). As learning is derived more from reflecting on the experience than from the experience itself, I wondered what effect the reflective questions approach to collaborative reflections was having on the students. Loughran (2005) notes that being aware of the living contradiction and doing something about it are not the same, recognizing and responding to the dissonance, self-study summons. I therefore decided to do self-study of my approach to students' collaborative reflection following reflective questions. My self-study began in 2011. In my journal I noted:

> Should I just focus on what they say they learn personally and professionally and what they will do differently in future as this suggests learning … To pick this up I must carefully listen to their descriptions of the action to relate that to new knowledge and new strategy... (Personal Journal 20 July 2011)

I tried to pay careful attention to the way I conducted these collaborative reflections to determine the impact of this approach on students.

Loughran (2005) talks about "grasping and unpacking the problematic in teaching about teaching" (p. 9), an approach that promotes student teacher critical examination of their pedagogies to construct own knowledge of teaching practice. As students collaboratively reflect on practice, reviewing relational aspects of classroom encounters, sometimes second guessing what was said or done, they engage in self-improvement. Eventually they will understand that teaching involves lifelong learning, where teachers do, observe and analyze classroom experiences, making meaning out of them.

Teacher educators can enhance student reflection by engaging them in dialogues or multilogues which employ reflective questions. Olsher and Kantor (2012) suggest that questioning creates avenues for viewing thoughts and experiences from new perspectives. Students may thus, be empowered to think through and view classroom complexities and practices and, experience positive results as well as personal and professional growth. Thus, teacher educators can enhance students' acquisition of teaching knowledge as an outcome of their own reflection on their teaching by as Olsher and Kantor (2012) note, "exploring and critiquing their emerging teaching philosophies and practices as teachers" (p. 158). In this self-study while reflective questions scaffolded students' knowledge construction in reflecting on and analyzing their teaching experiences, they enabled me to study my practice and question my assumptions about teaching teachers during practicum.

Methodology

The practicum period for all students is from the middle of July to the first week of August. I thus worked with different B.Ed. cohorts in 2011, 2012 and 2013 during their residential practicum in rural schools. These pre-service teachers were conveniently selected and thus, there was neither randomization nor matching to the demographics of the general student population. The cohorts were diverse in year group, specialization, age, gender and race (Table 1).

Year		Gender		Age range			Race			Academic Year			Specialization			
	Total No.	M	F	20 -25	26 - 30	30+	W	B	I	2nd	3rd	4th	M & Sc	Hum.	Com	FP
2011	16	4	12	10	4	2	3	9	4	5	6	5	7	3	3	3
2012	15	4	11	12	0	3	2	10	3	3	5	7	5	4	3	3
2013	14	1	13	13	1	0	2	10	2	0	11	3	5	2	2	5

Table 1 Students' Biographical Details

Key:
M = Male, F = Female, W = White, B = Black, I = Indian,
M & Sc = Maths & Science, Hum = Humanities, Com = Commercial Subjects, FP = Foundation Phase

This diversity was vital for providing an extra level of support outside the entire cohort and collaborative reflection sessions. I reflected after my first meeting with these students:

> …this diversity is good for the group as it provides another layer of support beyond the entire cohort, but sitting and doing all activities by race makes me uncomfortable. I must address this. (Personal Journal 16 July 2011)

Data collection

I gathered data over three years from the three different cohorts during their four-week residential practicum sessions. Loughran (2005) indicates that self-study employs; "multiple, primarily qualitative methods, some that are commonly used in general educational research, and some that are innovative ... provide us with opportunities to gain different, and thus more comprehensive, perspectives on the educational processes under investigation" (p.6). The main data sources for this self-study were transcripts of my reflections and, records of my interactions with and observations of students during practicum periods over the three years. My documented experiences as classroom teacher, teacher educator in college and university and reading teacher education experiences as text as well as audio-recorded students' daily collaborative reflection discussions also provided data for this self-study Further, I consulted transcripts of students' written reflections as other source materials. Informed by Feldman (2003) that validity in self-study may be enhanced by "providing clear and detailed description of how we collect data … making explicit what counts as data in our work (p. 27), the following sections provide detail on data sources and processes.

Personal Reflective Journaling

I engaged in this self-study of my role as teacher and mentor to describe and interpret my experiences and assumptions about how the students experience and respond to teaching and mentoring during practicum. At the same time I was navigating the potential for reflective questions approach as an effective tool for reflection and professional learning in the context of my work with pre-service teachers. Focusing on experiences and assumptions allowed me to challenge and more clearly describe my image of the kind of teacher educator and mentor I wanted to become while guiding student teachers during practicum.

