Reforming Teacher Education:
Making Sense of Our Past to Inform Our Future

By Peter Chin & Tom Russell

This article examines teacher education reform through the eyes of two science educators who teach within a unique program structure. One of us (Peter Chin) is a recently appointed (January 1994) assistant professor of education, and the other (Tom Russell) is an "experienced" professor who was appointed at Queen's University in 1977. We begin by clarifying the significance of our title. "Making sense of **our** past to inform **our** future" foreshadows the two distinct components of this article: a self-study component, and a collaborative component. The self-study component highlights our individual and separate professional development as teacher educators in order to convey a sense of the perspectives on learning to teach that each of us brings to our science methods classrooms. This is critical because we believe that **program structure** and the **coherence of our teaching approaches** are the two key features that explain why our efforts at teacher education reform have been successful in our first two years of collaboration at Queen's University. The collaborative component of the article highlights our joint efforts at teacher education reform and illustrates the level and depth

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of engagement that can occur when preservice teachers are encouraged to take ownership of their own professional development.

Self-Study: Making Sense of Our Past

For the last decade or so, teacher educators have been encouraging preservice teachers to become more aware of their own personal knowledge so as to better understand and improve their own teaching. Connelly and Clandinin (1988) have encouraged teachers to explore and validate their personal practical knowledge through narrative writing, and Schön (1983) contends that our "epistemology of practice" can be found in the framing and reframing of events within the action setting. This self-study component is our attempt to "practice what we preach" by focusing on our own personal knowledge about teacher education so that we can better understand and improve our own teaching. We begin with Tom Russell's perspective as an experienced teacher educator and follow with Peter Chin's perspective as a beginning teacher educator. (We deliberately avoid the labels "expert" and "novice," which would be quite unproductive in our collaboration.)

Tom's Story

Where do I begin to look at my own professional development, now that I am best described as an experienced teacher educator? Where was the starting point? Unlike Peter, neither of my graduate programs in education provided any access to the role of teacher educator, but I have always valued two unusual features of my career: (1) I was able to teach for two years (as a Peace Corps volunteer in Nigeria) before taking any preservice courses; and, (2) I did inservice work with teachers for three years before teaching any preservice courses. My initial teaching moves in preservice science methods courses at Queen's in 1977-78 were influenced by six history teachers in one high school. In the 1976-77 school year, I was involved in training them to analyze their teaching from transcriptions they prepared from recordings of their lessons. Their two overwhelming conclusions were that they talked far more than they realized or wanted to, and that it was far harder than they could have imagined to reduce their classroom speaking to levels they could accept. How could I teach new teachers to be aware of the extent of their own talking in the classroom if I could not reduce my own in my work with them? The inevitable stresses and strains burst forth midway through my second year at Queen's when one individual responded to my efforts to explain my pedagogy by asking, "Why didn't you tell us you weren't going to tell us [how to teach]?"

In retrospect, the first six years to tenure and my first sabbatical leave were lonely ones, but I had to gain personal experience of the tensions and dilemmas of preservice teacher education. There were times when I wondered if "teaching against the grain" was a clever excuse for troublesome aspects of my course evaluations. My science methods colleagues had been outstanding science teachers

whose arrival in teacher education was uncontaminated by Ph.D. research perspectives and experiences. The Faculty of Education at Queen's was slowly beginning a transition into a "teaching **and** research" culture that is only now approaching completion. I had been predisposed to what are now seen as constructivist perspectives by accepting the insights into small-group discussion and the transmission-interpretation and school knowledge/action knowledge distinctions provided by Barnes (1976). Schön's (1983) argument for a new epistemology appropriate to learning from experience fell into my hands and overwhelmed my thinking just as I set off for a year's leave at Mills College in Oakland, California. The rest is history, as they say: more than a decade of collaborative research with Hugh Munby focused on metaphor, reflection, learning from experience, and the "authority" of experience (Munby & Russell, 1994). Throughout that decade, the interaction between teaching and research became increasingly important, capped in 1991 and 1992 by two four-month returns to the secondary school to teach physics (one class a day) while continuing to teach science methods (Russell, 1995a, 1995b).

