CHAPTER 1

BECOMING A TEACHER

Any plan to prepare teachers should include some teaching under the direction of an experienced practitioner … Both students and professors have judged student teaching to be, without qualification, the best way to train teachers.

(Spalding, 1959, p. v)

How does one become a teacher? Some may argue that one is born to teach; indeed many of the teacher candidates that I have met over the years are quick to tell me that they have dreamed of becoming teachers ever since they were small children. A few candidates have even described moments in their childhood when they "played school" with friends, family, or perhaps stuffed toys. Other candidates have mentioned a critical moment later in life when they realized teaching is a career they would like to pursue. Perhaps they enjoy explaining their subject matter to others. Perhaps they had a meaningful experience as a camp counsellor that cemented an interest in working with young people. Perhaps, like me, they had an experience in secondary school as a teaching assistant for younger students, and decided that they would like to be the one at the front of the classroom.

In the province of Ontario, Canada, where I have been both a student and a secondary school teacher, one becomes a teacher by attending an 8-month pre-service program at a Faculty of Education. Upon graduation, a teacher candidate earns a Bachelor of Education (B.Ed.) degree and is recommended for professional certification to the Ontario College of Teachers. Over 80% of teacher candidates in Ontario attend consecutive education programs, which are taken after successful completion of an undergraduate degree (Crocker & Dibbon, 2008). The rest enrol in concurrent education programs when they enter university, completing a few education courses concurrently with their undergraduate degree. Most teacher candidates in concurrent programs complete their undergraduate degrees and then join candidates in a consecutive program to complete the B.Ed. degree. Thus graduates of a teacher education program in Ontario end up with two baccalaureate degrees at the end of 5 years of university study. Exceptions include those teachers who obtain teacher certification through one of two masters-level programs at the University of Toronto, and candidates who come from a career in the trades who receive a Diploma in Education and certified to teach in technology subjects.

The pathways to becoming a teacher in Ontario are relatively straightforward. Teacher education programs in Ontario, across Canada, and worldwide tend to include some mixture of course work and field experience. The implicit message is that there is theory to be learned in coursework that can be applied during the field experience in schools. There is considerable evidence in the education research literature that indicates teacher candidates tend to place a higher value on field experiences than on

course work. Some teacher candidates, teachers, principals, and university professors question the content, validity, and utility of coursework in a preservice teacher education program. Although the pathway to teaching certification may be clear, the question of how one *learns* to become a teacher is considerably more ambiguous. What roles do coursework and field experience play in the process of becoming a teacher?

Calls for increased coherence in preservice programs are abundant in the teacher education literature (Darling-Hammond, 2006; Darling-Hammond & Bransford, 2005). In a presidential address to the American Educational Research Association, Cochran-Smith (2005, p. 14) advocated that the "new" teacher education be constructed both "as a policy problem and a political problem." Framing teacher education in this way may well help to change some of the structures of teacher education to more coherent program designs, but the humbling history of education reform indicates that changes in policy are unlikely to result in changes in the cultural routines associated with schools and, by extension, teacher education programs (Sarason, 2002). As a result, policy-level changes are unlikely to encourage teacher educators to reconceptualize how teacher candidates construct professional knowledge from teaching and learning experiences during a preservice teacher education program.

This book begins with the premise that learning to teach is a cultural, rather than a political or a policy-driven, problem. Most adults in North American society have been to school and hence have first-hand experiences of the routines of teaching and learning that occur in schools. Problematically, "teaching looks easy and is widely regarded as easy, the image of teaching as transmission and the perspective of technical rationality mask the many ways in which challenging and engaging teaching represents a highly disciplined view [of teaching and learning]" (Loughran & Russell, 2007, p. 217). In contrast to the dominant view of teaching as a relatively easy profession, Darling-Hammond (2006, pp. 34–35) argues:

> Teaching may be even more complex than law, medicine, or engineering. Rather than serving one client at a time, teachers work with groups of twenty-five to thirty at once, each with unique needs and proclivities. Teachers must balance these variables, along with a multitude of sometimes competing goals, and negotiate the demands of the content matter along with individual and group needs. They must draw on many kinds of knowledge – of learning and development, social contexts and culture, language and expression, curriculum and teaching – and integrate what they know to create engaging tasks and solve learning problems for a range of students who learn differently.