Self-study methodology focuses on how teaching and learning experiences encourage teacher educators to see their practice in a different way (Bullock, 2012). The methodology has developed into a powerful way for teacher educators to understand their own practices and the process of learning to teach (Loughran, 2005). Despite its growing reputation and scope, there seems to be no specified method for conducting a self-study. Engaging in self-study is a humbling activity, where, as Bullough (2012) laments, "vulnerability presents a genuine danger, but it is recognized as a part of learning, which also involves unlearning" (p. 147). The vulnerability emanating from unlearning is vital; nonetheless a self-study has to be made public for scrutiny by the academy. Thus, notwithstanding the 'self' in self-study, this is a perspective that both relies on and contributes to the standpoints of the broad research community.

I documented my experiences as a classroom teacher, teacher educator in college and teacher educator in university. Data focused on my experiences and, the assumptions I held about student teacher learning. I was particularly attentive to situations which made me to interrogate my assumptions about my roles and, the relevance of my prior experiences as classroom teacher and teacher educator in college to my current role of teaching and mentoring student teachers during practicum. Data were gathered over three years using a reflective journal. Journaling allowed me to record my experiences and thoughts in any context at any time to quickly collect my thoughts and observations. It thus became a critical tool for reflective practice and professional development as it captured original experiences and thoughts so that they are not lost. It further provided for viewing my practice through analysis, critique, evaluation and definition of new challenges for future action (Hoover, 1994). This made journal writing a

key component of data gathering. Clandinin, Davies, Hogan and Kennard (1993) point out that, journal entries represent written conversations of practice which provide a voice. Thus, journaling offered me a way of conversing with myself in trying to make sense of my experiences and, assumptions.

Reading Teacher Education as Text

Interactions that occur between teacher educators, student teachers and colleagues during teacher education programme activities constitute a text with multiple levels of interpretation (Bullock, 2012). Reading a particular text of teacher education depends on the researcher who reads that text. Thus, the term text here is not limited to words on a page; but a text of teacher education with all the experiences, communications and collaborations reported on and interpreted by the person who constructs the text. Reading my experiences as teacher and mentor of student teachers in the RTEP as text allowed me to construct my professional knowledge of teacher education as I worked to create a space where student teachers could construct their own professional knowledge of teaching. This text I constructed incorporated my prior experiences as a classroom teacher and teacher educator. These experiences provided "reading positions" (Bullock, 2012) from where I was able to interpret my data and reconstruct my practice. Hence, this was another source of data for this self-study.

Audio Recorded Students' Collaborative Reflection Sessions

Collaborative reflection sessions were recorded for archiving the learning conversations and subsequent retrieval for rigorous reflection and scrutiny. Back in my room every night, I listened to the recordings over and over, reflecting on, taking notes and journaling. As a teacher and mentor for these students, there were times when I felt I was missing some of the elements of their debates in trying to locate their experiences in my own context. Again, while I wanted students' active engagement; giving comments, suggestions and feedback to their peers, many times I felt I heard my own voice more than I wanted.

> Oh my! That's too much talking, in the meeting, I must learn to throw questions back to them, and I should ask the group for comments and suggestions. Why do I think that they have no answers, I must exercise restraint. (Personal Journal 27 July 2011)

Loughran (2005) highlights the tension between balancing a desire to tell students about teaching and the value of providing opportunities for students to learn about teaching themselves. Managing this tension was difficult as students expected 'hints' and my desire to help often pushed me back into the traditional pedagogies of telling. So, playing back recordings helped to keep myself in check. More importantly, replaying recordings allowed me to engage in deeper, more profound and uninterrupted reflection and analysis which gave me insight into what was happening and, into the entire process. I was able to read a range of interactions among students, in particular what they said they learnt and what they thought they would do differently as well as the manner in which they responded to peers' experiences and reports. I also realized that students' voices changed as they spoke which denoted some emotions attached to certain incidences many of which I missed in the sessions as I related:

> Oh … sounds like she was crying, her voice is trembling ... Was she really crying? Was her dressing really that bad? I did not realize this! How did I miss it? How could I really? Poor girl, I could have been more empathetic … (Personal Journal 26 July 2012)

So recording these sessions became my crucial third ear (Masinga, 2012) which also assisted to determine whether I was managing the complexity of teaching about teaching which Garbett and Ovens (2012) indicate "requires familiarity with practice in concert with maintaining a distance from practice in order to see what is happening while it is happening" (p.48).