When Peter Chin arrived at Queen's in January, 1994, to begin his teacher education career, I welcomed the opportunity to teach in proximity to someone familiar with both good teaching and good research. Peter's supervisor in his Master's program, Doug Roberts, had been my Ph.D. supervisor; Peter's Ph.D. supervisor was Gaalen Erickson, whose work I have respected for more than a decade. Yet nothing could prepare me for the apparently high "compatibility" we felt, professionally and personally, as we listened to the responses from the first group of Queen's-Waterloo science students we taught that winter. Peter's story continues the theme.

Peter's Story

Where do I begin to look at my own professional development as a beginning teacher educator? Where was the starting point? Much of my learning has been "implicit." As a recent appointee to Queen's University, I am acutely aware of the fact that I received little direct preparation for my new teaching responsibilities. As I reflect on my immediate past, I realize that I was provided, quite deliberately, with a host of rich experiences and opportunities on which I can draw. As my teaching experience in teacher education accumulates, I am recognizing more and more the importance of my graduate student experiences as the professional development context in which my perspectives on teacher education have been articulated, critiqued, and practiced.

I began graduate work in education in the third of my five years as a science teacher, and my first opportunity to work as a teacher educator came when I left the science classroom for my residency year of the master's program at the University of Calgary. I was awarded a teaching assistantship in the elementary science program but, more significantly, I was asked to choose between teaching one section of the course alone and team teaching two sections of the course with Dougal

MacDonald, a Ph.D. candidate in the same department. We both agreed to the team-teaching opportunity.

As in so many team-teaching arrangements, Dougal and I spent countless hours in joint planning before and debriefing after each lesson. The shared planning sessions were critical because having to decide on the content of a lesson forced us to spell out our reasons for wanting to do certain things. In effect, the co-planning acted as a catalyst for examining our personal views of what constituted sound science education experiences for the preservice teachers in our classes. The debriefing of lessons enabled us to critique our successes and failures. It is not often that teachers or teacher educators have opportunities to have a "critical friend" observe so many of their lessons (Chin & MacDonald, 1994).

Early in our planning, Dougal recalled the adage that: "If you give people fish, they can eat for a day, but if you teach them to fish, they can eat for a lifetime." This statement became the focus of our goals for each lesson and for the course. For me, it signifies the balance that I am now trying to achieve in my role as a teacher educator. The saying aptly articulates the two important features of "needs" and "ownership" in my developing perspective on teacher education. There is a tension between teaching for the short-term needs of preservice teachers and teaching for their long-term needs. To return to the adage. We want preservice teachers to learn how to fish for themselves, but we also have to recognize that their more immediate concerns are for some fish of their own (practical strategies and materials they can use right away). We cannot engage fully in teaching them how to fish if they are preoccupied with their empty stomachs. Thus I now see my teacher education role as one in which I am endeavoring to teach people to fish, yet I am also trying to give them enough fish so that they don't go hungry in the interim. Of course, the ultimate goal is that they be able to fish for themselves. I continue to struggle with striking a balance in my own work with preservice teachers, especially because I work in a context where some people focus only on learning to fish while others focus on giving out fish. At the same time, until the preservice teacher education program structure at Queen's changes in September, 1997, I work within a program structure that makes it very difficult for individuals to focus on learning to fish (by taking charge of their own professional development).

I had a second opportunity to work with preservice teachers during my Ph.D. studies at the University of British Columbia (UBC). I was assigned to teach an intensive three-week course to former teachers who were attempting to regain their provincial certification or validate a teaching certificate from another jurisdiction. Since everyone in the class had teaching experience, I recognized the need to adjust my approach in order to draw upon their previous teaching experiences. The result was that the course evolved into more of an extended inservice workshop rather than a preservice methods course. I perceived my own role as being more of a facilitator for their discussion of issues of teaching and learning rather than as a "purveyor of the knowledge." Since most members of the group had only minimal experiences

in the teaching of science (predominantly due to a "science phobia"), I also realized that part of my role entailed providing classroom opportunities that would serve as a basis for both the learning of science concepts and the concomitant issues of teaching particular concepts to children. It quickly became apparent that I needed to model for these teachers the classroom atmosphere and approaches to teaching science that would be consistent with what I was trying to encourage them to do with their future pupils. Thus I realized the importance of aiming for consistency between my own teaching and the kind of teaching I was recommending to them.