Darling-Hammond goes on to call attention to three problems in learning to teach (pp. 35–40):

1. *The Problem of the "Apprenticeship of Observation"*: Teacher candidates enter preservice programs after spending most of their lives as students in schools. They have well-developed ideas about the characteristics of good teaching, most of which are tacit and unexamined.
2. *The Problem of Enactment*: Teacher candidates often find it difficult to enact the propositional ideas that they have learned from their teacher education coursework during their practicum placements.

3. *The Problem of Complexity*: Teaching is a complicated act that requires teacher candidates to attend simultaneously to multiple, competing contextual factors in the relationships among students, subject matter, and themselves.

Russell (2008, p. 4) points out that the second and third problems can also be explained by a careful analysis of the implications of the problem of the apprenticeship of observation: "Most of what beginning teachers 'know' about teaching consists of images and patterns enacted before them by many different teachers through 12 years of schooling and into university. This knowledge is tacit; it has been conveyed to them unintentionally." It is not surprising that teacher candidates experience problems of enactment during their practicum placements, given that their tacit knowledge about how teaching *should* look, gained via their apprenticeships of observation, did not prepare them for the underlying complexities of the teaching profession. Their apprenticeships, noted Lortie (1975, p. 62), are obtained from a "specific vantage point": the vantage point of the student.

Taking the problem of the apprenticeship of observation as the overarching problem of learning to teach compels us to consider the degree to which learning experiences in teacher education programs help candidates to name and challenge their tacit, socialized assumptions about teaching and learning. To understand deeply the ways in which teacher candidates construct professional knowledge of teaching and learning, we must examine their prior assumptions in light of the cultural knowledge they construct during their preservice programs. We must also examine the taken-for-granted assumptions that seem to underlie many teacher education programs. Is the role of a teacher educator to synthesize research-based best practices for candidates to practise during field placements? Does the practicum experience challenge or reinforce a lifetime of socialized experiences in schools? Are methods courses destined to be seen by the majority of teacher candidates as little more than sites for collecting resources? Can powerful learning that challenges prior assumptions occur within a methods classroom? Where and how do candidates construct professional knowledge of teaching?

This book describes and interprets a study that assumes that many enduring questions of teacher education need to be considered through the lenses of the cultural assumptions, routines, and relationships between teachers and their students. As such, the study is ethnographic in its premise. It draws inspiration from two previous ethnographic accounts of learning to teach: Britzman's (1991/2003) *Practice Makes Practice* and Segall's (2002) *Disturbing Practice*. Britzman begins with the premise that "teaching is an interpretive relation" (p. 12) and ends with the conclusion that learning to teach is characterized by several existential crises that require candidates to construct an identity against three powerful cultural myths gained from a lifetime of schooling: everything depends upon the teacher, teachers are experts, and teachers are self-made (Britzman, pp. 224–232). These three cultural myths encourage many teacher candidates to set extraordinarily high expectations for their performances during practicum placements. Candidates tend to believe that they need to be in control of the classroom at all times, possess an exhaustive knowledge of their subject matter, and be able to instantly impress their host teachers with natural teaching abilities. It is this third belief, stemming from the cultural myth that teachers

are self-made, that is particularly dangerous because it devalues "any meaningful attempt to make relevant teacher education, educational theory, and the social process of acknowledging the values and interests one brings to and constructs because of the educational encounter" (Britzman, p. 230).

While Britzman (1991/2003) focused on the field experience of learning to teach, in his ethnography Segall (2002) situated himself as a participant-observer in a social studies methods course at a large university in western Canada. Throughout his discussion Segall makes clear his "reading positions" (p. 8), which necessarily informs how he constructs and reports his research, including the fact he attended the same preservice program under consideration in his study. In particular, Segall "uses the lenses of critical pedagogy not only to examine preservice education but also to have prospective teachers use those very lenses to critically examine their own process of learning to teach" (p. 14). He concludes that teacher candidates are inherently restricted by "teacher education's inability to provide them 'otherwise' experiences that break with the traditional, the expected, the obvious, and the taken-for-granted" (p. 167). Thus Segall suggests that the effects of school socialization have implications not only for how teacher candidates learn to teach, but also for how teacher educators learn to teach teachers. After all, teacher educators have their own apprenticeships of observation with which to contend, including the reading positions they bring to faculties of education as a result of their own experiences as teacher candidates and school teachers.