Students' Reflective Journals

I also consulted students' reflective journals as source materials for this self-study. Every Friday, I collected students' reflective journals for the week. I carefully went through each one of them more than once, reflecting on their reflections and, recording my observations and reflections. I recorded:

> These questions require a lot more thinking, I wasn't aware, I took them for granted. Each one of them means something and needs its own detail. The whole thing gives a voice to their experiences, intentions and thoughts while giving them guidelines for reporting on their experiences. (Personal Journal 16 July 2011)

Journal recordings were not only useful stimuli for collaborative reflection sessions, but they enabled students' reflections on their professional successes and failures and, to rehearse alternatives (Moon, 2003). Thus, journaling became vital for making knowledge of practice more explicit, analyzing, checking understanding and interpreting all aspects of the experiences as one student also wrote:

> These questions taught me how to reflect on my work and improve my approaches. I analyze my classroom activities, what that means personally and professionally and how to make it better next time. This helps me to try different strategies in my class; I learn what works and what does not work (Cohort 2013)

I was very eager to understand whether or not my approach to students' collaborative reflections was helping me and the students to professionally develop. Getting answers to reflective questions helped move students beyond mere reporting on experiences to a deeper level of interpretation and analysis of those actions. Students were also able to converse with themselves and others (peers, mentors etc.). Giving a voice to ideas and speculations facilitated construction of professional knowledge. Therefore, an integral component of the use of reflective questions strategy was to provide explicit guidelines for conversing, reporting, monitoring, analyzing and improving practice thereby professionally developing as I recorded:

> … students reflect, stop, go back to their lessons and identify alternative or better approaches of doing things … realizing mistakes and finding alternative

> ways implies some learning from the experience. (Personal Journal 26 July 2012)

I also found that the process of journaling promoted a shift from being passive to active learners which made collaborative reflection sessions more educative as students would bring problems or issues partially solved and looked up to sessions for further input and validation. This type of paradigm shift where journal writing aided in making students responsible for active engagement and self-directed professional learning can be seen in my reflections:

> Developing alternative strategies and finding solutions to some challenges and, just checking with others is helping them to confirm topics, methods and activities for the different grades which gives them a bit of confidence before going to class. (Personal Journal 22 July 2013)

Thus, students seemingly moved from a "fix-it" mentality to a more experience/practice centered reflection i.e. reflection-in-action and reflection-on-action where they thought about their personal teaching performance or their unique situations as one reflected:

> I am benefitting, I am fourth year but sharing with others and thinking of other methods and solutions to classroom problems is great you learn new ways ... you have to think of yourself and your class and how you handle that in your situation. (Cohort 2013)

Such reflections included their own values, beliefs, (the gestalts) classroom context, and students as sources of knowledge for action making and, justifying decisions based on their unique situations (Minott, 2008). Thus, this deliberative reflection involved thinking about a whole range of teaching concerns: learners, the curriculum, instructional strategies and rules and organization of the classroom.

Collaborative Reflection Sessions

Collaborative reflection generally means that participants work together as a learning community for professional development, engaging in reflective interactive discussions (Huann-shyang, Hong, Hsin-Hu & Sung-Tao, 2013). Loughran (2005) emphasizes that "self-study demonstrates interactions with our colleagues near and far, with our students, with the educational literature, and with our own previous work . . . to confirm or challenge our developing understandings" (p. 6). My interactions with students occurred throughout the day during practicum but were more intensive during collaborative reflection meetings. For the four weeks of TP, we assembled for collaborative conversations every evening and, all discussions were audio recorded. Sessions lasted for at least two hours and commenced with finalising individual journaling. Following personal reflection, I took students through an open reflection discussion where each discussed the day's highlights drawing on their journal entries. Thus, collaborative reflections were an agent for creating a dynamic process for students' professional development. Answering reflective questions, students cross-examined and examined, interrogated, probed, questioned, quizzed, described and detailed their experiences. I related in my journal:

> … for them to report following these questions, they have to carefully think back to their lesson and say what happened, was this a success and why, what

methods they used, what was the level of their learners, what is this saying to them and what are they going to do in future. All this stuff … (Personal Journal 22 July 2012)

Zhang and Sternberg (2000) describe this as playing back, thinking and learning from direct encounters with the phenomenon being studied (teaching) rather than merely thinking about it, or considering the possibility of doing something about it. Hence, these reflective questions pointed to specific areas of focus and helped to clarify issues for them while the probes prompted deeper reflection into situations and incidences to address them more systematically, creating lively sharing and feedback.