As a graduate student in the UBC community, I was also introduced to and influenced by a constructivist view of learning. This perspective on learning assumes that knowledge is personally constructed, socially mediated, and inherently situated. The three premises of constructivism have resonated within my own view of teacher education. Specifically, I recognize that preservice teachers cannot merely be "told" what I want them to learn. Rather, they must be provided with opportunities to "experience" what it is that I am trying to help them understand. I try to create a safe atmosphere so that they feel comfortable in talking and writing about how they are making sense of the issues of teaching and learning in which we engage. In addition to the shared experiences of the science methods course, I also make attempts to draw upon their classroom experiences as teachers and learners, because understanding these experiences is pivotal to their personal professional development. For me, the inherent situatedness of learning to teach is best captured by Donald Schön's (1984) tenet that one cannot tell others what they need to know, and that new teachers will only recognize their needs when they are immersed within the practice they are trying to learn.

In summary, I believe that my opportunities and experiences as a graduate student allowed me to develop a clear initial sense of my personal perspective on teacher education. While this was valuable, it was still impossible for me to escape the dilemma that others (those experienced in teacher education) could not tell me what I needed to know as I assumed full responsibility for a preservice course. These initial experiences helped me to articulate the rationales for my beliefs about what I should teach and how I should teach it. Of course, as both a teacher and a learner, I continue to struggle with carrying out my role as a teacher educator in a way consistent with my beliefs. The constant tension surrounding what I should teach centers around striking the balance between "giving out fish" and "teaching fishing itself." The issue of how I should teach involves clarifying what it means to be a facilitator. Taken to an extreme, being a facilitator silences my own experience and expertise in classroom science teaching and teacher education. Nevertheless, finding a role for my own voice has resulted in a frequent quip from a colleague: "You still think you have something to teach them." Clarifying what it is that I do have to offer preservice teachers, and conveying what I have to offer in such a way that my teaching is not telling, seem likely to be endemic to my career as a teacher educator.

I arrived at Queen's in January, 1994, eager to embark upon my own attempts

at teacher education reform. Not surprisingly, the reform perspective—attempting to go against the grain—has never been something I would have applied to my own teaching, for I have always viewed my own teacher education practices as the logical evolution of my personal experiences and opportunities. It is when I compare my own practice with the practices of the colleagues around me (through informal conversations with colleagues and preservice teachers) that I begin to recognize that my work with preservice teachers may be quite different from the norm. It is important to mention that our faculty includes a number of people who see themselves teaching against the grain, making deliberate efforts to shift away from teacher training and more towards professional development.

Merging Our Stories—Peter's View

Two important and related factors have contributed to a fairly smooth transition into my role as a beginning teacher educator. The first factor appears simple on the surface: one of the science methods courses I was assigned to teach entailed working closely with Tom Russell. Prior to my arrival at Queen's, I had never met Tom, but was aware of his reputation as an educational researcher. Not surprisingly, my own perspective towards teacher education (which is influenced significantly by Schön) proved to be quite consistent with Tom's perspective and practices. Initially, I merely assumed that his interest in Schön's work would mean that there would be some degree of consistency in our teaching approaches. This was confirmed four weeks into my first courses at Queen's, when our preservice teachers told us of the similarities they saw in our teaching approaches. As well, Tom and I share views about the importance of critical reflection and self-study of our own teacher education practices.

It would be difficult to over-emphasize the importance of having an experienced and established colleague to work with when trying to break with tradition. Here I was working closely with someone who had been going against the grain (in his own quiet way) for the past 18 years (Russell, 1995c). His support of my efforts in the teacher education program is most obvious in the sharing of his own experiences in attempting to bring change to teacher education, and in the encouragement he provides when I am faced with apparent setbacks. In effect, Tom has assumed the role of "critical friend." Although we have our separate classes, we engage in a fair amount of team planning and some team teaching. Without the support of an established colleague pursuing a similar teaching approach, it might well have been more inviting to go **with** the grain when faced with negative comments and resistance in the science methods classroom.

