THE QUESTION OF EVIDENCE IN RESEARCH IN TEACHER EDUCATION IN THE CONTEXT OF TEACHER EDUCATION PROGRAM REVIEW IN CANADA

Volume 2

Edited by

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Faculty of Education of the University of Manitoba
Winnipeg, Manitoba

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Picture from the last day of the Fourth Working Conference on Research in Teacher Education in Canada Winnipeg, 20 November 2010 (missing from the picture are Ron MacDonald, Janet Ferguson, Kevin O'Connor, and Karen Goodnough)

The contributions in this book (chapters 2-18) went through a blind peer-review process. We acknowledge with great appreciation the work that the following reviewers have done and their contributions to the quality of the chapters in this book: Clive Beck, Gestný Ewart, Rosemary Foster, Tim Hopper, Julian Kitchen, David Mandzuk, Barbara McMillan, Kathy Sanford, Anne Scholefield, Jackie Seidel, Jo Towers, Sandy Wilde, Randy Wimmer, Jon Young, Barbara Barter, Shawn Michael Bullock, Ruth Childs, David Dillon, Karen Goodnough, Mark Hirschkorn, Janice Huber, Paula Kristmanson, Yi Li, Ron MacDonald, Nancy Maynes, Julie Mueller, Shaun Murphy, Irene Naested, Carla Nelson, Jodi Nickel, Cheryl Poth, Jérôme Proulx, Caroline Riches, Tom Russell, Elaine Simmt, Lynn Thomas, Sean Wiebe, Mary Young.

The Fourth Working Conference on Research in Teacher Education, held 18-20 November 2010 at the University of Manitoba (see www.umanitoba.ca/education/TEResearch), provided the context for the face-to-face working sessions in which participants

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Winnipeg and Calgary, November 2011 Thomas Falkenberg & Hans Smits

Chapter 10

In Search of Evidence of the Quality of Learning in the Teacher Education Practicum

ANDREA K. MARTIN & TOM RUSSELL

The absence of high-quality evidence about what teacher candidates learn in their practicum settings can no longer be tolerated. This chapter suggests four questions that would lead to richer evidence of the quality of practicum learning. Discussion of available research on practicum learning leads us to reject a theory-into-practice perspective on practicum learning. We then examine research on innovative approaches to practicum experiences and identify the potential of transformative learning theories. We conclude that evidence for quality in practicum learning requires attention to the following elements: (1) critical incidents in teacher candidates' practicum teaching experiences and perceptions of student learning, (2) tensions between enacting familiar rituals of teaching and fostering productive student learning, (3) naming and framing elements of student learning and of candidates' own professional learning, and (4) articulating development of professional knowledge of practice from a transformative perspective.

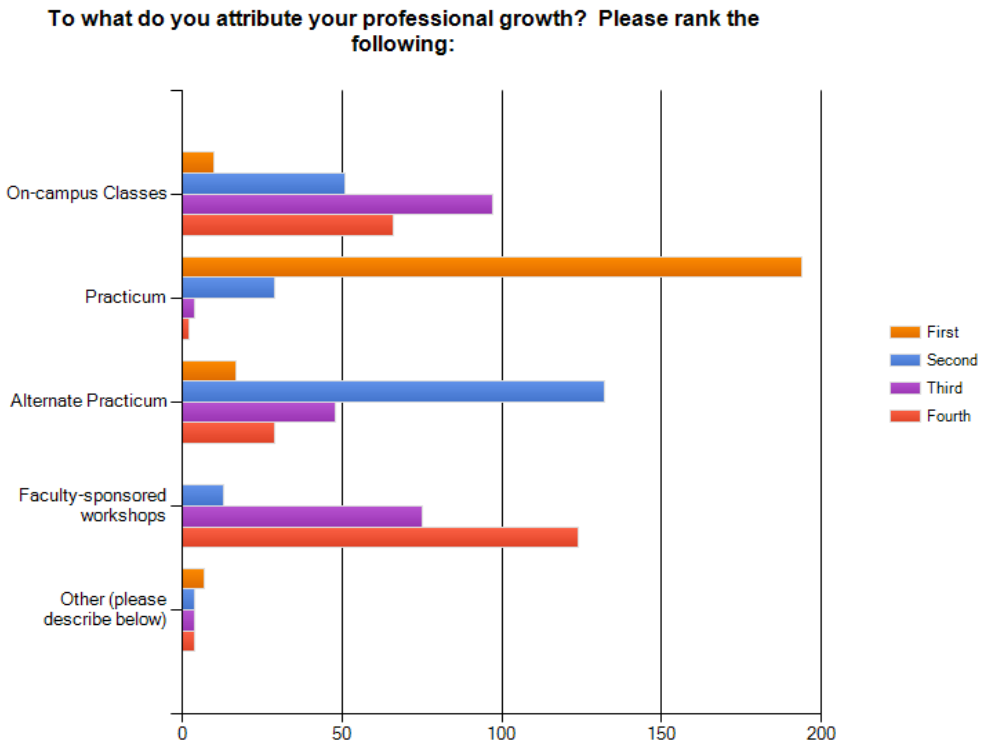
Introducing the Issues

If asked, virtually all teacher candidates report that their practicum experiences in schools were the single most valuable component of their preservice teacher education program. In a 2007 on-line survey of 700 teacher candidates at Queen's University, 194 of 229 responses (85%, an average of 1.19 on a 1-to-4 scale) placed the practicum as the element making the strongest contribution to their professional growth (see Figure 1). Similarly, 218 of 227 respondents (96%) agreed with the statement, "My practicum experiences allowed me to genuinely experience teaching." It is widely agreed that the practicum experiences in a preservice program are both essential and valuable.

At the same time, we know very little about the quality of practicum learning experiences. At Queen's, there appear to be no criteria for selection of associate teachers other than willingness to accept a teacher candidate into one's classroom. The demand for practicum places always exceeds the supply of associate teachers, with the result that no data are collected about the quality of individual placements, even though anonymous data would at least provide some indication of quality.

 The question of evidence in research in teacher education in the context of teacher education program review in Canada (2 vols., pp. 149-159). Winnipeg, MB: Faculty of Education of the University of Manitoba.

Figure 1. Teacher candidate (N=227) ranking of factors contributing to professional growth in 2007 program at Queen's University



We are intrigued by this gap between the high importance of the practicum and the very limited knowledge of factors that contribute to the quality of practicum learning. At Queen's University, all courses longer than 10 hours must be evaluated formally, yet only 10 of 224 respondents (an average of 2.98 on a 1-to-4 scale) ranked on-campus classes as the element making the strongest contribution to professional growth. Ironically, while courses are evaluated formally, there is no corresponding evaluation of the all-important practicum learning. We see the absence of evidence for the quality of learning in the teacher education practicum as a major gap in the data available about preservice teacher education programs in Canada. Perhaps the absence of such data is generally tolerated and even overlooked because of the almost universal recognition of the importance and value of the practicum experience. Universal agreement about the value of practicum learning is no reason to be sanguine about issues concerning the quality of that learning.

We believe that the absence of data about the quality of practicum learning should no longer be tolerated and thus we focus this paper on what should count as evidence for the quality of practicum learning in Canadian teacher education programs. The development of teacher candidates' professional practice during practicum experiences is of critical importance, yet our understanding of its development and its relationship to candidates' learning in education courses is extremely limited. Sadly, what little we do know about candidates' development during practicum experiences suggests that education courses have little

influence. Rather, candidates appear to be socialized into the status quo of school practice and to reproduce their own experience in school as pupils.

The research literature emphasizes the importance of metacognition and transformative learning, yet these concepts have not been developed in the context of professional learning in the teaching practicum. In the search for evidence of quality, we believe that explicit attention must be paid to the following aspects of practicum learning:

- Critical incidents in teacher candidates' practicum teaching experiences and perceptions of student learning (Tripp, 1993)
- Tensions between enacting familiar rituals of teaching and fostering productive student learning (Bruner, 1996; Nuthall, 2005; Tyack & Tobin, 1994)
- Naming and framing elements of student learning and of teacher candidates' own professional learning (Berry & Milroy, 2002; Schön, 1983, 1987)
- Articulating development of professional knowledge of practice from a transformative perspective. (Mezirow, 1991, 1995, 1997; Mezirow & Associates, 2000)

These aspects shape the following questions that would lead to better understanding of practicum learning:

1. To what extent is teacher candidates' learning during practicum experiences constrained by prior assumptions about how and what they will learn?
2. What assumptions do associate teachers, faculty supervisors and faculty members make about the nature of that learning as they interact with those learning to teach and how do these assumptions affect teacher candidates' development of their professional practice?
3. What are the unique features of practicum structures that encourage or restrict learning from practicum experiences?
4. Are there deliberate pedagogical interventions by associate teachers and candidates' faculty supervisors that will foster transformative practicum learning for teacher candidates?

Our many years of experience as supervisors of candidates during practicum placements suggest that how the practicum is conceptualized in practicum policy and program reform remains stable and inadequate. The overall quality of preservice teacher education is unlikely to improve until the practicum is conceptualized as something other than a place to practice what was (supposedly) learned in education classes. Evidence in the form of responses to these four questions could help to raise awareness of the need to reconceptualise our thinking about the practicum and its contributions to learning to teach. As background to these four questions, we begin with a review of research related to practicum learning.

Review of Research on Practicum Learning

There is widespread evidence that the content of teacher education courses has little impact on the development of teacher candidates' teaching ability during practicum experiences. The evidence is long-standing (e.g., Zeichner & Tabachnik, 1981) and widespread (e.g., Wideen et al., 1998; Clift & Brady, 2005; Cochran-Smith & Zeichner, 2005). Instead, during practicum experiences teacher candidates seem to be socialized into the status quo of school practice or, at worst, simply reproduce what they experienced about teaching as students in school (Cole, 1997; Tigchelaar & Korthagen, 2004; Tillema, 1998). The lack of truly transformative learning by teacher candidates during practicum experiences is perhaps most succinctly summarized in the title of Britzman's (2003) book about student teaching, *Practice makes Practice*, rather than "practice makes perfect." Our analysis of the research surrounding this situation has identified two major factors that help to explain the generally ineffective nature of teacher education programs on the teaching practices of teacher candidates, as well as some promising ways forward for reconsidering practicum learning.

Lack of Examination of Teacher Candidates' Prior Assumptions about Teaching

Lortie (1975) identified four ways in which teacher candidates' long apprenticeship of observation as pupils limits their understanding of teaching and learning:

1. *Students do not link teaching strategies used by teachers to the effects those strategies have on their learning:* Students are not likely to "learn to see teaching in an ends-means frame" (p. 62).
2. *Students can imitate teachers:* Through observation, students learn about teaching in ways that are "intuitive and imitative rather than explicit and analytical" (p. 62).
3. *Students believe teaching decisions are whimsical and subjective:* "Students have no reliable basis for assessing the difficulty of demands of various teaching acts and thus may attribute teachers' actions to differences in personality or mood" (p. 63).
4. *Students do not understand the complex decision-making processes that teachers engage in every day:* Students do not "perceive the teacher as someone making choices among teaching strategies," nor are students "likely to make useful linkages between teaching objectives and teaching actions" (p. 63).

Where Lortie identifies the challenges, Brookfield (1995) focuses our attention on the critical importance of our assumptions, which are often complex and difficult to identify:

> An uncritical stance toward our practice sets us up for a lifetime of frustration. . . . Assumptions are the taken-for-granted beliefs about the world and our place within it that seem so obvious to us as not to need stating explicitly. . . . Assumptions give meaning and purpose to who we are and what we do. Becoming aware of the implicit assumptions that frame how we think and act is one of the most challenging intellectual puzzles we face in our lives. (pp. 1-2)

In light of this powerful starting point for prospective teachers, Segall (2002) identifies what is typically missing from teacher education classroom experiences:

> Because prospective teachers are not invited to critically examine the underlying assumptions in educational conventions and practices (Kincheloe, 1993), they . . . . become more interested in learning how to perform expected actions than in analyzing those actions or the expectations that generate such actions. (Segall, 2002, p. 159)

Indeed, despite extensive research training and experience, we as teacher educators seem caught up in the same unexamined conceptions and attitudes that we say we want teacher candidates to avoid or see beyond. Nuthall (2005) pointed to this conclusion with a perspective based on 4 decades of research into teaching and learning: "It is important to search out independent evidence that the widely accepted routines of teaching are in fact serving the purposes for which they are enacted. We need to find a critical vantage point from outside the routines and their supporting myths" (p. 925). Russell (1993, p. 209) identifies a "ritual-practice problem in learning from experience" by considering that it is possible for those learning to teach to develop ritual rather than principled knowledge from experience. Ritual knowledge is constructed when a teacher acts without attending to the principles underlying those actions.

Overall, we suffer from a significant lack of knowledge about how teacher education practices do and do not affect teacher candidates' thinking. There is considerable support in the literature for the importance of ensuring that "Why?" questions are not lost in the inevitable focus on "What?" and "How?" questions:

> Most [critical analyses of teacher education] have not been grounded in or accompanied by "thick" ethnographic descriptions (Geertz, 1973) about actual practices in teacher education classrooms or "the web of meaning and action involved in the process of becoming a teacher" (Ginsburg, 1988, p. 3, cited in Segall, 2002, p. 14)

Darling-Hammond (2000) stated the problem clearly and succinctly: "Developing the ability to see beyond one's own perspective, to put oneself in the shoes of the learner and to understand the meaning of that experience in terms of learning, is perhaps the most important role of universities in the preparation of teachers" (p. 170).

Limitations of Teacher Education Programs based on a "Theory-into-Practice" Approach

The general structure of teacher education programs is based on providing teacher candidates with information about (rather than experiences of) teaching and learning. This structure assumes that candidates can and will apply that information in their subsequent practicum teaching experiences. This common approach fails to examine the deep-seated assumptions about teaching and learning that teacher candidates bring to their programs and also fails to provide teacher candidates with a teaching-learning perspective from which to consider their program content (Hiebert, Morris, Berk, & Jansen, 2007; Russell, McPherson, & Martin, 2001). As Bush (1987, p. 16) concluded, "trying to teach everything at once is self-defeating because

trainees have had insufficient experience to profit from the instruction… Practice should not come after method and theory; they should accompany and be related to each other." Kane (2007) put it more dramatically:

> Teacher education programs in the 1990s appeared to be based on what I have previously termed the "immaculate assumption": It was assumed that . . . our graduates would somehow miraculously integrate their learning and experience from a range of distinct and disparate courses and practicum experiences in spite of the fact that we, as their professors, had not taken the time to make such links explicit. (p. 67)

Thus the theory-into-practice approach fails to enable teacher candidates to experience the enormous complexity of teaching. That complexity is apparent in the recent development of theories of professional teaching competencies based on the complexity of teachers' work (Cochran-Smith, 2003; Darling-Hammond, 2006) and in recent insights into the abilities of expert teachers (Loughran, 2010).

Clift and Brady (2005) link the theory-into-practice issue to the topic of prior assumptions about teaching by arguing that it is essential to attend systematically and explicitly to individual candidates' prior beliefs about teaching and learning throughout their education courses and practicum experiences: "It is well documented that prospective teachers often feel conflict among the messages they receive from different university instructors, field-based teacher educators, and school settings, [and] it is also the case that prospective teachers resist coherent messages when they find it difficult to engage in recommended practices" (p. 311). Bullock and Russell (2010) and Dillon and O'Connor (2010) provide further analysis of these issues and perspectives. Finally, the results of the theory-into-practice structure are predictably ineffective, as the major analysis of 93 studies by Wideen et al. (1998) concluded: "The notion that coursework should provide teaching skills and information about teaching—and that beginning teachers can integrate and effectively implement that information—receives very little support from this research" (p. 151).

Innovative Approaches to Practicum Learning

An emerging body of work on alternative and more effective approaches to practicum learning points to the potential of *transformative* approaches using teacher candidates' (TCs') teaching experiences as a basis for learning through critical reflection and socio-constructivist dialogue (Beck & Kosnik, 2006; Carlson, 1999; Korthagen, 2001; Loughran, 2002, 2006, 2010; Munby & Russell, 1994). In the tradition of Mezirow (1991, 1995, 1997), Mezirow and Associates (2000), and Cranton (2006), we take *transformative* to indicate that teacher candidates will begin to transcend the limitations of their previous school experiences and the status quo of school practices in order to develop evidence-based practices. These approaches build on the concept of reframing that is central to Schön's (1983, 1987) construct of reflection-in-action.

Darling-Hammond (2006) drew conclusions from a survey of exemplary teacher education programs and found that they continually interwove courses and practica across the entire program, using pedagogies that confront the problems of teaching. A key factor is "a tight coherence and integration among courses and between course work and clinical work in

schools" (p. 306). Virtually all course work involved applications in classrooms, and pedagogies confronted the problems of teaching and fostered reflection on teaching (e.g., logs/journals, research inquiries, autobiography, self-reflection). The exemplary programs integrated the traditionally separate roles of instructor, supervisor, and mentor teachers through overlapping and sharing of responsibilities, and student learning occurred in small-scale professional communities. Beck and Kosnik's (2006) survey of several effective teacher education programs revealed that a key factor was an open, non-authoritarian, questioning approach to dealing with the problems of teaching, involving "constant dialogue and co-learning, extensive opportunities for students to reflect, give input, and develop their own ideas" (p. 24). Continual inquiry into practice requires extended cycles of action, reflection on action, returning to action with renewed insight, and returning to action with new questions.

Darling-Hammond and Beck and Kosnik have begun the collection of evidence but much more is needed, and such evidence must then be used to critique the structures and procedures of individual programs. The promising ways forward that they suggest highlight the importance of identifying candidates' assumptions and fostering critical reflection on their course work *and* practicum experiences (Martin & Russell, 2010). Nevertheless, incorporating such new pedagogical approaches to practicum learning into traditional program structures remains elusive. Within this significant gap in our professional knowledge as teacher educators, we must address the compelling need for evidence of the quality of teacher candidates' practicum learning.

Transforming Theories-in-Use

Teacher education faces a unique challenge in preparing teachers by virtue of teacher candidates' extensive prior experience in classrooms. This apprenticeship of observation (Lortie, 1975) teaches a great deal about teacher's pedagogy with little or no opportunity to understand it, and also helps to explain why teacher education courses seem to have so little long-term influence (Zeichner & Tabachnick, 1981). Extensive prior experience as students in schools makes it difficult for those learning to teach to identify their existing assumptions about teacher and student behaviour and even more difficult for them to relate what they already know to what they are being taught in education classes. Attention to prior beliefs and the process of conceptual change is clearly required (Tillema, 1997).

Argyris and Schön (1974) described the difficulty professionals have in transforming their practice because their theories-in-use are usually tacit and thus largely inaccessible. Their espoused, conscious theories, which are often not congruent with their actual practices, can blind them to the ineffectiveness of their default practices. Schön (1987) posited the need to base professional training programs on experience to help learners make sense of and transform that experience by intervening in ways that foster reflection-in-action as a base for effective, even artistic, professional practice that goes beyond mere technical application of guidelines. Schön described three supervisory approaches—Joint Experimentation, Follow Me!, and Hall of Mirrors (pp. 295-298)—that remain undeveloped in the context of the teacher education practicum. Critical reflection in and on action is essential for the transformative learning that practicum experiences need to foster and develop.

Mezirow's (1995) theory of transformative learning provides a promising way forward. Three common themes in that theory are the centrality of experience, critical reflection on that experience, and rational discourse as a means of learning. Experience is seen as socially constructed, so that it can be deconstructed and acted upon. It is experience that provides the grist for critical reflection. Major challenges for pre-service teacher education continue to be the development of skills of critical reflection on practicum experiences and the linking of those experiences to what is learned in education courses.

The assumptions confronting approaches based on learning from experience are apparent in Russell's (2005, p. 141) contrast between gradual (theory first, practice later) and rapid (experience first, understand later) introduction to practicum experiences. "Assumptions about the timing and structure of the preservice practicum remain unexamined. . . Structural links between theory and practice appear to be missing from many preservice teacher education programs" (p. 150). These programs face a major challenge in attempting to transform candidates' perceptions, understandings, and abilities with respect to professional practice (LeCornu, 2009; LeCornu & Ewing, 2008). Identifying assumptions and developing links between theory and practice are some of the many activities that fall under the very broad term "metacognition." Those learning to teach have rarely been challenged to become metacognitive and thereby to come to understand the nature of their own learning processes. Perkins (2003) writes about "making thinking visible," asking key questions such as "What's going on here?" and "What do you see that makes you say so?" (Perkins, 2003, ¶7). In Loughran's (2010, p. 142) words, "metacognition involves self-monitoring and self-regulation," two processes that help teacher candidates identify and move beyond their personal assumptions. The end goal of transformative learning is professional autonomy: "the understanding, skills, and disposition necessary to become critically reflective" (Mezirow, 1997, p. 9). Thus we argue that a metacognitive perspective is essential in finding new sources of evidence for the quality of practicum learning.

What Counts as Evidence for the Quality of Learning in the Teacher Education Practicum?

Early in this chapter we proposed four questions that could provide a basis for assessing and improving the quality of learning in the teacher education practicum. The review of research amplifies the significance and complexity of the issues associated with the four questions. As we search for evidence, we must remain acutely aware of the stability of school cultures and teaching practices (Kennedy, 2005; Sarason, 1996) and document the factors that constrain efforts to make practicum learning transformative. We believe that it is important to seek evidence that candidates are learning to think like a teacher, or *think pedagogically*. Thus we would look for evidence of metacognition and transformation. This would include evidence that teacher candidates are increasingly able to explain why specific teaching approaches appear to be successful or unsuccessful, evidence that candidates are modifying and extending their initial perspectives on student learning, and evidence that they are increasingly able to explain what and how they are learning from their practicum experiences. In short, we believe it is essential to recognize the significance of the practicum as seen by the teacher candidate, and

accordingly teacher educators must gather all possible evidence of the quality of practicum learning.

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References

Argyris, C., & Schön, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco, CA: Jossey-Bass.

Berry, A., & Milroy, P. (2002). Changes that matter. In J. Loughran, I. Mitchell, & J. Mitchell (Eds.), *Learning from teacher research* (pp. 196-221). New York: Teachers College Press.

Beck, C., & Kosnik, C. (2006). *Innovations in preservice teacher education: A social constructivist approach*. Albany: State University of New York Press.

Britzman, D. (2003). *Practice makes practice: A critical study of learning to teach*. Albany: State University of New York Press.

Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Francisco, CA: Jossey-Bass.

Bruner, J. (1996). *The culture of education*. Cambridge, MA: Harvard University Press.

Bullock, S. M., & Russell, T. (2010). Does teacher education expect too much from field experience? In T. Falkenberg & H. Smits (Eds.), *Field experiences in the context of reform of Canadian teacher education programs* (pp. 91-100). Winnipeg, MB: Faculty of Education of The University of Manitoba. Available online: http://www.umanitoba.ca/education/TEResearch/Book 2009 (Volume 1).pdf

Bush, R. N. (1987). Teacher education reform: Lessons from the past half century. *Journal of Teacher Education, 38*(3), 13-19.

Carlson, H. (1999). From practice to theory: A social constructive approach to teacher education. *Teaching and Teacher Education*, *5*(2), 203-218.

Clift, R., & Brady, P. (2005). Research on methods, courses, and field experiences. In M. Cochran-Smith & K. Zeichner (Eds.), *Studying teacher education: The report of the AERA Panel on Research and Teacher Education* (pp.309-424). Mahwah, NJ: American Educational Research Association and Lawrence Erlbaum.

Cochran-Smith, M. (2003). The unforgiving complexity of teaching: Avoiding simplicity in the age of accountability. *Journal of Teacher Education, 54,* 3-5.

Cochran-Smith, M., & Zeichner, K. M. (2005). Executive summary. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 1-37). Mahwah, NJ: Lawrence Erlbaum Associates.

Cole, A. L. (1997). Impediments to reflective practice. *Teachers and Teaching: Theory and Practice, 3*(1), 7-27.

Cranton, P. (2006). *Understanding and promoting transformative learning* (2nd ed.). San Francisco, CA: Jossey-Bass.

Darling-Hammond, L. (2000). How teacher education matters. *Journal of Teacher Education, 51*, 166-173.

Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs.* San Francisco, CA: Jossey-Bass.

Dillon, D., & O'Connor, K. (2010). What should be the role of field experiences in teacher education programs? In T. Falkenberg & H. Smits (Eds.), *Field experiences in the context of reform of Canadian teacher education programs* (pp. 117-146). Winnipeg, MB: Faculty of Education of The University of Manitoba. Available online: http://www.umanitoba.ca/education/TEResearch/Book 2009 (Volume 1).pdf

Ginsburg, M. B. (1988). *Contradictions in teacher education and society: A critical analysis.* London: Falmer Press.

Hiebert, J., Morris, A. K., Berk, D., & Jansen, A. (2007). Preparing teachers to learn from teaching. *Journal of Teacher Education, 58,* 47-61.

Kane, R. (2007). From naïve practitioner to teacher educator and researcher: Constructing a personal pedagogy of teacher education. In T. Russell & J. Loughran (Eds.), *Enacting a pedagogy of teacher education* (pp. 60-76). London: Routledge.

Kennedy, M. K. (2005). *Inside teaching: How classroom life undermines reform.* Cambridge, MA: Harvard University Press.

Korthagen, F. A. J. (2001). *Linking practice and theory: The pedagogy of realistic teacher education.* Mahwah, NJ: Lawrence Erlbaum Associates.

LeCornu, R. (2009). Building resilience in pre-service teachers. *Teaching and Teacher Education, 25*, 717-723.

LeCornu, R., & Ewing, R. (2008). Reconceptualising professional experiences in preservice teacher education . . . Reconstructing the past to embrace the future. *Teaching and Teacher Education, 24*, 1799-1812.

Lortie, D. C. (1975). *Schoolteacher: A sociological study.* Chicago: University of Chicago Press.

Loughran, J. J. (2002). Effective reflective practice: In search of meaning in learning about teaching, *Journal of Teacher Education, 53*(1), 33 43.

Loughran, J. (2006). *Developing a pedagogy of teacher education.* London: Routledge.

Loughran, J. (2010). *What expert teachers do.* London: Routledge.

Martin, A. K., & Russell, T. (2010). The potential role of field experiences in teacher education programs. In T. Falkenberg & H. Smits (Eds.), *Field experiences in the context of reform of Canadian teacher education programs* (pp. 275-283). Winnipeg, MB: Faculty of Education of The University of Manitoba. Available online: http://www.umanitoba.ca/education/TEResearch/Book 2009 (Volume 2).pdf

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco, CA: Jossey-Bass.

Mezirow, J. (1995). Transformation theory of adult learning. In M. R. Welton (Ed.), *In defense of the lifeworld* (pp. 39-70). Albany: State University of New York Press.

Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education, 74,* 5-12.

Mezirow, J., and Associates (2000). *Learning as transformation: Critical perspectives on a theory in progress.* San Francisco, CA: Jossey-Bass.

Munby, H., & Russell, T. (1994). The authority of experience in learning to teach: Messages from a physics methods class. *Journal of Teacher Education, 45*, 86-95.

Nuthall, G. (2005). The cultural myths and realities of classroom teaching and learning: A personal journey. *Teachers College Record*, *107*, 895-934.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Perkins, D. (2003). *Making thinking visible.* Available online: http://newhorizons.org/strategies/thinking/perkins.htm

Russell, T. (1993). Teachers' professional knowledge and the future of teacher education. *Journal of Education for Teaching, 19*(4 & 5), 205–215.

Russell, T. (2005). The place of the practicum in preservice teacher education: Strengths and weaknesses of alternative assumptions about the experiences of learning to teach. In G. Hoban (Ed.), *The missing links in teacher education design: Developing a multi-linked conceptual framework* (pp. 135-152). Dordrecht, The Netherlands: Springer.

Russell, T., McPherson, S., & Martin, A. K. (2001). Coherence and collaboration in teacher-education reform. *Canadian Journal of Education, 26*, 37-55. [published in 2003]

Sarason, S. B. (1996). *Revisiting "The culture of the school and the problem of change."* New York: Teachers College Press.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.* San Francisco, CA: Jossey-Bass.

Segall, A. (2002). *Disturbing practice: Reading teacher education as text.* New York: Peter Lang.

Tigchelaar, A., & Korthagen, F. (2004). Deepening the exchange of student teaching experiences: Implications for the pedagogy of teacher education of recent insights into teacher behaviour. *Teaching and Teacher Education*, 20, 665-679.

Tillema, H. H. (1997). Promoting conceptual change in learning to teach. *Asia-Pacific Journal of Teacher Education, 25*(1), 7-16.

Tillema, H. H. (1998). Stability and change in student teachers' beliefs about teaching. *Teachers and Teaching: Theory and Practice, 4*, 217-228.

Tom, A. R., & Valli, L. (1990). Professional knowledge for teaching. In W. Houston (Ed.), *Handbook of research on teacher education* (pp. 373-392). New York: Macmillan.

Tripp, D. H. (1993). *Critical incidents in teaching: Developing professional judgement.* London: Routledge.

Tyack, D., & Tobin, W. (1994). The "grammar of schooling": Why has it been so hard to change? *American Educational Research Journal, 31,* 453-479.

Wideen, M. F., Mayer-Smith, J., & Moon, B (1998). A critical analysis of the research on learning to teach: Making the case for an ecological perspective on inquiry. *Review of Education Research, 68*(2), 130-178.

Zeichner, K. M., & Tabachnik, B. R. (1981). Are the effects of university teacher education "washed out" by school experience? *Journal of Teacher Education, 32*(3), 7-11.

Chapter 11

Grounding Program Reviews to Focus on Student Learning: A Model for Conceptual Shift in Thinking that Supports Effective Teacher Education Practices for the Future

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Program change in Faculties of Education is influenced by many social and economic factors. When program change is undertaken the process should be guided by a clear vision of the potential and intended outcomes of the change. The learning of students should be central to this vision. By creating an image of the characteristics of effective teachers as an early step in program change initiatives teacher education faculties can focus change efforts in ways designed to support optimal student learning outcomes. This chapter presents the researched elements that characterize teachers who have shifted focus from their own teaching toward their students' learning. We argue that the characteristics evidenced by these teachers should guide program change decisions.

Educational research and related social science research are becoming increasingly complex and focused within universities with accredited teacher education programs (Little, 2003). Increased focus on research roles within each institution can draw resources away from the teaching focus of teacher education programs. There is intense competition for research funding. Institutional recognition for seminal research within the educational social science community creates pressures and tensions that may draw focus away from the quality of the teacher preparation program unless that program is guided by a conceptual framework that embeds its principles and implies its practices. These tensions and pressures cause us to turn our attention toward the task of clarifying and delineating the nature of the evidence that is currently used, or should be used, in teacher education research. By providing a conceptual framework for teacher education, we can prioritize related actions to ensure that program review remains grounded in a focus on student learning.

As institutional funding is pressured by shortages and budget trimming measures from both internal and external sources, teacher education programs are experiencing unprecedented motivation to examine all areas of program design and delivery. In times of competition for educational dollars in teacher education programs, various aspects of the programs in certain institutions may find themselves embroiled in intense, even passionate, debate about institutional priorities and directions. The resulting program reviews may be

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undertaken in thorough, clearly organized ways or may be addressed in more haphazard ways without the advantages of a clear vision of the desired outcomes. This chapter references research that identifies elements of teacher candidates' skills and dispositions that are essential to creating their professional focus on students' learning. Such a focus is called for in much of the recent educational literature (Cochran-Smith, Gleeson & Mitchell, 2010; Cochran-Smith & Power, 2010; Pecheone & Chung, 2006).

The need for teacher education program reviews across many educational institutions is converging at the same time that economic pressures, digital realities, and possibilities for improved instructional design are aligning to make teacher educators more highly motivated to examine past practices. For many teacher educators, this emerging focus on our own teacher preparation practices may be an uncomfortable fit, but perhaps for reasons that are not being attended to through the institutional review processes themselves. Teacher educators who have not had recent classroom experience either as teachers themselves or as evaluators of teacher candidates, may identify different priorities for teacher preparation than those who have recent classroom exposure. At the school level, teachers have continuous exposure to professional development that maintains focus on school improvement efforts. This knowledge may not be readily available to those whose exposure to classroom contexts is less current. However, professional development efforts have undergone unprecedented scrutiny as the potential of teachers to deliver educational reform is questioned in light of new expectations for teaching and learning (Borko, 2004; Darling-Hammond, 1996;Darling-Hammond & McLaughlin, 1995). It is clear that these reforms are shifting in focus away from solely focusing on the professional attributes of the teacher and toward the potential of these attributes to promote improved learning in students.

> Once we find the teacher characteristics that best forecast student learning, we can improve student learning by improving the raw material that teachers bring with them to their work. [However], the qualities the teachers bring with them to their work are not enough to ensure better teach*ing* practices. It is what teachers actually *do* that is most relevant to student learning. (Kennedy, 2010, p.591)

Evidence that teacher candidate quality may be declining for those entering the teaching profession (Corcoran, Evans, & Schwad, 2004) is further cause for concern about teacher preparation program quality. A strong vision of the intended outcomes of a program would inevitably make the program review process a more comfortable fit for all participants, including those who are charged with establishing program standards.

The Need for a Conceptual Framework for Teacher Preparation Program Review

Change through self-imposed or externally imposed realities such as grants and budget adjustments, is inevitable as a profession evolves and matures. Competition across teacher education service providers adds a layer of urgency to the need for marketable change. Such change should be supported by clear conceptual and research based ideas so that resulting practices have the potential to deliver the needed focus on students' learning (Kruse & Louis, 1993). There is s strong body of literature about research related to improving teacher practice

(Borko, 2004; Desimone, Porter, Garet, Yoon, & Birman, 2002; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 1994; Little, 1982; Penuel, Fishman, Yamaguchi, & Gallagher, 2007).