Collaborative reflections draw on socio-cognitive and socio-cultural theories where learning is a complex social activity largely influenced by cultural beliefs, values of institutional context and conversational interactions (Huann-shyang et al., 2013). Not only did students follow the reflective questions and adhered to key elements of collaborative learning, these questions also directed their focus to using and sharing specific classroom contextual issues as opportunities to promote these learning conversations which prompted deliberating on many facets of their professional development some of which they probably had not been aware of or had previously ignored as one student documented:

…sharing your classroom problems, others will tell you better methods. … My problems with group work, they said I should have used pair work or threes because grade 8 classes are big (90 learners), there is no space for me to walk around to ensure that everyone remains working. (Cohort 2011)

Again, this strategy was intended to encourage student collaboration to develop a community in which they are empowered to resolve challenges, problems, and difficulties thereby professionally learning (Huann-shyang et al., 2013). Without a supportive environment for professional development, higher levels of reflective thinking and self-evaluation of teaching practice are unlikely to happen by themselves. Support and discussion with peers and supervisors promotes collaborative capability as students sit beside, share and feed off each other thus, learning with and from one another (Fairbanks, Freedman & Kahn, 2000).

Data analysis

The journal recordings were transcribed to facilitate data analysis. The data from the three cohorts, (2011, 2012, 2013) were pooled together. I adopted content analysis for analyzing data which according to Plunkett and Dyson (2011) involves; "a careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, biases, and meanings" (p.37). I thus, read through transcripts and listened to audio tapes multiple times to determine themes relevant to the research questions. Loughran and Northfield (1998) argue for data representation and analysis that inform findings and interpretations making it transparent to others. In this article, I attempt to make data visible by using quotations from transcripts of my own personal journals, students' personal journals and, audio recorded collaborative reflection discussions. I thus re-examined the data and selected quotes representative of each theme and across my own records and student cohort reflections over the three years to enhance interpretation of actions, articulation and reflection.

Informed by Lincoln and Guba (1986) I triangulated the multiple data sources and continuously checked the selected quotations and interpretations of journal transcripts and listening to audio recordings, trying to tighten and clarify explanations. I then asked a critical

friend to read through my interpretations to offer an outsider's perspective on my findings and give me some feedback. Also drawing on Bullough and Pinnegar's (2001) guidelines for quality in self-study, my findings attempted to illuminate and honestly show my positionality by talking frankly about my beliefs and experiences to enhance understanding of issues. In addressing an important issue: applying reflective questions for promoting professional development through collaborative reflections, I described my experiences and, tried to present an inside look at my thinking and feeling by sharing beliefs, values, experiences, emotions and assumptions thereby providing readers with openness in the description of my self-study.

Ethical clearance for this study was awarded as part of the RTEP.

Results of the process and discussion

During this self-study, my focus on students' collaborative reflections facilitated use reflective questions strategy. As sessions progressed, I tried to determine whether my approach was promoting my own professional development and that of students. From the data, and more generally from my interactions and experiences with students, it became evident that the reflective questions strategy provided a catalyst for professional development for students and myself as a teacher educator, mentor and researcher. The exclusive use of this approach to reflections prompted us re-examine our practice in relation to reflection – students at initial stages and me with my several years of experience as teacher and teacher educator. Data analysis yielded three main themes, development of: 1) critical reflection and general pedagogical knowledge; 2) confidence, independence and autonomy; and 3) quality of professional thinking.

Development of critical reflection and general pedagogical knowledge

One area that students registered considerable impact of the reflective questions approach was exposure to and implementation of systematic critical reflection. In commenting, students noted that putting the questions into action was more useful than being told about using them.

