

Chapter Three

DEVELOPING A RESEARCH APPROACH

SELF-STUDY AS A METHODOLOGICAL FRAME

This research focuses primarily on the development of my self-identity as a teacher educator. The self examined is both personal and professional, and includes my beliefs about teaching and learning and their possible sources, and my practice as a teacher educator, including my interactions with others in the context of my work. The methodological stance selected is that of self-study (Hamilton, 1998), as a means of examining beliefs, practices and their interrelationships. Pinnegar (1998) described the methodology of self-study thus:

Self-study researchers seek to understand their practice settings. They observe their settings carefully, systematically collect data to represent and capture the observations they are making, study research from other methodologies for insights into their current practice, thoughtfully consider their own background and contribution to this setting, and reflect on any combination of these avenues in their attempts to understand . . . For these reasons . . . self-study is not a collection of particular methods but instead a methodology for studying professional practice settings. (Pinnegar, 1998, p. 33)

Hence, self-study as a methodology defines the focus of the study but not the way it is carried out (Loughran & Northfield, 1998). Instead, self-study draws on data sources that are appropriate to examining the issues, problems or dilemmas that are of concern to teacher educators. It is therefore common for such data to be drawn from multiple sources including discussions, journals and observations/recollections of practice (Loughran, Berry & Corrigan, 2001).

Gathering data from a variety of (primarily qualitative) sources is one of five principal characteristics of the methodology of self-study identified by LaBoskey (2004). The remaining four characteristics that typify self-study methodology, according to LaBoskey are, that the work is self-initiated and self-focused, improvement aimed, interactive (or collaborative) at one or more points during the process and, that validity is defined as a validation process based in trustworthiness.

Data Sources

The data for this study were developed in order to create genuine opportunities for me to see into my practice and prospective teachers' learning, from different perspectives. I needed to "stand in and outside myself" (Brookfield, 1995) to enhance critical reflection on my practice. Data sources included:

1. An autobiographical account of my experiences as a learner and teacher
2. Videotape of each of the two semesters of Biology methods classes that I taught during the one year period of the study
3. Two journals that I kept throughout the 2001 academic year (one public and one private journal)
4. Field notes that I took during Biology methods classes
5. Prospective teachers' responses to a 'Personal Learning Review' task (n = 28)
6. Interviews that I conducted twice during the year with a small cohort of prospective teachers from the class (n = 8)
7. Regular conversations with a colleague in the Faculty of Education
8. Regular e-mail correspondence between myself, and one of the prospective teachers in the Biology methods class, in which we explored our ideas about learning, teaching and Biology. (This data source emerged unplanned – a point that will be taken up in later in this chapter.)

Together, this comprehensive array of data sources contributed a rich picture of my practice through a range of different perspectives. The choice of each of these data sources and the particular methodological frame each offered for the study is now explained in more detail.

1. Autobiography Overview. Life experiences, including the influence of social and cultural factors, shape teaching (Ball & Goodson, 1985). Pedagogical actions are often grounded in autobiographical experiences of learning, hence bringing these experiences to the surface can be an important step in coming to understand one's actions as a teacher/educator. Constructing life stories that portray the circumstances or choices that have led to a particular outcome is one important way in which these experiences may be made available for subsequent analysis (Bullough, 1996; Cole & Knowles, 1995).

Application within the study of my practice. Prior to the commencement of formal data collection, I wrote an autobiographical account of my learning and teaching past. The purpose of this account was to identify and describe my beliefs and practices about teaching, learning and Science/Biology based on an examination of past experiences. I shared my account with a colleague in advance of a critically reflective conversation about my practice based both on my writing and my colleague's experiences of teaching with me. The purpose of our conversation was to uncover assumptions and pedagogical principles that guided my work with prospective teachers, to elicit examples and evidence of my beliefs in practice, and to search for contradictions and limitations in my writing as well as fuller explanations of my beliefs and practices (Brookfield, 1995).

My purpose for engaging in these autobiographical activities was: i) to produce an autobiographical narrative that established my pedagogical framework and hence would serve as the beginning point of my self-study; and, ii) to identify a set of assumptions about practice that I could use as a frame for analysis of my practice throughout the substantive data collection period. These insights and ideas provided me with a starting point for beginning to look more closely into my practice.