All of these circumstances lead us to ask what types of evidence should be used in program review processes to argue for or against certain aspects of teacher education programs. What should be kept? What should be abandoned? What should be introduced? These questions are central to the program review process and must have, at their core, a commonly understood vision of the mission and goals of the program that is solidly embedded in the context of the program, both socially and economically. Kane (2009) argues for this alignment between the vision and structure of teacher education programs.

Establishing Parameters for Effective Teacher Education Program Review in a Research Paradigm

This chapter presents a conceptual framework for teacher education program review that is the result of reflexive education research. Reflexive education research has educational research itself as the object of the research. Reflexive education research can be of two types: analytic and genealogical (AERA, 2009; Macbeth, 2001). Analytic reflexive education research can focus on asking questions about the meaning and relationships among central research concepts, including overlaps and disagreements about methodologies. Alternatively, analytic reflexive education research examines the nature of value commitments in education research, research ethics, and the politics of knowledge; while, genealogical reflexive education research focuses on investigation of historical and epistemological sources of educational knowledge and questions the common sense of various approaches to research.

Both analytical and genealogical reflexive education research approaches apply when we consider the question, "What can or should be used as evidence when we examine aspects of program change in teacher preparation?" Value commitments are integral to the visioning processes that characterize the initial stages of managing productive change. Clear visioning is critical in order to move visioning to action. Falkenberg (2009) and others question the extent to which a shared and sustained vision for teacher education programs is possible when we consider the richness and diversity of the experiences of the various faculties of teacher educators. Teacher preparation is indeed "messy, unpredictable, loaded with inconsistencies and enormously complex" (Kane, 2009, p.41). This messy complexity subjected to program reviews that lack a central and common concept to direct change is analogous to a runaway train. Without a common conception of the end product of a review, the program actions that result from a review can quickly get derailed, lack sustained focus, or head in the wrong direction.

To re-rail the runaway train, we must examine the profound relationship between the actions and dispositions of teachers and the learning and growth of their students. The epistemological process of determining the commonly held beliefs about the characteristics of strong teachers can guide the practical deliberations about how to teach in a program designed to produce these strong teachers. We concur with Loughran's (2006, p.174) argument that teacher education programs must provide venues to teach about teaching and to learn about teaching. However, if teacher candidates do not establish a learner centered focus as they learn

about teaching, their program may fail to prepare them to develop the professional lens on their practice that is essential in education: ensuring learning. Many program review efforts require teacher candidates, teacher educators in faculties of education, and faculty administrators to "examine their own practices and the impact of such practices on our [their] ongoing learning about teaching" (Kane, 2009, p.43). However, this does not extend individual professional roles far enough. Program review efforts must also result in newly designed programs that provide enabling conditions that cause teacher candidates, their mentors, and their professors to examine their own professional growth trajectories as essential preconditions to their students' learning. To only teach is not nearly enough; those responsible for facilitating students' learning must see themselves as guardians of students' vulnerability and ensure that their "own ethics-of-care based … teacher identity" (Falkenberg, 2009, p. 54) is well developed with an essential focus on attending the pathic, or the ability to accommodate the Other as self, (Hatt, 2008) in their teacher/student relationships.

Attending the pathic within an ethics of care internalizes Freire's notion of the horizontal student-teacher relationship in which teaching and learning is symbiotic; in which institutionalized power and authority is a shared commodity; in which the learning process is transformational; and in which student-teacher communication is built upon a foundation of "love, humility, and faith…of which mutual trust between the dialoguers is the logical consequence" (Freire, 1970, pp. 79-80). Within the praxis of attending the pathic, student and teacher are working on the same level. Identity of self and other and accommodation of self and other reciprocally move between critical reflection and creative transformation. Learning is newly designed in an educational atmosphere that fosters safety, security, and encourages a sharing of power, responsibility, and accountability.

Increasingly, researchers in educational social sciences are calling for accountability among teachers for student learning outcomes (Cochran-Smith & Power, 2010). The impact of teacher preparation programs and their professional pathways to accreditation on the students' learning outcomes are being compared (Cochran-Smith, Gleeson, & Mitchell, 2010; Pecheone & Chung, 2006) to determine if equity of professional skills and dispositions are resulting from different pathways into the profession of teaching. This approach to examining student learning in terms of teacher characteristics or attributions may be too simplistic and may disregard the various elements of the situations that have an impact on teaching practices (Kennedy, 2010). Kennedy argues that these situational factors may also have a strong influence on the quality of teaching practices.

Aligning the Pathic, the Situational, and the Attribution Factors

Previous research has focused on the comparative impacts of existing teacher preparation programs. We propose instead that the process of substantive and meaningful program review needs to consider two crucial questions that take a broader view of teacher preparation. These are:

- What are the critical characteristics of teachers who focus on students' learning rather than focusing on their teaching?; and

- How can we as a society ensure that the professional trajectories of teachers, including pre-service education, hiring, induction, and in-service professional development align to contribute to the vision of a teacher who focuses on students' learning?

The trends and measures of student learning outcomes are complex and interrelated. This complexity makes a linear assessment of the impacts of teacher preparation and the characteristics of strong teachers futile. Vision setting for program review mirrors the complexity of measuring student learning outcomes. We cannot be certain that the various aspects and courses that comprise a teacher preparation program will guarantee a professional teacher who sustains a student learning focus. We can, however, be certain that without making the effort to identify the need for specific characteristics and dispositions in teacher candidate graduates, we will fail to produce teachers with these attributes. We can agree with Maclure (1993) that teacher self-identity is a contested and an argumentative territory. Teacher candidates continuously engage in the conflict between the external forces of contemporary social, political, and economic pressures and the internal forces of self–relationality and relationality of self with other; namely, their students. Part of the challenge in developing and articulating pedagogical self-identity for teacher candidates is the requirement to cognitively and non-cognitively make meaning and sense of themselves, of their relationship with other, and of the world at large. Teacher candidates also struggle with self-identity in their specific role as pedagogue in relation to how each student is, or is not, learning. Personal and professional visioning is critical to program changes but what we espouse as the central vision for program change in faculties of education must reflect our ultimate purpose: to ensure the learning of the youngsters and adolescents who will benefit from the vision and self-identity that our teacher candidates attain and retain of themselves in their various roles.

To ensure that all aspects of a teacher preparation are aligned to achieve the characteristics of a teacher focused on students' learning, both course and practicum aspects of programs must be contributing to the same goals. Kosnick (2009) calls for a re-conceptualization of the practicum component of teacher preparation to address the ambiguous nature of the purpose of practice teaching experiences and the complexities (Hagger & McIntyre, 2006) of engaging in these practica. Kosnick (2009) argues that "the goal of practice teaching is to support pupil learning" (p. 68). Kosnick's vision for this aspect of teacher preparation recognizes the essential shift in the characteristics of teachers away from their teaching and toward students' learning. Kosnick suggests that this shift in vision for the role of the practicum in teacher education programs would reposition classroom associate teachers and teacher candidates into a mentor and apprentice relationship that would provide needed support for the shared goal of managing students' learning. Relationality must be part of the process of visioning for a learner-focused program change process.

Moving Toward a Guiding Conceptual Model

If program review efforts can be filtered through a clear vision of the characteristics of teachers with a focus on students' learning and practica experiences can be repositioned into an apprenticeship model to align with this focus, teacher candidate evaluation will require re-

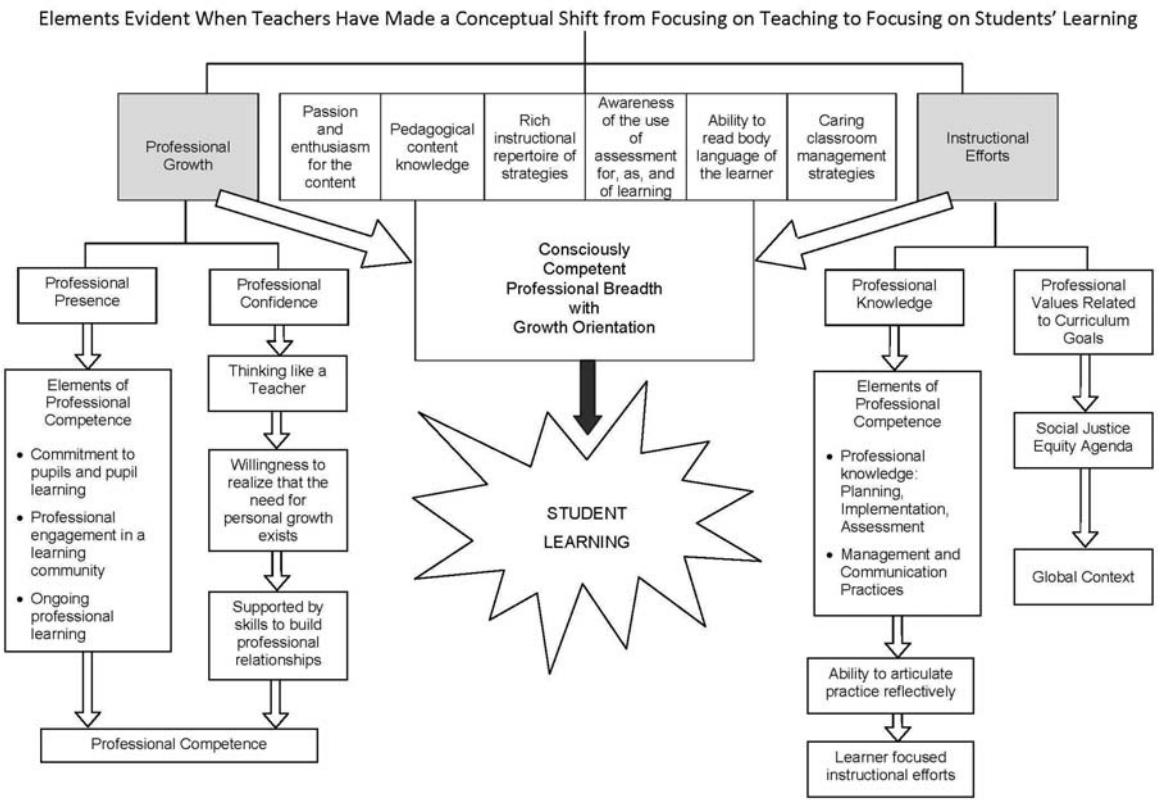
conceptualization. Program review efforts will need to reconcile what is evaluated with what should be evaluated in a teacher candidate's professional performance so that all aspects of evaluation reflect the skills and dispositions to ensure student learning.

In our opinion, such restructuring efforts face many challenges that may have commonalities across faculties of education. The responsibility for program change may be limited within a faculty because of logistical considerations (i.e., size of review committee, times for meetings, mandates, etc.). Visioning is by its nature a consensus focused activity. In the process of change within large institutions, consensus building may be affected and even offset by time limitations and related financial constraints. Weak consensus building efforts may limit faculty commitment to change proposals. Standards of quality that characterize, or are perceived to characterize, a program may be compromised when there is a need or perceived need to change a program under weak consensus circumstances. Expediency could cause the process of examining fundamental beliefs and values and building a common vision to be rushed or ignored as an essential first step in the visioning process. Weak rationales for specific changes may cause some faculty entrenchment or failure to buy-in with the proposed changes. Many faculties of education operate with divisional structures for course delivery. If proposed changes are adopted or instituted without strong and shared commitment to a common vision, change proposals can become de-contextualized and the same changes may be adopted across divisions within a program even when alternatives may be more appropriate. The time and effort invested to establish a common vision across divisions and within divisions of faculties will create epistemological consistency for the resulting program.

To begin the process of professional discussions about a common vision for program change, we offer a conceptual diagram (Figure 1). This schematic was developed using qualitative analysis of focus group discussions involving faculty of education instructors who had responsibility for teaching and for the supervision of teacher candidates' practicum placements. Seven teacher educators who taught pre-service programs and had responsibility for the supervision of teacher candidates in their practicum placements were invited to participate in focus group discussions to consider the question, "What characteristics and behaviours would you see if you were evaluating a pre-service teacher who had the made the conceptual shift in their focus from focusing on their teaching toward focusing on their students' learning?" This focus group met three times and discussed this question until saturation of the data was reached. Following these meetings, discussions that had been audio recorded were transcribed and member checked. Using qualitative analysis techniques (Creswell, 2008) themes in the discussion were identified and connected to key ideas. A diagram was developed to represent the key ideas presented in the discussions and the relations among key ideas. Focus group members examined the diagram and approved it as a true representation of their discussions.

This schematic represents the view of one group of teacher educators about the professional characteristics and dispositions that characterize teachers who have made the shift in their thinking from focusing on their teaching to focusing on students' learning. This schematic represents an initial ideation and may be useful for the introduction of discussions about program change in other jurisdictions.

Figure 1



To create this schematic, data collection, analysis, and conceptual formulation were connected in a reciprocal and recursive sense. Examination of emerging themes during the different meetings provided opportunities for participants to guide analysis and facilitate the process of diagramming. The diagram was subjected to the four requirements identified by Strauss and Corbin (1990). Specifically, 1) the fit between the diagram and the 'shift in conception' phenomenon, including its evolution from diverse data and its adherence to the common reality of experienced Faculty Advisors; 2) the ability of the diagram to support understanding of this shift in thinking for teachers; 3) the applicability of the conceptualizations in this diagram to broad contexts; and 4) the potential of the diagram to provide direction about its applicability and to support reasonable action related to teachers' professional growth. The following paragraphs explain the elements represented in this diagram.

The data contributes to the major theme that emerged from the focus group discussions. This theme was that of a *consciously competent professional*, with six contributing attributes necessary to be defined in this manner, along with supporting skills, attitudes, and dispositions, including professional and instructional breadth and a growth orientation. A consciously

competent professional will focus instructional and professional actions to improve student learning. According to the data, the professional teacher who focuses on student learning would require a cadre of attributes to support instructional efforts. These attributes include: passion and enthusiasm for the subject content, pedagogical content knowledge (Schulman, 1986), a rich instructional repertoire of teaching strategies, awareness of the various productive ways that assessment data can be used, sophisticated ability to read the body language of the learner, and caring classroom management strategies.

Passion and enthusiasm for the subject matter provide a platform for engaging students' interest. By demonstrating this passion and enthusiasm the teacher motivates and provides reasons for students to attend to new ideas. Engaging strategies are developed by teachers when they have an interest in a topic and students benefit from having high levels of interest engaged.

Pedagogical content knowledge (Schulman, 1986) is a level of comfort and familiarity with a topic that allows teachers to engage examples and non-examples and to explain, clarify, and expose students to complex opportunities to consider consolidations and applications. Consolidation and opportunities to apply learning support students' internalization of new ideas. This attribute allows teachers to anticipate common misconceptions and provide learners with opportunities to examine and consider various aspects and perspectives about a topic. Strong pedagogical content knowledge allows teachers to differentiate effectively because they can provide variations within the scope of central ideas to respond to students' interests, learning profiles, prior learning, and readiness.

A necessary attribute of teachers who focus on students' learning is *a rich instructional repertoire of strategies* for use during the instruction, consolidation, and application components of lessons. Being able to vary approaches allows teachers to provide learning opportunities that maximize students' ability to learn through their preferred learning styles. The ability to select direct instruction through modeling, or to choose from among a rich variety of indirect approaches such as project-based learning, cooperative learning, web quests, or inquiry, provides both exemplar exposure and experiences to support internalization of central concepts.

Awareness of the possible uses of assessment is an essential attribute of the teacher. Teachers who focus instructional efforts on students' learning arrange opportunities to gather assessment data *of, for* and *as* learning (Earl, 2008) and include assessment that is embedded and non-intrusive. The learner has a role in self and peer assessment. Learning and assessment of the learning become seamless.

Teachers who focus on students' learning are *able to read the body language of the learner.* This body language provides early signals that learning is happening or that the student's grasp of the learning is problematic. The ability to understand the body language of the learner allows teachers to adjust learning opportunities (reflection-in-action) and remain sensitive to the potential for adapting content, processes, or products to improve learning.

Caring classroom management strategies are essential to ensuring the preeminence of learning as a focus in the classroom. Through the appropriate, supportive, and proactive use of rules and routines in the classroom, teachers who focus on students' learning ensure that learning time is optimized, that the focus on learning is a central filter for all decisions, that learning happens in responsive and flexible environments, and that respect for individuals is the guiding premise.

All six of these attributes must be present for a teacher to be considered a consciously competent professional. These basic attributes are expanded and enriched by *professional presence* and personal *professional confidence.*

A teacher's *professional presence* in the classroom projects a sense that the person is in charge, has a direction, and is guided by a sense of purpose. Elements of professional competence that relate to a teacher's professional presence include: their commitment to students and their learning, their engagement in a professional learning community through cooperative professional growth, and their commitment to ongoing professional learning. Conscious competence is deepened by the person's ability to *think like a teacher.* This includes their ability to focus efforts on issues and strategies that can impact students' learning and expand their conceptual repertoire of professional knowledge to encompass concepts that enable the operation of effective practice. Being open to professional growth is critical to the teacher's ability to expand their realization of the need for personal growth and extend their capacity and willingness to grow. Professional growth is seen as a function of the desire to improve student learning. Professional growth is supported by the interpersonal skills to build professional relationships. These support further professional growth through cooperative stimulation and constructive peer mentoring and collaboration. *Professional competence* is the outcome of the coexistence of professional presence and professional confidence.

Professionally competent breadth with a growth orientation is supported by the teacher's instructional efforts and the cadre of skills they develop to support these efforts. Instructional efforts are enriched by the teacher's professional knowledge and their professional values in synchronization with curriculum goals. Elements of the teacher's professional knowledge include their knowledge of effective curriculum planning, implementation, and assessment, as well as their management and communication practices with related stakeholders such as students, parents, guardians, support agencies, care providers, administrators, and policy makers. In a learner focused environment, the teacher's ability to reflect and articulate their professional practice is a key to their ability to use, improve, expand, and actualize practice when needed. When the teacher can name and describe what they do, they have the advantage of reflective and responsive use of what they do. Reflection allows the teacher to understand the impact of specific actions in an instructional context on specific outcomes in student learning. When all instruction is focused on what the student is learning in relation to the time and effort spent, an economy of effort characterizes the instruction. The instruction becomes learner focused.

Theoretically, the cadre of specific skills and a set of professional values that synchronize to the current curriculum goals of the jurisdiction support instructional efforts. Each curriculum guideline identifies knowledge, skills, and values that are contextualized in the expected learning outcomes of the jurisdiction. Theoretically, the teacher who has made the conceptual shift toward focusing on students' learning will be able to understand, teach, and exemplify the values that are espoused in a guideline. These values will often relate to the big ideas or enduring understandings of the subject. Additionally, they reflect the commonly espoused values of the community and evolve in the context of general social awareness. These values will include and are encompassed by a social justice equity agenda and relate to the global context. The professional values related to curriculum goals that are held by the teacher will be reflective of the inclusive social goals of the era. They will be understood and modeled for students in the classroom context. The classroom norms of behaviour will be used to model and practise the predominant social norms of the society.

Seeing the Conceptual Framework as a Whole

The diagram represents the conceptual shift at end point. The elements represent the attributes that require development in order to make the conceptual shift from focusing on teaching to focusing on student learning. The diagrammatic conception can be used broadly in pre-service and in-service contexts to guide professional discussions, growth plans, professional evaluations, and school improvement efforts. It has the potential to provide direction about reasonable actions related to teachers' professional growth along the continuum from pre-service to professional maturity. It provides a filter for considering what data is relevant to program review within teacher education and guides effective professional development efforts (Kennedy, 2011).

The schematic presents a conceptual shift from focusing on teaching to focusing on students' learning, which is an adaptation of the notion of phronesis or perceptual knowledge (Korthagen, et al, 2001) and episteme or scientific understanding or conceptual knowledge. However, the conceptual shift represented in the schematic does not privilege either type of knowledge but presents the view that both are essential for teachers in order to transition successfully from a focus on teaching to a focus on student learning. Self-identity, personal meaning-making, understanding of self, orientation to other, intentionality, and appropriateness of action are all elements associated with professional growth. Professional growth is predominantly phronesis. However, phronesis is not just perceptual knowledge but includes ethics: knowing what to do, at the right place, at the right time. It cannot be learned through application of knowledge but only through experience and/or through the example of someone who practises phronesis. Personal reflection and deliberate action respect identified need for personal growth and the need to develop the skills necessary for creating and maintaining effective pedagogical relationality in the classroom within a community of learnership.

Phronesis, episteme, and techné are conjoined in the above schema in an effective and affective blending of passion and enthusiasm for content on the one hand and caring classroom management strategies on the other. The non-cognitive and the cognitive form a confluence of knowledge, experience, and understanding which enable teacher candidates to make meaning, intuit, and apply professional growth and instructional efforts rooted in pedagogical relationality. These skills and dispositions allow teacher candidates to formulate their identities as teachers and to develop an understanding of the impact that their identities have on student learning. Greene (1995) contended that the teacher's role and function in student learning is to "order experiences in such a fashion as to move diverse persons to mindfulness and to care … [and to make] connection between diversely lived experiences and an increasingly meaningful world" (pp. 142 & 144). One of the strengths of the schematic for a conceptual shift from focusing on teaching to focusing on students' learning is its ability to connect the concepts of phronesis, episteme, and techné. Another strength is that this model serves to address the need "to articulate a pedagogical model that can at least be used as the basis for common discourse and dialogue" (Kane, 2007, p. 42).

Instructional efforts with the attending foci on applications of professional competence are essentially episteme and techné. (knowledge related to productive work). The elements of professional knowledge relating to planning, implementation, evaluation, assessment, classroom management, and communicative strategies for instructional efforts keyed to the

learner are composite of the episteme and techné. But, the episteme and techné do not exclude the phronesis of professional values related to curriculum expectations; nor do they negate the importance of social justice and equity related to pedagogical relationality; nor the need to situate all that is done vis-á- vis instructional efforts into a global context. Such a pedagogical focus on space and place reinforces the conceptual shift from teaching to student learning.

Using the Conceptual Framework to Guide and Direct Program Review

The intended contributions of the schematic may be thwarted if the prior personal experiences of teacher educators block productive change and if the complexities of relationships between teaching and students' learning are not commonly envisioned as a starting point for productive change. The many influences on teacher preparation may not be coordinated toward a single vision of teacher preparation across faculties of education where instruction is invested in full time faculty, part time faculty, faculty advisors with responsibility for practicum supervision, and associate teachers (Zeichner, 2005).

Change is further complicated by its intended recipients. The teacher candidates are not a homogeneous group and present variations in their affective judgment, and their skills in responding to experiences through either emotive responses or through their ability to undertake an intellectual analysis of the impacts of their instructional actions. Various programs may also address the induction of new teachers differently with some programs failing to provide an orientation that would support adoption of a common vision for a program (Kane, 2007; Loughran, 2006; Murray & Male, 2005; Zeichner, 2005).

Conclusion

What we do in teacher preparation program reviews has the potential to impact thousands of teachers and many thousands of their students. How we envision the common goals across the teacher preparation expanse from faculties of education, through hiring, induction, and career trajectories will either support or dilute the vision that informs program review. Many teacher educators call for a common pedagogical model as a basis for discourse and dialogue about program review efforts (Kane, 2009; Kathagen, 2001; Kincheloe, 2004; Korthagen, Loughran, & Russell, 2006). We will fail several generations of teachers if we fail to undertake visioning change before we have thorough knowledge of our teacher education practices across institutions and thorough understanding of the impacts of these practices on students' learning (Kane, 2009, p.43).

If we take the time to build the structures and to implement change to faculty of education programs to ensure that the outcome is focused on producing teachers who understand their role in relation to ensuring students' learning, we have built a solid rail bed for the next steps. We will then need to turn our attention toward aligning coordinated efforts through a common vision across hiring practices, induction, and ongoing professional growth for experienced teachers. A model for the characteristics and dispositions of teachers who focus on students' learning will help teacher candidates and experienced teachers maintain a sense of themselves as professionals charged with the awesome task of ensuring that all

students learn under their care and guidance. Such a model can help move teacher education from a program to be delivered, to a program that ensures solid student learning informed by clear goals and visions for teacher preparation.

References

American Educational Research Association. (2009). Standards for reporting on humanities-oriented research in AERA publications: American Educational Research Association. *Educational Researcher, 38*(6), 481-486.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher, 33*(8), 3-15.

Cochran-Smith, M., Gleeson, A., & Mitchell, K. (2010). Teacher education for social justice. What's pupil learning got to do with it? *Berkeley Review of Education*. Retrieved from http://escholarship.org/uc/ucbgse_bre

Cochran-Smith, M., & Power, C. (2010). New direction in teacher preparation. *Educational Leadership, 67*(8), 6-13.

Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methods approaches*. (3rd ed.) Thousand Oaks, CA: Sage.

Darling-Hammond, L. (1996). The quiet revolution: Rethinking teacher development. *Educational Leadership, 53*(6), 4-10.

Darling-Hammond, L., & McLaughlin, M.W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan, 76*(8), 597-604.

Desimone, L. M., Porter, A. C., Garet, M., Yoon, K. S., & Birman, B. (2002). Does professional development change teachers' instruction? Results from a three-year study. *Educational Evaluation and Policy Analysis, 24*(2), 81-112.

Earl, L. (2008). *Growing success*. Toronto: Queen's Printer of Ontario.

Falkenberg, T. (2009). Starting with the end in mind: Ethics-of-care-based teacher education. In F. Benson, & C. Riches (Eds.), *Engaging in conversation about ideas in teacher education* (pp. 50-59). New York: Peter Lang.

Freire, P. (1970). *Pedagogy of the oppressed*. New York: Herder & Herder.

Garet, M., Porter, A., Desimone, L., Birman, B., & Yoon, S. (2001). What makes professional development effective? Analysis of a national sample of teachers. *American Educational Research Journal, 38*(3), 915-945.

Greene, M. (1995). Notes on the search for coherence. In J. A. Beane (Ed.), *Toward a coherent curriculum: 1995 ASCD yearbook* (pp. 139-145). Alexandria, VA: Association for Supervision and Curriculum Development.

Gaskey, T. R. (1994). Results-oriented professional development: In search of an optimal mix of effective practices. *Journal of Staff Development, 15*(4), 42-50.

Hagger, H., & McIntyre, D. (2006). *Learning teaching from teachers: Realizing the potential of school-based teacher education*. Maidenhead, England: Open University Press.

Hatt, B. E. (2008). *Heart teaching: Attending the pathic*. Köln, Germany: Lambert Academic Publishing.

Kane, R. G. (2007). From naïve practitioner to teacher educator and researcher: Constructing a personal pedagogy in teacher education. In T. Russell & J. Loughran (Eds.), *Enacting pedagogy of teacher education: Values, relationships and practices.* (pp. 60-76). London: Routledge.

Kane, R. G. (2009). The teacher education landscape of my imagining. In F. Benson & C. Riches (Eds.), *Engaging in conversation about ideas in teacher education* (pp. 39-47). New York: Peter Lang.

Kennedy, M. (2010). Attribution error and the quest for teacher quality. *Educational Researcher, 39(*8), 591-598.

Kincheloe, J. L. (2004). The bizarre, complex, and misunderstood world of teacher education. In J. L. Kincheloe, A. Bursztyn, & S. R. Steinberg (Eds.), *Teaching teachers: Building a quality school of urban education* (pp. 1-49). New York: Peter Lang.

Korthagen, F. A. J., Kessels, J., Koster, B., Lagerwerf, B., & Wubbels, T. (2001). *Linking practice and theory: The pedagogy of realistic teacher education.* Mahwah, NJ: Lawrence Erlbaum Associates.

Korthagen, F., Loughran, J., & Russell, T. (2006). Developing fundamental principles for teacher education programs and practices. *Teaching and Teacher Education, 22*(8), 1020-1041.

Kosnik, C. (2009). It is not just practice: Conflicting goals, unclear expectations, mixed messages. In F. Benson & C. Riches (Eds.), *Engaging in conversation about ideas in teacher education* (pp. 65-71). New York: Peter Lang.

Kruse, S. D., & Louis, L. K. (1993, October). Developing professional community in new and restructuring urban schools. Paper presented at the Annual Meeting of the University Council for Educational Administration, Houston, TX.

Little, J. (1982). Norms of collegiality and experimentation: Workplace conditions of school success. *American Educational Research Journal, 19*(3), 325-340.

Little, J. (2003). Inside teacher communities: Representations of classroom practice. *Teachers College Record, 105*(6), 913-945.

Loughran, J. (2006). *Developing a pedagogy of teacher education: Understanding teaching and learning about teaching.* London: Routledge.

Macbeth, D. (2001). On 'reflexivity' in qualitative research: Two readings, and a third. *Qualitative Inquiry, 7*(1), 35-68.

Maclure, M. (1993). Arguing for self: Identity as an organizing principle in teachers' jobs and lives. *British Educational Research Journal, 19*(4), 311-312.

Murray, H., & Male, T. (2005). Becoming a teacher educator: Evidence from the field. *Teaching and Teacher Education, 21*(2), 125-142.

Pecheone, R., & Chung, R. (2006). Evidence in teacher education: The performance assessment for California teachers (PACT). *Journal of Teacher Education, 57*(1), 22-36.

Penuel, W. R., Fishman, B., Yamaguchi, R., & Gallagher, L. P. (2007). What makes professional development effective? Strategies that foster curriculum implementation. *American Educational Research Journal, 44*(4), 921-959.

Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4-14.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* Thousand Oaks: CA. Sage Publications.

Zeichner, K. M. (2005). Becoming a teacher educator: A personal perspective. *Teaching and Teacher Education*, *21*(2), 117-124.

Chapter 12

Making Connections between Professional Teaching Standards and Program Assessment and Evaluation in Teacher Education: A Provincial Example

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Recent calls for accountability and quality assurance in higher education, including pre-service teacher education, demand that programs address goals and standards with direct evidence to support practices. Specific accreditation requirements make the same demand for examination of learning outcomes through systematic data collection and analysis. This chapter examines an example from one pre-service, consecutive bachelor of education program beginning with connection of standards and goals to assessment rubrics across the program through curriculum mapping. The process of selection and implementation of an on-line program-wide assessment system is chronicled, with attention to the potential for comprehensive analysis and longitudinal study through an electronic evaluation system. The program evaluation answered questions related to program fidelity in terms of addressing goals, variables that might impact learning outcomes, and possible predictors of success. Results of the examination of the evaluation process speak to issues and challenges in terms of training and support, equity, and links between assessment and learning outcomes/goals. This approach to program review suggests that the evidence used to make program and policy decisions should come from a systematic and planned, program-wide evaluation strategy that may be supported through on-line assessment across courses and field practice.

The purpose of this chapter is to provide an example of how one Faculty of Education addressed the need for research evidence for accountability as well as program improvement using comprehensive assessment data linked to standards and goals across the program. Included in the chapter is a review of the development and implementation of the assessment approach examining the issues and challenges of relating the research evidence to policy and program decisions.

The Context for Accountability in Teacher Education

A number of international, national and provincial initiatives are influencing the direction of assessment and accountability in higher education institutions world-wide (Murphy, 2009; Pullin, 2004) and, more specifically, teacher education in Canada (Phelan, 2007). For example, the Bologna Accord in Europe establishes common degree standards and provides

 The question of evidence in research in teacher education in the context of teacher education program review in Canada (2 vols., pp. 175-192). Winnipeg, MB: Faculty of Education of the University of Manitoba.

mechanisms for credit transfers from one university to another across national boundaries (Bologna Accord, 2011). In the U.S., accreditation by either the National Council for Accreditation of Teacher Education (NCATE) or the Teacher Education Accreditation Council (TEAC) is becoming the badge of excellence for teacher education programs; some states require this accreditation in order for a teacher education program to license its graduates. In Canada, provincial accreditation and internal review processes for university programs have been formalized and standardized through quality assurance commissions to provide public accountability. Most recently, the Agreement on Internal Trade (AIT) and Labour Mobility Act in Canada allows professionals licensed in individual provinces to practice across the country and has effectively removed the jurisdiction of provinces around teacher education. The provincial position has shifted from "mutual recognition of credentials" to the federal government's "harmonized, national standards based on objective competencies" (Henley & Young, 2009, p. 5). This emphasis on objective competencies and the ability to demonstrate common knowledge, skills and dispositions has the potential to "flatten the complexity of the profession" of teaching and turn teacher preparation into "training" rather than elaborated academic study (Henley & Young, 2009). Phelan (2007) raised the concern that teacher education programs are being entangled in the "very logic of utility (instrumental/means-end thinking) that characterizes much of contemporary policy." A danger lies in turning our preservice teachers into technicians who apply standardized protocols rather than adaptive experts capable of reflecting on a dynamic situation and changing strategies to meet student needs. The complexity of teaching, including both efficiencies (i.e., applying automatized routines and schemas) and "disciplined improvisation" (innovation within a set of general constraints) (Hammerness, Darling-Hammond & Bransford, 2005) must be maintained while addressing the call for accountability. Evaluation evidence must therefore match the integration of knowledge, skill, and application that determine successful outcomes in teacher preparation.

Given the need for balance between gathering data for accountability purposes and for improving program quality in terms of complex and varied learner outcomes, it is important to consider what should count as research evidence that is appropriate. Certainly, there is a need for formal evidence of learning outcomes beyond individual course evaluation. For example, the innovative program at the Faculty of Education described in this review is based on a set of standards, goals and principles that encourage continual professional learning through inquiry in authentic practice. Program fidelity can only be assured if measures of these goals and standards are considered in program-wide assessment. Thus, data from course-specific outcomes must be looked at both independently and as indicators of program quality when aggregated across courses. Moreover, higher education programs are increasingly being asked to provide such data. For example, our Institutional Quality Assurance office requires programs to provide data on "methods for assessing student achievement of the defined program- and course-level learning outcomes and degree level expectations" (Cyclical Review of Undergraduate and Graduate Academic Programs, p. 6, http://www.wlu.ca/vpa/qualityassurance).