> Questions are a useful guide for proper reflection. They make us analytical and thorough; you analyze activities saying what you learnt. This requires deep thinking about what each activity meant to you. You become open-minded, thinking deeply and reasoning beyond surface matters and surface thinking. (Cohort 2011)

> Saying 'what should have been done differently' was central, that is what made you learn. This was our first time to be taught how to reflect. We have become very critical, always looking for personal or professional learning points from all situations good or bad. (Cohort 2012)

> I used to think of reflection as just writing down what you did, but now I know that it's different. I know that you think deeply about what you did... critically evaluate it... and then you try to devise ways to change or improve, try to think of ways you can better that. This approach developed me. … made us rational thinkers and diplomatic, rather than saying this was wrong, we learnt to say

> what could have been differently? Why did people not teach us this earlier? …
> Now that I know, I tell you I will continue to do it and learn … a teacher is a
> life-long learner. (Cohort 2013)

Students' sentiments were a recalibration (Allard & Gallant, 2012) an ah-ha for me. I realized that to articulate their learning, students need guidelines and a context to help reduce contradictions and confusions that may inhibit professional learning. They were able to apply reflective questions in the context of their experiences and learn from them. Korthagen and Vasalos (2005) confirm that it is when students can respond to questions systematically that they truly reflect and professionally develop. As sessions progressed, I noticed change in their journal entries. Rather than simply report on the experience, they began to adopt a style of writing each aspect of the question first then respond to it. This prompted profound thinking, deep exploration of questions and production of very detailed reflections.

The prevalence of daily reflection sessions seemingly moved me and students into routinely reviewing and reflecting on all aspects of our daily activities signifying how we re-played our experiences and what we learnt from them as I reflected:

> I can't take my mind off and, comparing what is happening here now with last
> year. Even students are also analyzing everything: the absence of mentor
> lesson observations, learners, school assembly, what other teachers do and,
> what they learn from all this and what they could have done differently... This
> makes them understand the bigger picture I guess... (Personal Journal 19 July
> 2013)

Students used reflection to understand some of the goings on in the school, consequently enhancing their practice and growth. Kennedy (2002) indicates that if teachers are merely critical without coming up with what they could have done differently, then little learning can occur from reflection. Hence, in this self-study reflection questions guided us through steps in a longer process of finding better ways to do things next time.

Students also commented that they gained general pedagogical knowledge around classroom strategies. General pedagogical knowledge is those general aspects of pedagogy, regardless of the teacher's content knowledge. Students testified that from sharing experiences, reflecting and meaning-making through questions, they would determine different pedagogies for use in subsequent activities.

> … when answering the question how did it go or what could you have done
> differently, others will tell you, 'use this method instead of that one,' even
> when you talk about learners misbehaving they will say, 'no handle them this
> way', this is very helpful. (Cohort 2012)

Not only were these students' consumers, but also constructors of knowledge on classroom practice. This interaction with confrontation prompted reflection giving rise to professional learning related to general pedagogy around teaching approaches and learner discipline. Devlin-Scherer (2003) concluded, teachers who participate in teaching collaborations improve their daily instructional practices more than those who rely on solo practices and supervisory feedback.

Growth in Students' Confidence, Independence and Autonomy

Gaining confidence emerged as an important aspect of the students' learning from the reflective questions approach. Confidence is understood as a multi-dimensional concept related to self-esteem, self-efficacy and optimism which manifests in one's belief in positive achievements, self-awareness and, ability to make judgments on how well or whether they can do something (Prince, Snowden & Matthews, 2010). Graven (2004) concluded that confidence has psychological/cognitive underpinnings which link it to internalized knowledge and beliefs. She argued that from a social standpoint, confidence implies an ability to participate meaningfully within communities.

In this self-study, whenever I started with a cohort, I got frustrated by students' reluctance to talk and would wonder why it was such a struggle to get them to interact. Those who reported as I recorded:

> Their reports are so brief, they do not address questions in depth yet they write a lot in their journals. Is it that writing is easier than verbalizing experiences, but then they need to share their experiences learn from others and let others also learn from them. (Personal Journal 17 July 2012)

While language probably threatened their confidence to talk, as the majority was Black from non-English speaking backgrounds, reluctance to talk was not limited to such students but included Indian and White students whose first language is English. I was frustrated:

> I don't understand what I am doing or why I am here. These kids do not want to talk. I thought they were afraid to report individually and hoped that today would be different working in pairs, but most still did not want to talk. Is it lack of interest or confidence speaking English? But then some are English speaking! How do I encourage them? (Personal Journal 18 July 2012)

I realized that each student arrived with a certain level of confidence in their ability to engage verbally regardless of home language. All else being equal, working with students with a healthy level of confidence is a real joy. Collaborative reflections would go by in a flash and both students and me would come out of them energized by the experience. Conversely, working with students with a low self-efficacy is an uphill struggle.