This research shares with Britzman (1991/2003) and Segall (2002) the premises that cultural myths and routines exist that have an effect on how teacher candidates learn to teach. As Appendix A indicates, I used elements of Segall's research design to frame my study, although the focus is different from both Britzman and Segall. We share an interest in the process of learning to teach, but my research focuses on establishing warranted assertions (Dewey, 1938) for how teacher candidates construct professional knowledge from teaching and learning experiences that occur both in a methods course and during practicum placements. We also share a belief that teacher education needs to pay more explicit attention to the role of cultural expectations of teaching and learning in developing pedagogies of teacher education. As Segall (2002, p. 6) notes, "teacher education programs can no longer afford the 'luxury' of masquerading as an invisible, innocent context within which prospective teachers naturally build ideas, knowledge, and skills."

CONTEXT FOR THE STUDY

This book reports on a study conducted for my dissertation research. The study interviewed 5 teacher candidates and their teacher educator at various points during the two semester preservice teacher education (Bachelor of Education) program at Queen's University in Kingston, Ontario. In addition, I attended each meeting of the physics curriculum methods course taken by the participants in this study. This section of the chapter provides additional contextual details of the nature of the preservice teacher education program at Queen's University during the year in which the research was conducted. I have used a consistent terminology throughout this book to refer to particular features of a program. A university student enrolled

in the preservice teacher education program is called a *teacher candidate*, the field experience in a *host school* setting is called a *practicum*, the teacher who supervises the teacher candidate during the practicum is called an *associate teacher*, and someone who teaches in the preservice teacher education program is called a *teacher educator*.

The preservice teacher education program at Queen's University began the day after Labour Day in September and ran until the end of April. The program alternated between on-campus coursework and blocks of practicum experiences in host schools. Teacher candidates were placed in cohort groups in host schools during the months of October (4 weeks), December (4 weeks), and February-March (5 weeks). The host schools were located as far west as Toronto, as far north as Ottawa, and as far east as the Québec border. One unique feature of the program was a 3-week placement in March in an alternative educational setting such as a museum, school board office, or international school. Successful candidates were awarded a Bachelor of Education (B.Ed.) during the spring convocation ceremony. There were two major streams in the program, one leading to certification as a Primary-Junior (Kindergarten to Grade 6) teacher, the other leading to certification as an Intermediate-Senior (Grade 7 to Grade 12) teacher. Teacher candidates in the Intermediate-Senior stream must take a curriculum methods course for each of two school subjects. The participants in this study had physics as one of their two subjects.

Curriculum methods courses in the intermediate-senior stream were scheduled for two 2 ½-hour classes per week. During the year this research was undertaken, the physics curriculum methods course had an enrolment of 19 teacher candidates (11 men and 8 women). The class met in a large room equipped with lab benches: Candidates spent most of their time sitting in small groups around circular tables arranged so that they could easily see one another, the front chalkboard, or the Smart Board on the side wall. Figures 1 and 2 help to convey a sense of the classroom environment:

Figure 1. The physics methods room as seen from the north wall.

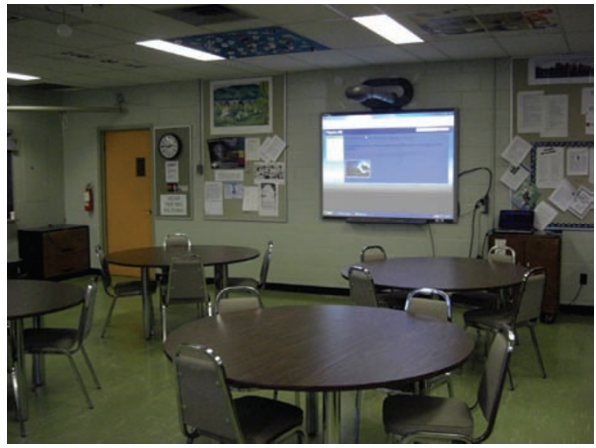

Figure 2. The physics methods room as seen from the east wall.

The photographs capture several of the elements that help to make this classroom a unique environment. For example, Figure 1 reveals that a number of brief statements about teaching and learning hang above the front blackboard. Both figures show ceiling tiles decorated by previous classes, a tradition that began in 1994. The names of former students help to convey a sense of shared ownership over this space. For example, the ceiling tile class of 1997–1998—the year in which I was a candidate in this same classroom—proudly displays our slogan "The Power of Experience" in the centre as our names and undergraduate university affiliations fan out toward the perimeter.