2. *Videotape Overview.* Mitchell and Weber note that dissonance between what one sees and how one feels, acts as a stimulus for reflection, thereby creating alternative possibilities for action (Mitchell & Weber, 1999). Videotape offers the opportunity to scrutinise practice through the recording and replay of classroom events (Mitchell & Weber, 1999; Harris & Pinnegar, 2000) that can lead to recognition of dissonance and to the re-creation of practice. While self-video offers a revealing view of oneself, it is not the whole of one's teaching experience, as Mitchell and Weber (1999, pp. 192–194) note:

[Video is a] . . . nonetheless partial representation . . . based on what was visible or recordable via the camera's lens and microphone from a certain angle from a specific juncture in time and space. The video tape per se is not my view of myself. I watch the tape to experience and interpret this outside view of me, reconstructing or interrogating my self image in the process.

On the other hand, self-video can capture and make available for study, teaching actions and their effects. Actions and decisions that are taken 'in the moment' can be subsequently examined, and the full significance of particular actions can be pondered. So too, alternative approaches to practice may be imagined in order to achieve greater congruency between action and intent (Mitchell & Weber, 1999).

Application within the study of my practice. In this study, I video recorded seventeen of the twenty-one, two hour Biology methods classes that I taught during the 2001 academic year.¹ Classes were held in the same room each week, and the camera was set up in the same position for each session. One video camera was placed in the classroom, at an angle that could best capture the largest area of the space, particularly the parts of the room that I would be most likely to cover during my teaching. One area of the room was out of the camera view. This allowed a space for those students who did not wish to be filmed at all (though all students provided consent to be filmed) and for those who might temporarily wish to move out of the camera's gaze. Seeing myself through the 'eye' of the video camera confronted me with all of my practice, an experience that was challenging, as well as affirming. I used the videotape to help me obtain a 'slowed down look' at the events of each session and to become aware of aspects of my teaching that the video camera had captured, that I had otherwise overlooked. (For example, the videotape showed

¹ It was not possible to video record all sessions since some were conducted outside the university or before students had given permission for their involvement.

particular verbal/non-verbal responses from students that had gone unnoticed by me while I was teaching. Watching these afforded me greater insight into their experiences of the class.) Viewing the videotape also gave me an opportunity to look at myself 'from the outside' and to compare my feelings during the class, with how I saw myself on the screen. In this way, one important function of self-video for me was to see what I could not otherwise see, in my teaching.

3. Journals Overview. Journal writing is commonly used in educational settings to assist the development of reflection. Journals can be used for a variety of purposes including data collection for documenting personal change, evaluating aspects of practice, to promote critical thinking, to release feelings and to develop observational skills (Ghaye & Lillyman, 1987). These purposes are equally applicable to teacher educators as to prospective teachers. Journal retrospection can be short and/or long term, looking back on immediate experience and/or the total experience. An important function of journal writing is that it provides the necessary distance and abstraction from the immediacy of teaching and, as such, serves as "a vehicle for reflection which then allows us to return to practice more thoughtfully, with, we hope, greater wisdom" (Adler, 1993, p. 163).

Application within the study of my practice. I maintained two journals during the formal research period; one, a private journal, in which I recorded my thoughts, feelings and experiences of teaching Biology methods, and the other, an electronic journal, (I called this the 'Open' Journal), which was linked to the Biology methods Home Page within the Faculty of Education. My private journal included brief analyses of events as they arose within my practice, and my responses, in the form of brief comments, from viewing the videotaped recordings of Biology methods sessions.

The Open (electronic) Journal was publicly available to students studying Biology methods. This journal contained a record of my purposes for each session, how I saw these purposes unfold, as well as other observations that I made about my experiences of the class. An important purpose of the Open Journal was to provide prospective teachers with access to my thinking about the classes, including my aims, how I felt about whether or not these aims had been met, as well as other questions, concerns and observations arising from my experiences of the session. Students were informed that reading or contributing to the web page was not compulsory, but that they may find it useful to learn about my plans for their learning as well as being able to read about and give feedback (via e-mail or discussion) on our classes.