> All the energy, all the enthusiasm was from me. The session dragged by, seemingly taking hours and leaving me exhausted and dejected. (Personal Journal 18 July 2012)

My reaction to their unease was to be more supportive and positive. I decided to support and affirm, rather than frame and reframe (Bullock, 2012). At the end of every week as I always collected students written reflections to enable my own reflections therefrom, and pick up any follow up issues. The comments that I made in each journal were impactful:

> My comments seemed to have helped a lot here maybe because I addressed each student as an individual … they went a long way to show them that I care about each of them and am not worried about language but that I only want to help them to learn to teach. (Personal Journal 23 July 2011)

As I reflect on their reluctance to talk, I think I was 'lost in school'. Being lost in school as Bullock (2012) notes relates to problems of slipping back into one's habits and practices. I expected students to be 'lost in school' because sharing their experiences seemed very simple

and real to me. What I did not realize is that I became 'lost in school' each minute I stepped into the first collaborative reflection session and reverted back to my familiar practices the moment I entered our venue for these sessions. As I more critically think about it, I came to understand my approach to these reflections in relation to my previous identities as teacher and, teacher educator and overlooked that:

> Building trust, and confidence takes time, there has simply not been enough time for them to have built relationships and trust with peers and me or to have probably developed, confidence within themselves. (Personal Journal 23 July 2011)

There was seemingly hypocrisy in my expectations, with each group, I imagined outspoken students who would share experiences and suggestions confidently right from the start. With the second and third cohorts, I needed to recall my experiences of students' reluctance to talk during the first cohort. However, gradually students developed confidence as one student noted.

> Most, in fact all of us, lacked confidence. We were nervous but through these meetings we are now confident to present anything. Answering questions to talk about our experiences helped us to talk more. (Cohort 2013)

Confidence is a key teacher quality for classroom practice which often motivates teachers to do trial and error, take risks, ask for help when needed and relish challenge. These characteristics are also vital for pre-service teachers as they effectively promote reflective practice and professional development. Prince et al. (2010) contend that teacher confidence affects teacher-pupil interaction, the way teachers express themselves as individuals and how pupils respond to classroom instructions.

Students also reported growth of independence and autonomy. A key objective of collaborative reflections was to provide students with space for structured regular discussion and reflection about their practice to promote autonomous and independent learning (Mukeredzi & Mandrona, 2013). Teacher independence and autonomy are inter-related and generally understood as encompassing a teacher's capacity to accept responsibility, engage in self-determined/directed and self-regulated teaching, which as Smith (2006) notes is driven by possession of a positive attitude towards their and, capacity to reflect on the content and processes. In a group presentation some students noted that:

> As much as we were guided, cared for and loved, we had space to take initiative, grow and become independent. We did not entirely depend on our mentor. Answering how did it go what it meant personally and professionally and what could have been done differently made us think independently and autonomously because we were in different classes and situations. (Cohort 2013)

Independence and autonomy are linked to positive relations between present and future. According to Smith (2006) teachers who accept responsibility more likely achieve their teaching goals and, when they do, they maintain a positive attitude to achieving them in future. In taking initiative, students were applying knowledge of teaching and reflective practice and, were self-managing their practices as I related in my journal:

> These days they are all so busy journaling, printing, marking, drawing, planning etc., everyone wants flip chart and markers, everyone wants the data

projector, everyone wants to print, and ask questions, no one wants to waste any time. (Personal Journal 23 July 2013)

Although I had considered my principles challenged during the first week when students were reluctant to talk, I saw their independence and autonomy manifesting in a capacity, freedom and responsibility to make decisions about their teaching and, for self-directed professional engagements and professional development.

Growth in students' quality of professional thinking

Students' professional thought became visible gradually. Initially, reflections were dominated by challenges and "othering" in describing teaching activities:

> Yes this is my class but she did not tell me that I would teach today, she should tell me, give me advance information. … The lesson was just not a lesson; she did not give me the lesson plan or materials… She was not there to help with discipline. (Cohort 2012)

With these impressions I scrutinized their reflections closely drawing on my experiences of student teaching practice and started questioning how they perceived teaching:

> Oh my! This is the 2nd week of TP! These children do not seem to understand TP and teaching as a whole … What about teacher preparedness which we talk about every time in our sessions … quickly developing a lesson plan …? (Personal Journal 24 July 2012)