During the study, I was a participant-observer in the physics methods course offered as a part of the Queen's B.Ed. program taught by my supervisor Dr. Tom Russell. Although participant-observation is a familiar strategy for fieldwork, the nature of the participation "is a continuum that varies from complete immersion in the setting as full participant to complete separation from the setting as spectator, with a great deal of variation along the continuum between these two end points" (Patton, 2002, p. 265). I was present during each class throughout the year, but I had no official status in the course. The teacher candidates were aware of my purpose for attending every class and understood that I had no evaluative power over their grades. I often spoke to the teacher candidates before and after class in a social way, but these conversations were not part of the data collection. During each class, I sat at the back of the room and took notes on my laptop. I did not interact with the teacher candidates during class time, and I did not participate in class discussions or activities. Thus I tended toward the spectator end of the continuum described by Patton (2002), although I was not completely separated from the setting because I often spoke to Tom while the teacher candidates were engaged in a learning activity. Tom was both the teacher for the course and a participant in the research; our long history of critical friendship and collaborative self-study made it natural for us to have quick conversations as teaching and learning situations unfolded.

The selection of this particular environment was based on three factors. First, Tom is an experienced teacher educator with an extensive research program in both reflective practice and self-study. I expected that his participation in the research would yield rich data allowing me to describe and interpret the perspective of an experienced teacher educator as he enacts a pedagogy of teacher education. In addition, it seemed strange to investigate how teacher candidates construct professional knowledge from a physics methods course without considering the perspective and voice of the teacher educator. As Kane, Sandretto, and Heath (2002) argue, there is a paucity of literature that explores the relationship between teacher educators' beliefs about teaching and evidence of their actual teaching practice, noting that it is important "to make explicit the links between tertiary teachers' espoused theories and their teaching practice so that we can understand better how university academics learn to teach" (p. 242). Second, I believed that my prior experiences both as a teacher candidate and a teacher educator made me uniquely suited to attend to the pedagogy enacted in the physics methods course at Queen's University. In 1997–1998, I was a teacher candidate in the Queen's B.Ed. program and a student in Tom's physics methods course. In my first year of doctoral studies, I was appointed as a graduate teaching fellow for this same course while Tom was away on sabbatical leave. These prior learning and teaching experiences combined with my experience as a secondary school physics teacher provided me with powerful "reading positions" (Segall, 2002, p. 8) with which to describe and interpret Tom's evolving pedagogy of teacher education. Third, Tom and I have a 10-year history of critical friendship in which we have helped each other to frame and reframe our understandings of teaching and learning. Portions of this history have been published (Bullock, 2007; Russell & Bullock, 1999) and presented at academic conferences.

OUTLINE OF THE STUDY

This book poses three questions with the goal of exploring and interpreting the ways in which teacher candidates construct professional knowledge from teaching and learning experiences during a physics methods course and during practicum placements in host schools. The research questions that guide this study are:

1. How do teacher candidates construct professional knowledge from learning experiences in a methods course?
2. How do teacher candidates construct professional knowledge from teaching experiences during their practicum placements?
3. How do teacher educators construct their professional knowledge through collaborative self-study as they frame teaching as a discipline with teacher candidates in a physics methods course?

Data were collected from September to April of one year of the preservice teacher education program at Queen's University in Kingston, Ontario. The first two research questions were addressed primarily via focus-group and individual semi-structured interviews with five volunteer teacher candidates from the physics curriculum methods course at Queen's University. In addition, I attended the physics methods course as a participant-observer and kept detailed field notes of my

perceptions of the teaching and learning that occurred during the course. These field notes often served as a catalyst for my ongoing conversations with Dr. Tom Russell, the teacher educator for the physics methods course and a participant in this research. Conversations between Tom and me form the basis for the collaborative self-study that addresses the third research question. Appendix A describes the design of the study, including its associated ethical dilemmas, and the methods of data analysis.

OUTLINE OF THE BOOK

The next two chapters present a synthesis of relevant literature. Chapter 2 begins with the argument that education is a cultural process that results in the transmission of dominant social patterns and ideas, making sustainable educational reform difficult. It concludes with a review of two influential sociological accounts of teaching, emphasizing the the importance of Lortie's (1975, p. 62) concept of the "apprenticeship of observation" to considerations of teaching and learning. Chapter 3 reviews relevant literature on how teachers construct professional knowledge. Although it is acknowledged that teachers can and do learn from propositions, the chapter argues the primary role experience plays in the construction of professional knowledge about teaching and learning. Schön's (1983) construct of knowing-in-action is framed as a highly productive way of thinking about the nature of teachers' professional knowledge.