4. Field notes Overview. Field Notes provide a written record of observations, interactions, conversations, situational details, and thoughts during a period of study. Different types of field notes are generated in the course of research, including mental notes, jotted (or scratch) notes and full field notes (Lofland & Lofland, 1995; Sanjek, 1990). In this study, jotted notes were the predominant type of field notes recorded. These consisted of brief "phrases, quotes, key words, and the like" (Lofland & Lofland, 1995, p. 90).

Application within my practice. During Biology methods sessions I made brief hand written notes to myself about issues that I wished to raise or revisit with prospective teachers, comments that I overheard from prospective teachers about their experiences of

sessions and summaries of notes made on the whiteboard or overhead projector transparencies. These field notes served both teaching and research purposes. I used them as prompts for discussion within the Biology methods class and informing the planning of subsequent classes (teaching), as well as acting as a means of recapturing the experiences of a session for my post class reflections (research).

5. Personal Learning Review Overview. Approaches to exploring 'self', such as life writing (Bullough & Gitlin, 2001) offer opportunities for prospective teachers to make explicit their thinking about schooling, teaching and learning. By making their ideas explicit, prospective teachers can begin to recognize the shaping forces and assumptions that influence their practice. When these artifacts of experience are shared with others, including teacher educators, common concerns and issues can be identified, discussed and individually, or collaboratively, investigated. Recognising the relationship between self and others is foundational to self-study. In this research, use of a Personal Learning Review (PLR) offered prospective teachers a way in to learning about themselves, at the same time that it encouraged the development of a deeper relationship (Bullough & Gitlin, 2001) with me, as their teacher educator.

Application within the study of my practice. The PLR task served both teaching and research purposes. The task consisted of a series of questions intended to gain a picture of prospective teachers' entering assumptions about Science, teaching and learning. The PLR was completed by all students as part of the formal requirements of the subject at the beginning of the academic year. The questions were intended as a stimulus for prospective teachers to begin to recognise similarities and differences between themselves as students/learners (e.g., what motivated them, what led to their success in Biology) and the students they taught. PLR responses were revisited via various activities and discussions throughout the year.

6. Interviews Overview. Interviews offer opportunities for detailed exploration of complex issues as participants give and receive information within a conversational framework. Interviews provide a flexible approach to eliciting and exploring information from others since the interviewer can pursue a particular response with an individual, ask for elaboration or redefinition, or probe and pursue factors or feelings that arise during the exchange (Wiersma, 1986). A good interview enables access to the thoughts and feelings, as well as the knowledge associated with a particular experience of both interviewer and interviewee (Patton, 2002). In this study interviews were used as a means of gaining insight into others' experiences and understandings of my teaching, and their learning about teaching.

Application within the study of my practice. I conducted individual, audio-taped interviews with eight volunteers from the Biology methods class, twice during the year. The timing of each set of interviews was chosen so that a comparison could be made between prospective teachers' initial thoughts about teaching and learning and those they expressed as they prepared to leave the course. The intention of the interview on each occasion was to uncover prospective teachers' beliefs about themselves as new Biology teachers, their views about learning, influences that shaped their teaching, and responses to their experiences of Biology methods classes.

7. *Colleague interview and observation Overview.* Enlisting colleagues to share conversations about teaching offers insights into experience that are not possible when working alone (Brookfield, 1995). When colleagues, “listen to our stories and reflect back to us what they see and hear in them, we are often presented with a version of ourselves and our actions that comes as a surprise” (ibid, 1995, p. 141). Brookfield identifies five purposes for shared critical conversations with colleagues: (i) helps us to gain a clearer perspective on the parts of our practice that need closer critical scrutiny; (ii) increases our awareness of how much we take for granted in our teaching and how much of our practice is judgmental; (iii) can confirm privately felt instincts; (iv) suggests new possibilities for practice and new ways to analyse and respond to problems; and, (v) helps to break down a sense of isolation and as a result, to recognize commonalities of our individual experiences (op cit, 1995).