The second factor contributing to a smooth transition when I arrived at Queen's was the structure of the Queen's-Waterloo (QW) cooperative science education program in which I found myself teaching a science methods course. Specifically, the program permits science students from the University of Waterloo (widely recognized for its cooperative programs, with alternating academic and work

terms) to qualify for a Bachelor of Education degree (comparable to California's fifth-year program or to many graduate teacher preparation programs in the United States) at Queen's University while gaining work-term experiences in high schools. An unusual feature of this program is the fact that the preservice teachers (about 25 per year) complete a 16-week work term in a school setting **before** arriving at Queen's for their term of education courses. These preservice teachers then have a second 16-week work term that begins either five or nine months after their courses at Queen's. The program structure permits a strong emphasis on integration of practice with theory and adds a sense of professional purpose to the completion of their science degree requirements at Waterloo. More importantly, their first work term in a school, before any education courses, allows them to become fully integrated into the realities of being a teacher within a particular school culture. Thus they arrive at Queen's with a sense of what they need to learn that is not invented from memories of life as a student but rather is grounded in significant personal experiences of teaching. Then, with our encouragement to share and reflect on their initial teaching experiences, many become much clearer about some of the issues they knew were causing them uneasiness "but they just couldn't put their finger on it." Even those with specific concerns in certain areas come to an enriched understanding of additional factors they had not previously considered germane to solutions.

Although the structure of the QW program was designed not to provide early teaching experiences but to create a structure acceptable to existing routines at two different universities, we both immediately and intuitively recognized its potential for "learning from experience." Conveniently, Tom had done very little work with QW students before Peter arrived at Queen's, so we were sharing new experiences. Serendipitous time tabling assigned the two of us to the teaching of science methods courses within this program. Thus we quickly came to recognize that our personal approaches to teacher education are well suited to the preservice teachers in this program. Their early extended teaching experiences predispose them to welcome opportunities and encouragement to stand back from experience and collectively interpret its meaning and its authority (Chin, Russell, & Smith, 1996). It is this QW program that serves as the context for our collaborative efforts at teacher education reform.

Informing Our Future: Collaborative Efforts at Reform

The Queen's-Waterloo program began in 1989, and Tom had worked with one cohort (in 1992) prior to Peter's arrival at Queen's in 1994. Since that time, we have been the only two science education faculty members involved with the QW program. As well, the special achievements of the teacher candidates in this program have been most evident over the last three years, with the 1994, 1995, and 1996 cohorts. What has been different? Why are the preservice teachers in this program attaining goals that were never imagined or intended by those who set up the

program? Through almost daily discussions, we have come to the following conclusions about the contributing factors.

Factors Contributing to Change

First, the **structure** of the QW program entails an extensive block of classroom experience **before** the start of their education courses. As already noted, this early and extended teaching experience means that the preservice teachers arrive with specific needs and concerns that they hope to have addressed during their time at Queen's. Most approach their education courses with a clear sense of what they need to know in order to develop as a professional. This is in obvious contrast to the other programs at Queen's where the bulk of the practice teaching comes after most or all of the coursework has been completed. We also teach science methods courses for individuals who do not have early and extended experience, and it is only when they complete their education courses and limited teaching placements that they seem ready to address the issues that members of the QW program take for granted.

Second, our **shared approach** to teacher education has a coherent theme stressing the importance of how preservice teachers can learn from their own experiences (in contrast to our "telling them how to teach"). This approach is well-suited to the structure of the QW program. Thus we see the teacher candidates' time at Queen's as a "processing term" in which they have an opportunity to make sense of their teaching experiences and to set personal professional development goals for their second teaching work term.