I probed students with questions that drew their attention to their own contributions and what they could have done themselves. As time progressed, they became more reflective and critically engaged with aspects of their practice at a deeper level. Reflections then started to show gradual change in their professional thought from a focus on "others" or on technical challenges to focusing on their contributions, what they learnt, would have done or would do differently, their own professional growth and pedagogical issues. Some commented:

> With these questions, instead of blaming mentors, you are required to answer the aspect of your own contribution, and then you also say what you learnt from it personally and professionally and what you could have done or will do differently next time. (Cohort 2012)

Once students started feeling some sense of having gained sufficient skills to handle most classroom practice challenges thereby clearing some uncertainty experienced earlier, they started raising some content and general pedagogy questions which, at times I could not clearly or simply answer for example one said: "What do you do when your mentor is teaching incorrect information? I sat there and felt sorry for those poor kids." Another said: "How do I know whether learners are satisfied with my teaching?" (Cohort 2012) I reflected on those reflections. The first question made me wonder whether or not my approach to collaborative reflections and, the discussions and suggestions were helpful. Learner satisfaction was again a pedagogical issue which made me wonder, whether these students were also satisfied with my approach to teaching and mentoring them. My reflections prompted me to encourage them to think about the principles of good teaching relevant to this context. This dialogue seemingly made them realize the value of eliciting their learners'

positive feedback about their teaching. Such pedagogical and professional identity questions influence pre-service teachers to grow from articulating their challenges, to struggling to resolve them on their own (Olsher & Kantor, 2012). This was a relief:

> I feel better about the whole process now; students have lots of fascinating ideas about their learning through reflection questions and handling practice issues with learners or mentors. Everyone now wants to comment… A sense of accomplishment, the overall success of the project seems to be conveyed. (Personal Journal 6 August 2013)

I felt that many of them were somewhat empowered as professionals capable of life-long learning through reflective question approach to reflection on their practices.

Growth in my professional thinking towards my own self-study

The reflective question strategy also triggered change in my own professional thinking. While I used this approach to provoke my thinking and analyze situations, I also wondered whether questions fostered or inhibited students' reflection capacities and consequently their professional growth. Such uncertainties which Olsher and Kantor (2012) call, "a living contradiction" (p.165) point to the complex nature of teaching about teaching.

From this self-study, I became aware of some weaknesses in the reflective question strategy. Olsher and Kantor refer to a fine line between stimulation and frustration and, thought provoking and thought inhibiting. Mindful of this, I had to constantly check to maintain a balance of these aspects to benefit students and avoid detriment. But as it later emerged, students were intimidated by some of my expectations for collaborative reflections associated with individual reporting and, also the daily reflections, as one reflected:

> Answering those questions alone, was frightening the first days… you are nervous, you don't know these students or what they will think of you … I dreaded reflections ... was afraid of sharing my inner feelings. (Cohort 2013)

While I seemingly displayed some inflexibility by not immediately changing to group reporting, persisting with individual reports, I believed that it was important for me to help students develop confidence through individual sharing in a small audience. Again my persistence with daily reflections was not only because it was a requirement for the RTEP, but more importantly to enhance their professional growth as teachers. This seems to resemble what Loughran (2005) describes as the problematic nature of teaching and the importance of embracing the chaotic aspects of practice to develop patterns that may enable learning and little generalizations from those experiences.

Again, this self-study made me aware of the changes that have occurred to my approach to mentoring and teaching pre-service teachers over the years as it offered an opportunity to frame/reframe my thoughts assumptions about teaching teachers. I realized that my approach used to be more directing; offering the 'best answers, solutions and suggestions'. My experiences have prompted viewing things from other perspectives and exposed me to new ways. I have realized the value of restraint, not offering the 'best answers, solutions and suggestions' but allowing students to analyze situations and come up with answers. I have developed more openness to other ideas, no longer providing solutions which I once believed in. Olsher and Kantor (2012) advise that mentors should resist temptation of creating clones on themselves in their novices, but instead encourage them to develop their own styles.

Conclusions and Implications for self-study

In this self-study, I wanted to understand the potential for reflective questions strategy as an effective tool for reflection and professional learning in teaching and mentoring pre-service teachers. This would enhance my work with pre-service teachers and so contribute to my professional growth and that of students.