In teacher education programs, the question may be "how do we assess the complexity of teacher preparation in a meaningful manner, one that tests the fidelity of the program with informative results?" Without intentional linkages between conceptual/philosophical program goals and measured outcomes, an unintended outcome of the accountability movement may be that only superficial, easily measured outcomes will be assessed. Continued concern around

the compartmentalization of courses and the lack of connection between theory and practice suggest that a more holistic, program-wide approach to assessment and planning needs to occur in teacher education programs. To institute change and promote evidence-based decisions, teacher educators must come together to be the "reflective practitioners" that they are hoping to develop in their teacher education candidates (Loughran, 2002); they must use data to critically examine their programs on a regular basis. In order to reflect on program effectiveness, relevant and comprehensive evidence must be gathered from a variety of sources.

This chapter examines one example of a pre-service teacher education program's approach to program-wide evaluation and addresses the question of whether these types of data can or should be used as research evidence for accreditation reviews and program improvement. On-line assessment technology afforded the opportunity to efficiently collect, collate, manage, and analyze a large amount of data, facilitating our evaluation process. Russell (2007) discussed the difficulties inherent in school reform with reference to Darling-Hammond's (2006) fundamental problems in learning to teach and a lack of spark to "light the fire". Technology may have the potential to fan a "spark of innovation" in connection with program-wide planning and assessment. In our case, technology provided a vehicle to enable us to examine teacher education candidates' attainment of broad, conceptual goals across courses. In selecting an on-line assessment system from those available at the time, a number of factors were considered, including the sheer volume of data to be analyzed, the system's ability to link goals and standards to outcomes across courses, the technology-intensive nature of the program, and the desire to maintain an historical database. The analysis required in making this selection subsequently drove discussions about course and program revisions, thus substantiating decisions and providing authentic evidence of accountability. This process allowed us to link theory and practice via a digital medium, "sparking" change in assessment and instructional practice.

The general push for quality assurance and a move toward financially-driven higher education (Murphy, 2009) demands that higher education institutions provide evidence of "bang for the buck." In the past, evidence has consisted of student evaluations and program reviews for infrequent accreditation renewals that are rarely denied (Bedford, 2010). The required assessments for these reviews are generally ineffective and conclusions rarely acted upon. Rather, the evidence for accreditation and program reviews needs to demonstrate quality outside of graduation and employment rates (Woolcott, 2010). While the aforementioned measures, along with course grades, GPAs, student questionnaires, and employer surveys provide global measures of program success, they do not drill down to specific competencies developed across courses and which define the level of professional expertise we hope to produce in our graduates. At the same time, competencies must both relate to individual programs' philosophies, conceptual frameworks, and local contexts, and to the standards set by institutional and provincial accreditors. Negotiating a balance between outcomes-based accountability and "cookie-cutter" training programs with identical standards is an issue that must be addressed as accountability takes an ever-increasing role in review of higher education programs. The "consumer-driven" approach to higher education in today's fiscal climate demands data-driven decisions and a view of faculty as "workers" that contribute or do not contribute to the 'bottom line' (Bedford, 2010). We believe that quality assurance must be seen in a more positive light, offering openness, practical accountability and quality. Accountability

measures need to recognize all aspects of teacher preparation and measure outcomes accordingly.

Singh (2010) discussed a constant balance between accountability and improvement in quality assurance endeavours, suggesting a move away from the political and bureaucratic pressures on academic and intellectual freedoms and a move toward a student learning-driven approach where accountability is to the learner and the profession. We need to accept some accountability as necessary in a democratic, public education system, but continue to be aware of the limits and reaches of bureaucratic accountability (Murphy, 2009) based on limited outcome variables, such as graduation rates, employment numbers, and individual course grades. Faculties of Education and the teaching profession should be looking toward scientifically-based evidence for practices and resources used in teacher preparation. Expanded, comprehensive research is a necessary foundation for such evidence-based decisions. However, narrow, contextualized examinations of course-by-course attainment of objectives fail to provide a complete picture as a measure of success in teacher education programs and do not serve as robust research evidence for reform efforts. The initial step in determining best practice is development of the outcomes that you wish to reach before you can evaluate the success of programs designed to get there. Those outcomes, standards, and goals are actualized in the courses and field experience of students and should be evaluated through comprehensive, empirical examination of results.

Professional Standards, Goals and Outcomes in Teacher Education

The recently written Accord on Initial Teacher Education from the Association of Canadian Deans of Education presents a mutual understanding of the complexities of teacher education and the principles that support effective teacher education (ACDE, n.d.). The Accord recognizes the combination of both an intellectual and practical component in teacher education and the need for teachers to cultivate knowledge and think critically. The principles are, by design, broad and need to be operationalized through competencies and standards within each province and through individual teacher education programs in context. The assessment and evaluation of teacher education and ultimately teachers, needs to operationalize the complexities of these standards and provide informative and productive feedback beyond accountability to political bodies.

The knowledge and skills that form the base of a teacher's expertise are complex--an integration of content knowledge, understanding and creative, flexible application of pedagogy, and appropriate integration of technology to enhance learning (Darling-Hammond & Bransford, 2005; Koehler & Mishra, 2009; Shulman, 1987). The standards that define the teaching profession are then necessarily broad and comprehensive. In Canada, the overarching principles of the Deans' Accord on Initial Teacher Education (ACDE, n.d.) suggest a foundation for pan-Canadian agreement on standards in teacher education. The example that forms the impetus of this chapter is from a faculty of education that operates under the governing body for teachers in the province of Ontario—the Ontario College of Teachers (OCT), which promulgates five standards of practice and four ethical standards (see Table 1).

Table 1: Ontario College of Teachers' (OCT) Standards of Practice and Ethical Standards

Standards of Practice
1. Students and Learning: Members are dedicated in their care and commitment to students. They treat students equitably and with respect and are sensitive to factors that influence individual student learning. Members facilitate the development of students as contributing citizens of Canadian society. *2. Professional Knowledge*: Members strive to be current in their professional knowledge and recognize its relationship to practice. They understand and reflect on student development, learning theory, pedagogy, curriculum, ethics, educational research and related policies and legislation to inform professional judgment in practice. *3. Professional Practice:* Members apply professional knowledge and experience to promote student learning. They use appropriate pedagogy, assessment and evaluation, resources and technology in planning for and responding to the needs of individual students and learning communities. Members refine their professional practice through ongoing inquiry, dialogue and reflection. *4. Leadership in Learning Communities:* Members promote and participate in the creation of collaborative, safe and supportive learning communities. They recognize their shared responsibilities and leadership roles in facilitating student success. Members maintain and uphold the principles of the ethical standards in these learning communities. *5. Ongoing Learning*: Members recognize that a commitment to ongoing professional learning is integral to effective practice and to student learning. Professional practice and self-directed learning are informed by experience, research, collaboration and knowledge.
Ethical Standards
1. Care: The ethical standard of Care includes compassion, acceptance, interest and insight for developing students' potential. Members express their commitment to students' well-being and learning through positive influence, professional judgment and empathy in practice. *2. Respect:* Intrinsic to the ethical standard of Respect is trust and fair-mindedness. Members honour human dignity, emotional wellness and cognitive development. In their professional practice, they model respect for spiritual and cultural values, social justice, confidentiality, freedom, democracy and the environment. *3. Trust:* The ethical standard of Trust embodies fairness, openness and honesty. Members' professional relationships with students, colleagues, parents, guardians and the public are based on trust. *4. Integrity:* Honesty, reliability and moral action are embodied in the ethical standard of Integrity. Continual reflection assists members in exercising integrity in their professional commitments and responsibilities.

These complex competencies and attitudes call for complex assessments across pre-service academic courses and field experiences (Ludlow et al., 2011). Rideout and Koot (2008) suggest that faculties of education need to measure the connection between the beliefs, such as those described in the Deans' Accord and OCT's Professional Standards, and authentic outcomes in practice. While these standards are inarguably important for prospective teachers to attain, the compartmentalization suggested by a static list of skills and dispositions cannot capture the complexity of a dynamic classroom. Neither do the Accords or the Standards in Table 1 provide observable ways of measuring these outcomes. The standards need to be operationalized if they are to be used as measuring sticks for teacher preparedness and success. What do these standards look like when applied in practice? What behaviours, skills, and knowledge are required to meet them? And what kinds of data will count as evidence to demonstrate that they have been met?

What, then, are the connections among professional teaching standards, teacher education, and program assessment and evaluation and what kind of an assessment system will help to make these connections visible? Metzler and Blankenship (2008) approached this question by addressing what they see as a disconnect among these three constructs. They suggest that despite the abundance of research on teaching and teacher education in the past decades, much of the program assessment done by teacher educators is not based on research-quality data. The program assessment conducted by these researchers followed a framework they called the Development, Research and Improvement (DRI) Model for Program Assessment, which focused on the process (development and research) as well as the purpose (program improvement) of assessment. The initial stage of the framework includes examination of goals and development of context. The second stage is the data collection phase, gathering evidence and artifacts to create a database from which decisions for improvement can be made in the final stage. This framework adds structure to the program assessment while maintaining enough flexibility to allow for changes in priorities and commitments within context.

These same questions need to be addressed by individual faculties of education in order for outcomes to be measured objectively and teacher education programs to be evaluated effectively. We are presenting a case for collecting and analyzing outcome measures such as assignment marks that reflect key competencies, program-wide, in order to address the ways and extent to which program goals and objectives have been met. Whether such "objective" data collected across courses are adequate for assessing program goals and objectives remains to be seen. It might be argued that such evidence could blind us to other types of evidence that are also important to consider – direct evidence, for example, of novice teachers' attitudes toward diversity in their classrooms or their ability to combine "efficiencies" with disciplined improvisation (Hammerness et al., 2005) during moment-to-moment instructional decision making. These demonstrations of desired learner outcomes likely cannot be measured without careful and detailed observations of our teacher candidates while they are practicing in classrooms, and the design and implementation of objective observational protocols will likely be both complex and labour-intensive. Attempts by individual programs to collect data of this sort must be made, however, in order to pull evidence together for transfer to generalizations about effective teacher education practice.

An Example of Program-Wide Assessment from a Consecutive Teacher Education Program in Ontario

Reform movements in both performance based assessment and technology have recently combined to support an authentic electronic portfolio (e-portfolio) approach to teacher education assessment (Britten & Mullen, 2003; Herner-Patnode & Lee, 2009). Portfolios provide an opportunity for teacher education candidates to demonstrate their learning through a collection of artifacts from practice and academic courses across time. Some faculties of education have turned to portfolio assessment as one means of capturing the comprehensive nature of complex learning outcomes. There has been a movement toward more 'real world' ways of assessing teacher preparedness in the United States and Canada in response to the increased demand for accountability and in reaction to calls for teacher testing (Banister, Vannatta, & Ross, 2006; Berrill, 2011; Britten & Mullen, 2003; Herner-Patnode & Lee, 2009).

Authentic assessment refers to examination of understanding in practice—assessment of the application of knowledge in the context that it will be used. That is, rather than a cursory examination of content knowledge alone, the portfolio attempts to evaluate the technological, pedagogical, content knowledge that makes a teacher's expertise so complex. E-portfolios represent an alternative assessment as demonstrations of learning (Britten & Mullen, 2003) with multimedia potential. Multiple artifacts are gathered to support standards and goals with user reflection often a key part of the resulting portfolio. These artifacts are frequently derived form authentic works—those used in the practice of teaching, such as lesson and unit plans, samples of elementary or secondary students' work, assessment rubrics, etc. Although many technological changes have been optional in teacher education, the pressure from outside the faculty to create alternate assessments of standards has made the use of e-portfolios more common and often a requirement for both program accreditation and graduation in the United States (Strudler & Wetzel, 2005). Purposes of e-portfolio assessment range from individual progress assessment (student use for assessment and career advancement) to program-wide evaluation (assessing standards linked to the portfolios across courses).

The DRI framework described above (Metzler & Blankenship, 2008) is used to describe the program-wide assessment conducted in our example of a one-year, post-baccalaureate, pre-service teacher education program at a mid-sized university in Ontario. This program prepares individuals to be certified in one of two divisions: Primary/Junior (P/J), addressing Kindergarten to grade 6; or Junior/Intermediate (J/I), addressing grades 4 to 10.

Development Phase

The teacher education program being discussed is a relatively new program with a student body of 140 teacher education candidates (TECs), six full-time faculty and approximately 25 part-time faculty. The *development* of the program assessment began with early planning and curriculum mapping, followed by definition of specific program goals and exploration of appropriate data collecting vehicles. The *research* phase of the framework included both quantitative and qualitative measures via a program-wide e-portfolio assessment system that gathered student outcome data along with validity and reliability measures; responses of students from focus groups; and, faculty reaction from individual written and verbal feedback. Analysis of the research data resulted in findings and implications that can then be used to

support accreditation reviews, but more importantly, to make any necessary revisions for *improvement* of the program.

The OCT provincial Standards Of Practice and Ethical Standards (See Table 1) were used as a starting point of discussion in development meetings and faculty retreats that drew together full time faculty and administration to develop specific program goals. Faculty retreats were purposely set to establish program goals. Additional examples of goals and standards were examined: program goals from various Faculties of Education in Canada and teacher education programs in the U.S.; standards from NCATE and INTASC (Interstate New Teachers Assessment and Support Consortium) in the U.S.; and standards from the New Teacher Induction Program (NTIP) in Ontario. Goals were selected that were reflective of our Faculty's mission and philosophy, and which represented a synthesis of our evaluation of the most important goals among the various samples that were analyzed. Each program goal was then aligned to the relevant standards from OCT and NTIP. All provincial standards were addressed by one or more of our goals. Nine specific program goals were established:

1. *Planning*: Design short and long term instructional plans that are developmentally appropriate and relevant to diverse student experiences.
2. *Instructional Strategies*: Implement a broad range of appropriate instructional strategies and technologies that promote student learning.
3. *Learning Environment*: Use effective classroom management strategies to create a learning environment that supports the development of self-regulated, adaptive learners.
4. *Communication*: Communicate clearly and professionally.
5. *Professional Knowledge*: Use their professional knowledge and understanding of students, Ontario curriculum, subject knowledge, legislation, teaching practices, and classroom management strategies to promote the learning achievement of their pupils.
6. *Inquiry*: Use inquiry and reflection to improve and inform practice.
7. *Professionalism*: Demonstrate qualities that characterize professionalism.
8. *Assessment*: Conduct ongoing assessment of pupils' progress, make data-driven decisions for differentiated instruction, evaluate student achievement and regularly communicate results to students and parents.
9. *Continuous Learning*: Adapt and refine their teaching practices through continuous learning and reflection, using a variety of sources and resources.

Following the development of context-specific program goals, curriculum mapping was undertaken in an effort to connect theory and practice and to connect across courses. A curriculum map is a large matrix with each goal on one axis and each course on the other. In the cells of the matrix are listed the various assignments (key assessments) from the courses by which each goal will be partially assessed (see Figure 1).

Key assessments are important pieces of work specifically designed to correspond to one or more goals; most courses had only one key assessment, along with other minor assignments that did not play a role in the program-wide evaluation. Taken together, the summation of these key assessments should provide information with respect to students' attainment of various aspects of each goal across different contexts, thus enhancing the reliability of the measurement of the goals. The curriculum maps (one for each division of the program) were

then reviewed by faculty to identify strengths, gaps and overlaps (as outline in Uchiyama & Radin, 2009). The process of creating the curriculum map was beneficial to individual course instructors as they reflected on the "big ideas" in their courses and the most appropriate assessment tasks, as well as to the program as a whole as it sparked deeper discussion around content and assessment.

Figure 1

Example of Curriculum Map of Program Goals and Key Assessments

Goals/Courses	401-Lrn & Dev	402-Sch & Soc	403-Eq & Div	404-PLS	405-Gen Mth	410-Lit I	411-Lit II	412-Math I	413-Math II	414-Soc St	415-Sci & Tech	422-Arts	423-Hlth & PE	Practica
Planning	SRL/			Portfolio	unit	Lesson Unit		Micro-teach Assess. Assign-ment	Unit plan			Lesson plan	DPA?	X
Instructional Strategies	SRL/ Learn. Ctres		Store-front	Portfolio	unit	Lesson/ Read. Assess./ Unit		Micro-teach Assess. Assign-ment	Unit plan			Lesson plan	DPA?	X
Learning Environment	SRL/ Learn. Ctres		Store-front	Portfolio				Micro-teach						X
Communication	SRL/	Case	Store-			Lesson/		Assess. Assign-				Photo essay		X

The next phase of the project was for the course instructors to create an analytical rubric for each key assessment (see Figure 2). An analytical rubric is a scoring matrix with criteria relating to various aspects of the assignment along the vertical axis, and achievement levels along the horizontal. After much discussion, we chose to have four achievement levels ranging from 1 (unacceptable/not present) to 4 (exemplary/exceeds expectations), with level 3 (proficient/meets expectations) as the target. Each criterion was linked to a corresponding program goal, professional standard, ethical standard, and/or NTIP standard. Once the development phase was well under way--goals were established, the curriculum was mapped out, and assessment tasks were determined--discussion and exploration of options to conduct the program-wide assessment began.

Figure 2

Approaches to Motivation Group Assignment Rubric (35%)

Performance Indicators	Level 1	Level 2	Level 3	Level 4
Description of motivational plan 8/35 P3, E1, G2, N2	Vague or incomplete description of strategies for motivating and engaging students.	Fairly clear explanation of strategies for motivating and engaging students with some gaps or unclear aspects.	Clear explanation of strategies for motivating and engaging students.	Clear and thorough explanation of strategies for motivating and engaging students.
Consideration of student needs 4/35 P1, E2, G3, N1	Plan addresses a very limited range of learner differences.	Plan addresses some learner differences.	Plan addresses several learner differences.	Plan addresses a wide range of learner differences.
Justification of motivational approach 8/35 P2, G5, N6	Demonstrates limited knowledge and understanding of factors influencing motivation.	Demonstrates some knowledge and understanding of factors and strategies for motivating and engaging students.	Demonstrates considerable knowledge and understanding of factors and strategies for motivating and engaging students.	Demonstrates extensive knowledge and understanding of factors and strategies for motivating and engaging students.
Empirical support 5/35 P2, G9, N6	Motivational strategy is not logically supported by research literature.	Motivational strategy is partly supported by the research literature described.	Motivational strategy is logically supported by the research literature described.	Motivational strategy is logically supported by the research literature described. Argument for choice of motivational approach is insightful and well-reasoned.

Research Phase

Within the research phase of the program evaluation, an on-line portfolio system was seen as an effective way to provide individual assessment for students as well as scientific data for the volume of information to be gathered in the evaluation of standards and goals across the program (e.g., Cohen, 2005; Darling-Hammond, Newton, & Wei, 2010; Herner-Patnode & Lee, 2009). Online portfolio systems are widely used in the U.S., and are recognized as an effective means of managing and analyzing data by national accreditors such as NCATE: "institutions are expected to use technology to maintain their assessment systems, though how complex an undertaking this is varies with how many programs are in the unit. Some institutions are moving toward electronic portfolios in which candidates can demonstrate their mastery of proficiencies" (NCATE, 2010, "FAQ about Standards"). With an on-line system, the data could be analyzed across courses, across students, across time, and demographic variables; and be linked to program goals and standards. The data can more accurately reflect the complexities of teaching as they represent various ways of enacting the standard across courses and field experiences. For example, the "planning" goal was assessed in aspects of unit and lesson plans created for several methods courses, IEPs written in the special education course, and case studies analyzed in child development courses, as well as lessons and units taught in field experiences. The creation of a database of assessments provides a history for analysis of trends and improvement across time. Teacher education candidates were already creating portfolios in their professional learning seminar and much of their work was already in a digital format so the initiation of an e-portfolio system was a reasonable next step.

We were looking for a system that would enable us to combine several functions: archiving of student work samples, online submission of student work, online faculty

evaluation of work, alignment of student assessments with rubrics, alignment of rubric with provincial and local standards, and analytics for program improvement. Several on-line systems were investigated based on faculty members' past experiences at other institutions and examples from the literature (e.g., TaskStream, LiveText). The Learning Management System already in use at the faculty and the University as a whole used an isolated, course by course approach to evaluation and didn't allow evidence to be collected across the program, or for linking of specific course assessments to goals and standards. After a review of several options, Chalk and Wire was chosen as it had the potential to address the program-wide assessment and make the necessary links to standards and goals. As stated on the Chalk and Wire website,

> Chalk & Wire's suite of tools and services gives educators the power to build systems and processes that house authentic learner work samples and assessment-related data sets. Faculty and administrators can gather relevant data and generate meaningful reports with regard to teaching and learning while also facilitating academic and professional growth… *Faculty members, assessors and staff* can build learning objectives, assignments and assessment instruments tied to any standards desired… *Administrators* can customize the entire system to suit local processes and goals. In short, the system is a powerful tool for monitoring the quality of your assessments and for ensuring that educational standards are being met. (http://chalkandwire.com/index.php/product/overview)

The distinction must be made between an e-portfolio system and an electronic program-wide assessment tool. The e-portfolio is a collection of student artifacts that demonstrates their learning, either as a demonstration of progress or in a showcase of best work. E-portfolios often include elements of faculty assessment and typically are used by students in job interviews. Program-wide assessment systems include student work, faculty assessments according to rubrics, and linkages to standards, allowing in-depth analyses of progress across courses. Chalk and Wire provides both tools; the one of interest here is the program-wide assessment tool.

Chalk and Wire is also an Ontario company which meant that our data would be housed in Canada, mitigating concerns or issues around the Freedom of Information and Protection of Privacy Act. Institutions covered by this Act must collect, store and distribute personal information in accordance with the legislation. Where we utilize third parties, we need to make sure that they understand Ontario's obligations and agree to follow them. The problem we have when personal info is housed outside of Canada is that we can't compel an external third party to be bound by our legislated requirements under FIPPA; thus, using an Ontario company decreases the level of risk under the Act.

Because buy-in from faculty is key to any technological implementation, the on-line system was presented at a faculty meeting as the recommended option and faculty support was obtained before the system was formally adopted. Initial training was provided by the administration at Chalk and Wire for our administration, Information Technology support staff, and two faculty members. Continued support and guidance was key to successful implementation and was provided by the trained faculty members in sessions for part-time and full-time faculty, and on an as-needed basis individually.

In order to provide scaffolding for the teacher education candidates (TECs), a small group of TECs volunteered to attend a pre-launch training session to learn how to use the program with mock assessments and a simulated student identity, and then act as somewhat knowledgeable peer assistants with the broader cohort of TECs. TECs were informed about Chalk and Wire and its purpose in program evaluation during orientation week. They were given instruction on how to use it along with guided practice early in the program and continued support thereafter. Permission to use their work for research purposes was obtained. TECs were asked to complete a demographic survey the first time that they logged into their portfolio, making additional variables available for analysis and comparison. These variables included gender, age, teaching level (primary/junior or junior/intermediate), school in which they were doing their field experience, and years of experience working with children.

TECs used the e-portfolio system across the program (two consecutive terms) to submit course assignments (key assessments). The portfolio served as a deliberate collection of artifacts from each course linked to the broader standards and goals of the program. Students submitted their work on-line to their portfolio (much as one attaches a document to an email) and the key assessments were assessed using the rubrics by individual faculty members. Initially, practicum evaluations—assessment of the teacher education candidates' teaching practice in the schools—were to be conducted through the on-line assessment system as well but due to technical limitations at the time, these were not included. Connecting the practicum assessments to the course assessments is a key feature that we continue to work on and see as a necessary component to broaden the scope of our evaluation.

Following submission and evaluation of all key assessments, analysis was conducted on the data collected within the system. Descriptive statistics were produced for each assessment (key assignments in each course), each individual rubric criterion, each standard, and each program goal, including mean level, range, and sample size. The mean level of performance on each key assessment, and the specific criterion within each of those rubrics, along with measures of variability (range) helped to clarify how Teacher Education Candidates were performing on each goal and in each course. This evidence was then used to address key program evaluation questions.

Improvement Phase

Chalk and Wire provides extensive analytic tools with which to examine program data. It would take several iterations of program assessment to fully appreciate the potential of the tool. We chose a few questions which were of key importance to us at our stage of program development.

Were the program goals addressed? Chalk and Wire provides an algorithm to complete an initial analysis of the number of links from each rubric criterion to each program goal. The frequency data provided an overall picture of how well assessment in the courses matched the curriculum mapping that had been conducted at the beginning of the process. For example, our analysis indicated that the majority of goals were addressed by a large number of rubric criteria, while two goals were addressed by only a few (i.e., inquiry and professionalism). The results gave immediate feedback to the faculty regarding curriculum coverage: which goals were over-emphasized, and which needed more attention throughout the program. There ensued a broader discussion about our intended emphases and whether unequal coverage was appropriate. This program wide compilation of curriculum is something that is not easily

accomplished when courses are taught by a variety of faculty and assessment is done in isolation. The validity of each individual key assessment would need to be considered within courses by faculty and by examining the reliability of multiple measures of the same goal for individual teacher education candidates.

Was the intent of the goals realized? The validity of the links between rubric criteria and program goals is vital to the examination of program outcomes. The Chalk and Wire system analyzes the content of the rubric criteria in connection with the brief description of each goal to which it is linked. This gave some indication of commonality across courses in terms of what criteria are measuring the assessment goal and begins to provide some evidence of validity. The aggregation of criteria that are linked to the same goal across courses began to paint a picture of what that standard or goal "looked like" in practice and how it was being assessed. For example, 45% of the linked criteria for the assessment goal used the word "assessment" in their description. Other words that were common across criteria linked to that goal included "task" (24%), "data" (15%), "lesson" (12%), "expectation" (12%), "objective" (12%) and "plan" (9%). Many of the linkages were made by part-time faculty who had not participated in the earlier discussion around the goals and what was meant by them. This analysis led us to the conclusion that we needed to inspect the linkages from rubric criteria to standards, and verify that the links were consistent with our conception of the goals.

Were the goals addressed equitably across program divisions and gender? Analysis was also conducted according to two demographic variables to identify any differences across programs and/or gender. The comparison across divisions (Primary/Junior or Junior/Intermediate) provided evidence to consider differences in the two levels of the program as well as similarities. Trends, differences, and similarities across demographic variables help to address equity concerns and provide fodder for discussion in relation to extraneous variables that might be responsible for differences.

Was success in the program as measured by the GPA and the Final Practicum Rating predicted by level of success on each goal? The importance of practicum experience was not addressed in this first overall program evaluation as the practicum evaluations were not included on Chalk and Wire. Final practicum ratings were entered manually in order to be included in the program evaluation. External data, including overall GPA and practicum evaluation levels, were combined with the practicum ratings and key assessment levels in order to get a more comprehensive picture of success in the program and to correlate course evaluation and practical assessment. Findings from that analysis showed connections between only some program goals and overall GPA, and no relation between practicum ratings and performance on standards and goals, which presents food for thought and need for further study. The apparent lack of connection between program goals and practice in the field may be an artifact of the lack of variability in the practicum evaluations. The limited variability would not allow for statistical differences to be demonstrated but the finding highlights the need to enrich the evidence with additional forms and types of data, including observation, of practice, surveys, and discussions.

How well did C &W inform us about our program and what improvements are needed? The quantitative evidence provided by the program-wide assessment system as mentioned earlier (mean level of success, frequency of standards being addressed, etc.) gave a picture of how frequently goals were being addressed, how teacher education candidates were or were not meeting those goals, and how faculty were conceptualizing those goals and standards through language used in the rubric. In addition to the quantitative data provided by the on-line

assessment system itself, both faculty and teacher education candidates added qualitative evidence related to the implementation process. Teacher education candidates participated in focus groups at the end of the school year and were encouraged to provide feedback throughout the year as they worked on the on-line assessment system. The richness of the qualitative responses is helpful in making improvements to the implementation process.

Further analysis of the comprehensive database, along with the qualitative data, provided the Faculty of Education with additional information with which to make program changes and to provide evidence for accountability and review. This approach to program review suggests that the evidence used to make program and policy decisions should come from a systematic and planned, program-wide evaluation strategy. The potential of the technology used to create the e-portfolios and to gather and analyze the data is promising in terms of offering more comprehensive databases that may be generalized to other contexts. Involvement of faculty in curriculum mapping and technical decisions from the beginning of the process and continued technical and human support throughout the implementation process is key.

Issues, Challenges and Implications

Barnett and Amrein-Beardsley (2011) have put forth three key challenges in evaluating teacher education programs in one state: defining the purpose of the evaluation; data management; and data dissemination. Concerns were expressed in terms of who would house the data, who would have access, how it would be used, and what evidence would be collected. They concluded that these types of evaluation are "difficult to conduct, and take inordinate amounts of time, attention, and care" (p. 2). The content of this book suggests that the same concerns are present in Canadian teacher education. The complexity of teacher education should be addressed through a 'suite' of evidence (Ludlow et al, 2011). Both process and purpose should be considered carefully (Metzler & Blankenship, 2008) and resulting evidence be examined for validity and reliability.

This chapter has described one provincial example of program evaluation for program improvement and accreditation review through an assessment system that aligns course work, rubrics, and both internal and external standards in one Faculty of Education. This system is being used for the dual purposes of accreditation and program improvement. How, then, can this experience in a new, small and agile Faculty of Education inform the practice of larger, well-established programs? Darling-Hammond, Newton, and Wei (2010) summarize a lengthy program evaluation of their teacher education program that had similar characteristics to the one described in this chapter. The faculty was small, emphasized theory-practice connections, infused technology, and worked with a limited number of dedicated professional development schools. That program also focused on the connection between program goals and student learning, suggesting that the process "created consonance between the program's efforts and the criteria against which candidate learning was being evaluated, and made the results of the studies much more useful for programme revisions and improvement than would have been the case if measure of learning were out of sync with the programme's aspiration" (p. 374). Establishing measurable program goals is becoming increasingly important in institutional quality assurance reviews, and the next logical step is to determine ways to measure these goals.

Our process provides one method—utilizing rubrics for key assessments linked to professional standards and program goals. Using an electronic program-wide assessment system is not necessary in order to measure progress against goals, but the sheer volume of data and the types of sophisticated analyses being required do imply the need for some type of computer-assisted strategy. Specific challenges and issues arose that were particular to this on-line assessment approach. Faculty experienced the same challenges inherent in any technological innovation—a technical learning curve, difficulties with the interface, and concerns about reading from a screen and losing work. In addition, some challenges were related to the assessment process—faculty did not have control over posting of their assignment and rubric and the four-point rubric levels did not provide enough variability for some faculty. Although concerns and challenges arose, the issues acted as catalysts for faculty-wide discussions around assessment and rational for grading. The curriculum mapping in the development phase of this program evaluation also required program-wide examination of goals and how they would be operationalized, leading to a more comprehensive evaluation of program objectives and outcomes.

Several key conclusions about using research evidence for program evaluation and accreditation purposes emerged from the process and results:

- using fewer but more encompassing key assessments is more effective and efficient;
- using a system that integrates with the University's Course Management software is less confusing to students;
- making the purpose of the assessment system clear and explicit to students and faculty is essential;
- taking the time to reflect on the data gathered and the implications for program improvement on a regular basis is critical.
- you need to be willing to take risk in any self-study and accept results understanding that you may need to make changes

The reality is that faculties of education will continue to be pressed for accountability and accreditation reviews. Beyond the gathering of evidence for such external purposes, decisions about program change and learning outcomes need to be based on empirical evidence that is supported by teaching and teacher education research and internal, program-wide assessment. Curriculum mapping and digital portfolios acted as key pieces in the development and research stages of the program-wide assessment discussed in this chapter. Analysis of the resulting database and qualitative responses from stakeholders provides the evidence base needed for continued improvement and effective practice within the program, while the empirical, group data provides fodder for identification of best practices more generally and for continued teacher education reform.

References

Buzza, D., Kotsopoulos, D., & Mueller, J. (2008, June). *An investigation of teacher education candidates' responses to the Professional Development School model of teacher education.* Paper

presented at the annual conference of the Canadian Society for the Study of Education (CSSE), Canadian Association for Teacher Education (CATE), Vancouver, British Columbia.

Buzza, D., Kotsopoulos, D., Mueller, J., &, Johnston, M. (2010). Investigating a professional development school model of teacher education in Canada. *McGill Journal of Education*, *45*(1), 45-62.

Association of Canadian Deans of Education. (n.d.). *Accord on initial teacher education.* Available online: http://www.csse-scee.ca/docs/acde/acde_teachereducationaccord_en.pdf.

Banister, S., Vannatta, R. A., & Ross, C. (2006). Testing electronic portfolio systems in teacher education: Finding the right fit. *Action in Teacher Education, 27*(4)*,* 81 – 90.

Barnett, J., & Amrein-Beardsley, A. (January 13, 2011). Evaluating teacher education programs in the accountability era. *Teachers College Record,* www.tcrecord.org ID Number 16290, Date Accessed: March 21, 2011.

Berril, D. (2002, March) Portfolios promote professional growth. *Professionally Speaking,* Retrieved February 18, 2011, from www.oct.ca/publications/professionally_speaking/ march_2002/portfolio.asp.

Bologna Accord Website. *About the Bologna Accord.* Retrieved from www.ond.vlaanderen.be/hogeronderwijs/bologna/about/ on February 18, 2011.

Britten, J. S., & Mullen, L. J. (2003). Interdisciplinary digital portfolio assessment: Creating tools for teacher education. *Journal of Information Technology Education, 2,* 41-50.

Clark, R. E. (2009). Translating research into new instructional technologies for higher education: The active ingredient process. *Journal of Computers in Higher Education, 21,* 4-18.

Cohen, V. (2005). Electronic-portfolios as cognitive tools in a teacher education program. Retrieved March 10, 2009 from http://www.formatex.org/micte2005/55.pdf.