Third, because we are the only two science education faculty members involved with the program, our teaching approaches appear consistent to the preservice teachers. We do not send mixed messages about what it is important to do in an education course and program. This **program coherence** developed spontaneously: we first became aware of it when the 1994 cohort "played it back to us." Conveniently, some of our colleagues in foundation courses teach in ways that are consistent with a theme of learning from experience. Our work with the QW cohort is at the core of their preservice courses, and coherence at the core pays rich dividends and permeates their other experiences.

Finally, because the QW program brings the preservice teachers into the Faculty of Education in January, even though all other programs have been operating from September, the people in this program take several courses in which they are taught as a group. Thus the preservice teachers spend much of their class time as a **distinct cohort** and inevitably form a strong group identity that fosters sharing of experiences (as well as a spontaneous predisposition to "having fun"!).

Our teaching approach emphasizes addressing needs and concerns about teaching through cooperative learning and large- and small-group discussions. Our emphasis on making sense of recent teaching experiences is obvious; many of the assignments are dependent upon data we ask them to collect during their teaching term. We begin this process by traveling to Waterloo in August to meet with the new

group during the one-week orientation prior to the start of their first teaching term. As well, our teaching approach encourages the preservice teachers to take ownership of their own professional development. The remainder of the paper highlights some of the ways in which our joint attempts at teacher education reform have enhanced the experiences of the preservice teachers following this unusual program structure.

Preservice Teachers Taking Ownership of Their Own Professional Development

During the past two years, working with three different cohorts (1994, 1995, and 1996), we have seen many of the QW preservice science teachers take to heart the concept of **taking ownership of their own professional development**. Their period of early and extended experience enhances attention to personal experience and the ability of individuals to learn from each other. Within the first cohort that we shared (1994), the preservice teachers took the initiative in setting up weekly discussion sessions to deal with common teaching concerns, such as classroom management, ranges of ability, and evaluation. To their credit, they too recognized the importance of documenting these discussions so that they had a record of the various ways in which their peers had addressed these issues. With our encouragement and support, this cohort of preservice teachers prepared a book that interprets their first teaching experiences and documents their professional development at Queen's. *The Experience Book: The Roots of Our Ever-Branching Tree* (Queen's-Waterloo Class of 1994) includes contributions from each member of the group, with different sections that highlight their sense of the weekly discussions and the significance the explorations into teaching and learning that were done in the science methods course.

Several members of the 1994 cohort expressed interest in participating in the August orientation week activities for the 1995 group. They recognized the value of peer mentoring and the extended possibilities of learning from each other. As well, this provided a different type of opportunity for the preservice teachers to gain teaching experience that obviously built upon their studies at Queen's. Previously, the orientation week had been organized and taught by the program coordinator at Waterloo with a one-day visit from us at the end of the week. Now a new tradition is emerging as the 1995 cohort accepted this challenge. The 1996 cohort is determined to continue.

In our own roles as learners, we listened to and implemented several of the 1994 group's suggestions for improving their program. The most important of these changes was the addition of a three-week practicum after the first five weeks of education courses. The 1994 group felt that they would have benefited from another opportunity to work in the classroom, enacting some of the new and refined understandings of their teaching that were emerging in their education courses. For both pedagogical and pragmatic reasons, we decided to arrange the practicum so that people go out in pairs to serve as "critical friends" for each other. Members of the

1995 and 1996 cohorts found the additional practicum to be a powerful experience and many also found their critical friend to be invaluable. They welcomed our challenge that they use additional experience to test the value of their work in education courses. An experience as short as three weeks also emphasizes the importance of their two 16-week teaching assignments.

The 1995 cohort initially had concerns about having to live up to the increased expectations that had been created by their predecessors in 1994, but they quickly developed their own sense of coherence and identity. This cohort produced its own book: *The Path Less Travelled: The Journey of 23 Experience-Guided Student Teachers* (Queen's-Waterloo Class of 1995). As noted above, some members helped to plan and conduct the August orientation week activities for the 1996 group. At the request of the 1995 group, the Waterloo administration established a non-credit time block once every two weeks in which the 1994, 1995, and 1996 groups could meet to hear invited speakers and otherwise keep their education interests "alive" while continuing their studies at Waterloo. The 1995 group accepted responsibility for organizing topics and guest speakers for the bi-weekly meetings. We were invited to attend the inaugural meeting of the education "course," and we certainly felt excitement and pride when we found ourselves in a room with more than 50 preservice teachers—everyone in the 1996 cohort as well as many drawn from the 1994 and 1995 groups. With our encouragement and on their own initiative, a growing community of teachers and learners is taking hold at Waterloo. We firmly believe that such a community of practice can serve as a continued forum for dealing with their efforts to express their educational beliefs in their teaching practices.