My awareness of the value of teacher reflection in professional development prompted engaging students in collaborative reflections through reflective questions approach. I anticipated that students would eventually become independent learners, able to systematically reflect through questions, construct knowledge and integrate it with their previous learning (Korthagen & Vasalos, 2005; Olsher & Kantor, 2012). In the process, some sense of dissonance and discomfort developed about the effectiveness of this approach where students attempt to address their teaching dilemmas following guiding questions. However, this self-study revealed both educative (those that enhance learning) and mis-educative experiences (those that inhibit learning) (Dewey, 1963) for me and the students.

Producing developmental reflections addressing all questions in great depth was draining not only to me but also to students as one noted in this reflection: "Reflections are very beneficial and developmental but too tiring and time consuming, you need exertion to replay and discuss all your experiences in depth" (Cohort 2013). Similarly, on 19 July 2013, I noted: "I don't seem to be getting this right. Today I am finished." Again, the process required mentor patience and restraint to scaffold students and allow for their ideas and creativity to boost their self-efficacy. Loughran (2005) points to difficulties faced by teacher educators in subconsciously directing and controlling their students. Promoting students' confidence, autonomy and independence is slow, gradual and complex. Thus, managing this fragile situation demanded a lot of caution and awareness on my part. This study however, shows that the reflective questions approach gradually enabled students to develop confidence and at the same time promoted learning and professional development for both students and myself individually and collaboratively. It drew my attention to the need to recognize occasions when students' frustrations and difficulties with the process might create mis-educative experiences and, when experiencing frustration from my perseverance with my approach offer them educative experiences and, eventually acknowledge its benefits to their professional and personal growth.

The self- study also enabled me to identify complexities of reflective questions in teaching and mentoring students. I required profound comprehension of students' concerns that I could address immediately and those that required further investigation and deeper thinking. In handling their pedagogical and professional questions, I offered them full support notwithstanding that I encouraged them to answer questions and/or come up with suggestions. Some questions simply wanted them to narrate their experiences; others pointed to new directions of thought while some required exploration of other sources depending on needs. In this regard, both students and I were able to decide which reflective questions to emphasize and which not to focus much on. Thus, we concentrated on those that would enable identification of learning and what would be done differently next time. This was an advantage of this strategy which Olsher and Kantor (2012) relate to "as opening windows: if you wish you open one, and if you do not want to, you do not" (p. 176). Through this educative act, it became clear that reflective questions as research and pedagogical tool is effective but needs time, patience, determination and dedication and so is reflection itself.

Self-studying my teacher education practices seems to have expanded the reflective dimension of my practice. The study offered me a methodology to critically confront my own

teacher educator assumptions, beliefs and practices and, to enact more fully my socio-constructivist teaching philosophy. I seem to be better able to create a balance between telling and growth; offering students more effective opportunities for meaningful learning and construction of professional knowledge through reflection on their experiences rather than relying on knowledge transmission. While the self-study heightened my own as well as students' level of critical reflection, it was more vital for my growth. I realized a seemingly effective way of leading collaborative reflections in teaching and mentoring students during TP. This is an important finding given that mentors often lack appropriate communication skills to effectively assist students in reflecting and discussing their teaching/learning experiences. Gordon and Brobeck (2010) posit that different approaches for teaching and mentoring exist and good mentors must be aware of their communication styles if they have to meet their mentee needs. In my case, applying reflective questions helped me and student teachers to engage in an interactive knowledge sharing and knowledge construction process about teaching. This enhanced my skills as mentor, teacher educator and researcher, and renewed my commitment to working with students on residential TP. Self-study was key to this process. I can now make adjustments to this role and to leading the RTEP project as a whole. Notwithstanding the noted mis-educative experiences, I will continue to use reflective questions in collaborative reflections but, being mindful of the shortcomings and trying to minimize their impacts.

Reflecting on both RTEP and my teacher education practice generally, I developed a deeper understanding of my findings and, identified possibilities for staff and students' collaborative reflections in teacher education. Reflection is a robust and effective strategy for enhancing teacher education through practitioner self-study (Olsher & Kantor, 2012). Other teacher educators could also adopt the reflective questions approach to promote their students' reflection and learning, while they develop an understanding of themself as practitioners.

Teaching and mentoring pre-service teachers need dynamic reflective question approaches to enhance their professional growth given that it is when students can answer questions systematically that they will effectively be reflecting and learning (Korthagen & Vasalos, 2005). Through this self-study, I have demonstrated my gameness as a teacher educator to critically interrogate my teaching and mentoring style and to understand the contribution of this approach to reflections and consequently to students' and mentor's personal and professional growth.

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