Chapters 4 to 7 describe, analyze, and discuss the data collected for the study. Each chapter is devoted to a particular month of on-campus weeks during the preservice teacher education program at Queen's (September, November, January, and April). Sources of data include observations that I made as a participant-observer in each of during each of the during the on-campus block, a focus group interview with the five research participants, an individual follow-up interview with each participant, and regular face-to-face meetings and email correspondence with Tom Russell. Throughout the analysis, quotations and references are made to either my research journal or the six primary documents in each hermeneutic unit (Muhr, 2004) associated with a particular on-campus block. The naming conventions used to reference the data are consistent in each chapter. For example, The first primary document is the transcript of the first focus group (FG1); the remaining five primary documents are transcripts of the individual interviews for the participants (using the pseudonyms David, James, Irene, Max, and Paul). Specific references and quotations refer to the author, the interview number, and the quotation number within the hermeneutic unit. Thus a reference of (FG1, 85) refers to quotation 85 in the transcript of the first focus group. A reference of (David1, 5) refers to quotation 5 in the transcript of David's first interview. Finally, a reference of (Journal, September) refers to an entry made in my research journal in September of the year in which data was collected. I believe that there is significant value in allowing the reader to consider the comments made during the four focus groups (coded FG1, FG2, FG3, and FG4) compared to the individual interviews, since participants tended to share more personal thoughts in the individual setting. This distinction will become particularly evident in Chapter 6.

Chapter 4 discusses the ways in which teacher candidates' initial assumptions about teaching and learning were called into question by learning experiences in the physics methods course. These assumptions, rooted in their apprenticeships of observation, were disrupted by three types of experience during the month of September: a lesson study activity, interactions with their peers, and Tom's explicit focus on building a trusting environment in the physics class. Although there were no practicum experiences to report on, some of the participants expressed trepidation about their October practicum placements.

Chapter 5 names the ways in which the tensions experienced during the October practicum placement and during the November on-campus weeks caused teacher candidates to experience themselves as living contradictions. The candidates were frustrated by the fact that their enacted pedagogies on practicum did not match their expectations of themselves or their perceptions of the expectations placed on them by associate teachers and the Faculty of Education. Tom continued to focus on exploring the potential utility of active-learning pedagogies during the methods course, framing much of his lesson planning around a visit by Dr. Randy Knight of California Polytechnic State University.

Chapter 6 focuses on the challenges Tom faced in his efforts in January to develop a coherent signal against the noisy background of a teacher education program that was perceived as increasingly incoherent by participants in the study. He provided class time for candidates to engage in a self-directed learning activity, so candidates could have time to think more deeply about what they had learned from the course and to experience student-centred learning first-hand. The teacher candidates who participated in the research spent considerable time in their focus group interview discussing how and why Tom was using certain pedagogies in the methods course. Their experiences of themselves as living contradictions were magnified by the December practicum experience, to the point where two of the participants expressed a great deal of discomfort about the February practicum placement.

Chapter 7 interprets how the teacher candidates consolidated their learning while looking ahead to the future, as well as discussing the strategies that Tom used to bring the physics methods course to an appropriate conclusion. Few comments were made by candidates about their final practicum experiences in February and March. Tom found ways to touch on each major theme of the course, with a view to reminding candidates why the themes were important rather than trying to form propositions about teaching and learning. Four of the five participants theorized about the kinds of pedagogies they wished to enact in their future classrooms. All participants showed evidence of reframing their prior assumptions about teaching and learning as a result of experiences in the physics methods course.

Chapter 8 begins by revisiting the literature on teachers' professional knowledge, interpreting the data in light of both the narrative and reflection-in-action perspective of constructing knowledge from experience. Conclusions are then offered for each of the three research questions in the form of principles, rather than propositions, because principles are understood as contextually based and suggest future directions for productive lines of thinking. An interview conducted with Tom the year after data was collected for this study is analyzed to shed light on how Tom was encouraged to

reframe his pedagogy after reading a thorough analysis of his teaching and how five candidates learned in his one year of his methods course. The question of how and why the candidates came to think about their professional knowledge in new ways is explored using the concept of the authority of experience. The book concludes that it is possible to disrupt and reframe teacher candidates' prior assumptions about teaching and learning, tacitly gained through their apprenticeships of observation, by providing learning experiences in a methods course that encourage candidates to analyze carefully how they think about teaching and learning.