Crocker, R. & Dibbon, D. (2008). *Summary of teacher education in Canada: A baseline study.* Kelowna, BC: Society for the Advancement of Excellence in Education. Retrieved September 29, 2010, from http://www.saee.ca/index.php?option= com_content&task=view&id=728&Itemid=141

Darling-Hammond, L. (Ed.). (2005). *Professional development schools: Schools for developing a profession*. New York: Teachers College Press.

Darling-Hammond, L. (2006). *Powerful teacher education.* San Francisco: Jossey-Bass.

Darling-Hammond, L., & Bransford, J. (Eds.) (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do.* San Francisco: Jossey-Bass.

Darling-Hammond, L., Newton, X., & Wei, R. C. (2010). Evaluating teacher education outcomes: a study of the Stanford Teacher Education Programme. *Journal of Education for Teaching, 36*(4)*,* 369-388.

Dawson, S., Heathcote, L., & Poole, G. (2010). Harnessing ICT potential. The adoption and analysis of ICT systems for enhancing the student learning experience. *International Journal of Educational Management, 24*(2)*,* 116-128.

Drent, M., & Meelissen, M. (2008). Which factors obstruct or stimulate teacher educators to use ICT innovatively? *Computers & Education, 51,* 187-199.

Fullan, M. (2001). *The new meaning of educational change (*3rd ed.*)* New York: Teachers College Press.

Hall, G. E., & Hord, S. M. (2001). *Implementing change: Patterns, principles, and potholes.* Needham Heights, MA: Allyn & Bacon.

Hammerness, K., Darling-Hammond, L., & Bransford, J. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Eds.). *Preparing teachers for a changing world.* (pp. 358-389). San Francisco: John Wiley & Sons.

Henley, D., & Young, J. (2009). Trading in education: The Agreement on Internal Trade, Labour Mobility and Teacher Certification in Canada. *Canadian Journal of Educational Administration and Policy, 91*. 1-27.

Herner-Patnode, L. M., & Lee, H. (2009). A capstone experience for preservice teachers: Building a web-based portfolio. *Educational Technology & Society, 12*(2), 101-110.

Liu, O. L. (2009, August). Measuring learning outcomes in higher education. *R & D Connections, 10*, 1-6. Available on-line at: http://www.ets.org/Media/Research/pdf/RD_Connections10.pdf

Loughran, J. J. (2002). Effective reflective practice: In search of meaning in learning about teaching. *Journal of Teacher Education, 53* (1), 33-43.

Ludlow, L., Mitescu, E., Pedulla, J, Cochran-Smith, M., Cannady, M., Enterline, S., & Cahppe, S. (2010). An accountability model for initial teacher education. *Journal of Education for Teaching, 36*(4)*,* 353-368.

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education, 9*(1), 60 – 70.

Metzler, M. W., & Blankenship, B. T. (2008). Taking the next step: Connecting teacher education, research on teaching, and programme assessment. *Teaching and Teacher Education, 24,* 1098-1111.

Murphy, M. (2009). Bureaucracy and its limits: Accountability and rationality in higher education. *British Journal of Sociology of Education, 30*(6)*,* 683-695.

NCATE. (2010). *FAQ about Standards.* Retrieved from http://ncate.org/Standards/NCATEUnitStandards/FAQAboutStandards/tabid/406/Default.aspx#faq10

O'Donnell, C. (2008). Defining, conceptualizing, and measuring fidelity of implementation and its relationship to outcomes in K-12 curriculum intervention research. *Review of Educational Research, 78*(1), 33-84.

Phelan, A. (2007). A new thing in an old world? Instrumentalism, teacher education, and responsibility. In T. Falkenberg & H. Smits (Eds.), *Mapping research in teacher education in Canada. Proceedings of the Working Conference on Research in Teacher Education in Canada* (pp. 21-31). Winnipeg, MB: Faculty of Education of the University of Manitoba.

Pullin, D. (2004). Accountability, autonomy, and academic freedom in educator preparation programs. *Journal of Teacher Education, 55*(4)*,* 300-312.

Rideout, G. W., & Koot, R. A. (2009). Reflective, humanistic, effective teacher education: Do principles supported in the Deans' Accord make a difference in program outcomes? *Canadian Journal of Education, 32*(4)*,* 927-956.

Russell, T. (2007). Teacher education program reform and development. In T. Falkenberg & H. Smits (Eds.), *Mapping research in teacher education in Canada. Proceedings of the Working Conference on Research in Teacher Education in Canada* (pp. 117-123). Winnipeg, MB: Faculty of Education of the University of Manitoba.

Salter, B., & Tapper, T. (2000). The politics of governance in higher education: The case of quality assurance. *Political Studies, 48,* 66-87.

Shulman, L. S. (1987). The wisdom of practice: Managing complexity in medicine and teaching. In D. C. Berliner & B. V. Rosenshire (Eds.), *Talks to teachers: A festschrift for N. L. Gage.* New York: Random House.

Singh, M. (2010). Quality assurance in higher education: Which pasts to build on, what futures to contemplate? *Quality in Higher Education, 16*(2)*,* 189-194.

Strudler, N., & Wetzel, K. (2005). The diffusion of electronic portfolios in teacher education: Issues of initiation and implementation. *Journal of Research on Technology in Education, 37*(4)*,* 411-433.

Uchiyama, K. P., & Radin, J. L. (2009). Curriculum mapping in higher education: A vehicle for collaboration. *Innovative Higher Education, 33,* 271-280.

Weber, L., & Dolgova-Dreyer, K. (Eds.). (2008). *The legitimacy of quality assurance in higher education: The role of public authorities and institutes.* Cedex, France: Council of Europe Publishing.

Woolcott, D. (2010, May). *An overview of quality assurance in Ontario – Transition to a new framework.* Keynote address at the McGraw-Hill Ryerson 35th National Teaching and Learning Conference, Wilfrid Laurier University, Waterloo, ON.

Chapter 13

The Professional Teacher Portfolio as Evidence: Integrating Ideas, Values and Praxis

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Can portfolios provide evidence of a teacher candidate's learning? Portfolios, both paper-based and electronic, have become commonly used tools for reflection and assessment in teacher education programs. Portfolios may provide evidence that teacher candidates have not only met specified standards, but can also highlight competence in particular areas. They are regarded as preferable to traditional assessments such as research papers and exams because the students select the items that best represent their learning and engage in meta level reflection upon their learning. To promote "deep learning" (Biggs, 2006), teacher candidates in the Bachelor of Education program at Mount Royal University begin constructing a working portfolio in the second semester of their first year by collecting artifacts and writing reflections to accompany each artifact and this portfolio evolves over their time at MRU. Portfolios are initially developed using Microsoft Word and Google Docs in order to allow students to not only work in a familiar environment but to focus upon reflective content as opposed to technological skills. Faculty members throughout the program mentor students to effectively reflect upon their individual learning. Teacher-candidates are required to focus their portfolio reflections on exactly how they have developed the Alberta Education knowledge, skills and attributes (KSAs) relevant to teaching, both through their course work, field and practicum experiences. The overall result is regarded as indicative of how individual teacher-candidates reflect upon their practice and competencies.

Portfolios as Evidence of Learning – Rationale and Framework

> *An important consideration in career and professional development planning is the compiling of a teaching portfolio. This process and product will help beginning teachers as well as seasoned teachers in gaining employment or special positions. A teaching portfolio is a document that details, in an organized way, a teacher's efforts and accomplishments… .The portfolio can be either showcase (showing off your best work and final drafts) or developmental, each approach involving different guidelines and different purpose for construction. (Naested, Potvin & Waldron, 2004, p. 161)*

This paper concerns itself with the question of evidence in the context of teacher education research and program review in the Canadian setting. It poses the question "what can and should count as evidence in research and as legitimate knowledge, particularly in the diverse

 (2011). *The question of evidence in research in teacher education in the context of teacher education program review in Canada* (2 vols., pp. 193-204). Winnipeg, MB: Faculty of Education of the University of Manitoba.

areas of teacher education?". By way of introduction and in addressing this problem it seems necessary to 1) clearly describe what we mean by evidence, 2) consider the prescriptive term "should", and 3) outline the concept of legitimate knowledge.

Genuine evidence involves gathering and examining all the available circumstances, facts, supporting a belief or proposition or indicating whether or not a thing is true or valid (The Oxford Dictionary, 1990). In this particular case we consider teacher candidate portfolios as a legitimate and valuable source of evidence of an individual candidate's learning. Evidence provided in the candidate's portfolio is information given *personally* (from experience) or drawn from a document tending to prove a fact or proposition.

In further defining our terms, we must address the idea of the "portfolio", what it is and how it should be regarded within the realm of a teacher candidate's learning (that is, performance assessment). With regard to the teacher candidate assessment in general, a number of things are taken into account over an individual's course of study – all of them containing varying degrees of relevance. These include such things as exams, papers, assignments, and practicum experience. Given that all of these are provided by the candidate, they are in fact legitimate items to be considered as evidence of learning. Their individual legitimacy or, to use a synonym, authenticity, relies on the fact that they are provided by the candidate, that is, the author. Both of these words are derived from the same root word and being directly connected with respect to meaning – of undisputed origin, genuine, reliable, trustworthy, the originator of an event. According to the Alberta Assessment Consortium (2006) assessments are authentic if the task to be assessed clearly matches the expectations of real life tasks. A portfolio certainly falls into these categories by virtue of being both an authentic source, one which provides a certain amount of evidence of learning and artifacts often match the expectations of real life teacher tasks such as lesson planning. Simply put, a portfolio in this case is specifically a collection of artifacts, put together by an individual containing evidence of the experience or learning within a specified time period and about specific topics or areas of concern. This is not to say that any portfolio constructed by anyone will necessarily provide evidence of learning; the portfolio may lack the overall quality and rigorous examination characteristic of a strong portfolio, but the fact remains that, if such a portfolio is constructed along clearly specified and relevant requirements and then later assessed by experienced and informed faculty, it can prove to be an invaluable source in the overall process of evaluating a teacher candidate's learning.

Background on Portfolios in Teacher Education

There is a long and rich history of using portfolios to document evidence of learning in pre-service teacher education programs (Anderson & DeMuelle, 1998). Winsor and Ellefson (1995) define the concept of a portfolio as "A thoughtful, organized and continuous collection of a variety of authentic products that document a professional or students' progress, goals, efforts, attitudes, pedagogical practices, achievements, talents, interests and development over time" (p.3). Portfolios involve both collection and reflection as students are asked to consider previous work as a subjective process and as a reflective object. Reflection occurs when the student provides written statements where comments are made regarding not only the artifacts but the process of their production. Without a clear purpose, there is a risk that the portfolio

will degenerate into a scrapbook which is representative of randomly selected 'snapshots' of achievement.

Kilbane and Milman (2003) suggest that the implementation of portfolios in pre-service teacher education programs can support a form of "authentic" assessment. The goal of authentic assessment is to measure individual performance or achievement in situations or tasks that most closely match the standards and challenges of real life (Alberta Assessment Consortium, 2006). When portfolios are used as the basis for assessment, students can identify their progress on real-world tasks enabling them to track their growth over time against standards of quality. Faculties of Education are increasingly using portfolios as a form of student assessment because multiple-choice tests and other more traditional forms of assessment are inadequate measures of what students know and can demonstrate (Smits, Wang, Towers, Crichton, Field & Tarr, 2005). Portfolios are a compilation of artifacts that can be used to pull together a representative variety of the pieces of evidence the teacher candidate could use to portray achievement and attainment of the standards (KSAs) "at the level of a beginning teacher" (Pugach, 2009, p.71). For example, "Portfolios allow students to document how well they are acquiring the appropriate knowledge, skills, and dispositions for teaching and the choices they are making about what it means to teach" (Pugach, 2009, p. 71).

Mount Royal University's Portfolio Vision

As we prepare to move from a two year transfer program to a four year Bachelor of Education degree, we recognize that students will have to provide further evidence of their teaching competency. Maki's (2004) questions have challenged us to be conscious of our vision:

> What do members of a college or university and members of specific programs expect their students to be able to demonstrate or represent based on pedagogy, design of the curriculum, co-curriculum, instruction and other educational opportunities and practices and the use of educational tools? What should students be able to demonstrate or represent at points along their studies based on these educational practices? What do the curricula and other educational experiences add up to? (p. 35)

If the portfolio is a panoptic document developed throughout the program and finalized at its culmination, it has the potential to show what the students' learning actually "adds up to." Hounsell (2007) highlights the importance of congruence or constructive alignment between curriculum goals and teaching-learning and assessment strategies. If we want students to provide evidence of their own knowledge, skills and abilities of the KSAs, we must ensure that we incorporate these explicitly into our classroom activities and assignments.

Since Alberta Education Teaching Quality Standard (KSAs) objectives are appropriate for teachers at the end of a teacher education program, we are developing expectations for teacher candidates who are on the journey to becoming teachers. Foundational courses introduce concepts that we later expect students to apply in their practice. For example, students in foundational courses are introduced to the program of studies and examine them more closely in order to better understand the teachers' goals and the students' learning as observed in their school placements. Later they use those program of studies documents to

develop their own lessons. Differentiated instruction, establishing a climate of respect through an effective classroom management plan, and the use of diverse methods and technologies, are other KSAs which the students first observe and analyze and later practice in their own teaching. Assignments that require explicit attention to these KSAs support teacher candidates' growing awareness of the role of teachers, particularly as they collect artifacts of their learning for their portfolios. Furthermore, the teacher candidates better understand the rationale for these assignments because they are able to make the connection of the relationship between the tasks and the expectations for teacher certification.

According to Biggs (2006), a deep approach to learning requires the learner to relate new knowledge to previous experience and to understand the principles or structure underlying the ideas while a surface approach requires only basic comprehension. Portfolios have the potential to foster deep learning because students are given the opportunity to comprehend the relationship between their courses, practicum, and prior experiences. Through reflective captions, they demonstrate the significance of their learning and their success in achieving not only specific course outcomes but the broader expectations of KSAs.

Program Structure

The Bachelor of Education program at Mount Royal University deliberately places an emphasis upon the reflective process, requiring teacher candidates to create, maintain, and edit a portfolio which evolves over their time at MRU. Teacher candidates are introduced to the idea of portfolios during their first semester and actually begin constructing a portfolio early in the second semester of their first year. They do this by collecting specific artifacts and writing personal reflections to accompany each artifact. All portfolios are initially developed using Microsoft Word in order to allow students to not only work in a familiar environment but to focus upon reflective content as opposed to having to develop new or complex technological skills. Faculty members in all the courses mentor students as to how to more effectively reflect upon their individual learning. Regular feedback and prompts are forms of formative assessment used to help students in identifying and charting their own progress and monitoring their own thinking. Thus teacher-candidates' reflective captions can, with regular self-analysis, foster self-reflection, critical thinking, meta-cognition, and self-regulated learning or what Biggs (2006) refers to as deep learning. The reflective process begins in the initial courses, where students are encouraged to reflect on their first school field experiences in an e-journal, and continues throughout the entire program to the final third and fourth year practicum experiences.

In their *final practicum term* of the Bachelor of Education Program, teacher candidates participate in a capstone course where they are required to focus their portfolio reflections on exactly how they have developed the knowledge, skills and attributes (KSAs) relevant to teaching, both through their course work, field and practicum experiences. The overall result is regarded as indicative of how individual teacher-candidates reflect upon their practice. Participants critically reflect upon significant issues and experiences gleaned from their education and elective courses, field experiences, and practica. The development of a Professional Teaching e-portfolio constitutes a major focus. Cooperating teacher mentors and

lead teachers are invited to review the Professional Teaching e-portfolio with the teacher-candidates.

The program courses are designed to conform directly to the knowledge, skills and attributes (KSAs) outlined in The Alberta Teaching Quality Standards (TQS) in accord with the Ministerial Order #016/97 (Government of Alberta, 1997).

The general goals of Mount Royal University's Bachelor of Education program as evidenced in the portfolio include the following specific areas of knowledge, skills, and attributes (KSAs) derived from the Core Program Competencies for Teacher Education Programs recommended in the Government of Alberta Ministerial Directive 4.2.1 (see the Appendix for a complete listing of KSAs):

- Ability to apply pedagogy appropriate to individual and unique circumstances;
- Capacity to understand and adhere to the legislated moral and ethical frameworks;
- Capacity and ability to understand the various subject disciplines;
- Ability to utilize a variety of approaches to teaching and learning;
- Capacity to engage in a range of planned activities;
- Ability to create and sustain fertile learning environments;
- Ability to develop and implement a broad spectrum of meaningful learning activities;
- Ability to access and apply a variety of technologies;
- Ability to gather and use information about students' learning;
- Capacity to establish and maintain worthwhile learning partnerships;
- Capacity to engage in and demonstrate both career-long and lifelong learning.

Authentic Assessment

In educational environments, assessment traditionally involved using instruments to evaluate students, teachers, and programs, a process for determining a "level" of performance or functioning, strengths or weaknesses in a variety of areas. Educators now recognize that education can be improved with a departure from some traditional methods, organizational structures and procedures, through identification and implementation of innovative practices including alternative assessment practices (Naested, 1993). Often assessment can become a very narrow set of "instruments". Trump and Baynham (1961) hypothesized evaluation in "tomorrow's schools" would be broader and deeper. Authentic work and assessment is purposeful, generative (of ideas), gratifying and fulfilling, challenging, engaging, and meaningful, not trivial make-work exercises. It goes beyond the acquisition of facts to a demonstration of understanding. Educators are encompassing authentic tasks with authentic assessment. According to Zander (2000) and Naested et al. (2004), authentic tasks:

- require real-world relevance
- are open to multiple interpretations (requiring more than rote memory or simple imitation for success)

- comprise complex tasks to be investigated by learners over a sustained period of time
- provide opportunity to reflect – individually, socially, self-reflection
- are designed to encourage interdisciplinary perspective
- are seamlessly integrated with assessment – reflects real world assessment, rather than separate artificial assessment removed from the nature of the task
- create polished products and should culminate in the creation of a whole product rather than an exercise or sub-step in preparation for something else
- necessitate a public review of the solutions

As noted in the introduction, authenticity is defined as reliable, trustworthy, and genuine. In the textbook which we use for our introductory courses, we use the word to refer to professional behaviour that is genuine and sincere. "In learning and teaching we understand authenticity to apply to explicit connections between learning in school and in life beyond the classroom, and the opportunities afforded students to demonstrate their understanding of these connections" (Naested et al., 2004, p. 29). The portfolio becomes an authentic (self-authored) instrument where the teacher candidates provide evidence of their attainment of the KSAs theoretically and in their practice.

At Mount Royal University education students are involved in many teaching experiences when they take the four core courses in the first two years and in the art, music, physical education, math, science, social studies, language arts and drama classes. The teaching experiences include small group peer teaching, collaborative study and peer presentation groups and the teaching of younger learners in K – 12 classrooms (or bringing groups of students to Mount Royal University classrooms). These teacher candidates are required to constantly reflect, comment, and write about their teaching experiences. They consider the various teaching experiences as being highly rewarding. They have frequently entered the teaching experience somewhat fearfully even though they were well prepared. This is where the experience becomes "authentic" – "doing the real thing". These teaching and learning experiences are captured in their e-portfolios in the form of written reflection, lesson plans, photos of the event, digital visual images and video clips. The e-portfolio contains genuine evidence of the experience and the learning.

In the art, music, drama, and physical education classes, students are given teaching experiences in elementary schools. The students collaborate with one other student and partner teach, or teach solo. The students find these experiences authentic in the context that it is they who are doing the actual performing (as opposed to observing). Nerves are always a part of this but that is because they know it is so important since they are teaching real human beings. These performances often captured in photo and video are included in the e-portfolio where students reflect upon their performance and their learning in the performance and the process of lesson preparation.

Portfolio Guidelines

In order for the portfolio to be valuable for the teacher/pre-service teacher, audience, and evaluator there need to be guidelines for the ongoing development of the portfolio. This

begins with clearly defined outcomes (both general and specific) that relate to provincial, institutional, department, and course/class standards. When designing tasks that might go into the portfolio, students are given a set of key indicators that show how the product might become part of the portfolio. Ideally, the design of the task should allow for multiple forms of evidence to promote creativity, leaving an opening for personal representation of their own experiences. "Students can create and own the content, presentation, and meaning of their work" (Chen & Light, 2010, p.vii). For example, some students represent their learning in traditional written formats while others involve their peers in learning activities or use digital tools like Photostory, a tool which allows them to provide visuals and narration of their learning.

Assessment of the portfolio contains criteria/standards/exemplars that focus on "what pedagogy, scaffolding, and best practices will guide what goes into the e-portfolio" (Chen & Light, 2010, p.13). Evaluation includes assessing multiple points, self-reflection, a variety of evaluators (stakeholders) with feedback, and shared expectations for learning (transferability). The design of a rubric is progressive and "provide(s) a robust framework for assessing the many dimensions of learning through and across the curriculum and co-curriculum over time" (Chen & Light, 2010, p.19). Reflection should constitute an essential part of the portfolio where the students undertake thoughtful contemplation to demonstrate understanding of the phenomena that has produced the artifact and how it relates to the required standards. Reflection should contain evidence of transferability and integration of learning thus making the learning and the product authentic.

The rubric used to evaluate the portfolio contains the following categories and expectations:

- *Philosophy statement*: Insightful articulation of beliefs about teaching and learning
- *Resume*: Carefully revised in response to Career Services, error free, logical format
- Personal artifacts (3+): Carefully chosen artifacts and reflection demonstrate unique qualities and learning of the creator
- *Learning artifacts*: Rich reflections provide a context to help the reader understand how the artifact illustrates KSA understanding
- *Summary self-assessment*: Rich reflections upon KSA strengths and areas for growth including clear goals
- *Format, organization, conventions*: Format enhances readability and visual appeal, uses colour, format and images skillfully, organization enhances readability and appeal, carefully edited

The final or overall assessment at the end of the program is based, in part, on the completion of a teaching e-portfolio. Participants are expected to complete their teaching e-portfolio, including an integrated personal philosophy of teaching and learning, by addressing various stipulated topics which address the KSAs.

In our departmental research, we have revisited and reexamined the use of portfolios, particularly how students might use them as evidence illustrating that they have achieved "articulated expectations for quality performance" as set out in the Alberta Education Teaching Quality standard. Since ours is a professional program and the students are ultimately

certified by Alberta Education, the view of our external audience is particularly important. The following recommendations were particularly influential in constructing our model. According to the Association of American Colleges and Universities (in Chen and Light, 2010), assessment should be:

- grounded by the work students are asked to do as part of the undergraduate curriculum
- guided by the aims and outcomes essential to achieve liberal learning anchored in the mission and goals of the local institution;
- consistent with clearly articulated expectations for quality performance at progressively more sophisticated and challenging levels as students move from entry to culminating work;
- focused on our students' best work, not simply minimal or introductory levels of attainment;
- evaluated at multiple points throughout a student's educational pathway;
- communicated in meaningful ways to students, faculty, and external audiences concerned with quality student learning. (p. v)

We believe our portfolio addresses these recommendations because the students begin the portfolio in first year, revise it each year in response to feedback, rise to progressively more challenging expectations and learning outcomes throughout the program, and ultimately showcase their best work to multiple audiences at the culmination of their capstone course.

Summary

The educational faculty at MRU are committed to the position that the portfolio we are developing for use throughout our educational program can and should count as evidence of teacher candidate learning, and ultimately of required teaching competence. The portfolio component in Mount Royal's Bachelor of Education Program is more than just a component, in a larger process, it is, in fact a seminal document – one with which the individual student becomes acquainted during the initial courses in the program and which then becomes the repository of the individual teacher candidate's experience and learning throughout the entire four or five years of their studies. The structure of the final portfolio has been designed with the whole of the degree process in mind. Its tendrils reach out throughout the entire planned curriculum, touching on a cross-section of various required and optional elements. Rather than being a mere component within the program, the portfolio has been constructed as more of an umbrella designed to help shape and guide the whole educational journey of the individual teacher candidate. It has been constructed to provide an opportunity for the students' reflect upon their achievement of the KSAs. It is an evolving, living document which outlines the individual candidate's learning and life experience, a dynamic and integral map sketching the educational journey they have been engaged in from their entry level comprehension of the teaching-learning process, a journey which continues through their course work, volunteer time

in the schools, exams, assignments, and so forth, and which culminates in their final practicum level understanding of what it means to be a professional teacher.

It should be noted that future research is designed to examine individual teacher candidates' perceptions of the portfolio process and how candidates perceive their success in attaining the requisite level of knowledge and understanding of such elements as the KSAs, teaching qualities, and commonplaces of learning. We believe that such input will go far in helping us to not only further refine the program but also to refine the ongoing role of the teaching portfolio itself. If teacher candidates identify an area for growth such as differentiating instruction for diverse learners, we can provide more of those experiences in our courses to better meet those perceived needs. The artifacts included within the portfolio demonstrate personal/professional self-reflection, self-analysis, critical thinking, meta-cognition, self regulated learning of the teacher candidate.

The portfolio document is an invaluable asset which allows teacher candidates to help demonstrate their teaching competence to both their professors and the various external stakeholders. Furthermore, it will not only provide the faculty with a valid means of assessing both our individual teaching candidate's overall of performance and evidence of the individual candidate's understanding of the connection between classroom theory and actual teaching practice, but will also serve to provide teaching candidates with a foundational document which can help to document their learning and professional growth throughout their careers.

References

Alberta Assessment Consortium. (2006). *A framework for student assessment*. Edmonton, AB: Alberta Assessment Consortium.

Anderson, R. S., & DeMuelle, L. (1998). Portfolio use in twenty-four teacher education programs. *Teacher Education Quarterly*, *25*(1), 23-31.

Biggs, J. (2006). *Teaching for quality in the university*. London, UK: Open University.

Chen, H. L., & Light, T. P. (2010). *Electronic portfolios and student success: Effectiveness, efficiency and learning*. Washington, DC: Association of American Colleges and Universities.

Government of Alberta. (1997). *Teaching quality standard applicable to the provision of basic education in Alberta*. Available online at: http://education.alberta.ca/department/policy/standards/teachqual.aspx

Hounsell, D. (2007). Towards more sustainable feedback to students. In D. Boud & N. Falchikov (Eds.), *Rethinking assessment in higher education: Learning for the long term* (pp. 101-113). New York, NY: Routledge.

Kilbane, C. R., & Milman, B. (2003). *The digital teaching portfolio handbook*. New York: Pearson Education.

Maki, P. (2004). *Assessing for learning: Building a sustainable commitment across the institution*. Sterling, VA: American Association for Higher Education.

Miles, R. Ed. (1998). *Teaching music through performance in band*. Chicago, IL: GIA Publications.

Naested, I. (1993). *Educational innovation at the Lester B. Pearson High School in Calgary, Alberta, Canada*. Unpublished doctoral dissertation, Brigham Young University, Provo, UT.

Naested, I., Povtin, B., & Waldron, P. (2004). *Understanding the landscape of teaching*. Toronto, ON: Pearson, Prentice Hall.

Oxford Concise Dictionary. (1990). *Oxford concise dictionary*. Oxford, UK: Clarendon Press.

Pugach, M. (2009). *Because teaching matters: An introduction to the profession* (2nd. ed.). Hoboken, NJ: John Wiley and Sons.

Smits, H., Wang, H., Towers, J., Crichton, S., Field, J., & Tarr, P. (2005). Deepening understanding of inquiry teaching and learning with e-portfolios in a teacher preparation program. *Canadian Journal of Learning and Technology*, *31*(3), 111-119.

Trump, L., & Baynham, D. (1961). *Guide to better schools*. Chicago, IL: Rand McNally and Company.

Winsor, J. T., & Ellefson, B.A. (1995). Professional portfolios in teacher education: An exploration of their value and potential. *The Teacher Educator*, *31*, 68-74.

Zander, R. (2000). *The art of possibility*. Boston, MA: Harvard Business School Press.

APPENDIX

In order for a graduate of a pre-service teacher education program in Alberta to obtain an Interim Teaching Certificate they must meet the Provincial Teaching Quality Standard by demonstrating an understanding of the following interim knowledge, skills and attitudes (KSAs):

> Teachers who hold an Interim Professional Certificate are expected to demonstrate consistently that they understand:
>
> a) contextual variables affect teaching and learning. They know how to analyse many variables at one time, and how to respond by making reasoned decisions about their teaching practice and students' learning;
> b) the structure of the Alberta education system. They know the different roles in the system, and how responsibilities and accountabilities are determined, communicated and enforced, including the expectations held of them under the Certification of Teachers Regulation, A.R. 261/90 as amended and their school authority's teacher's evaluation policy;
> c) the purposes of the Guide to Education and programs of study germane to the specialization or subject disciplines they are prepared to teach. They know how to use these documents to inform and direct their planning, instruction and assessment of student progress;
> d) the subject disciplines they teach. They have completed a structured program of studies through which they acquired the knowledge, concepts, methodologies and assumptions in one or more areas of specialization or subject disciplines taught in Alberta schools;
> e) all students can learn, albeit at different rates and in different ways. They know how (including when and how to engage others) to identify students' different learning styles and ways students learn. They understand the need to respond to differences by creating multiple paths to learning for individuals and groups of students, including students with special learning needs;
> f) the purposes of short, medium and long term range planning. They know how to translate curriculum and desired outcomes into reasoned, meaningful and incrementally progressive learning opportunities for students. They also understand the need to vary their plans to accommodate individuals and groups of students;
> g) students' needs for physical, social, cultural and psychological security. They know how to engage students in creating effective classroom routines. They know how and when to apply a variety of management strategies that are in keeping with the situation, and that provide for minimal disruptions to students' learning;
> h) the importance of respecting students' human dignity. They know how to establish, with different students, professional relationships that are characterized by mutual respect, trust and harmony;

i) there are many approaches to teaching and learning. They know a broad range of instructional strategies appropriate to their area of specialization and the subject discipline they teach, and know which strategies are appropriate to help different students achieve different outcomes;
j) the functions of traditional and electronic teaching/learning technologies. They know how to use and how to engage students in using these technologies to present and deliver content, communicate effectively with others, find and secure information, research, word process, manage information, and keep records;
k) the purposes of student assessment. They know how to assess the range of learning objectives by selecting and developing a variety of classroom and large scale assessment techniques and instruments. They know how to analyse the results of classroom and large scale assessment instruments including provincial assessment instruments, and how to use the results for the ultimate benefit of students;
l) the importance of engaging parents, purposefully and meaningfully, in all aspects of teaching and learning. They know how to develop and implement strategies that create and enhance partnerships among teachers, parents and students;
m) student learning is enhanced through the use of home and community resources. They know how to identify resources relevant to teaching and learning objectives, and how to incorporate these resources into their teaching and students' learning;
n) the importance of contributing, independently and collegially, to the quality of their school. They know the strategies whereby they can, independently and collegially, enhance and maintain the quality of their schools to the benefit of students, parents, community and colleagues;
o) the importance of career-long learning. They know how to assess their own teaching and how to work with others responsible for supervising and evaluating teachers. They know how to use the findings of assessments, supervision and evaluations to select, develop and implement their own professional development activities;
p) the importance of guiding their actions with a personal, overall vision of the purpose of teaching. They are able to communicate their vision, including how it has changed as a result of new knowledge, understanding and experience; and
q) they are expected to achieve the Teaching Quality Standard.

(Government of Alberta, 1997, pp. 1-3)

Chapter 14

The Untapped Potential of Developmental Evaluation in Teacher Education Programs

CHERYL POTH

Initial teacher education programs play a critical role in preparing teachers yet often the programs struggle to maintain relevancy within a dynamic education system. Teacher education programs require a mechanism to respond to emerging innovative classroom policies and practices. A developmental evaluator offers such a mechanism by working in partnership with program decision makers with a focus on supporting ongoing organizational and program development (Patton, 1994, 1997, 1999, 2010). This chapter presents an empirical example whereby the developmental evaluator facilitated discussions and used evaluative logic that in turn impacted programmatic decisions during the redesign and piloting of a multi-section, large-class mandatory assessment course. Implications for future consideration include the potential of developmental evaluation for informing teacher education program review processes are discussed.

Teacher education programs are responsible for preparing teachers yet the effectiveness of programs to maintain relevancy within a changing education system is a major concern (Campbell & Evans, 2000; Darling-Hammond & Bransford, 2007). Among the most pressing concerns is the lack of alignment between teacher education and current policy and classroom practices (Alberta Education, 2009). To that end, teacher education programs require a mechanism to monitor, respond, and integrate emerging innovative classroom policies and practices. The inclusion of a developmental evaluator who would work in partnership with program decision makers to support ongoing program and organizational development offers such a mechanism (Patton, 1994, 1999, 2008, 2010). Developmental evaluation represents a radical shift from traditional program evaluation approaches in that the process is not predicated on pre-established evaluation goals, time constraints, or a detached role for the evaluator. Rather, the developmental evaluator is charged with stimulating discussions and using evaluative logic to facilitate data-informed programmatic and organizational decisions (Gamble, 2006). What remains to be examined is the untapped potential of developmental evaluation for informing the decisions and procedures that guide teacher education program reviews. The chapter begins with a description of developmental evaluation as a useful approach for supporting innovative programs and then following a methodological case study approach (Stake, 1995) presents an instrumental example of how a developmental evaluation informed programmatic decisions within a teacher education program.

 The question of evidence in research in teacher education in the context of teacher education program review in Canada (2 vols., pp. 205-214). Winnipeg, MB: Faculty of Education of the University of Manitoba.

What is Developmental Evaluation?