Application within the study of my practice. I met regularly with a colleague to engage in (audiotaped) conversations about practice. Prior to the commencement of formal data collection we met for an autobiographical interview (see data source 1, earlier in this chapter) that explored various aspects of my educational beliefs, philosophy and practices. We continued to meet throughout the year to discuss different events from Biology methods sessions. In our discussions, my colleague acted as a critical friend, listening without judging, encouraging me to think further about my ideas, actions and feelings and prompting me to consider what these different events helped me learn about my practice and prospective teachers’ learning about teaching Biology. At times, I felt considerably challenged by the questions my colleague asked me about my teaching decisions or actions. Although this was not always a comfortable experience, I found it valuable for my pedagogical growth.

On one occasion my colleague attended a Biology methods class as a participant/observer. The purpose of the visit was two fold: as an approach to facilitating prospective teachers’ understanding of their teaching through observation and discussion of mine using a third party (i.e., colleague) to facilitate this discussion; and, as a shared experience of my teaching, to further ‘open up’ conversations between my colleague and me about aspects of my teaching approach (particularly aspects that I was unable to recognize, at that point). After a brief introduction outlining the purpose for his visit to observe and critique my teaching with the group, my colleague participated in the activities of the class then led a debriefing discussion of my teaching at the conclusion of the session.

8. *E-mail Overview.* Hoban (2004) identifies e-mail as a way of making personal insights public through communicating them with others and, because messages can be, “sent quickly . . . but downloaded when required, [e-mail] . . . is like having a ‘slow motion conversation’ because there is another layer of reflection when taking time to reply to someone’s communication about their personal insights” (Hoban, 2004, p. 1047). Hence in teacher education, e-mail offers a form of information communication technology (ICT) that supports the development of thinking about, refining and reframing practice.

Application within the study of my practice. In this study, regular e-mail conversations took place, over the academic year between myself, and Lisa (pseudonym), one of the prospective teachers in the Biology methods class. This unplanned data source emerged as a result of an experience early in the year when Lisa shared with me an extract from her personal, written journal that was a commentary on her experiences of the teacher education program. This led to a regular exchange of ideas between us, via e-mail and conversation, about our various experiences of teaching and learning. Through her questions and comments Lisa pushed me to consider why I taught the way I did, how I understood my interactions with others and, my beliefs about how learning can be authentic and meaningful for high school Biology students. My experiences with Lisa mirror those described by other teacher educators who have also developed e-mail relationships with prospective teachers in their classes for the purposes of facilitating understandings of teaching and learning (see Russell & Bullock, 1999).

Summary of data sources

To summarise, this study drew upon a broad range of qualitative data sources. Given the complex, diverse and richly detailed nature of professional practice, I needed a similarly rich and diverse set of artifacts that could help me understand more about my teaching from the perspectives of those that experienced it. Self-study research embraces the detailed nature of individual and collective experience and so employs methods that can best portray the inherent complexity of that work (Berry & Loughran, 2005).

Data Analysis

The emergence of tensions as a conceptual frame and analytic tool

My initial approach to data analysis was framed around the identification of that which I experienced as ‘problematic’ in my practice. Problematic situations were defined as those that caused me doubt, perplexity or surprise and that led me to question otherwise taken-for-granted aspects of my approach². I identified and analysed critical incidents from within my practice (Measor, 1985) and investigated assumptions (Brookfield, 1995) that I held about teaching and learning. A further analytic approach involved exploring differences between my intentions for prospective teachers’ learning and my actions in class. Preliminary analysis of the data developed alongside a review of the research published by other teacher educators also motivated to study their practice. As I read this literature I recognized similarities between my own experiences and what

² I use the word problematic in a Deweyan sense (1933) of problem as an intellectual difficulty.

these teacher educators reported from studies of their practice. I also saw a broader framework that connected the various elements of teacher educators' practice. It became apparent to me that teacher educators regularly experienced different *tensions* as they attempted to manage complex and conflicting pedagogical and personal demands within their work as teachers of prospective teachers. The notion of tensions seemed a useful way of describing teacher educators' experiences of their practice (including my own).

In addition, I recognised that the identification of particular tensions offered a useful conceptual frame that could be employed to organize and analyse studies of other teacher educators' investigations of their practice and, possibly as an analytic tool for the investigation of my own, derived from the themes and issues that had become apparent through the critical incidents, assumptions and behaviours that I had already identified.