In Preservice Teachers' Words and Voices

One of the most common critiques expressed by preservice teachers in the traditional program concerns the **lack** of applicability and value they perceive in their courses at the Faculty of Education. Predictably, they are quick to claim that the most powerful experiences in their growth as a teacher occurred during their practicum placements. What is disturbing is the number of preservice teachers who state, with certainty, that they learned little from their education courses. In sharp contrast is the widespread tone of enthusiasm for courses in education expressed by the 1994, 1995, and 1996 groups in the QW program. As we complete this paper, the third volume of writing has appeared under the title, *Learning to Teach, Teaching to Learn* (Queen's-Waterloo Class of 1996). It appears that a program structure in which extensive experience precedes **and** follows education courses provides many more opportunities for the "integration of theory and practice." (We place this familiar phrase in quotation marks to signal that these three groups of new science teachers have shown us how inadequate that phrase can be as a label for the learning that resides in their experiences.) Also significant is perceiving a degree of program coherence from faculty members who act from the premise that we cannot tell

people how to teach, but we can help them learn from their experiences.

The three Waterloo groups we have worked with have been ready, willing, and eager to focus on what they learned from extensive personal experience in the classroom. We have several sets of data from the 1995 group that were provided in an in-class writing exercise when they returned from the three-week teaching placement that sent them back to the classroom midway through their term of education courses. Those who examine these statements carefully will realize that there is a broad range of reactions to their experiences in this program structure. Extensive experience that precedes education courses does not reduce diversity or encourage uniformity on a topic as complex as learning to teach. Far more significant, on our reading of these data, are the perspectives that they have on their own professional learning, and their sense of the relationship between their classroom experiences and the impact of the first five weeks in education courses.

> u Queen's has allowed us to reflect upon our T1 experiences, build new and old principles, and give us the opportunity to learn how these principles have affected our teaching style. ["T1" is their term for their first 16-week teaching term; "T2" refers to the second such term, which begins either five or nine months after their courses at Queen's.]
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> u It is important to keep in mind that the QW students have had four months' experience teaching before we came to McArthur [the Faculty of Education is located in Duncan McArthur Hall]. Through trial and error most of us have been able to acquire and develop a style or methodology towards teaching in a classroom that can only now be perfected. Classes at McArthur are a source of ideas and discussion topics that allow us, as students, the chance to hone our already developed teaching strategies. We do not learn much that we could not figure out for ourselves. What we do learn and decide to take away from classes is an appreciation for the whole aspect of becoming an educator and the responsibilities that are an integral part of the job. We have survived our trial by fire and now are ready to be honed to a sharp edge. We were a lump of iron with a desire to become a sword. Now we are the sword and seek to be sharp. (It sounds corny but it makes sense).
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> u I've found the curriculum courses to be helpful as well. I believe I get ideas and confidence from these classes to try things in my own classroom. Group discussions are **very** valuable. I gain a **lot** from the experiences of my peers.
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> u I can't deny that I progressed as a teacher far more in my practice round [of three weeks] than I did in my four months, and I think it **has** been due to these courses here at Queen's. Whether as a direct result of the exercises and discussions or indirect, my mode of thinking is more focused. Maybe just taking the time to chew over what happened is what makes the classes effective, and certainly the emphasis on personal well-being and supporting others is invaluable. My first associate told me that teachers really need summers off, and I'm starting to understand why. That time is important because the hectic teacher life will kill you otherwise. I feel that the courses here are pointing us in the right direction and giving us the seeds for our future growth. As for the specific content of each course, as with any course

one doesn't see the value of it right away, maybe never. Different things will be worthwhile to different people as long as the base is sound.