A distinguishing feature of developmental evaluation is its usefulness for supporting ongoing program and organizational development. This is especially true when the context within which the program and organization operates is a complex environment (Patton, 2010). An environment is considered complex when the solution to the problem the program or organization seeks to solve is uncertain and when there is a lack of consensus among key organizational members about how to proceed. To compare, an environment is considered simple when organizational members can identify what the program activities would look like and how the program activities would consistently lead to the intended program outcomes. A program is considered stable when evidence of a cause-effect relationship is produced, that is, the problem identified by the organization is addressed by the program activities, which in turn produces evidence in the form of anticipated outcomes. Application of complexity principles are emerging in evaluation methods and approaches (e.g., Morell, Hilscher, Magura, & Ford, 2010)

When a program is considered stable, it is assumed that the program is transferable to other similar contexts, that is, the program produces similar outcomes and is considered context-free. A traditional evaluation is useful for stable programs to generate information for either program improvements or judgments related to the program's effectiveness. Once the evaluation purpose is identified as either formative (i.e., improvement) or summative (i.e., decision-making), the primary responsibility of a traditional evaluator is to align the evaluation purpose with the intended use of the evaluation (Scriven, 1967). The need for alignment between purpose and intended use is based on the concept of personal factor, which emerged from an empirical study (Patton, 2008). Patton described personal factor as "the presence of an identifiable individual or group of people who personally care about the evaluation and the findings it generates. Where such a person or group was present, evaluation were used; where the personal factor was absent, there was a correspondingly marked absence of evaluation impact" (p. 66). This idea is that when stakeholders actively seek information from an evaluation then they are more likely to use the findings. In the development evaluation literature what remains to be further operationalized is how evaluators go about monitoring and responding to emerging stakeholder needs.

What would typically occur is that a traditional evaluation would be planned, conducted, and reported with little attention to changes in stakeholders' intended use. The extent to which traditional evaluations are typically deemed useful is directly related to whether the evaluation generates information that responds to the organizations' pre-specified purposes within a pre-specified time line. Traditional evaluators can be either internal or external to the program; both locations have both advantages and disadvantages. Whereas, an external evaluator is presumed to have greater objectivity and credibility, an internal evaluator has the potential to offer superior knowledge about organizational dynamics.

A mismatch can occur when evaluators attempt to conduct a traditional evaluation within a complex environment. In this case, no longer can the program be assumed to be stable, instead the program must adapt to the dynamic elements influencing its context. The result creates a problem for the evaluation process because any changes to program delivery require adapting the evaluation. Thus the challenge for traditional evaluators operating within a complex environment is the shift in thinking related to their role as an evaluator within this

new environment. By definition, the influences in complex environments are non-linear and how a program will adapt and change is unpredictable. As such a developmental evaluation approach requires a shift from assuming predictability and cause and effect to assuming unpredictability and uncertainty. Flexibility in how the evaluator conducts the evaluation process is crucial if the evaluation findings and processes are to remain relevant and meet the emerging informational needs of the organization.

One way for developmental evaluators to gain understandings of the elements influencing a program is to pay greater attention to changes in the program's context. With the aim of informing ongoing development through contributing to the ability for a program or organization to adapt to its dynamic environment, developmental evaluators are tasked with providing organizational members access to up-to-date information with the goal of development. Although initially a developmental evaluator can be considered either an external evaluator, or over time, the developmental evaluator working within a complex context cannot work from a distanced and objective position but rather assumes a position as an integrated and active organizational member. Table 1 summarizes the key characteristics that differentiate a traditional evaluation from a developmental evaluation and builds on the ideas forwarded by Patton (2019).

Table 1: Distinguishing Among the Key Characteristics between Traditional and Developmental Evaluation Approaches.

	Traditional Evaluation	Developmental Evaluation
Purpose	• Improvement (formative) OR • Judgment (summative)	• Program and organizational development
Program	• Stable	• Changing
Timeline	• Fixed	• Fluid and forward looking
Environment	• Stable and manageable	• Dynamic and ever changing
Useful for	• Monitoring program effectiveness and impact	• Exploring possibilities
Evaluator role	• Independent • Distanced	• Part of the development team • Integrated

Maintaining Alignment of Teacher Education Programs with Current Policy and Practices

Reconceptualizing teacher education programs as operating within a complex environment and the program review process itself as non-linear can begin to address many of the challenges faced by teacher educators. One pressing need identified in the literature is better alignment between teacher education programs and current classroom policies and practices (Alberta Education, 2009). Both internal and external elements contribute to the complex environment in which a teacher education program operates and when and how a review process is

undertaken. Among the dynamic external pressures are changes in educational policies and practices and in the current economic situation; available program funding continues to fluctuate. Teacher education programs also encounter internal pressures in the form of individual organizational member's preferences and shifting organizational priorities. Programs will continue to increasingly experience the loss of organizational memory through retirements and personnel changes. Together these interacting and interdependent elements exert pressure and influence programs in unpredictable ways. When a teacher education program is conceived to be operating within a simple environment, the assumption is that what a teacher should possesses today in terms of knowledge, attitude, and skills remains stable in the future. While teacher education programs are under periodic formal redesign at the discretion of the institution, it is logical to assume that small changes are constantly occurring. Thus, teacher education programs are in reality under constant pressure to adapt and to develop in response to changes in educational policies and practices.

I have experienced first-hand the challenges faced by teacher education programs tasked with a program review and implementing recommended program changes at two Canadian institutions. I can attest to the difficulty of bringing about change in teacher education programs when there is little agreement among organizational members as to the required program components. Among the greatest challenges faced by committee members tasked with making recommendations was the lack of available evidence that was considered valid and reliable. For the most part, a systematic process did not exist for gathering and interpreting data from multiple perspectives that would generate information that could be used for real-time discussions to inform improvements. From these experiences, I began to consider the need for increasing the quality and usefulness of the evidence used to make teacher education program decisions.

What is becoming increasingly evident is that teacher education programs cannot be conceived as stable or their operating environments as simple, and that program review processes spanning years or even months are no longer feasible. As a result, traditional evaluations focused on program improvement or decisions simply do not function for a program operating within a complex environment. Instead, the focus should be on continuous program development and innovation in response to changes in policy and practices. The usual gap between completing an evaluation and implementing recommendations does not allow a rapid response to changes in policy and practice. Furthermore, innovation is a key consideration when exploring the use of developmental evaluation within teacher education programs; it is not necessary to reinvent but rather to *continuously develop* a program. In this way, the review process does not become an onerous task undertaken by a few organizational members each decade and the program is better able to maintain pace with changes in the context surrounding the program.

Distinguishing between innovation and invention is important for the present discussion; Roger Martin (2010) describes invention as rare because it produces something new to the world whereas innovation refines what already exists by making it more efficient and useful to society. For teacher education programs, although both innovation and invention in education are crucial, one might argue that a focus on innovation may prove to be more viable for informing programmatic decisions. In other words, predicting what knowledge, skills, and attitudes a teacher might require in the future is less useful than providing a mechanism for monitoring environmental changes and informing programmatic decisions might be considered inventive. Therefore, embedding the use of evaluative logic within the

organizational culture provides an opportunity for supporting ongoing program development and helping teacher education programs to adapt and thrive in their complex environment. A developmental evaluation offers an approach to dynamic teacher education programs and where a focus on development and improving is ongoing.

An Instrumental Example of Course Development

In the following section, interspersed with my first-hand description of the redesign process of the mandatory assessment course (*in italics*) are comments that illustrate the potential usefulness for the role of an internal developmental evaluator during a teacher education program review process. I borrow the term instrumental example from the case study literature because of its usefulness for using the example to understand program review contexts beyond the course described and by studying this example we learn about developmental evaluation. Instrumental is differentiated from intrinsic case study by Stake (2005) where the interest is in the case itself.

In this course I was the course coordinator with responsibility for providing support to instructors and teaching assistants. Over time the team approach to this course emerged from the need to provide students with an equitable experience across multiple sections and the need to optimize course resources. The debriefing meeting highlighted the key indicators that a developmental evaluation was well-suited to the present context involving course development and it began to establish the necessary relationships for success.

> *When I felt a general dissatisfaction during my first term as an instructor of the required undergraduate assessment course, I began to pay greater attention to the anecdotal comments from four course instructors, five teaching assistants, students, administration, and other required course instructors. At the end of the course, I facilitated a debriefing process involving the course instructors and teaching assistants where we discussed our assessment course experiences. Throughout the discussion common themes emerged that were also aligned with the comments I had heard during the term and near the end of the meeting, I shared them. The three themes were: a) activities were not engaging for students, b) content was not relevant to what the students would experience during their practicum, and c) assignments overlapped with the curriculum course assignment focused on creating lesson plans. I then invited feedback and my impression was that the instructors and teaching assistants agreed that the course required attention and I sensed their sincere desire and even a shared interest to offer a "good" assessment course. In response to my proposal to undertake a redesign of the course, as a group they voiced willingness as well as concerns related to the potential time and effort that would be involved. I thanked the group for their time and advised them I would return with a plan that considered their concerns.*

The key indicators for a developmental evaluation included purpose, timing, and emerging course goals. We had agreed that our purpose was not to improve the current course or to do away the course altogether but rather to take time to develop a new course. No time constraint was posed because we knew it would take time to develop a clear idea of what the course should look like. In addition, the meeting served as a means of gauging willingness to be involved in the process and to establish a working relationship. The focus on establishing trust was important because: "No matter how rigorous, systematic, and elegant the methods, if the relationship between evaluator and those developing an innovation doesn't work, the full

potential of developmental evaluation won't be realized" (Patton, 2010, p. xiii). As an internal developmental evaluator, I saw potential for building on the relationships that had been fostered throughout the term and on my knowledge of the course gained as an instructor and course coordinator.

> *Following the initial meeting with instructors and teaching assistants, I thought about all the organizational members who could influence or be influenced by the course design. There were two reasons for this step; first I needed to understand the constraints in which the course operated and second, I wanted to figure out who would be interested in the course development process as it unfolded. In addition to those involved in the actual course delivery (an administrator, four instructors, five teaching assistants, and several hundred students), I identified organizational members involved in the larger teacher education program as the multiple instructors of other courses and personnel from local school boards and professional associations. To confirm my understanding of each organizational member's interest in the course as well as to begin to identify how he or she might influence the course, I sought to meet with each person individually. What I learned was that each organizational member saw himself or herself as exerting different influences on the course. For example, the administrator identified her role as managing the logistical constraints related to the course. She categorized them as: those anticipated to remain the same (i.e., stable influences) and those that would probably change (i.e., dynamic influences). The stable influences included time allotment within the program (36 hours), method of course delivery (16 large class lectures), enrollment numbers (1400 students per year) across 9 sections, resources allocated (hours of teaching assistant support, number of instructors). Internal sources of change were identified as course personnel and participants, and although a level of continuity of course instructors and teaching assistants would be sought, some change would have to be expected. Among the external sources of change identified at the local and Provincial levels by organizational members were; possible changes, within the University, to the larger teacher education program that might have a cascade effect on all courses as would decisions anticipated about the platforms for electronic delivery of course resources. At the Provincial level, any changes to the mandatory knowledge, skills, and attitudes prescribed for licensure would impact the course content, as would changes to classroom assessment policies and local practices.*

The process of identifying program stakeholders was essential during a developmental evaluation for two reasons; first to continue to develop relationships and second, to identify sources of change and stability. In this way, the developmental evaluator is able to monitor environmental changes and at the same time to continue establishing relationships and avenues for sustained communication.

> *The next step was a meeting with instructors and teaching assistants to communicate the findings derived from meetings with the organizational members. When I proposed a meeting, the teaching assistants were busy with their own coursework so I suggested a meeting among the course instructors to begin conceptualizing how the redesign process might unfold. I told the teaching assistants that they were an important part of the process and would have the opportunity to contribute to the process. At the instructors' meeting, we reviewed the summary of the program constraints and possible influences and I facilitated a discussion that explored additional influences I had considered. We then began to talk about our vision for the course and we quickly realized that through our conversation we had identified many of the principles that might guide decisions and ultimately the course development. We also agreed, although we needed to meet the current requirements for licensure and would align to current practices that we needed to embed flexibility within the course to be able to integrate emerging assessment literature, policy, and practices as we*

> *went forward. We also identified a need to gather more detailed data from those involved in the course as well as from the literature to better understand how we might proceed with the course redesign. I created a summary of the meeting that was sent to the teaching assistants, along with an invitation to take part in this process, which was eagerly accepted.*

Maintaining avenues of communication is an important consideration when building relationships within a developmental evaluation. This is especially important when sub-groups of a larger group are meeting; for example, when the instructors met, we reported back to the larger group the conversations and subsequent decisions. As the developmental evaluator, I facilitated discussions in a way that both explored the possibilities as well as established some boundaries for our work.

The decision to gather data in a manner that was systematic allowed for reliability and confidence in the data to be enhanced and in turn useful for programmatic decisions. It is also important to respect the time and energy of individual organizational members and a summary can provide a useful communication tool.

> *During the following term, organizational member participated in aspects of gathering and interpreting data using several different methods; questionnaires with students enrolled in the course, informal meetings with the administrator and other course instructors, and exit interviews with students as they completed their program. For each data source, a summary of the preliminary analysis was shared with the instructors and teaching assistants and time was allocated for a collaborative interpretation of the data and preliminary discussion about how individual activities would be informed by our findings. Changes to course activities were based on combining the understandings along with the literature related to effective instructional practices. The activities were purposefully focused on an instructional approach that would model high-quality assessment practices and provide opportunities for students to experience, discuss and build skills related to developing, administering, scoring and communicating assessment results. One of the consistent themes from the data was the lack of experience with some of the new ways on conducting assessment; specifically students were not familiar with those practices reflective of the shift from a culture of testing to a culture of learning. Students reported limited experience with assessments focused on supporting students' learning. Instead their experiences had been largely restricted to traditional assessments where opportunities to receive feedback prior to scores are assigned. These findings were important because integrating formative and summative classroom assessments improves students' motivation (Hargreaves, 2005; Wiliam, Lee, Harrison, & Black, 2004). Thus, we needed to rethink how the activities both met the knowledge, skills and attitudes that were mandated by provincial licensure requirements as well as were reflective of what the students would be expected to implement when they are teachers. The activities were subsequently piloted and refinement was informed by data gathered during the implementation. As we began to implement the activities, we found that many of the organizational members from whom we had previously sought their perspectives expressed interest in our redesign process.*

The opportunities for collaborative data interpretation were important for fostering relationships and for real-time use of the data for decision making related to activity design and refinement. Also important was that we embedded opportunities for students to contribute to the refinement of activities and we were pleasantly surprised that students appreciated being engaged in the process. Finally, we found that new relationships were built with instructors from other courses as they heard about our work. The shift in organizational culture is

evidenced by time taken during meetings to talk about the present course and the possibilities for the future.

> *As we move forward as a team of instructors and teaching assistants we continue to refine our activities and develop the course. Each term we continue to hold a debriefing meeting, gather data from students and others, and make data-informed programmatic changes. I am happy to report that the only "losses" to our team has been an instructor on maternity leave and teaching assistants who have graduated. What I do see is a wonderful manner in how the team functions; the instructors collaborate with the teaching assistants and the ownership that the teaching assistants have developed. Evidence of the impact on instructors include, "Teaching assistants continue to push my thinking and ideas and keeps the course under constant development." Not only are the instructors impacted but among the positive comments from teaching assistant are, "more opportunities for learning and developing leadership" and "I feel empowered by contributing my ideas." Finally, I have had many emails from students after the term is finished who want us to know that the course was useful for them. The student perception of high satisfaction with a high standard of quality of instruction was provided by the end of course evaluation comments.*

As a team, we have come a long way and although some changes in personnel in the instructors and teaching assistants has occurred, the message that I consistently hear is that the developmental process provides opportunities for everyone to participate in instructional decision-making. From the initial experience of beginning the course redesign to the present where instructors talk about having a better idea of the dynamic influences on the course, which allow us to better anticipate for change. By sustaining communication with the other course instructors we have developed stronger ties between the courses through a better understanding of what we are each doing in our courses.

Implications for Teacher Education Review Processes

Many teacher education programs already use a traditional evaluation approach to measure impact and inform improvements. In this chapter, I propose developmental evaluation as a preferred alternative because of the complex environment in which teacher education programs operate. A traditional evaluation approach assumes linearity in the process and its success is based on producing an end product whereas developmental evaluation is iterative and its success is based on building and sustaining relationships. My dual role as a developmental evaluator and course instructor in the example highlighted the potential during a teacher education program review of an internal organizational member facilitating discussions as a form of organizational self assessment. I believe that the dual role allowed me to bring credibility as an instructor and evaluator to the team. This function could easily be generalized to other contexts including committee membership but that the role as internal to whatever is being reviewed is important. Table 2 provides a summary of the differences between the traditional and developmental evaluation approaches at each stage of an evaluation.

Table 2: Contrasting the evaluation stages in traditional and development evaluation approaches

	Traditional Evaluation	Developmental Evaluation
1.	Identify purpose and intended use	Identify appropriateness of purpose and context for developmental evaluation
2.	Identify stakeholders	Identify stakeholders and contextual influences
3.	Conduct the evaluation	Gather data to inform decisions and remain open to opportunities
4.	Evaluation dissemination	Iterative data integration and data collection
5.	Return to step 1	Identify issues to continually investigate

Shifting to a view of teacher education programs as continually evolving may help us to provide programs that are reflective of current assessment policies and practices. A new approach to the teacher program review process is overdue and rather than reducing the program to its components, an inquiry based process captures the experiences to allow the program strengths to be fostered and the weaknesses to be addressed in a way that optimizes resources. What developmental evaluation offers is a mechanism for collecting real-time data and working collaboratively with key organizational members to make data-informed programmatic decisions that respond to needs arising in a complex environment. Developmental evaluation requires a commitment from those involved but in return offers transparency in the process and opportunities for sustained organizational learning.

References

Alberta Education (2009). *The Alberta student assessment study: final report*. Retrieved from Alberta Education: http://education.ualberta/department/ipr.aspx

Campbell, C., & Evans, J. A. (2000). Investigation of preservice teachers' classroom assessment practices during student teaching. *The Journal of Educational Research*, *93*, 350-55.

Darling-Hammond, L., & Bransford, J. (Eds.) (2007). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass.

Gamble, J. (2006). *Emerging learning about developmental evaluation*. (J. W. McConnell Family Foundation) Retrieved from www.mcconnellfoundation.ca/utilisateur/documents/EN/Initiatives/Sustaining%20Social%20Innovation/Emerging_learning_about_Developmental_Evaluation.pdf

Patton, M. Q. (1994). Developmental evaluation. *Evaluation Practice, 15*, 311-319.

Patton, M. Q. (1999). Organizational development. *Canadian Journal of Program Evaluation, Special Issue,* 93 -113.

Patton, M. Q. (2008). *Utilization-focused evaluation: The new century text* (4th ed.). Thousand Oaks, CA: Sage.

Patton, M. Q. (2010). *Developmental evaluation*. Thousand Oaks, CA:

Martin, R. (2010, June). *What is innovation, really?* Retrieved from the Institute for Competitiveness & Prosperity at www.competeprosper.ca/index.php/work/research/#what_is_innovation_-_really

Morell, J., Hischer, R., Magura, S., & Ford, J. (2010). Integrating evaluation and agent-based modeling: Rationale and an example for adopting evidence-based practices. *Journal of MultiDisciplinary Evaluation, 6* (14) 32-54.

Stake, R. (1995). *The art of case study*. Thousand Oaks, CA: Sage.

Chapter 15

Reflecting on Hegemonic Structures in Teacher Education Programs Through the Use of Empirical and Historical Research Studies

JÉRÔME PROULX & ELAINE SIMMT

In this paper we discuss two specific structures in teacher education programs that we argue are hegemonic: (1) the nature of discipline-specific courses and their location in the university for secondary school teachers, (2) the compartmentalization of discipline, methods, and pedagogy courses in teacher education programs (at the elementary and the secondary levels) and assumption that teachers will integrate the knowledge developed in these various courses when teaching. There is growing evidence from research that questions these deeply engrained structures. As we discuss these hegemonies, we use historical research and literature from contemporary research to illustrate the pervasive beliefs and practices that appear to be entrenched in our common sense views about teacher education, through inserting a number of "snapshots." This paper raises issues about what is and can be used as research evidence in teacher education, as well as the challenges that new research findings raise for teacher education structures and programs. We conclude the paper pondering the question: are we as teacher educators ready to question the structures and well-established programs we have in our institutions?

Introduction

In his 1999 paper, Zeichner asserts that most of what we do in teacher education (course content and program structures) is done on the basis of our own experiences and beliefs as teacher educators. We think this phenomenon should create tension for teacher educators who themselves conduct research. After all, research studies are intended to document and theorize the objects, relations, structures and processes of teacher education and inform the community about the very things we do – prepare teachers. As teacher educators we assert that the community must ask how is it that research informs the development of policies, programs, and teaching practices. In discussing traditional instructional practices, Battista (1999) is bold in his challenge of practices that ignore research. Indeed he almost goes as far as suggesting that ignoring the research is tantamount to malpractice.

> How would you react if your doctor treated you or your children with methods that were 10 to 15 years out-of-date, ignored current scientific findings about diseases and medical treatments, and contradicted all professional

 The question of evidence in research in teacher education in the context of teacher education program review in Canada (2 vols., pp. 215-229). Winnipeg, MB: Faculty of Education of the University of Manitoba.

> recommendations for practice? It is highly unlikely that you would passively ignore such practice. Yet that is exactly what happens with traditional mathematics teaching, which is still the norm in our nation's schools. (p. 1)

We as university-based teacher educators are sensitized to the importance of research and use it to inform our teaching practices (this book being a good case in point). However, how do we as an educational research community use research when we review and reform teacher education programs? Our personal experience with program review has caused us to wonder about this usage. Is the research acknowledged, consulted and taken into account to guide and orient our program structures and curriculum? On one hand, we might ask if we teacher educators are not at risk of "malpractice" when preparing teachers with programs and courses that lack strong support from the research. On the other hand, we believe that caution must be exercised when we make claims about what research can actually do and help us think about. Hiebert (2000), a mathematics education researcher, reminds us that

> research can be a powerful tool for making informed decisions in mathematics education, but it can never answer questions that have more to do with *values and priorities* [italics added] than with the likelihood of effects. Failure to recognize the appropriate role of research leads to false optimism or disillusionment. To harness the real power of research and use it wisely, it is essential to understand both its limitations and its promise. (p. 436)

In the last couple of decades we have witnessed rapid growth of research in teacher education (with the establishment of scientific journals, research conferences, research programs and grants, etc.). We believe this growth is not without consequence: these ever growing research findings have the potential to help us reflect on and critique teacher education, as well as assist us in questioning our taken-for-granted practices, programs, and systems. The taken-for-granted aspects of teacher education are specifically what we aim at exploring in this paper. Their existence in our teacher education programs and practices leads us to perceive them as representing hegemonic structures in teacher education. When we say "hegemonic," we understand it in terms of Gramsci's work:

> By hegemony, Gramsci meant the permeation *throughout* society of an entire system of values, attitudes, beliefs and morality that has the effect of supporting the status quo in power relations. Hegemony in this sense might be defined as an 'organising principle' that is diffused by the process of socialisation into every area of daily life. To the extent that this prevailing consciousness is internalised by the population it becomes part of what is generally called 'common sense' so that the philosophy, culture and morality of the ruling elite comes to appear as the natural order of things. (Boggs, 1976, p. 39, cited in Burke, 1999/2005)

Thus, the purpose of our paper is to highlight the presence of hegemonies in teacher education programming and the issues and challenges they present for program reform. As a way of discussing hegemony in teacher education programs, we offer two commonsensical views that appear to be rarely questioned, but are supported and reinforced through various teacher

education program structures: (1) the vital importance of disciplinary knowledge taught in the academic departments and (2) the need to compartmentalize disciplinary content from curriculum and instruction, from pedagogy, and from the history and philosophy of education.

We consider both hegemonies in relation to the research available and the research that might still be needed. We ask how and what research can be introduced in teacher education program reform such that it challenges these hegemonies. As we discuss these hegemonies, we use *historical research* to illustrate the pervasive beliefs and practices that appear to be entrenched in our common sense views about teacher education. We do this through inserting a number of anecdotal or historical "snapshots" from a particular Canadian context. It offers a documentary of how current teacher education programs and structures have become what they are and how they continue to persist in spite of research on teaching and learning that call into question some of those programs and structures [those appear in various framed boxes woven throughout our discussion]. We believe that the confrontation, awareness and intertwining of field-based research and historical studies help us understand and unpack the presence of hegemonies in teacher education, as well as the role that research, and more precisely research evidence, may play in teacher education program decision making and reform.[1] Although we point to these problematic practices and structures in mathematics teacher education (see footnote 1), the work of others can be used to demonstrate how the hegemonies are maintained within teacher education more broadly (see, e.g., the work of Britzman, 1991; Feiman-Nemser, 2001; Lortie, 1975).

A First Hegemony: Preparation in the Discipline

> An effective teacher education program ensures that beginning teachers have sound knowledge of *subject matter* [italics added], literacies, ways of knowing, and pedagogical expertise. (Association of Canadian Deans of Education, n.d., p. 5)

As the Canadian Deans of Education suggest, developing sound knowledge of subject matter in pre-service teachers is a critical goal of teacher education programs. Whereas there is strong support for such a goal (since it reflects both shared values and pragmatic implications), it is what the "Deans" do *not say* that cause us to pause and reflect. They do not say, e.g., anything about how that sound knowledge might be brought about or who is responsible for ensuring it be brought about. As we reflect on the teacher education programs across Canada we note that this subject matter knowledge (disciplinary knowledge) is primarily the responsibility of the disciplinary faculties and departments and it is left to professors in those areas to teach that knowledge to future teachers. Hence the first hegemony that we identify raises issue with the nature of the discipline knowledge courses (e.g., English, history, mathematics, physics) for secondary school teachers and the location of responsibility for those courses. What was not said in the "Deans" message is that in Canada most teacher education programs involve 1-2 years of post-baccalaureate work in a faculty of education. In a couple of provinces it is also

[1] Note that as a way of discussing the ideas we put forth, be it research available or historical pieces, we use illustrations and examples taken from our own field of expertise, that is mathematics education research. These are used only as a matter of illustration, since the arguments can be made concerning the other disciplines as well.

possible to study a 4-year Bachelor of Education. In those programs, prospective secondary school teachers take up to half of the credits (i.e., 2 years) of the program in their major and minor disciplines (University of Alberta is an example).

That a teacher needs preparation in the discipline to teach (e.g., English, history, mathematics, physics) is a notion one could hardly dismiss. But the assumption persists that this preparation needs to be provided by departments whose role is it to prepare specialists (literary critics, historians, mathematicians, physicists) in the disciplinary fields (see Framed Box 1), in spite of research dating as far back as the 1970s which questioned that relationship extensively. In fact, most of the current program structures for preparing secondary school teachers in their discipline have remained unchanged in regard to the discipline preparation since the origin of the baccalaureate in education (see Framed Box 2).

Framed Box 1. Disciplinary knowledge for teachers

In the early 2000s, upgrading of disciplinary knowledge for secondary school teachers was offered by a large urban school district in Alberta for its teachers who were teaching mathematics but did not have a university background (mathematics specialization) for it. That school board provided support for teachers to take up to six half-year courses in university mathematics (see Liu, 2000), but not in curriculum or instruction. Two of the mathematics courses were specifically designed for teachers by a department of mathematics and addressed content such as higher arithmetic, elementary algebra, and problem solving. The remaining credits were to be accumulated from selecting from the courses secondary mathematics minors took in the university's existing program. Some time into the initiative the school district's program administrators had a change of heart about the need for mathematics courses specifically and negotiated with the Faculty of Education to offer two courses that would examine and discuss the curriculum for high school mathematics.

Framed Box 2. Historical division of responsibility for the teaching of teacher knowledge

By 1945 the Faculty of Education at the University of Alberta had been established. Courses in the content areas were offered by the Faculty of Arts and Sciences, and courses in education were offered by the Faculty of Education. [There is an exception to this in the fine arts because there were no academic courses in the fine arts at the university. Hence the Faculty of Education offered those content courses (Chambers, 1978, p. 47)]. Significantly, with respect to the teacher education program, the relationships among the profession, the university and the departments within the university at the time of founding the Faculty of Education persist to this day.

This persistence of disciplinary knowledge defined and taught outside of faculties of education today (see Framed Box 3) is remarkable given there has been educational research that questions the value of such course work for pre-service teachers. In regard to the preparation of mathematics teachers, research studies have shown that the emphasis on the formal nature of the mathematics in most academic mathematics courses may have the detrimental effect of reinforcing the abstract and technical aspects of mathematics in teachers'

understanding of concepts as well as in their teaching (Ball, Lubienski & Mewborn, 2001; Cooney & Wiegel, 2003). The research suggests that this can lead to serious difficulties in teachers' ways of making mathematics comprehensible to students (Thompson & Thompson, 1994, 1996; Nathan & Koedinger, 2000; NRC, 2001). While one strength of academic mathematics is to "compress" mathematical ideas so they are more powerful and easier to use, it is actually the opposite that appears relevant for teaching school mathematics to students (Adler & Davis, 2006; Ball & Bass, 2003; Moreira & David, 2005, 2008). In order to foster students' mathematical understandings, teachers have to be able to unpack, dismantle and decompress mathematical concepts to allow the meanings and subtleties hidden within their compact structure to emerge, as mathematics teaching practices require a return to the concepts' underlying meanings in order to promote robust mathematical comprehensions in students (Bednarz, 2001; Brousseau, 1998; Ma, 1999). This represents understandings and skills outside of the focus of academic mathematics. Through the insistence on formalism and abstraction, studies in university level academic mathematics give little focus to developing the knowledge teachers will use in their professional practice.

Framed Box 3. Reform that doesn't reform disciplinary knowledge for teaching

The emphasis on disciplinary knowledge taught in the academic departments is embedded in the structure of the university programs. In the late 1960s the Faculty of Education at the University of Alberta reviewed its programs and introduced a "component model" for teacher education. That program was made up of six components: specialization, "non-education", curriculum and instruction (CI), basic education, practicum and "free" electives. (Interestingly, these are reminiscent of the ones in the 2010 statement on teacher education from the Association of Canadian Deans of Education.) All students would study in all six components but there would be differences in weightings among the various program routes.

> For example, students intending to be elementary teachers would have a heavier CI component; aspiring secondary teachers would have more "free options" which could be used, say to strengthen their content mastery in a second teaching area. The program as implemented required most students to spend at least 50% of their time in studies outside the Faculty; students on the secondary route were encouraged to spend as much as 75% of their time in studies outside of the Faculty (Mac Intosh, 1987, p. 15)

These proportions exist today in the University of Alberta program for secondary students. More recently (over the last four years) a review was conducted and significant (research-based) reforms have been proposed for the curriculum of the Bachelor of Education. Those reforms impact between 48 (Secondary Education) and 57 (Elementary Education) of the 120 credits needed for the degree. The remaining credits are taken in the disciplines offered by the Faculties of Arts and Science. (There are also possibilities students take discipline-related courses in business, agriculture, forestry and home economics and physical education.) It is significant to our discussion to note that the disciplinary courses taken by

students in faculties (outside of Education) were not examined in the review process and are not included in any of the proposed changes.

Another important concern raised by research is the way in which the academic mathematics courses are taught – primarily through modes of lecturing and the exposition of mathematical knowledge (Bauersfeld, 1998; Burton, 2004) . The habits and ways of doing mathematics developed in these courses are more about "standardized knowledge" than about participation in a *process of learning,* which reflects the work teachers do (Framed Box 4). Bauersfeld (1998) believes we overvalue the positive effect and importance of academic mathematics preparation by introducing teachers to a body of objective knowledge (where mathematics is an epistemological absolute), and underestimate the need for teachers to be immersed in a practice of doing mathematics and a culture of mathematics. Participating in a mathematical practice is to enter into a practice that uses mathematics, that shares and negotiates its meaning, and that generates ideas, questions, norms, and ways of doing in mathematics; a practice where mathematics is created and alive. Lortie's (1975) seminal observation that the years we spend in school leave a powerful and persistent understanding of teaching is relevant in this context. Not only do pre-service teacher candidates have twelve years of experience in school mathematics, they have an additional two to four years experience with disciplinary teaching at the tertiary level. Feiman-Nemser (2001) cautions, "These taken for granted beliefs may mislead prospective teachers into thinking that they know more about teaching than they actually do and make it harder for them to form new ideas and new habits of thought and action (p. 1016).

Framed Box 4. Historical connection between university curriculum and high school curriculum

> In 1951, the Alberta minister of education and the president to the University of Alberta issued a joint statement saying coordination between "high school teaching of academic subject with university teaching in the first year" was particularly important in two fields: foreign language and mathematics (Sigurdson et al., 2003, p. 205).

The selection of courses offered in contemporary high school can be traced back to the late 19th century in Canada and the 18th century in Europe (Berry, 1963). The content of mathematics courses can be further traced back to 18th century France where mathematics was foundational to the education of an elite engineering corps (Archibald, 2008). How do the content and the need to teach the particular content for the elite or for university preparation contribute to the hegemony of what counts as disciplinary knowledge for teachers and who offers that disciplinary knowledge?

In those two years of post-baccalaureate work (or two years of professional studies in four year degrees), time is dedicated to the professional knowledge of the field: pedagogical content knowledge, pedagogical knowledge, knowledge of the learner, assessment and educational foundations, etc. Disciplinary knowledge (content knowledge) is not taught explicitly. When reform does not reform a particular element of teacher education, we think it is worth a second look. What if research suggests that these practices are not effective, or that they are not meeting our goals? What then stands in the way of reform? We point to the assumed need for disciplinary knowledge and the responsibility for it given to the disciplinary faculties as hegemonic precisely because it is viewed as common-sense and seems to "slip under the radar" as something to be discussed when reforming programs (see Framed Box 5). There are a few questions we might consider in regard to this absence of attention on content knowledge. Do people believe: (1) that although disciplinary knowledge is foundational knowledge for teachers it is not "professional" knowledge?; (2) that content knowledge is outside of the expertise of faculties of education?; (3) that faculties of education do have such expertise but they lack the resources to deliver this disciplinary knowledge?; (4) that professors in all the disciplinary faculties / departments have responsibility for and are teacher educators? Each of these questions points to how the hegemony can persist, intertwined in a world of values, beliefs and a history.