In order to test the soundness of this frame as an analytic tool, I worked through samples of the various data sources, coding the data according to the different tensions. I picked out regular occurrences of the tensions at work within the data. This gave me confidence to commit to this concept as an analytic frame for researching my practice. The tensions therefore became both a conceptual tool for understanding teaching about teaching and an analytic tool for investigating my teaching about teaching. Given the purpose of my study as an investigation of my practice as a teacher educator in order to improve practice and prospective teachers' learning about practice, an interesting symmetry became apparent in the relationship between the teaching and research that comprised this study, which indeed, exemplifies the value of a self-study methodology.

Tensions identified

My understanding of the tensions developed as I worked with them. Through refinement, I established a final list of six. These include tensions experienced by teacher educators between: safety and challenge; action and intent; telling and growth; planning and being responsive; valuing and reconstructing experience; and, confidence and uncertainty. Each of these tensions will be elaborated in detail in the following chapter. My purpose here is to illustrate how the frame of tensions emerged through the research approach and, in this way, make explicit "the process of self-study" (Barnes, 1998), an important criterion for quality in self-study research (LaBoskey, 2004). Related to this, I now offer an example of one of the tensions, 'safety and challenge', together with two indicative data samples, in order to illustrate (briefly) the ideas of the tension and the manner of coding employed.

Illustrating a tension: safety and challenge

The tension between 'safety and challenge' emerges for teacher educators in engaging prospective teachers in forms of pedagogy that are intended to challenge ideas about teaching and learning, and pushing prospective teachers so far beyond their comfort zone that productive learning can not occur.

Data source: E-mail from Lisa (student)

Subject: Feedback about peer teaching

Date: May 21, 2001

From: Lisa

To: amanda.berry@Education.monash.edu.au

Have just read the open journal. I think it's funny to read some things from us and from our own students. We try to wangle our way out of things that aren't comfortable don't we? . . . I guess that came out in some of our comments – we don't like drawing, less time for reflection. It gets uncomfortable when things are a bit less structured than the norm.

Data Source: Interview with Ellie (student)

Ellie: . . . it's only been during this subject that I've actually put up my hand and given my opinion . . . I've never felt safe to do that sort of stuff in a classroom, like you'd be told you are wrong or that's a wrong opinion to have. But you feel sort of safe in an environment where you can just chuck things out there . . . It's sort of a safe place to make mistakes.
(Interview 1)

Each of the data sources (above) illustrates different aspects of the tension between safety and challenge. The first example, an e-mail from Lisa, one of the prospective teachers in the Biology methods class (see data source 8), reports her response to reading an Open Journal entry (see data source 3). Her e-mail follows a Biology methods class in which prospective teachers were asked to draw, rather than write about, their understanding of a concept, and to spend time reflecting on their experiences of learning and teaching. Lisa identifies a parallel between her own and her peers' response to this situation, that challenged their expectations of teaching and learning, and that of high school students when new ways of working are introduced. The tension then, becomes apparent as one departs from the 'safety' of normal routines and how such situations are managed and understood by the teacher/educator. The second example is drawn from an interview with a prospective Biology teacher, Ellie, (see data source 6). Ellie describes a new experience for her of feeling safe in a classroom. This in turn, leads her to risk challenging herself to express her ideas publicly.

It is important to note that because of the complex nature of teaching and learning, I regularly found more than one tension embedded within a particular situation or event. As a result, although the tensions may well appear neatly distinct from each other in the presentation of this research, in reality, multiple tensions could be read into individual instances.

SUMMARY

This chapter has outlined the research approach of the study described in this book. The rationale for the methodological approach, the selection of data sources, the reasoning behind their inclusion and the process of analysis that led to the analytic

frame of tensions have each been described. Self-study, as a methodology, employs multiple methods, is self-focused and initiated, improvement aimed and exemplar based. The detailed manner in which the research approach has been described in this chapter is representative of a self-study approach that is concerned not only with generating knowledge of teaching, but also, aimed towards the improved understanding of approaches to researching teaching about teaching. In the next chapter, I examine each of the tensions in detail, together with illustrative examples from teacher educators' accounts of their practice.