u Being at Queen's has made me totally aware of what I'm doing while in front of the class. Constantly thinking, and I think that is the most important thing Queen's could have given me to help me become a good teacher. Sometimes it is hard to see the usefulness of some of the topics we discuss or classes we take, but I think it is just because we personally haven't been in that situation so then don't consider it a situation. But some day we may be faced with it and then be glad we'd heard about it before. I really have used what I've learned here, if not in practice at least to develop my thinking. I actually felt what we've learned **is** out there in the schools. I've surprised myself in noticing so much more in what goes on "behind the scenes" in the classroom, as well as what is going on with the students. My big sum-up word is **awareness**!

u Coming to Queen's has helped me to feel much more confident as a teacher. By being with other preservice teachers, and discussing, reading, and writing about teaching, I am learning the teacher "culture" and have begun to feel like a teacher. I was very conscious of things that I was doing in the classroom this time around. I experimented with things that we had discussed here. In particular, the idea of letting the students carry the ball and the teacher keeping the ball going. My whole three weeks I worked on my questioning techniques and **inviting** the students to become **active** learners. Maybe I should say "**luring**" the students in, instead of inviting. I found this technique of teaching extremely comfortable and it gives me a feeling of being part of the learning experience and "**with**" the students instead of just being at the front of the classroom as someone separate from them. This whole idea that I learned from Queen's has really opened the door for me in terms of finding my own teaching personality. Another important thing I learned from Queen's was what learning and education is really all about. As a teacher, I now see myself as someone who is trying to create (I can't think of a better word) students who are "responsible thinkers" so that they can make informed, sound decisions. It's not about them knowing the speed of light or other little facts.

u I think the most important thing I am getting out of Queen's is the reflecting time. Time to think and write about things I want to do, be and pursue. I think the classes here at Queen's stimulate me to think about a lot of issues concerning education and personal "wellness."

u Five weeks at Queen's were great for showing ideas, opinions—learning about yourself—finding out there are lots of right answers and more than one way to do something well. **Personal development** is the key phrase here.

We find a sense of **perspective on, engagement in, and comfort with the process of learning to teach** in the statements from the 1995 Waterloo group. Many of the comments indicate how they have used their extensive experiences as a guide to constructing meaning in their education classes. Most report that their activities in education courses did influence their subsequent teaching. More than anything else, we are struck by how early extended teaching experience followed immedi-

ately by an emphasis on learning from experience leads new teachers to assume a measure of responsibility for their own professional development. This predisposition holds considerable promise for their responsiveness to future inservice teacher education opportunities.

Conclusion

We have highlighted the importance of a teacher education program structure that places preservice teachers in classroom settings for an extended period of time before they engage in education courses. We see this as our contribution to the reform of teacher education, and this is the domain in which we see ourselves going against the grain. As "new" and "old" professors, we would make no progress at all without each other. As Tom knows only too well, going against the grain can be a lonely experience, and when it is done in isolation, it moves very slowly. Sharing this enterprise has made all the difference.

In addition, we have demonstrated how a teaching approach that acknowledges and builds upon early experiences can have positive results when the preservice teachers begin to take ownership of their own professional development. When two or more teacher educators convey similar messages that value learning from experience, the increased program coherence can lead to remarkable achievements by preservice teachers.

Early in 1995, a report by a Royal Commission on Learning in Ontario recommended that all preservice teacher education programs in the province include more time in school for preservice teachers (Bégin & Caplan, 1994). Guided both by principles of learning from experience and by the evidence from recent QW groups, the Faculty of Education at Queen's has adopted a new preservice program structure to take effect in 1997-98. After a week's orientation, all teacher candidates will begin a 12-week teaching placement on the first day of school in September. In many ways, the entire faculty is now preparing to go against the grain as we embark on institutional reform of our teacher education program. Our individual and shared experiences of the QW program enable us to approach the new program structure with confidence, knowing that the 1994, 1995, and 1996 cohorts have provided invaluable empirical evidence of the potential of the new structure for preservice teacher education at Queen's University.

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