The body of research in mathematics teacher education noted above concerning academic mathematics is not exhaustive but is accessible to teacher educators. It leads us to question the value teacher educators place on the discipline preparation offered in the discipline departments. We wonder: what sort of research evidence is needed such that it would be taken up by, and would be convincing for, teacher educators or policy makers to inform program reviews and program reform? Is there a need for a more exhaustive body of research, one that would be overwhelmingly present and convincing? Does the field of teacher education (as a practice) look for more abundant evidence or for more precise evidence?

Framed Box 5. The persistence of demand for disciplinary knowledge

In the 1999 annual meeting of the Canadian Mathematics Education Study Group, a working group dedicated to discussing issues in teacher education explored a variety of scenarios for teacher preparation. In spite of a challenge to the group to imagine new possibilities for teacher education (without the constraints of an actual program) the mathematics educators present (mathematics teachers, graduate students in mathematics education, mathematicians, mathematics teacher educators and educational researchers) did not question the need for university course work or degree in mathematics as a prerequisite to teacher education (based on the written report). In that scenario, the teacher educators and mathematicians suggested that "mathematics be grouped into two sections: fundamental/academic mathematics and the mathematics related to the teaching program" (Evans, Gattuso & O'Shea, 1999, p. 103). Whereas fundamental/academic mathematics occupies normally 50-65% of the degree, it was however reduced to 15% of it.

Independent of the quality or quantity of the research studies conducted and evidence gathered to date, we also wonder how is it that as a community we have seldom questioned the demand for discipline specific courses in teacher education? How is it that the demand for those courses offered by the disciplines remains almost identical in most programs across the country? These are stimulating questions when one considers issues of research evidence and its potential impact on the practice of teacher education. We posit that it is the hegemonic nature of this situation — that is, the preparation of teachers tightly associated with preparation in the academic discipline — that helps us understand how those questions have not been asked. We are not suggesting that the activities, programs and work promoted in most teacher education programs are necessary or unnecessary, sufficient or insufficient, good or bad, etc. Rather we use this example to exemplify how, in spite of working in an environment that includes research, research is often not explicitly referenced or used in teacher education program development. Instead, traditions, economic factors, political activities, power relationships, and personal experience and ideas are seen to permeate and strongly influence our attempts to reform teacher education (Framed Box 6). There are issues for which our value system comes into play; these are the questions that relate to our intentions and goals. Once we decide on our intentions and goals (which are also subject to hegemonies), then research can inform our programs (reflectively, research can help us examine our values). Again, we ask: what sort of evidence would be compelling for people who make decisions for program structures and orientations in teacher education? Research (empirical, theoretical and historical, as we posit here) is needed to untangle and develop arguments that would question these ideas. But would that be sufficient to challenge the hegemony of disciplinary knowledge in teacher education programs?

Framed Box 6. A university education for teachers

In Chambers' (1978) history of the Department of Secondary Education at the University of Alberta, he shares how the Alberta Teachers' Association (ATA) was a strong advocate for a college of education to be part of the University of Alberta. "Almost from its founding in 1918, to enhance professional status it [ATA] had pressed for the establishment of a Faculty of Education in Alberta's only university, initially for the preparation of high school instructors, ultimately for the professional education of all teachers" (p. 10). The teachers themselves called for university education for their profession rather than the so-called trade education of the normal schools. Professional education through the university would include disciplinary academic content that was not taught in normal schools which focused on the more technical side of teaching. "Popular wisdom had it that normal school or teacher college graduates (and instructors) didn't know much, but they surely knew how to teach it. In contrast, university alumni (and professors) knew a great deal, even if they couldn't teach for sour apples—and usually they couldn't, or so it was believed" (p. 30).

A Second Hegemony: The Compartmentalization of Program Components

> It is ACDE's view that programs of initial teacher education should involve the development of situated practical knowledge, pedagogical knowledge, and *academic content knowledge* [italics added], as well as an introduction to research and scholarship in education. Essential to that development is a form of induction into the profession as well as ongoing communication with professional peers. (Association of Canadian Deans of Education, n.d., p. 5)

The *second* hegemony we discuss concerns the compartmentalisation of the various components of teacher education programs (e.g., didactics or methods preparation, general education preparation, discipline preparation). Didactics/methods courses, pedagogical/education courses and academic discipline courses are rarely tied together into integrated courses or terms and hence exist quite independent of each other (Feiman-Nemser, 2001). For the most part, discipline specific courses are taught in their home departments and faculties (English, history, mathematics, physics, etc.), whereas the pedagogical and methods courses are taught in education departments. This means that the various courses that constitute a program are given by a collection of professors who usually work in different departments and, just as significantly (and symbolically), in different buildings.

This program design for teacher education that has students studying various courses independent of each other assumes that future teachers will integrate the knowledge developed in those courses in their practicum and later in schools when they are hired to teach. However, research studies (e.g., Gess-Newsome and Lederman, 1999; Morin, 2008) have shown that this integration of the independent coursework represents a very difficult task for novice teachers to accomplish. These studies show in particular that this integration is difficult to realize by new teachers, who once in their own classrooms continue to work in a chaotic and at best disjoint fashion as they manage the pedagogical-content-knowledge (PCK, Shulman, 1986) from their methods courses, the disciplinary content from their academic courses and the pedagogical components from their education courses. Thus, the assumption that future teachers will integrate all the bits of knowledge learned in various places in their program appears to be hardly warranted by research.

In her discussion of teacher competence, Warham (1993) suggests that models of teaching need to be examined before changes are made to teacher education, and goes on to discuss Zeichner's two models of a teacher:

> Zeichner (1990) claims that in spite of the variety of teacher models one might consider, most models conform to two basic ideologies, and consequently two basic models of a teacher. He claims that teaching can be considered as an applied science requiring the training of skills, or teaching might be considered as a reflective practice requiring the education of the whole teacher. (Warham, 1993, p. 205)

Warham (1993) says that both these models (teaching as applied science and teaching as reflective practice) are insufficient for teacher education, as other constraints and aspects need to be taken into account, especially ones in regard to students. Teaching is not an individual activity; it is a relational activity. There is a constant dialectic between teachers and students in teaching. With this understanding and the body of research available to us on teachers'

teaching practices (e.g., in mathematics education, Butlen, 2006; Robert, 2001; Roditi, 2005), the discussion of *integrating* the knowledge of a teacher can be taken one step further. In addition to the constant dialectic and working with the learning of the students, teachers also have to negotiate aspects related to the functioning of the entire classroom and other pedagogical aspects that are influential within the class and for students' learning (e.g., classroom management, task and activity organisation), as well as institutional aspects such as working with the program of studies, cohort or collaborative planning within a school, etc. Research therefore points to the importance of taking the complexity of teaching into account (i.e., the intertwining of the diverse components simultaneously) in the development and preparation of teachers (Ball, 2000; Bednarz & Proulx, 2009). Further, this research shows us that these different aspects of teaching are not worked on in isolation but are simultaneously (and often ingeniously) mobilized in the actions of the teacher.

Hence, the hegemony of working on isolated components leaving the necessary integration to the teacher in his or her future practice conflicts with the studies conducted on teachers' teaching practices and how teachers mobilize their knowledge in the act of teaching. Those studies show that teachers mobilize the different disciplinary, pedagogical, didactical, and institutional aspects of their knowledge simultaneously in their teaching, and not in a parallel fashion (see, e.g., in mathematics education, Bednarz & Proulx, 2009, and Huillet, 2009). A question that needs to be tackled by researchers concerns what it could mean, for teacher education programs and courses, to prepare teachers in a non-compartmentalized fashion.

Thus, the above research suggests something different for teacher education than teaching independent and isolated content hoping that the future teacher will integrate all these domains of knowledge. The hegemony of compartmentalisation involves then a structural feature that separates questions of didactics / PCK from ones of pedagogy, as well as those two from the discipline itself. It involves a set of practices for teaching (and physical constraints, see below) that assert for the instructor independence of the content from other course content and instructors. Further, as mentioned, the hegemony involves a set of beliefs (in spite of the research) that teachers will integrate the knowledge learned from their various teacher education courses in their future classrooms.

Here again the research questions this compartmentalisation of components and suggest other avenues to inquire more about. The question that remains is: How is it possible that we do not use this research to influence our teacher education programs? What would it take for the community of teacher educators to pay attention to these research findings? Do we not already have evidence that point to the importance of beginning to question the issue? To whom should our research be addressed? Is research sufficient and compelling enough to confront the hegemonies in teacher education? If our conjectures about the existence of hegemonic structures in teacher education are as we understand them, then will we as a community have trouble identifying and carrying out the research needed? In wondering about the nature or sort of evidence needed, and the research to be carried out to effect changes in teacher education programs and structures, we understand that hegemonic aspects are ones that are complex to handle and address.

Framed Box 7. Historical precursor to compartmentalization

Historically speaking, normal schools were "trade" schools for teachers. However, secondary school teachers were university graduates with little teacher education. In the normal schools "[a]though there was instruction related to teaching mathematics, there was certainly no sense of educating mathematics teachers. […] Secondary school teachers [on the other hand] attended universities, where they often received little teacher education" (Sigurdson et al., 2003, p. 198).

Recognizing the hegemony of compartmentalization, we find ourselves looking to the source of it (Framed Box 7) and how it continues to be reproduced. In part, we might note how faculties / schools of education were integrated into universities. But we might also look at their place in the university today. From their physical location on campuses and the architecture of their buildings and interior spaces to department divisions within the faculty by content (educational psychology, curriculum and instruction, foundations, etc.), all of these features serve to reinforce the compartmentalization of the teacher education curriculum. This physical and social divide impacts the ability for faculty to interact with each other.

> Separate courses taught by individual faculty in different departments rarely build on or connect to one another, nor do they add up as a coherent preparation for teaching. Without a set of organizing themes, without shared standards, without clear goals for student learning, there is no framework to guide program design or student assessment. No wonder students have difficulty developing a vision of good teaching or making connections among different domains of knowledge and skill. (Feiman-Nemser, 2001, p.1020)

But maybe more significant in order for individual faculty to jointly consider the knowledge that research offers in building a shared vision of teacher education, informal conversation and formal discussions are necessary. When people share spaces and time they have opportunities to have hallway conversations and to meet for discussions. Departments within Faculties of Education often have separate office, meeting and common spaces, as well as different meeting schedules. And, it is common for faculties of education to occupy buildings separated from arts and sciences (who offer content courses); faculties of education could be on different campuses altogether. As well, there are differences not only in what people bring to discussions but in the framing discourses from which that knowledge is a part. For example, mathematicians have a different discourse than do mathematics education researchers and both of them have a different discourse than educational administrators. Thus, with all this in place, it is not surprising that the compartmentalization exists in teacher education programs, and it is not necessarily because we are disregarding the literature. The compartmentalization exists in the differences that exist physically, socially and culturally: different buildings, different meeting schedules, different disciplinary discourses, different standards, and different ways of understanding the preparation of teachers.

What Can Research Offer Given the Hegemonies in Teacher Education?

Through questioning the hegemonies of practices and structures of teacher education programs, we raise issues about the challenges that arise in their presence in teacher education, and the issues and challenges for research. As well, we spoke to the challenges that new research findings raise for teacher education structures and programs.

In regard to the preparation in the discipline and compartmentalisation of courses (the two dimensions we have raised here), there is little evidence that the field is using empirical research to design teacher education program structures. We do not feel that it is a problem concerning the quantity or the quality of the research available. Rather, we conjecture that the research is infrequently used precisely because these dimensions are hegemonic, and therefore pervasive and deeply rooted in our understanding of what teacher education is or should be. Hence the question that must be asked is: given the hegemonic forces, what kind of research can raise our awareness of the taken-for-granted and unquestioned features of teacher education? And what kind of research can lead them forward? In a hegemonic situation, is empirical research sufficient to realize the presence of hegemonies, or to question them? Through considering empirical research and some historical research data, we believe that we have just begun to uncover some of the hegemonic influences in teacher education that impact our ways of acting in the reform (or evolution) of teacher education program structures.

In our view, the hegemonic forces need to be investigated and deconstructed. Such deconstructing can be done through empirical research of contemporary courses and programs, as well as through historical study of the context. An illustration of unpacking aspects of the history of education and teacher education is what we did in this paper through the Framed Boxes 1 to 7 about mathematics teacher education and program evolution. We believe that this sort of digging into and unpacking of the history is a significant activity; an activity that is important to the field in order to be able to understand how the circumstances we find ourselves in today come to be, or continue to be as they are. Historical research can be of profound significance when combined with contemporary empirical research findings from studies in teacher education to help question and investigate, or simply understand, these hegemonic structures, as well as help the empirical research to be used in teacher education structure and program reform.

However, are teacher educators ready to question the structures and well-established programs we have in our institutions? Are disciplinary departments and faculties ready to participate in the conversation? Are teacher educators ready to invite them? Recall Zeichner's (1999) assertion that most of what we do in teacher education is based on our own experiences and beliefs as teacher educators, that is, on our experiential knowledge as practitioners. And this experiential knowledge, as studies of practitioners has shown us (e.g., Schön, 1983), cannot be ignored nor should be discarded. But we need to be aware of the source of knowledge when sitting on program review committees. Do we sit as practitioners (teacher educators) or do we sit as researchers? Can we be both? In short, do we defend research or do we advocate for our current practices or the ones we believe in? Who should have the louder voice, the teacher educator or the researcher? How can we make room and time (literally and figuratively) for multiple voices and a diversity of expertise?

Far from being a commonsensical idea, we think this leads us to reflect on our own biases as researchers in teacher education. By asking what research, whose research, what

evidence and so forth, we also perpetuate a hegemony: the hegemony of research. As we have offered through the paper, most teacher education programs are grounded in the traditional and the experiential, the political and the economic. Teacher education programs were for the most part never based on research; rather they were shaped by values, power relations and tradition / wisdom. It appears to us as a normal process that the research conducted in teacher education led to question these issues and practice. However, questions that come back are: How is research offering a different entry and view into the problem than wisdom, tradition and experience? What authority does research have in shaping teacher education? As well, what authority does experience and wisdom have on this process? Why would / should one prevail over the other?

Our quest for taking into account the current evidence, as well as developing more research that could offer additional or more precise evidence, needs to be nuanced and reflected upon more deeply. As an alternative point of view, we are led to consider using both arguments and ideas (of tradition / history and of research) to construct an enriched understanding of the situation at hand. Indeed, there is different expertise being faced here: the historical one, the experiential / personal one of teacher educators as practitioners, the research one, etc. Teacher education would gain from exploring in depth each legacy and where it provides fruitful information and distinctions to help *inform* teacher education practices and structures.

Finally, in addition to exploring the hegemonies in teacher education it is important to realize that the teacher education enterprise needs to continue considering seriously research conducted on it; research of a multiplicity of forms. As educational researchers, we have criticised schools and teachers for ignoring the work and research that has been done on the learning and teaching in schools. As practitioners working in teacher education, which is a field amply researched, it is time to look in the mirror. If we fail to reflect, critique and consider our own research, we send the message that we ourselves either do not really believe in our work or are ignorant of it. This, we believe, is something to think seriously about and act upon.

References

Adler, J., & Davis, Z. (2006). Opening another black box: Researching mathematics for teaching in mathematics teacher education. *Journal for Research in Mathematics Education*, *37*(4), 270-296.

Association of Canadian Deans of Education (n.d.). *Accord on initial teacher education*. Retrieved from http://www.csse-scee.ca/associations/about/acde

Archibald, T. (2008, October). *The history of mathematics education*. Presentation at the Annual Conference of the Mathematics Council of the Alberta Teachers' Association, Edmonton, Alberta.

Ball, D. L. (2000). Bridging practices: Intertwining content and pedagogy in teaching and learning to teach. *Journal of Teacher Education, 51*(3), 241-247.

Ball, D. L., & Bass, H. (2003). Toward a practice-based theory of mathematical knowledge for teaching. In E. Simmt & B. Davis (Eds.), *Proceedings of the 2002 annual meeting of the Canadian Mathematics Education Study Group* (pp. 3-14). Edmonton, Alberta, Canada: CMESG.

Ball, D. L., Lubienski, S. T., & Mewborn, D. S. (2001). Research on teaching mathematics: The unsolved problem of teachers' mathematical knowledge. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed.; pp. 433-456). New York: Macmillan.

Battista, M. T. (1999). The mathematical miseducation of America's youth. *Phi Delta Kappan*, *80*(6), 424-433.

Bauersfeld, H. (1998). Remarks on the education of elementary teachers. In M. Larochelle, N. Bednarz & J. Garrison (Eds.), *Constructivism and education* (pp. 213-232). Cambridge: Cambridge University Press.

Bednarz, N. (2001). Didactique des mathématiques et formation des enseignants: le cas de l'Université du Québec à Montréal. *Revue canadienne de l'enseignement des sciences, des mathématiques et des technologies*, *1*(1), 61- 80.

Bednarz, N., & Proulx, J. (2009). Knowing and using mathematics in teaching: Conceptual and epistemological clarifications taking their source in teachers' practice. *For the Learning of Mathematics*, *29*(3), 11-17.

Berry, G. L. (1963). *Historical development of the Alberta high school*. Unpublished doctoral dissertation, University of Colorado, Boulder, CO.

Boggs, C. (1976) *Gramsci's Marxism*. London: Pluto Press.

Britzman, D. (1991). *Practice makes practice: A critical study of learning to teach*. Albany, NY: State University of New York Press.

Brousseau, G. (1998). *Théorie des situations didactiques*. Grenoble, France: La Pensée Sauvage.

Burke, B. (2005). Antonio Gramsci, schooling and education. *The Encyclopaedia of Informal Education*, http://www.infed.org/thinkers/et-gram.htm (first published 1999).

Burton, L. (2004). *Mathematicians as enquirers: Learning about learning mathematics*. Dordrecht: Kluwer.

Butlen, D. (2006). Stratégies et gestes professionnels de professeurs des écoles débutants enseignant dans des écoles de milieux défavorisés: un enjeu pour les apprentissages des élèves. In N. Bednarz & C. Mary (Eds.), *L'enseignement des mathématiques face aux défis de l'école et des communautés. Actes du colloque Espace Mathématique Francophone* [CD-ROM]. Sherbrooke, QC: Éditions du CRP.

Chambers, J. W. (1978). *A proud profession: The story of the Department of Secondary Education, University of Alberta*. Unpublished manuscript, University of Alberta, Edmonton, AB.

Cooney, T. J., & Wiegel, H. G. (2003). Examining the mathematics in mathematics teacher education. In A. J. Bishop, M.A. Clements, C. Keitel, J. Kilpatrick, & F. K. S. Leung (Eds.), *Second international handbook of mathematics education* (Vol. 2, pp. 795-828). Dordrecht, The Netherlands: Kluwer Academic Publishers.

Evans, N., Gattuso, L., & O'Shea, T. (1999). Teaching practices and teacher education. In J. G. McLoughlin (Ed.), *Proceedings 1999 Annual Meeting of the Canadian Mathematics Education Study Group* (pp. 97-110). Memorial University of Newfoundland, St. John's: CMESG.

Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, *103*(6), 1013-1055.

Gess-Newsome, J., & Lederman, N. G. (Eds.). (2010). *Examining pedagogical content knowledge: The construct and its implications for science education PCK and science education*. Dordrecht, The Netherlands: Kluwer Academic Publishers.

Hiebert, J. (2000). What can we expect from research? *Teaching Children Mathematics, 6*(7), 436-437.

Huillet, D. (2009). Mathematics for teaching: An anthropological approach and its use in teaching training. *For the Learning of Mathematics*, *29*(3), 4-10.

Liu, A. (2000). The high school teachers' upgrade program. In G. Ludwig (Ed.) Mathematical Sciences Newsletter, November 2000. University of Alberta. http://www.math.ualberta.ca/Newsletter/Newsletter2e.htm

Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.

Ma, L. (1999). *Knowing and teaching elementary mathematics: Teachers' understanding of fundamental mathematics in China and the United States*. Mahwah, NJ: Laurence Erlbaum Associates.

MacIntosh, G. (1987). *The dynamics of diversity: Education*. Manuscript prepared for the Faculty of Education, Strategic Planning Project. University of Alberta, Edmonton, AB.

Moreira, P. C., & David, M. M. (2005). Mathematics in teacher education versus mathematics in teaching practice: A revealing confrontation. In R. Lins & A. Olimpio Jr. (Eds.), *Contributed papers, demonstrations and worksessions: The 15th ICMI study – The Professional education and development of teachers of mathematics* [CD-ROM]. Sao Paolo, Brazil.

Moreira., P. C., & David., M. M. (2008). Academic mathematics and mathematical knowledge needed in school teaching practice: Some conflicting elements. *Journal for Mathematics Teacher Education*, *11*(1), 23-40.

Morin, M.-P. (2008). Les connaissances mathématiques et didactiques chez les futurs maîtres du primaire : quatre études de cas. *Canadian Journal of Education*, *31*(3), 537-566.

Nathan, M. J., & Koedinger, K. R. (2000). Teachers' and researchers' beliefs about the development of algebraic reasoning. *Journal for Research in Mathematics Education, 31*(2), 168-190.

National Research Council. (2001). *Adding it up: Helping children learn mathematics*. J. Kilpatrick, J. Swafford, & B. Findell (Eds.). Washington, DC: National Academy Press.

Robert, A. (2001). Les recherches sur les pratiques des enseignants et les contraintes de l'exercice du métier d'enseignant. *Recherche en didactique des mathématiques*, *21*(1-2), 57-80.

Roditi, E. (2005). *Les pratiques enseignantes en mathématiques*. Paris: L'Harmattan.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Shulman, L. S. (1986). Those who understand teach: Knowledge growth in teaching. *Educational Researcher*, *15*(2), 4-14.

Sigurdson, S., Kieren, T., Pothier, Y., & Roulet, G. (2003). The mathematics education community in Canada outside Quebec before the new math era. In G. Stanic & J. Kilpatrick (Eds.), *A history of school mathematics* (Vol. 1; pp. pp. 195-237). Reston, VA: National Council of Teachers of Mathematics.

Thompson, P. W., & Thompson A. G. (1994). Talking about rates conceptually, Part 1: A teacher's struggle. *Journal for Research in Mathematics Education*, *25*(3), 279-303.

Thompson, A. G., & Thompson, P. W. (1996). Talking about rates conceptually, Part 2: Mathematical knowledge for teaching. *Journal for Research in Mathematics Education*, *27*(1), 2-24.

Warham, S. (1993). Reflections on hegemony: Towards a model of teacher competence. *Educational Studies*, *19*(2), 205-217.

Zeichner, K. (1999). The new scholarship in teacher education. *Educational Researcher*, *28*(9), 4-15.

Chapter 16

A Story of Teacher Education Program Revisioning as Shared by Insiders

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This paper has as its foundation the conviction that teacher education program success ultimately rests on the performance of its graduates, their professional wellbeing, and how well their own students succeed. We present a case study of the process of program revision and development in teacher education programs at a large urban Canadian university. We report on evidence collected and used to support the revisioning and rethinking of our programs and discuss issues and challenges of relating research to program decisions and policy. We conclude that program development must be responsive to the context and all stakeholders involved, while incorporating relevant research pertaining to teacher education. We further conclude that program development involves a cyclical process of revitalizing, refining and change that considers the past, investigates the present and looks to the future.

Preamble

On September 15, 2010, CBC's *The Current* (Trementi, September 15, 2010) ran a segment related to the furor surrounding a series of articles in the Los Angeles Times about grading teachers. In the midst of this debate about whether teachers should be given 'report cards' rating their performance in the classroom, and the suggestion that good teaching should result in good learning, the question was asked: "Should teacher education programs [also] be evaluated"? While we find this notion of assessment interesting, we take issue with the simplicity and linear nature of this debate. What constitutes 'success' and thus what to 'mark' in determining a grade is complex. Consider the debates over the validity of the Fraser Institute's ranking of schools (www.fraserinstitute.org/report-cards/school-performance/overview.aspx) or Macleans Magazine's annual university rankings (http://oncampus.macleans.ca/education/rankings/). For example, determiners for success in schools range from scores on standardized exams to a commitment toward staying in school and a lower high school drop-out rate (www.perseverancescolaire.com). Suffice to say that the factors selected are often the subject of controversy. In regard to *grading* teacher education programs in particular, we suggest that teacher education program success ultimately rests on the performance of its graduates, their professional wellbeing, and how well their own students succeed. How to achieve this end goal, however, as with anything involved in the human experience, let alone grade it, is anything but straightforward.

 The question of evidence in research in teacher education in the context of teacher education program review in Canada (2 vols., pp. 231-274). Winnipeg, MB: Faculty of Education of the University of Manitoba.

Regardless of whether or not teacher education programs are graded – those of us involved in teacher education strive for excellence in our programs In so doing, we engage in ongoing program development and revisioning that is rooted in research on what is effective in teacher education. As well, we deliberate and respond to feedback and evaluation, formal and informal, from the various stakeholders involved – faculty, students and partners in the field. We consider program revision and development to be a process that is iterative and responsive in nature. A process that ultimately must look forward to the end goal, but pay attention to, and develop, the pathway leading to that goal. This paper, then, presents a case study of a process of program development in teacher education at a large urban Canadian university. We report on the evidence collected and used to support and effect much needed revisioning, planning and implementation of our teacher education programs over a 6 year period (2004-2010). This time period comprised two formal program reviews and three formal needs assessments with stakeholders. This work was informed by both research in teacher education and the results of the internal reviews and assessments. It was reassuring that the two sources converged in their recommendations for change. In what follows we tell the story of how we implemented recommendations and changes through a number of pilot initiatives and program innovations. Finally, in framing this story, we acknowledge that, in the confines of our democratic and bureaucratic institution, both support and resistance were encountered in many guises and on many levels. This work, then, addresses the following two questions:

1. What research evidence is actually used in teacher education program review processes at Canadian universities, and what decisions and processes guide the use of research?
2. What are the issues and challenges of relating research to policy and program decisions?

Setting the Stage

We began in our positions as undergraduate program director and director of the office of student teaching in June 2004. The mandate given to us by our dean at the time was to bring all our energies and expertise to bear on moving our teacher education programs forward – making them 'cutting edge'. We were invited into a conversation about the discourse of educational reform that emphasized the urgency of moving from a solid foundation (Cochran-Smith, 2005a) toward new visions for teacher education. Goldstein & Tierney (2005) assured us that many of our colleagues found themselves facing a similar critical dilemma. As familiar as we were then with the body of research on teacher education and as ready as we were to engage in conversation around these important ideas (Benson & Riches, 2009), we found ourselves confronting a fractured program, where the past, in seeming collision with what we knew of the current reality in the field, undermined any stance we wished to adopt for the future. As well, we inherited a program where, for a variety of reasons, the divide between program and field existed in epic proportion and with serious ramifications for our students, our faculty structure and our school partners. While the need, based on our own inquiry and scholarship in the field, for a concerted effort toward a seamless intersection of these two orbits of teacher education appeared an obvious and necessary place for us to start on the

process of revisioning our B.Ed. programs, the resistance to our collaboration and efforts to bridge this divide were enormously and professionally surprising and challenging. Our working closely together to effect program coherence and change, and create solid partnerships with the field was viewed with reactions ranging from suspicion to blatant hostility by some of our colleagues. Despite strong research evidence brought forward in support of our efforts (Ayers, 1995; Banks, 2004; Schön, 1983; Silvernail, 1997; Darling-Hammond, Chung & Frelow, 2002; Feiman-Nemser, 2001; Ladson-Billings, 1999; Zeichner, 2000, etc.), the conversation was at times anything but convivial. But we are jumping ahead. Let us return to the beginnings of the process of change and the evidence unearthed.

What Research Evidence Is Actually Used in Teacher Education Program Review Processes at Canadian Universities, and What Decisions and Processes Guide the Use of Research?

It was perhaps providential that, just as we began in our current roles, we attended a faculty function where we heard quite negative reviews about the state of our Bachelor of Education (B.Ed.) programs from a few school personal and B.Ed. students. We immediately recognized this internal feedback from those living the program as a critical place of entry into any process of program revision. In our mission to address these critiques and gain greater insight into our programs, we started gathering evidence to ascertain the current status of those programs from a wider pool of stakeholders. This determined our directions in moving forward toward our goal of ensuring relevance of our B.Ed. programs and their effectiveness in preparing confident and able teachers. In the table below, we present a snapshot of those sources that make clear both how and why the evidence was collected and from whom, the sense made of that evidence as it spoke to the scholarship in the field and how that information informed decisions and ultimately, actions.

Stakeholder's Day & Ministry of Education Mandated Program Review (Table 1, Rows 1 and 2)

In 2005 at AERA, we were challenged by Cochran-Smith's address (2005b), that in these new times teacher education has the potential to become better or become worse, and in determining which, the education community must select, and take a strategic direction. She went on to say that, institutionalizing meaningful change calls for regular, responsive and strategic communication, respect for diversity and a more informed worldview. Thus it was that we began a process of gathering evidence from the various stakeholders in teacher education, including elementary and secondary school students (Kane, 2003). Together we began to identify our shared vision of a strategic direction as that of building capacity to support quality education for all.

Table 1: Snapshot of Evidence

	What/When	Why	Who/What	How	Findings	Action / impact to program
Legend: B.Ed. = Bachelor of Education; FE = Field Experience; PS = Professional Seminar; CT = Cooperating Teacher; MATL = Master of Arts in Teaching and Learning						
1.	Stakeholders' Day – Fall 2004	In response to feedback on programs. To give voice to all stakeholders	Elementary students, secondary students, cooperating teachers, student teachers, novice teachers, school principals, school board administrators, university faculty	Homogeneous and heterogeneous carousels groups, notes recorded in response to prompt question "What do student teachers need to know" in various contexts. (see appendices A and B)	Need for: - better interweaving of coursework to field experience application, - extended field experiences - better use of the university/school board/school partnership - strategies to keep new teachers in the profession	*Program Revisions* Design and launch of "We are Listening! Shoulder to Shoulder Pilot" Program revisions to embed PS1 in FE1. Locate FE1 at end of 1st semester rather than beginning. Create PS2, embedded in FE2. Commitment to hold course coordination and planning meetings. (to address course overlap and achieve program coherence) Launch of project to create curriculum maps for all B.Ed. programs. *Relationship with field* Procedures implemented to improve communication between OST and school partners. Follow-up sessions with principals, focused on partnership and communication (see *Principal's Days* below) Increased emphasis on Professional Development (delivery of redesigned workshops for CTs, field supervisors) Coordination meetings to gather input from / communicate with CTs in regard to content of courses co-requisite to FEs
2.	Ministry of Education mandated Review of university programs - 2004/2005	Government mandated review of university programs	All B.Ed. programs	Report of existing program structure based on responses by faculty, students and support staff to a series of questions AND an external review [conducted by Tara Goldstein and Rob Tierney (2005)]	Need for: - simultaneous theoretical and practical experiences - team approaches to teacher education - development of student cohorts - an approach to portfolio assignments centred around the Ministry of Education twelve exit competencies - a more pronounced social justice focus.	

3.	Town Hall – Winter 2005	To give voice to our student body	All B.Ed. students currently enrolled	Open sessions led by Associate Dean, Academic. Notes recorded.	Need for: - program coherence (reduce overlap) - more program rigour. - more time student teaching (see summary in Appendix C)	
4.	Principals' Day – Winter 2005 & Follow up – Spring 2005	To give voice to our partner administrators	Principals from 3 local school boards	Focused feedback elicited in response to program structure presentation and procedures followed in securing student teaching school placements		
5.	'We are Listening! Shoulder to Shoulder with Teachers' Pilot Project (above) – 2005 - present	To determine effectiveness of pilot model with a view to adoption program-wide.	B.Ed. students, CTs, principals, field supervisors, course instructors	- B.Ed. student longitudinal feedback (questionnaires during pilot semester, interviews every year following for 5 years) – - Instructor feedback pilot years (post semester focus groups) - CT feedback in pilot years (questionnaires) - School	Need for better communication between university and schools in terms of student teaching expectations. Need for more school partner input into position and duration of FE in school year	Ongoing initiatives to improve communication and collaboration between university and school partners.

				feedback - CTs, principals in pilot years (focus groups)		
6.	Undergraduate Program Review	Mandated by new Dean	All B.Ed. Programs	Lit review to identify best practices. Consultation with other universities, program directors, faculty, students and support staff. Working groups to assess specific issues.	Better theory to practice links. Students teachers experienced a more realistic time in schools (prior to 1st day, and a full term). Cohort groups created effective mentor and peer group support	Evolved into 3rd year Merged Model implemented program-wide. Provided rational and support for further program revisions improving program coherence, adopting a program-wide ecological approach to multicultural study, and explicit theory to practice links. Positively impacted student teachers and new graduates in terms of confidence and preparedness for the teaching profession. Next steps are to investigate the impact of effectiveness of our graduates on pupil learning, well-being and citizenship.
7.	MATL	Ministry of Education request for a program to address the needs of teachers currently teaching in schools without	Teachers teaching in schools without certification.	Best practices (gold standards) as identified in UPR. Consultation with colleagues. Our previous research.	Recommendations: - cohort model - coherent standards of assessment across the program - supported and integrated field experiences - relevant and rigourous curriculum - commitment to social	- ongoing discussions and planning for teaching education program restructuring. - Design and launch of MATL (see below) building upon identified recommendations

		certification.			justice, diversity and equity - alignment of B.Ed. programs with Ministry of Education competencies and context of the Government Mandated School Curriculum and bilingual goals of English school programs (French schools for TESL) *Essential Structures needed for implementation:* - Central Administrative Unit - sustained partnerships with local schools - leveraging of ICT	
8.	International / Community Field Experiences	Dean request for evidence of benefit – how do alternative placements contribute differentiate that a regular school placement to teacher professional development	Students participating in Hong Kong, Dominican Republic International placements, students participating in community-based placements. Students in regular Fes	International placements: Pre-experience questionnaires, post-experience interviews. Community-based placements: questionnaires toward end of placement.		

					STs developed: - flexibility, open-mindedness - abilities to adapt new cultures, unfamiliar school environment and different teaching styles - confidence in their skills, competencies - respect for other cultures, appreciation of multi-culturalism in the classrooms - pedagogical communities for professional support - ability to compare different pedagogical styles and tools – appreciation for strengths of other cultures and methods of teaching	Continue to send student on international FEs Further development of international and community-based placements. Investigate the impact of student teaching placement on pupils, cooperating teachers and the international schools sites at large.

Emanating from those early conversations was an initiative designed to invigorate the university - school board - school partnership with a view to better preparation of student teachers and new teachers for the demands of education in changing times. Our goal was to look with fresh eyes at how our teacher education program, and the government mandated school curriculum needed to inform each other, and agreed it was time to stop telling each other what we already knew, and instead start to articulate and tease apart the problems in order to move ahead and propose solutions. We had the courage to publicly admit that mandated reforms had demanded that we operate under different and unfamiliar structures the sheer volume of which had paralyzed us and kept us apart in our respective/comfortable silos. We needed to move out of this state, and to this end, we began with a full day workshop, which we named Stakeholder's Day, where input and feedback was gathered from eight stakeholder groups (elementary school students, secondary school students, cooperating teachers, student teachers, novice teachers, school principals, school board administrators, and university faculty). The stakeholders were organized into homogeneous and then heterogeneous focus groups, and asked to respond to questions generated from the field: "What do we know student teachers need to know?"; and "What else do they need?". Responses were recorded and then analysed thematically and became the reference for change and innovation (see Appendices A and B). This process of engaging with stakeholders became ongoing, iterative and evolving. The finding that better information transmission and communication with schools were needed, precipitated two follow-up "Principals' Days" (part 1 and part 2 – Table 1, row 4). All of the above added to our strategy for bringing about meaningful revision and change.

Concurrent to the initiative involving our school partners, we were mandated by the Ministry of Education to conduct program reviews across the university. In completing the review for our B.Ed. programs, input was gathered from the various stakeholders (course instructors, representative students from each program, student advisors, program directors) through responses to a set of directed questions. Input was also gathered directly from the B.Ed. programs student body and through two town hall meetings (see Appendix C and Table 1, rows 3). Finally, an external review of our B.Ed. programs was conducted by two experts (Goldstein & Tierney, 2005, see Table 1, row 2).

"We are Listening! Shoulder to Shoulder with Teachers" Pilot Project (Table 1, row 5)

The convergence of the information gathered from these various sources was striking in its strategic impact. It confirmed that the biggest challenge facing us in teacher education must be to connect theory and practice in ways that allow student teachers to meet with long-term success in the real world of teaching (Dewey, 1963). The better prepared we all are to understand the 'performance of teaching' (Doyle & Carter, 2003), the more able we will be to ready ourselves for the professional challenges that lie ahead. While the need for change was clear, we were mindful of the words of Horowitz (1974: 83) that "before major changes are introduced in teacher education affecting all students, some exploration is necessary with a small group of . . . student(s)." In response, then, we began our exploration with a pilot project aptly named – "We are Listening! Shoulder to Shoulder with Teachers" – which addressed salient issues, revealed in our work with stakeholders and redesigned the crucial 3rd year (Clandinin, 2000; Horowitz, 2005, 1974) fall semester of the B.Ed. Program architecture for a

cohort of 20 students drawn from each of the Kindergarten/Elementary and Secondary streams (40 students in all).

Significant to this exploratory pilot were the concrete links which were made between university course content and tangible practice in the field. These substantive connections better enabled students to enact and internalize the range of theoretical ideas through authentic classroom performance. Emphasis was also placed on designing the field experience to better reflect the realities of the demands of the profession. School administrators were asked to allow student teachers to participate in all aspects of the culture and community of school life – in ways that reached beyond the doors of their cooperating teachers' classrooms, schedules and workload allocation. Student teachers began their 3rd field experience (FE) on the same day that in-service teachers returned to their schools at the end of August, and before the students arrived in early September. In this way student teachers had the opportunity to experience the stages of planning and preparation that teachers engage in for a new school year, and benefited from, among many experiences, that singular 'first day of school'. Student teachers remained in their host schools until the end of term in December. Owing to the longer duration of this field experience (15 weeks as opposed to 7 or 8) and its broader mandate of actively involving student teachers in all aspects of school services, from resource room to front office to the inner sanctum of the school principal's office, the student teachers had a better opportunity to integrate into the culture and community of the school, be viewed more as junior teachers, and gain a greater insight and appreciation for the cycle of learning, their own and that of the students in their charge.

Student teachers spent Monday through Thursday in their host schools, returning to the university for associated courses on Friday. Design teams, comprised of course instructors, cooperating teachers, field supervisors, and university faculty, worked together in the planning and future delivery of these associated courses on Fridays, and imbued this pilot with an informed, collaborative, multi-faceted and authentic quality. Course assignments were developed to ensure, as one outcome among many, a student teacher portfolio that addressed, in a manner appropriate to the program level, the full spectrum of the Ministry of Education mandated professional exit competencies.

The emphasis on a more realistic or well-rounded field experience also helped us address the undeniable need for confidence and able teachers in our schools who, in finding ongoing satisfaction in teaching, will be more likely to remain in the profession (Cochran-Smith, 2005b**)**. Given the disturbing rates of attrition in the early years of teaching (up to 50% in the first 7 years of teaching (Fischer, 2002; Troman & Woods, 2000)), it was our hypothesis that a prolonged field experience, explicitly linking theory and practice, would result in novice teachers suffering less transition shock and being better able to thrive in today's challenging classroom environments.

In order to gather input and feedback in regard to the effectiveness of the pilot project, individual questionnaire data was collected from participating student teachers and cooperating teachers in the pilot, as well as from student teachers in the regular program. Focus groups were also conducted with cooperating teachers and school administrators involved in the pilot project. A select group of students from both the pilot and regular programs has also been followed for 4 years through interviews conducted one year later (post 4th year and final field experience), and then at the end of their first, second, and third years of teaching. Scholarship expounds on the many understandings and perceptions of "success" as that notion relates to student and novice teachers, such as the importance of being able to plan effective, engaging

lessons and communicate with parents effectively (Corbell, Osborne & Reiman, 2010), and the ability to be flexible and adaptable, and handle workload efficiently (Lewis & Masanuga, 2011). In the longitudinal aspect of our research we were looking for indicators of success that were informed by research and also shared with us by our student teachers (as reported in Benson & Riches, 2010) such as: heightened confidence; better developed sense of teacher persona; reduced transition shock; awareness of teacher preparation program relevance to their profession; positive impact on classroom students; and teachers as reflective learners (Darling-Hammond, 2006).

Undergraduate Program Review (UPR) (Table 1, row 6)

In 2008-9, with the arrival of a new dean, a review of the Faculty of Education's undergraduate programs was undertaken. The following excerpt taken from the UPR describes how the review was undertaken:

> The review was led by two senior Faculty members who established four working groups: Enrolment Management and Career Placement; Undergraduate Program Content, Working Structures and Outreach; Field Experience (including International and Community Student Teaching Placements); and Distance Education/First Nations and Inuit Education. The working groups were tasked with performing a *gap analysis* in their areas of focus, The working groups were directed to generate responses to the following three overarching questions that were to bridge the mandate of the committee and the research process at every stage:
> *What are the gold standards of excellence in teacher education?*
> *What structures and resources are required to implement the gold standards?*
> *How can these gold standards be implemented in the university's Faculty of Education?*
>
> The process taken by each working group in generating responses to the overarching questions on best practice and excellence in teacher education espoused three key elements:
>
> - a complete scan of existing literature on parameters determining excellence, including best practices and innovative models and structures for national and international excellence in the promotion and development of Teacher Education;
> - a review of all existing components of undergraduate education in the Faculty of Education, noting both current and potential strengths, opportunities for improvement, and implementation challenges;
> - and, informed by all of the above, proposals for proactive and innovative change that would serve to position the Faculty of Education undergraduate programs at the forefront in their respective fields, ultimately through the implementation of identified best practices, and the adoption of new pedagogical models, teaching program configurations or options, and new interdisciplinary programs.
>
> (Undergraduate Program Review, 2009, pp. 6-7)

Master of Arts in Teaching and Learning (MATL) **(Table 1, row 7)**

While the implementation of the recommendations from the UPR is forthcoming, we have drawn on these recommendations, as well as others in the design our MATL, a 60 credit graduate degree leading to provincial teacher certification. This program was created at the request of the Ministry of Education to provide a means to teacher certification for those currently teaching without this credential. To be eligible for the MATL, candidates needed to be currently teaching, without certification, in specified areas (e.g., Math and Science). Our first cohort began summer 2010. In the design we incorporated the 'gold standards' as identified in the UPR: Commitment to social justice, diversity and equity; relevant, ecological and rigorous approach to curriculum; Cohort model; Supported and integrated field experiences; Sustained partnerships with local schools; Coherent competency-based standards of assessment across the program. The Ministry of Education has now lifted the condition that students in the MATL be currently employed by a school board and has also opened the possibility for certification in additional subject areas.

International and Community Field Experience **(Table 1, row 8)**

Whilst acting as co-chairs of the Field Experience working group associated with the UPR which tasks included a focus on international and community field experiences, we were asked to provide evidence of benefit associated with international placements in order to make a solid and coherent case for the continuation of such projects. We based our further research (Islam, Riches & Benson, 2010) on the 'best practices' as determined in our UPR working group. Our research was focused on 10 students who were in the midst of preparing for and then engaging in their international field experiences (two in Dominican Republic and eight in Hong Kong) in winter of 2010. Given the small number of participants, the shared novelty of their international experience and our goal of understanding what the student teachers made of their experience, we employed the methodology of Interpretive Phenomenological Analysis (IPA)—a qualitative technique, which is used to examine how people make sense of their major life experiences (Smith, Flowers, & Larkin, 2009; Smith & Osborn, 2003, Marton & Booth, 1997, van Manen, 1990).
Our inquiry sought to find out:

1. What are the perceptions of the preservice teachers about their personal and professional development after their participation in International and Community FE?
2. How has this experience informed the preservice teachers' cultural awareness, understanding of teaching and learning from a global perspective, self-confidence, empathy, level of maturity, self-reflection and appreciation of feedback for personal and professional growth?
3. In what ways can the pre-service teachers' international experience contribute to their teaching practice in formal classroom contexts provincially and elsewhere in Canada?

All ten pre-service teachers (seven females and three males) completed a pre-departure questionnaire. Following the completion of their field experience, and after they had returned home, they were contacted and interviewed. The interviews, using a set of guiding questions, lasted for 45-60 minutes. This semi-structured interview approach enabled the sort of dialogue and exchange that encouraged the participants to share deeply about what the experience meant to them. Initial readings of the interview transcriptions provided significant and interesting insights. We then, through subsequent analysis, recognized emerging themes and connections both within, and across, the transcripts.

Some of the highlights of our analysis are that the student teachers felt more confident and self-reliant. The experience helped them to understand different cultures and improved their ability to learn, adapt and apply different methods of teaching in different situations. They developed as more worldly teachers, increased their understanding of multiculturalism and had a better grasp of how to promote diversity and multiculturalism in schools in Canada. Though the participating student teachers mentioned that the international experience was an 'eye-opener' and 'life-altering' experience, it is important to ascertain how this has actually altered the professional lives of the preservice teachers. Similarly, it is also important to explore how the student teaching placements have affected the host institutions in Hong Kong and Dominican Republic. Currently, we are gathering evidence of effective learning, well being and citizenship in classrooms led by the teacher education program graduates from the revised program.

Another of our tasks within the UPR working group was to find ways to capitalize on the B.Ed. program innovations in order to promote issues of cultural diversity, moving from static and sporadic course content (Darling-Hammond, 2006) to a more program-entrenched and ecological position (Ladson-Billings, 1999). Coincidentally at this time, the university principal made community outreach one of her primary objectives across the university. We were in the unusual but happy position of being asked to push the community outreach envelope with some small funds attached to that endeavour. We viewed this as an opportunity to address recommendations put forth by our student teachers to connect our programs more concretely to the real world, to offer alternative field experiences and to provide them with opportunities to experience their role as teachers and their engagement with youth in contexts other than formal classrooms. From our own and the B.Ed. program's commitment to social justice (UP, 2009), we were excited by the possibility of providing our student teachers a spectrum of significant opportunities to: "engage in critical reflection about the social forces that created the community need and about their social responsibility to address that need" (Stanton, as cited in Chambers, 2009, p. 78), develop professionally from multi-dimensional learning (Gibson, Hauf, Long, Sampson, 2011), initiate and sustain mutually beneficial partnerships (Dallimore, Rochefort, and Simonelle, 2010) and gain a greater understanding of citizenship and social responsibility (Bamber & Hanken, 2011).

To that end we immediately offered student teachers for the following academic year (in our K/Elementary, Secondary and TESL programs) an alternative to the "regular" school-based second field experience in the April/May session (3 weeks of student teaching supported by a 13 hour embedded professional seminar focusing on aspects of inclusion and differentiation) – that alternative being to undertake their 105 hours (equivalent of 3 weeks) of second field experience in various service-learning contexts encompassing informal learning situations in not-for-profit community organizations with youth, adults, or families. The 105 required "teaching" hours would be spread over the fall and winter sessions and supported by

a similarly spanned 13 hour professional seminar dedicated to approaches and issues of service-learning/community initiatives, and making links to practice in the formal classroom context. In the first year of this project (2009-2010) 24 of our student teachers worked with 10 community organizations. Of the many benefits associated with this service-learning community-based field experience (Usher, Benson & Riches, 2010), here are some examples of more contextualized findings that expand on those already noted in the literature (Darling-Hammond, 2006):

- Student teachers moving, often for the first time, beyond their own sheltered personal and university experiences;
- Student teachers seeing beyond traditional paradigms and stereotypes of the sorts of learners they encounter in schools and develop sensitivity to needs of learners and community impact;
- Student teachers see parents/family as initial and lifelong teachers, and the need to work with that relationship;
- Student teachers better understanding the skill sets of other professionals (community /social workers, youth protection, psychologists etc.) and the need to work alongside them to support learners;
- Student teachers encouraging a more ecological approach to curriculum that addresses the full range of learning and cultural diversity across the curriculum;
- Student teachers understanding more of the politics of education within the provincial context in which they teach and their own potential agency within that arena.

In the 2nd year of this community-outreach program (2010-11), this initiative continued to grow internally whilst garnering positive feedback and increasing interest and support from the community. Our partner schools, who in 2010 hosted those student teachers (in third year field experience) who participated in the first community-outreach opportunity (in completion of their second field experience), have also commented on how these students bring a deeper and more critical knowledge of multiculturalism, community, diversity and civic virtue into their classrooms.

Our overarching goals over this time-frame were, based on the convergence of our own inquiry and current teacher education research, to bridge the theory to practice gap; to better prepare student teachers for the realities of the classroom and the needs and diversity of learners, and to enable a large faculty to adopt a radically different, dynamic and ecological model of teacher education rooted in key principles of social justice.

What Are the Issues and Challenges of Relating Research to Policy and Program Decisions?

As touched upon earlier in this paper, the challenges and obstacles to program revision and implementation of research findings in relation to needed program reform are both structural and human. Challenges to implementation in terms of university structure involve money, time, human resources, administration and policy. In terms of the human dimension, which is huge and in our opinion greatly underestimated, the challenges involve resistance to change, comfort in the familiar, avoidance of the call for personal agency, ignorance of relevant scholarship and/or opposition to scholarship not reflecting the immediate and distinct contextual challenges (political and structural), ownership and vested interest in existing and "rewarding" structures, professional turf wars and power struggles.

In addition to those challenges and obstacles mentioned above, in closing we offer specific examples of challenges we faced in implementing the revisions tried and tested in our "We are Listening! Shoulder to Shoulder" pilot project, program-wide. The primary challenge, perhaps commonplace, but with far-reaching implications, was budgetary. For example, our pilot confirmed that the ability to make practicum-university, theory-to-practice connections was enabled by the ability to form small cohort groups of students. Meanwhile, university-wide budget cutbacks dictated a move to larger classes. A second challenge was transitioning to a large scale implementation of a small controlled project. In the two years of our pilot project we had the luxury, as additional course sections were created, to hand-pick instructors, schools and cooperating teachers who were supporters of the principles inherent in the pilot initiative. As this model was adopted program-wide issues of general workload competed with the instructor selection process. While we wished that the spirit of collaboration integral to the course design teams was characteristic of all educators, realistically, issues of power and autonomy, unfortunately often associated with academia, came into play.

A Few Lessons Learned

The opportunity to write a report such as this has given us the power of hindsight as we reflected on the process. We learned and appreciated the importance of getting all the stakeholders together in a room, including those stakeholders who might not normally be included such as school board consultants, resource teachers, and elementary and secondary school students, to discuss the good, the bad and the ugly, as this sharing proved to be invaluable. We came up against the agonizingly slow process of enacting change in entrenched organizations such as universities – so we learned how to make strategic use of pilot initiatives. Pilots enable innovations to be launched quickly, effect some immediate change and produce important evidence with which to argue for program-wide implementation. An added bonus of our own proactivity was that it reinforced our partners' faith in our commitment to address their needs and issues, and did much to restore a positive working partnership. We learned too that no matter how sound the pilot initiative, the school context in which it is placed, and the school leadership, are crucial to its success and wider reception in the field. We learned the importance of strategically building a supportive and collaborative team to work with us in improving our teacher education programs. We learned to accept that the very changes asked

for by certain stakeholder groups are sometimes met by resistance from those same groups. We learned never to underrate the need for timely and ongoing communication at every point in a change process, nor underestimate the complexity of that task.

Postscript

The iterative nature of teacher education program development is one of shared inquiry, interrogation and informed reflection. It involves a cyclical process of revitalizing, refining and change that considers the past, investigates the present and looks to the future. It demands that we not rest on our laurels, nor remain unmoved by the forces of change that command the very best of our attention and agency.

References

Ayers, W. (Ed.). (1995). *To become a teacher: Making a difference in children's lives*. New York: Teachers College Press.

Bamber, P., & Hankin, L. (2011). Transformative learning through service-learning: No passport required. *Education + Training, 53*(2/3), 190-206.

Banks, J. (Ed.). (2004). *Diversity and citizenship education: Global perspectives*. San Francisco: Jossey-Bass.

Bransford, J., Darling-Hammond, L., & LePage, P. (2005). Introduction. In L. Darling-Hammond & J. Bransford, J. (Eds.) *Preparing teachers for a changing world* (pp. 1-39). San Francisco: Jossey-Bass.

Benson, F., & Riches, C. (2010, June). *Novice teachers emerge from the mist: Seeing the bigger picture, preparation to practice*. Paper presented at the annual conference of the Canadian Society for the Study of Education (Canadian Association for Teacher Education), Concordia University, Montreal, QC.

Benson, F., & Riches, C. (Eds.). (2009). *Engaging in conversation about ideas in teacher education*. New York: Peter Lang.

Carter, K. (1993). The place of story in the study of teaching and teacher education. *Educational Researcher, 22,* 5-12.

Chambers, T. (2009). A continuum of approaches to service-learning within Canadian post-secondary education. *Canadian Journal of Higher Education, 39*(2), 77-100.

Clandinin, J. (2000). Learning To Teach: A Question of Knowledge. *Education Canada, 40,* 28-30.

Clandinin, D.J. (1985). Personal practical knowledge: A study of teachers' classroom images. *Curriculum Inquiry, 15*, 361-85.

Cochran-Smith, M. (2005a, May). *Reforming teacher education: Research, policy and politics*. Keynote address presented at the conference "Teacher Education for the Schools We Need", Toronto, ON, The Ontario Institute for Studies in Education / University of Toronto.

Cochran-Smith, M. (2005b, April). *The new teacher education: For better or for worse?* The 2005 AERA Presidential Address at the annual meeting of the American Educational Research Association (AERA), Montreal, QC.

College. In L. Darling-Hammond (Ed.), *Studies of excellence in teacher education: Preparing in the undergraduate years* (pp. 1-66). Washington, DC: American Association of Colleges for Teacher Education.

Dallimore, E., Rochefort, D., & Simonelle, K. (2010). *New directions for teaching and learning, 124*, 15-22.

Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco: Jossey-Bass.

Darling-Hammond, L. Chung, R., & Frelow, F. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of Teacher Education, 53*(4), 286-302.

Dewey, J. (1963). *Experience and education*. New York: Collier Books.

Doyle, W., & Carter, K. (2003). Narrative and learning to teach: Implications for the teacher-education curriculum. *Journal of Curriculum Studies, 35*(2), 129-137.

Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record, 103*(6), 1013-1055.

Fischer, T. (2002). *State teachers leaving profession at high rate*. Retrieved March 2, 2006, from www.weac.org/News/2002-03/jan03/attrition.htm.

Gibson, M., Hauf, P., Long, B., & Sampson, G. (2011). Reflective practice in service learning: Possibilities and limitations. *Education + Training, 53*(4), 284-296.

Goldstein, T., & Tierney, R. (2005). *McGill teacher education review*. Unpublished report. McGill University, Montreal, QC.

Horowitz, M. (2005). *McGill working group session*. Montreal: Faculty of Education, McGill University.

Horowitz, M. (1974) Teacher Education: Soufflé de fromage, or cheese omelette? In D. Myers & F. Reid (Eds.) *Educating teachers: Critique and proposals* (pp. 81-92. Toronto: The Ontario Institute for Studies in Education.

Islam, F., Riches, C., & Benson, F. (2010) *Report documenting the experience of ten preservice teachers in two international schools*. Unpublished report. Faculty of Education, McGill University, Montreal, QC.

Kane, R. (2003). *Making sense of learning at secondary school: An exploration by teachers with students*. Research grant, Auckland, New Zealand.

Ladson-Billings, G. (1999). Preparing teachers for diversity: Historical perspectives, current trends, and future directions. In L. Darling-Hammond and G. Sykes (Eds.), *Teaching as the learning profession: A handbook of policy and practice* (pp. 86-124). San Francisco: Jossey-Bass.

Lewis, T., & Masunaga, H. (2011). Self-perceived dispositions that predict challenges during student teaching: A data mining analysis. *Issues in Teacher Education, 20*(1), 35-48.

Marton, F., & Booth, S. (1997). *Learning and awareness*. New Jersey: Erlbaum.

Undergraduate Program Review (2009). *Undergraduate Programs in the Faculty of Education*. Unpublished report submitted to Dean Helene Perrault. Office of the Associate Dean (Academic), Faculty of Education, McGill University, Montreal, QC.

Schön, D. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Silvernail, D. (1997). *Results from surveys of graduates of exemplary teacher education programs and the employers of these graduates*. University of Southern Maine: Center for Educational Policy, Applied Research, and Evaluation.

Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretive phenomenological analysis*. London: Sage.

Smith, J. A., & Osborn, M. (2003). Interpretative phenomenological analysis. Qualitative psychology: a practical guide to methods. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to methods* (pp. 53-80). Thousand Oaks, CA: Sage.

Trementi, A. M. (September 15, 2010). *CBC Radio One, The Current: Grading teachers*. [radio broadcast]. Podcast retrieved from: http://podcast.cbc.ca/mp3/current_20100915_38209.mp3

Troman, G., & Woods, P. (2000). Careers under stress: Teacher adaptations at a time of intensive reform. *Journal of Educational Change 1*, 253-275.

Usher, K., Benson, F., & Riches, C. (2010, June). *Moving beyond the obvious: Seeking evidence of benefit associated with non-traditional and international practica.* Paper presented at the annual conference of the Canadian Society for the Study of Education (Canadian Association for Teacher Education), Concordia University, Montreal, Qc.

van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. Albany: State University of New York Press.

Zeichner, K. (2000). Ability-based teacher education: Elementary teacher education at Alverno. In L. Darling-Hammond (Ed.) *Studies in excellence in teacher education: Preparation at the graduate level* (pp. 1-66). New York: AACTE Publications.

APPENDIX A: SAMPLE CAROUSEL QUESTION AND HOMOGENEOUS GROUP RESPONSE

Q1 : From your perspective, what do you know student teachers need to know?
Q2: What else do they need?

University Staff

Foundational Knowledge	Teaching Act	Professional Identity	Social and Educational Contexts
• Knowledge of how children learn. • Content knowledge. • Curriculum resources and materials. • Not only 'what', but 'why'. • Differentiating the curriculum. • Good language skills. • Understanding atypical children and their unique differences. • The curriculum. • Understanding child development. • Computer knowledge. • Links. • Early literacy/beginning reading. • Planning preparation	• What student centered really means. • How to gain respect from students. • The changing, broadening, multiple role of the teacher in today's school (parent, social worker, counselor, etc.). • Differentiated pedagogy. • How to relax in classroom. • Constructive feedback from VT. • Different methods, techniques and how to use them. • Understanding how a positive learning environment is developed. • Time management.	• Accountability. • How to integrate into classroom, engage with students. • Continuation of personal development (arts, philosophy, general knowledge). • Role of the teacher in the consultative process. • What hats to wear, how and when. • Discussion/learning/reflection with other teachers. • What support to expect from CT. • Frank acknowledgment of struggles and support. • Truthfulness. • Positive, cheerful, optimistic,	• Self-awareness, critical awareness (attitudes, prejudices). • Coded children. • IEP's. • School culture. • The rest of a teacher's life beyond instruction (staff meetings, committees, social events for parents, etc.). • Knowledge of school policies. • Maturity, knowledge of differences, imagination. • Seeing students with special needs as individuals to communicate with and listen to.

routines –"management". • Evaluation. • Curriculum knowledge. • Knowledge of coded student issues. • Subject knowledge. • Organization. • Lesson plans. • Children's literature. • IEP info. • Government Mandated School Curriculum	• Classroom management. • How to ask questions. • Organizational skills. • Sense of humor. • IEP's. • Know school expectations/routines. Management as part of culture of classroom. • Guild relationships. • Skills: good voice, body language, communication abilities. • Catching the "small" stuff. • Classroom management and beyond (social and emotional learning for troubled kids). • Materials – real classroom examples (rubrics, etc.)	resilient compassionate, forgiving (self and others). • Willingness to receive criticism. • Work ethic. • How to communicate – how to problem solve. • A computer. • How to communicate with CT. • Humility. • Physical and mental health. • Sense of humor. • Self-directed learning. • Lifelong learning. • Ability to ask for help.	• Knowledge of school politics. • Understand culture of school (schedules, procedures, etc.). • Inclusion. • Exchange with parents, exchange with community. • Student involvement. • Technology. • Memory. • CT's resources. • Today's classrooms. • What content needs to be covered in class (so class is not behind at end of stage). • Welcoming environment. • Knowledge of school geography. • How to celebrate. • School rules, names and practices, locations and networks. • Today's students. • How to work as part of a community.

			• Procedures, paperwork, routine, etc. in schools today. • Orientation to being member of union, rights, ***rsp***. • Relationships (team work with staff, parents, community, etc.). • Need on-going contact with university personnel.
• Understanding cooperative learning strategies. • Names of the students.	• Authentic assessment and evaluation. • Openness. • How to set up and support positive atmosphere for self and others. • Fondness for children. • Special needs. • Flexibility. • Evaluation. • Knowledge of subject matter. • Teamwork skills. • Observation and documentation. • Classroom management skills.	• Patient, energetic, open, able to accept criticism, able to take initiative. • Willingness to learn. • Self-survival. • Teaching demands. • Self-evaluation. • Beyond their horizons. • Personal health and balance. • Professional awareness, update learning. • Attitude, ***advisory*** for children, respect for children. • Passion.	• ***Relationship*** with parents, ***relationship*** generally.

	• Discipline techniques. • Foundation – language – planning evaluation. • Reporting to parents. • Cultural sensitivities. • Cross curricular understandings. • Subject knowledge • Transitions/routines • Projection of voice. • Long-term planning. • Classroom management. • Broad orientation to and experience with range of generic approvals to teaching, modes of teaching		

School Students

Relationships	Teaching	Know-How	Preparation	Other
IN • **A respectful attitude towards students.** • Have a positive, if	• They need control, over themselves and the class. • They need to be compassionate so others feel good to be there.	• How to do exactly what cooperative teacher is teaching. • Know how to work with children with disabilities.	• An understanding of the subject matter and the curriculum. • They need preparation for dealing with different student situations.	• Support from the cooperating teacher and from administration. • A mature attitude. • Confidence in

possible, warm and fuzzy attitude towards what you are doing and you you're working with. • Involvement in the school. • They need to know at what level they are communicating with kids. • An understanding of the kids needs. • They need to be able to communicate with students, teachers and staff. • Need to know about student life and extracurricular activities. • How to deal with students who have issues without bringing more people into a situation. • A good connection with the students. • An established	• They need courage, because at times it's hard. • They need to be confident. • Exercises to do in the class, charge it up a little. • Presentation of curriculum in an easy way for students to understand. • How to be interactive with assignments and projects. • Also have to be able to understand what they are teaching so if asked a question they can explain. • Students don't always understand assignments 100% and need direction. • To put themselves in the student's position (ask: are they learning). • New and different	• What makes a bad teacher. • What NOT to do!! • A good knowledge of the specific curriculum. • Knowledge of our mentality. • Special needs of specific students. • Knowledge of the school they're working at. Politics, other staff, bells, etc. • Control a classroom. • Need to know how to deal with a specific student without causing a scene. • Need to be prepared: classes can be brutal. • Know how to handle behavior so one student does not disrupt the whole class.	• How the school works. • How classrooms work. • Have what the teacher has already used for teaching to avoid stress of change on students. • Discipline strategies and control tactics. • A tour of the school. • Have their rules laid out. • Their rights in the school and as a teacher. • The school and how it works. Maybe a tour day. • The subject they will be teaching. • Names of people.	themselves. • A knowledge of activities in the school outside of the classroom • Independent. • Knowledge of resources and places they can go for individual help. • A knowledge of needed materials. • Take-charge attitude. • Command attention/respect. • Basic orientation of the school area. • Constant support from more than just the cooperative teacher so there is always somebody in case of need.

relationship with the cooperating teacher. • Knowledge of the class dynamic. **OUT** • Get involved in coaching. • A good connection with the CT and staff of the school to get a feel of teaching. • Get involved with school activities e.g. sports, school shows. • To get involved with other areas and not just teachers.	ways to make lesson plans fun and creative. • A strict side. • Names of students. • How to present curriculum in an easy to understand way. • A love for teaching, you want to be there. • Knowledge of specific curriculum for specific classes or grade.	• A clear way to convey the information. • Able to bounce back from distraction or embarrassing situation.		

Principals

Teacher Personality -Traits, Qualities	Knowledge and Skills	Materials and Resources / Documents and Support
<u>LEARNER</u>: • Life long learners. • Interest in teaching as a profession. • Be a reader – lifelong learning.	<u>BASIC KNOWLEDGE</u>: • Knowledge of multiple intelligences. • Knowledge of GOVERNMENT MANDATED SCHOOL	• Ed Act: Education Act. • Copy of Government Mandated School Curriculum. • University Classes: Using school

• A desire to learn and be challenged. • Dup of Philosophy of Education. <u>QUALITIES</u>: • Empathy. • Self-awareness. • Reflective. • Sense of humor. • Flexibility. • Attitude of respect, tolerance. • Creativity – thinking out of the box. <u>TEAM</u>: • Collegial. • Team player. • People skills. • Collaborative. • Be able to work on a team. • Glass is always half full attitude. • Openness to the world. • Interpersonal skills.	CURRICULUM as a planning document. • Knowledge of curriculum. <u>SKILLS</u>: • Use of technology. • Good listening skills. • Good communications skills, verbal and written. • Organizational skills. <u>DIVERSIFICATION</u>: • Special needs students – how to work with these students. • Understanding of diverse student populations. • Understanding of programs. • Classroom management skills. • Knowledge of children's developmental stages. <u>SCHOOL BASE</u>: • Knowledge of school politics. • Philosophy of school. • Population of school: numbers, types of students, programs of schools. • Responsibilities – legal and other. • Exposure to school structure.	materials. • Rights: An understanding that they can approach administration anytime if they have questions. • Access: Knowledge of resources. • School: Physical tour of the building during school time. • Peers: Support from their peers. Weekly slated meetings with other student teachers. • School Admin: Leadership and vision from Principal. • School Act: Teachers who are open and receptive to student teachers. • University: Ombudsperson if CT is not working out. • $: Access to funds. • Continuous opportunities for PD

University B.Ed Students

Awesome Attitudes leads to →	**The Knack for Knowledge** leads to →	**Super Skills** combined with →	**Mega Materials and Rockin' Resources** leads to →	
• Advocacy for children. • Being treated as a colleague. • Sense of humor. • Take initiative! • How to 'act' or be animated. • Enthusiasm. • Confidence creating. • Ability to take criticism. • Be multiculturally sensitive. • Patience. • Be open to diverse students. • Willingness to be involved in all aspects of school life. • How to react and conform appropriately to CT.	• Dress code. • Teaching how to read. • Relevant University courses (Classroom management, special ed, students and drugs). • Knowledge of expectations held by Principal/CT/Supervisor • Morals • What exactly insubordinate behavior is. • School policies. • Legalities and responsibilities. • government mandated school curriculum. • Age level expectations. Development levels for kids. • Attendance policy. • Classroom management techniques. • Warning signs for at-risk	• Communication skills for teaching, oral and etc. • Need more prep on professionalism. • Voice projection and eye contact. • Anger management. • Stress management. • Human relations with parents. • Evaluation. • Behavior management. • Solving problems. • Overhead skills. • How to project voice. • How to make IEP. • Rubrics. • How to write report cards. • Assistance with students with learning difficulties. • Classroom	• Tour of the school, show us how and where to make overheads and photocopies. • Teacher planning book. • Smaller class sizes for University courses. • Supervisors that communicate from day 1. • CT's that willingly want to mentor us. • Continuous professional development. • Ongoing support from University. • Budget $ for materials, awards, etc. • I want to know what relevant textbooks are available to me.	• Reality check. • Life. • Life-long learners.

• Not take things personally. • Keep learning attitude. • Love of teaching	students. • Being able to relate to age level needs and problems. • Specific subject related courses that thoroughly show us the curriculum of that subject. • Ethics. • Computer literacy. • Inclusion. • Knowledge of our rights. • Understanding of emotional/behavioral/learning problems. • Be an "expert" on that subject that you're teaching. • Different levels of teaching. • Technology. • Knowledge of the codes. • Techniques for differentiated learning. • I need to learn more about the union and how they can help me. • Legalities responsibilities.	management. • What to do and what not to do. • How to teach reading. • How to use body language. • Sociology/psychology (parents and children).	• I need more allies. • Technology in the classrooms. • Keys to the school. • Newer textbooks. • How to reserve books for kids.	

Cooperating Teachers

Attitudes	Induction	Preparation	Practicum
• Social skills. • Idealism. • Empathy. • Commitment. • Diplomacy. • Sensitivity. • Enthusiasm. • Dedication. • Humility. • Street smarts. • Freedom. • Boldness sometimes. • Able to accept constructive criticism.	• Meetings, collaboration with CT and supervisors. • Guidance. • Classroom schedule. • Welcome package. • School rules. • Show where to find things, ie paper, books. • Emergency situations, fire drill crisis….. • Bells. • Tour of school. • School environment. • Support group. • A mentor, maybe two. • Introduce to all personnel – secretaries, caretakers, teachers, integration aids. • Staff of the school. • Resources available at the School Board. • Support system University + SCHOOL BOARD + school. • Resources available in	• Strategies to deal with parents. • How to deal with parents – support from Administration. • Curriculum. • How to do report cards. • How to handle behavior problems without fear. • Psychology! • Awareness of subject matter. • Curriculum background. • Subject matter. • Materials (cutting edge). • Knowledge of reform and hands-on learning. • Longer stages. • To have both elementary and secondary background so as to know the student's background. • Info on school politics. • More relevant courses (rubric), etc.	• Time to address concerns with CT. • Parent-teacher night and phone calls. • Observe other classes. • Pacing. • Juggling personal life with real life. • Experience (variety). • Feedback. • Funds for supplies. • List of materials needed for subject. • Inclusive experience. • How to do IEP's. • Rights in the workplace. • Background of students. • Class clientele. • School clientele.

	community. • Special services available. • Give map of school, take them around school. • A feeling of belonging to the school. • Knowing where to photocopy, etc. • Resources available at the school. • Info on school culture. • Give them school handbook, explain. • List of coded students. • Info on school guide background. • Work area. • To see the start up of a school year. • Seminars with supervisor possible on line to discuss strategies. • A great CT.		

Recent Grads

Reality	Preparation	Skills	Classroom Practical	Academic (Theory)
• Interview skills. • Behavior students. • Union politics. • The fact that everything needs to be bought by you. • Pop culture! • Where do I find resources? • How do deal with fatigue. • Coping skills. • More time to prepare for stage. • Less demands from University during stage so we can participate in extra curricular activities. • How to be a sub. • Time management. • Emotional support (help line). • To be prepared to deal with coded students.	• Knowledge of school culture. • Information on kids with IEP's. • Hidden curriculum. • Resources. • The material use by the teacher. • Communication with CT prior to stage. • Know what subjects are to be taught in stage well in advance! • Where you can find resources. • Workshop with CT, ST and supervisor. • The different steps of planification ex: pre-reading, reading, post-reading. • Children in difficulties learning.	• Social skills. • Communication skills. • Classroom management. • Talking to students. • Talking to parents. • Focus on relationship with the students. • Good communication skills. • Lesson planning skills. • Connections made with other teachers.	• Classroom management knowledge. • Report cards. • Dealing with at-risk kids. • How to deal with diverse students' needs. • School info. • Resources • Know school, staff, resources <u>weeks</u> prior to stage. • Evaluation. • Communication of experiences (shared among students). • "Gestion" room's class management. • Classroom management. • Broader range of courses (specific) – science, gym. • Implementation of	• Understanding of Government Mandated School Curriculum reforms. • Knowledge of curriculum. • Reform practices. • Evaluations/reports. • Government Mandated School Curriculum. • Curriculum – what are the components. • Curriculum for specific grades/subject. • Laws and regulations. • Knowledge of disorders and codes. • Classroom management techniques. • Knowledge in subject area. • How to write an IEP.

• Media coverage on provincial educational system. • Appropriate location of stage for individual. • Mentors. • Parents – how to deal with them. • Lack of $ support. • More information on other 'teacher' duties (paper work). • IEP. • Emotional/social issues. • A car! • Support from their CT/schools.			IEP's. • Classroom management skills (role playing).	

School Board: Head Office Staff

Planning and Preparation	Classroom Management	Professional Responsibility	Instruction	Personal Traits
• Need good reference books. • Diversity knowledge. • How to adapt their	• Communications skills. • Building relationships within the school	• Need empathy from all school staff. • They need a supportive	• Learning styles to better adopt teaching style. • How to address	• Patience. • Sense of humor. • Openness of mind. • Empathy for others.

expectations. • How to identify problems being experienced by students. • The demands of developing proper instructional units. • Need to know cognitive level of students. • Need to plan carefully. • Familiarity with appropriate technology. • Knowledge of competencies. • Rich and wide scope of interests and knowledge. • Backward design. • Knowledge of the Government Mandated School Curriculum. • The <u>why</u> of their lesson plans (what are you wanting the	community – with students, colleagues, parents. • Communication skills with staff, parents, students. • How to manage a difficult class. • How to communicate with students effectively and respectfully. • Need to know school culture. • Ability to build relationships.	environment in the school • Mental support. • Wide vision of the profession. • Ability and desire to reflect on practice. • Need to appreciate the <u>complete</u> teaching role, eg professional responsibility outside of the classroom. • Procedures re working with special needs, eg Ad Hoc Committee, IEP's, and the legal implication. • A CT who acts as a mentor. • Need a person that plays the role of mentor. • Be open to new learning forever. • Need to know that while practicing their reflexive skills they need help!	diverse needs, differentiated learning. • Animation strategies. • Instructional strategies for literacy in content areas. • Differentiated instruction. • High-yield instructional strategies. • How to communicate instructions to students (effectively). • Need to learn how to ask questions. • Inclusive education.	• Organized. • How to have fun as a teacher. • Creativity. • Solid vision of their role. • Love of kids. • Acceptance of kids with different needs. • Modesty in their own expectations. • Thrive on change. • Sense of mission. • Passion – high energy and/or sensitivity. • Be a problem solver.

students to learn from your plans). • Knowledge of subject area content. • Assessment for learning. • Appropriate courses in understanding by design, cooperative learning, etc. • Curriculum: need expertise in the subject areas. • Need to be computer literate. • Love of learning. • Evaluation.		• Need to know that they cannot deal with all the problems at a time (step by step approach). • Ability and desire to work collaboratively. • How to work in teams. • How to establish win/win with parents. • Responsibility as a member of a staff. • Need to know that reflexive practice is an ongoing process that needs to be practiced in every course. • Teacher rights. • Professional responsibilities. • A whole school acceptance of student teachers structurally organized to be welcoming and supportive. • Need to share their school experience		

		with their peers during seminars. • The 'realities' of the classroom – paperwork, parent issues, etc.		

APPENDIX B: Stakeholders' Day - STRATEGIES FOR ACTION – CAROUSEL ACTIVITY

CURRICULUM: UNIVERSITY AND SCHOOL

Action	**Present**	**Future**
• Financial support for shared curriculum building workshops, etc. (fewer courses) (tough marking). • Rigorous academic courses/feedback that is honest and useful in a realistic setting. • Planning from the GOVERNMENT MANDATED SCHOOL CURRICULUM (constructivism). • Practical and realistic methodology courses. • Relevant courses to the curriculum (reform). • Have a group of graduates brainstorm needed ideas for school curriculum. • Learn from specialists of different subjects (chemists = chemistry, etc.). • High-yield, research based strategies (e.g. Understanding by Design, Cooperative Learning, Multiple Intelligences, etc.).	• More 'future search'-like days. • Student teacher involvement in PED days. • Seminars held at high schools instead of at the university. • Better initiation into the culture of schools.	• More rigour!! • Less repetition and gaps. • More cohesive/coherent communication between Profs who teach consecutive courses. • University methods instructors substituting in high schools. • Profs team teaching with current elementary/high school teachers. • Mandatory volunteer work in schools (tutoring, coaching). • Selection process at University – interviews/ reference letters. • Mandatory ethics class.

CLASSROOM MANAGEMENT

Action & Theory	Present	Future
• How to prepare lesson plans that engage children – and what to do when the lesson fails! • Videos of real classrooms. • Movies. • Have interesting lessons. • Techniques with concurrent field experience. • Course placement in B. Ed Program (between 3 and 4 FE). • Provided with excellent resources and modeling. • Videotaped lessons for reflection and review of classroom management practices. • Relevant lessons that coincide with student's interests and needs. • Organizational skill.	• Courses with master teachers – 'management tricks'. • 'Harry Wong' or other 'how to' books as a graduating gift! • Discussion groups with student teacher and staff on classroom strategies (informal meeting).	• Workshops on 'building relationships'. • Preparation of conflict management.

DEALING WITH DIVERSITY

Action	Present	Future
• Discuss composition of class before beginning planning, etc. • How to implement and create teaching strategies for diverse learners.	• Student teachers can independently research how to cater to the different diverse needs of their classroom. • Include themes of diversity in all	• Introduce a mandatory course on differentiated instruction. • Mandatory stages within schools that are specialized in dealing with an

• Being made aware of the availability of support services. • Participation in different teaching environment with different CT's and different students. • Teach one on one. • Courses on differentiated instruction. • Critically evaluate teaching materials re: learners' needs for diversity. • Courses that inform on student problems such as (racism, drug abuse) disabilities. • How to deal with these sensitive students (operation respect!!)	aspects of the curriculum.	eclectic clientele. (Ex. autistic, physically disabled, ADHD, ADD, dyslexic, etc.

THEORY AND PRACTICE (INTEGRATION OF….) + PARTNERSHIPS

Action	**Present**	**Future**
• More realistic and frequent microteaching / role playing. • Real classroom samples. • Bring teachers and administrators to the university to meet with and plan with prospective teachers. • Situational problem solving. • Longer stages. • Class discussion with students. • Have a role play (to know what to do	• Trying to address the content of the courses with input from the reality of the field. Invite CT's to planning and co-ordination meetings for University courses. • Switching roles – CT's and Profs. • Include CT's in planning courses. • On-line – assignments and courses during stage discussions.	• Mentoring – courses for new principals. • Supporting new teacher. • Marriage of Masters and PhD. students doing research (with School Board). • Regular meetings.

when it happens). • Field practitioners' involvement in development of courses (e.g. case studies). • Research questions should come from the field. • Teach university classes in schools using CT's, administrators, resource people, etc.		

COOPERATING TEACHERS AND CONTINUING SUPPORT

Action	**Present**	**Future**
• Training program with incentives. • Selection process to be refined / on-going professional development. • On-line dialogue between CT's/ST's and supervisor to ensure consistency. • Strong, organized administrative support. • Standardized guidelines and **clear** expectations with open follow-ups. • CT should have a minimum of 5 years experience. • Regular meetings between the CT's and the administration to make sure things are going well. • A rubric of how they're going to be evaluated before they go into the classroom.	• Strike a tri-lateral committee (University, School Board and Teacher Union) to establish criteria for cooperating teachers. • Ensure that Student Teacher funds are used adequately (e.g. teacher release, workshops, materials, etc.) • Define role of principal in establishing a welcoming environment, the evaluation of the Student Teacher, the selection of the CT's, and the availability to Student Teacher and CT.	• In cooperation with the University provide mandatory training of CT's.

SCHOOL POLITICS (Relationships, Values and Structures)

Action	**Present**	**Future**
• Involvement in extra-curricular activities. • Understanding of each school community. • Orientation with a manual and training in effective committee participation. • Mandatory professional development within 4 years B.Ed. (sit in on/participate in interviews, IEPs, staff council….) • Welcome ST's as colleagues and greet with structured activities. • Prepare school community to receive student teachers. • Open house 'style' intro to school life for ST and new staff. • Mentorship program.	• Mentorship for stagiaires and new teachers – 'pod' – defined and shares. • Recommendation (esp. high schools) open house style intro to school life for student teachers and new teachers. E.g. booths manned by teachers to explain various clubs and committees (sports, Governing Board, Council, yearbook) with the expectation that they become involved.	• Develop a handbook (all inclusive) in University. • Direct instruction of meeting procedures and staff role (protocol, Robert's Rules). • Roles and Responsibilities of Educational hierarchy: Ministry of Education, Board of Commissioners, School Board Administration, school.

ORIENTATION & PREPARATION FOR FIELD EXPERIENCE

Action		
• Welcome package from school (handbook of policies, etc.). • School tour with CT. • Know how to work with kids.		

• Attendance at staff meetings prior to arrival of the classroom students (year 1). • Administration actively involved and supported by O.S.T. • Scheduled meeting with CT and Principal (planning, expectations) prior to placement. • Knowledge of textbooks and content ST's are expected to teach well in advance of the field experience. • A pre-field experience with cooperative teachers, supervisors and Administration, i.e. retreat, seminar.		

MECHANISMS FOR REFLECTION

Action	**Present**	**Future**
• Create a support system with other teachers (i.e. discussion panel). • Keeping a journal (portfolio record). • Feedback from students and evaluation. • Have an agenda to keep up and take notes. • Regular School Board level advisory meetings for student teachers with advisor and practitioners.	• Keep a daily journal (self-evaluation). • Students evaluate student teacher (feedback). • Social and professional development activities linking student teachers with the rest of the staff (rapport building). • Discussion with fellow student teachers.	• School based workshops on student teaching. • Videotaping student teachers in action (for purposes of reflection). • Published articles from journals – add one's voice to professional literature.

• Regular (informal) meetings with administrative team. • Action based research for/by student teachers in the classroom. • Reflection as part of evaluation process by supervisor.		

APPENDIX C

Summary of Town Hall Meetings

Summary of Student Voices
Top 30 Issues from Town Hall Meetings
Dates:
March 7, 2005 – 3:30 – 5:30
Open to all students in: K/Elem, K/Elem (Jewish St. Opt); TESL; TFSL
Approximately 20 students (Ss) attended.
18 in the K/Elem B.Ed program and 2 in the B.Ed TESL program
March 9, 2005 – 1:30 – 3:30
Open to all students in: Secondary; B.Ed/B.Sc; B.Ed/B.Mus; Phys&Health Ed.
Approximately 12 Ss attended.
8 in Secondary
4 in B.Ed/B.Mus

Field Experiences

1. Lack of professional seminars to lend support to Ss during 2nd Year and 3rd Year Field Experiences (FE).
2. Spread FE hours throughout program, so that Ss have real life experiences to draw on in classes.
3. Need for more time in schools, need more mentoring, feedback etc..
4. Have FE start on 1st day of school.
5. Quality of FEs. Placement irrelevant to specialization (Music). Cooperating teachers (CTs) not good models or mentors.
6. CTs need better guidelines as to what is expected of Student Teachers (STs).
7. More University supervision of STs.

Courses in Program

8. Asked whether course content is reviewed to check consistency between course description, outline, (inclusion in program based on intended outcomes) and what is actually being covered and taught.
9. Would like sections of the same course to be similar in terms of using the same textbook, and having similar expectations and methods of evaluation.
10. Want higher standards demanded of them. More rigour in courses.
    - lots of activity, assignments, tests etc. but no challenge.
    - assessment, courses where half of mark is based on attendance
    - bad examples of multiple choice tests
    - same videos used in 2 classes
    - profs underestimate students ability to think
    - Education known as 'easy' across campus, guaranteed way to raise GPA.
    - S reported receiving an A for a course he only attended class twice.

- Student 'knew' that she would receive an 'A' for each assignment even before she began assignment.

11. Too much theory or rather too big a divide between theory and practice, need to connect the two, through real life scenarios, case studies etc.
12. Class time not used effectively.
13. Too much 'reflection', chapter summaries. Want more challenging, worthwhile assignments.
14. More of a progression of issues and depth through 4 years of program.
15. Relevance of courses. Program requirements in terms of required academics, e.g. higher level math, linguistics unnecessary.
16. Student teachers from other university in same city chosen over our student teachers. Perception that other university's students are better prepared.
17. General feeling that Ss are at best disappointed, at worst angry that the B.Ed. content is not as valuable, rigorous, applied as it should be.
18. 4th year S commented that she is generally frustrated with Ed students, as she feels it is the students who should be taking more responsibility for their own education, and who should have higher standards themselves for the quality of work which they produce.

Specific Course Content

19. Ss would like specific training in the Government Mandated School Curriculum, perhaps a whole course. As it is new, CTs sometimes rely on, or expect student teachers to be 'experts' in the Government Mandated School Curriculum. They are expected to be the agents of change.
20. Ss would like First Aid Training offered at some point in the program, paid for through student fees.
21. Training in Lesson Plans (LPs) seems to be hit or miss over the program. Depends on which courses are taken with which instructors. LP not dealt with enough or not at all.
22. Development of portfolios also hit and miss over the program.

Professors

23. Professors should be assessed and evaluated. Should be given feedback, ways to improve teaching practices. Ed professors should be modeling good teaching practices.
24. S asked how course evaluations are used. General feeling that they are ignored.
25. Course evaluation results need to be more accessible to Ss. Suggested links beside profs' names on Minerva (class schedule).

Degree

26. Possibility of B.A/B.Ed,
27. Ss don't understand how Subject A, Subject B set up works. What it does for them in terms of their marketability.

Admissions, Students

28. Ss want higher admission standards, more than just GPA. Recommend letter of intent, interview.

29. Better, more informative website to attract prospective students. Advising for prospective students.
30. Interfaculty transfers too difficult. Could be attracting more students from other faculties

Chapter 17

The Professionalization of Teacher Education Program in Quebec

LUCIE ROGER, PHILIPPE MAUBANT,
FRANCE LACOURSE, & ENRIQUE CORREA MOLINA

Over the last decade, Quebec universities have offered reformed teacher education programs centred on a framework of twelve competencies. This reform was prescribed by the ministry of education in 2001 and implemented in 2003, and its most important goal has to do with the professionalization of teachers. The reform is anchored in Bourdoncle's (1991) and Lang's (1999) works with regard to professionalization and in LeBoterf's (1985; 2000) and Perrenoud's (1997; 1999) works with regard to developing competencies, and is broadly influenced by European researchers and research. What is meant by "competencies"? What are the historical roots of this idea of "competencies that teachers should have"? These are the central questions of this text.

Introduction

Since 2001, teacher education programs in Quebec have been structured based on a set of competencies. This new approach was established following an emerging recognition of the professional nature of the teaching occupation in the 1990s, when the occupation found itself valued and was given resulting media coverage. The trend toward universitization of professional teacher education, for its part, has been in place since 1969. As a follow-up to the recommendations of the *Royal Commission of Inquiry on Education in the Province of Quebec* (Gouvernement du Québec, 1965) or Parent Report, normal schools, which had been responsible for training teachers, closed their doors. Teacher education thus fell under the prerogative of universities, and a state university, the Université du Québec, was founded specifically to train teachers. However, the Government of Quebec's universitization of professional teacher education does not mean that the foremost objective of this form of education is to professionalize future teachers. How, specifically, has this idea of professionalization been integrated into Quebec universities since the Parent Report? How has the competency-based approach addressed this new aim of professionalizing teacher education programs? Since the idea of professionalization underpins current programs and the competency-based approach in turn underpins this professionalizing aim, it appears necessary to begin this text by defining professionalization and tracing the evolution of the notion in

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university-based teacher education programs. The following section will explain the evolution of teacher education in Quebec to highlight changes that led to the competency-based approach. Finally, the article will present the various influences leading to the present definition of the concept of competency structuring teacher education programs.

The Beginnings of Professionalization in Teaching and Training Occupations

The term *professionality* first appeared in the field of teacher education in 1989 in the context of the Bancel report in France. This report "attempted to determine the professionality required to teach by indicating orientations of the professionalization process to implement in view of reaching this objective" (PRISME, 2008).[1] The Bancel report, titled *Créer une nouvelle dynamique de la formation des maîtres* ("creating a new dynamic in teacher education"—an idea that gained major success), introduced the idea of professionalizing the teaching occupation and resulted in, among other things, the creation of the *Instituts de formation universitaire des maîtres* (IUFM) or university institutes for teacher education in France. This marked the beginning of the competency-based approach in teacher education programs attempting the move from a paradigm of technical qualification to a logic of competency leading to professional training for future teachers. Since the Bancel report, a number of works have dealt with the professionalization of teachers. Among these can be cited those of Bourdoncle (1991), Martineau (1998), Lang (1999), and Wittorski (2009,2007). Professionalization remains a lively subject of research (Lessard & Bourdoncle; 2002; Pastré, 2005, Piot, 2009; Roquet 2007) and has greatly evolved over the past 20 years; the contribution of scientific research has considerably changed the place given to the development of professionalization in teacher education.

Recent official texts on teacher education in the province come within the scope of a competency-based approach. For the teacher, this principle and approach is intended to support the construction of socio-professional action and form the basis for professional development; for pre-service teachers, the learning and mastery of twelve competencies promotes professional know-how. These two elements constitute the frame of reference for the professionalization process. In the spirit of the teacher education reform, pre-service teachers are considered learners in their own right who must learn, work, and master competencies serving social and professional action.

The choice of the competency-based approach is therefore justified in view of a professionalizing aim. As a result, in the context of teacher education, institutions offering such training are reminded to do their utmost to create the most favourable conditions to this socio-professional learning. The aim of constructing professional action, promoted and supported in teacher education programs, is in a sense thought to define and justify the competency-based approach.

Given the ministry's will to professionalize training, it appears essential, based on a reading and study of titles and aims of professional training programs in teacher education, to determine whether the suggested curriculum targets an objective of professionalization. In this

[1] All translations in the text are ours.

context it appears important to study the evolution of university models to understand to what extent and in what conditions Quebec universities, the bearers of teacher education programs, condemn or support an objective of professionalization.

Lenoir (2005) presents five university models: the cultural university, the scientific university, the liberal university, the pragmatic university, and the university of excellence. According to Lenoir, the Quebec educational system and the province's university system in particular are influenced by "the model of liberal education in the British sense of the term" (Lenoir, 2005, p.160), but clearly display the objective of "adapting the school system to the economic demands of a society undergoing profound transformation" (ibid.). This is why Lenoir considers that the province "has progressively become incorporated into the pragmatic North American educational logic" (Lenoir, 2005, p. 160). According to Lessard and Bourdoncle (2002), the university is not *a priori* a place of training for professions. Lessard and Bourdoncle (2002) identify three university models: the liberal university (targeting the construction and elaboration of an intellectual, personal, rational, and critical ethic), the research university (defined as a community of scientific research), and the university of service (serving social progress and providing its clients with useful knowledge). We could easily include these three models within the modelling suggested by Lenoir, especially as Lessard, Bourdoncle, and Lenoir all consider that Quebec universities today design and implement their offered training consistent with economic aims and the expectations of the labour market. In the conclusion to their text, Lessard and Bourdoncle (2002) call for a merging of the three models.

The University in Quebec

What models do Quebec universities claim to adhere to today? Let us briefly recall the university model defended by the Parent Report in 1964 (Gouvernement du Québec, 1965). The Report considered three functions for the province's universities:

> Today's university has a threefold function of transmitting up-to-date knowledge, training specialists in the practice or study of the core disciplines (medicine, law, linguistics, literature, philosophy, pure and applied sciences, business and administration, social sciences, pedagogy, etc.), and advancing knowledge in these disciplines through imaginative and creative reflection and research. (Gouvernement du Québec, 1965, p. 82)

This excerpt shows the desire to reconcile the three university models (liberal, research, and service). But it can be hypothesized that a strong trend, produced by the ideological and economic pressures of neoliberalism, has progressively marked and influenced the orientation of the Quebec university, gearing it toward the service model. It is important here to be prudent by avoiding amalgamations and by posing certain questions. Is the aim of professionalizing professional training a component only of the service model? Or can it become established in another model, for instance the research model—and in what conditions? If we consider that the aim of professionalizing a given professional training is organized on development of professional knowledge and the processes to acquire this

knowledge, it is less the university model that must be analyzed than the didactic and pedagogical meaning given to the curriculum and the training device by various trainers.

The Quebec University from 1969 to 1980

In 1969, with teacher education belonging to the realm of educational programs in Quebec universities, the University in the province did not present a configuration in which the three models (liberal, research, and service) were united. It should be kept in mind that research on education and teacher education was in its early stages. As the Parent Report suggests, university faculty versed in matters of education had yet to be trained. Future teachers were confronted with university training that was essentially disciplinary and strongly focused on psychology. Certain research was undoubtedly undertaken to study education, but they struggled to find their theoretical and conceptual references and to define their epistemological foundations: experimental pedagogy, psychopedagogy, or education science. In fact, in 1979, the report of the committee on teacher education and development, also known as the Angers report, presented a rather dismal portrait of the situation and prescribed that "educational research should be a priority for the 1980s"(Anadon, 2004, p. 26). The university model to which Quebec universities claimed to adhere at the time was essentially liberal. Not only was research almost absent in teacher education programs, but social stakes and professional aims were not any more taken into consideration in this professional training of educators chiefly patterned after the academic mode of passing on knowledge.

The Quebec University from 1980 to 1990

The first half of the 1980s witnessed severe criticism regarding the Quebec educational system. This criticism touched on not only the mediocre quality of preschool and primary school education, but also teacher education (Gouvernement du Québec, 1996). Moreover, certain social debates and issues spanned all of Quebec society, notably academic success for all and academic perseverance. In view of these challenges for Quebec society, the quality of offered education and training was questioned. Such debates were not taking place only in Quebec, however. The American educational system was also facing criticism in the United States for the same reasons (Holmes group, 1986). In the North America of the 1980s, it is not reconciliation between research on education and research on teacher education that could be observed, but rather a major divide. The educational research of the day was influenced by the natural sciences (Gauthier and Mellouki, 2006), while research on teacher education more or less explicitly advocated a neobehaviourist epistemology, as attested to the success of Jacques Tardif's book *L'enseignement stratégique* (literally "strategic teaching"). It should also be noted that this neobehaviourist movement held sway in the Quebec ministry of education and influenced the entire educational system. University and school curricula at the time were thought out and structured in line with an objective-based approach. Quebec universities certainly held the bases of scientific research on education; however, it was not linked to the complex problems of professional settings. A university of service gradually became established, seeking essentially to pass on technical knowledge. Students were to become specialists of professional action. The coexistence of the research model and the service model hardly allowed the development of an aim of professionalization, since, for professionalization to exist,

knowledge must be seen as the product and meaning of a dialogue between activity and learning.

The Quebec University from 1990 to the Reform

In the 1990s the education crisis was characterized by various signs. A major drop in the number of students, tied to decreases in school-related demographics, led to a lengthy period of low job security for newly graduated teachers. Student heterogeneity was becoming an increasingly common reality in classrooms. Teachers therefore had to learn to teach students from different ethnic, socio-economic, and cultural backgrounds. As a result of these social and educational realities, other questions were posed concerning Quebec Schools. Among these were the place of the school in society, as well as its ability to maintain and defend fairness and social justice. In view of these changes in and transformations of the social fabric, the role of the new teacher appeared to be less and less clearly defined in the official discourse. New values strongly influenced by private enterprise—flexibility, mobility, efficiency, and adaptability (Tardif, 2005)—seemed to supplant the traditional values of the School (instruction and hence the acquisition of knowledge). These values implied that knowledge was insufficient and that it would be advisable to adapt to the new social and economic realities imposed by the market (Freitag & Pineault, 1999). A first reform of teacher education was introduced by the ministry of education in 1993, primarily targeting secondary education and underpinned by five fundamental principles:

> The development of a strong general culture, including spoken and written mastery of the language of instruction; versatile training requiring instruction in at least two teaching disciplines; a focus on the professional development of students; in-service training of at least 700 hours; and an integrated training. (Vanhulle & Lenoir, 2005, p. 25)

These key principles are broken down into 36 competencies and uphold certain social values, such as the development of general culture and personal development. They lay the foundations for the idea of a professionalization of the teaching occupation in Quebec. The reform stipulates that

> autonomy and responsibility, characteristics of teachers' professional practice, require sound initial training enabling teachers to exercise their capacity for critical reflection and to actively contribute to the evolution of knowledge relative to the practice of teaching. (Gouvernement du Québec, 1993, p. 13).

The words "aptitude for critical reflection" and the invitation extended to teachers to "actively contribute to the evolution of knowledge relative to the practice of teaching" suggest that this 1993 reform established an aim of professionalization in teacher education.
Research dealing with professionalization also developed in this period (Bourdoncle, 1991; Hensler & Baillauquès, 1993; Lang, 1999; Lenoir, Laforest, & Pellerin, 1995; Tardif, Lessard, & Gauthier, 1998). A reconciliation can be seen between educational research activities on the one hand, and prescriptive texts on teacher education and teaching practice on the other. This reconciliation would substantially influence the education reform following that of 1993.

Educational research became structured in reference to education science, born in 1967 on the altar of pedagogy (Mialaret, 2005; Houssaye, 1987). This research increasingly approached debates regarding teaching practice in relation to Quebec society as a whole, social partners, and teachers confronted with social change. In the 1990s in Quebec, universities seemed receptive to a discourse on the professionalization of the teaching occupation. In this period, universities were beginning to be permeated by knowledge specific to educational research, notably because this knowledge asserted the social dimension of the School and the societal dimension of Education. There was also a will to connect educational research with the realities of classrooms and the contexts of teaching practice.

The Quebec University since the Reform

The second teacher education reform was announced in 2001 by the ministry of education while the previous reform was only becoming established. This reform definitively "brought teacher education within a perspective of professionalization" (Vanhulle & Lenoir, 2005). The official texts refer to "the diversification of school populations, growing social problems, and tensions stemming from technological changes and the globalization of the economy." Decision makers took these factors into account as elements likely to put pressure on the work of teachers. Public authorities consequently acknowledged the social dimension of the teaching act. Underscoring the apparently international establishment of a twofold convergence in OECD countries on the questions of teaching practice and teacher education, the 2001 Quebec reform set down a principle for structuring this new professional teacher education: professionalization. According to this principle, the reform defends and supports the model of the professional educator, leading to the development of teachers' professional autonomy. The curriculum (Gouvernement du Québec, 2001) was structured around twelve professional competencies (see Appendix) to be acquired over the course of teacher education programs. In sum, the reform upholds a principle of professionalization, targets the professional autonomy of teachers, and is based on a curricular configuration organized around twelve competencies.

The Model of the Professional Educator Expected by the Quebec Ministry of Education

The aim of professionalization found in teacher education programs is paired with the objective of contributing to the construction of a professional identity. We hypothesize that to be achieved, this twofold orientation must translate into aims, organization, and knowledge to learn through the implementation of professional learning situations (Maubant & Roger, in press). Martineau (2008) nonetheless points out that teachers can hardly rely on the educational institution (schools, school boards, ministry of education) to develop their professional identity; they must construct it through their interpretation of their work experience.

It should be kept in mind that the teacher education framework of competencies advances a conception of professionalization mainly based on the works of Bourdoncle (1991) and Lang (1999). Elaborating on the concept of professionalization by applying it to teaching, Lang (1999) in fact mentions that "an academization of training is no longer enough to promote the model of the professional" (p. 168). Based on Bourdoncle (1991), Lang proposes

a model of professionalization which, according to him, touches on two dimensions. The first is professionality, that is, the idea of professional development of individuals, who seek to progressively access knowledge enabling them to organize their professional actions. The second, professionalism, concerns the interaction strategies of a professional group in view of its social structuring and development, hence granting it legitimacy and recognition in the eyes of social partners, the population, and public authorities. According to Bourdoncle, to pass from a professional activity to a professionalization process, it is necessary to link professionality and professionalism under one same process.

Since the Parent Report, the will shown by the Quebec government has been not only to train teaching professionals in universities, but also to unite research on teaching practice with training, as well as to permit improved transmission of knowledge, a stronger bond between research and training. This will cannot merely fall under a technicist vision of the teacher's work and thus cannot simply be content to develop the instrumental interventions of teachers by taking an interest in their effects on students and in learning in school. There is, in the definition of the educator as "inheritor, critic, and interpreter," a consideration of the teacher's activity.

However, if the definition of professionalization adopted by the reform is nourished by European references and research, it is important to remember that "the word professionalization comes from functionalist sociology (notably the work of Parsons) and, in its first sense, refers to the process by which an activity becomes a liberal profession driven by an ideal of service" (Wittorski, 2007, p. 2). Professionalization, in Anglo-Saxon countries, seeks to address an organizational intention of regulating employees' activity. This first functionalist representation of professionalization is based on a logic of production, a logic of results, and the establishment of a controlled system to enable employee evaluation.

The curricular model adopted by the ministry of education is consistent with a logic of controlling activity. Organizing the activity of the professional teacher into twelve competencies precisely aims to structure the evaluation of future teachers' activity. In a sense, this institutionalization of activity can be said to lead to the production of professionals. This statement runs parallel to the thoughts of Wittorski (2009), who mentions in an operational definition of professionalization that it is translated "in an organization's intent of 'prompting subjects to action' by prescribing and organizing certain competencies (which expresses an unequivocal conception that the organization holds of a 'good professional') and by proposing specific frameworks (relative to work and/or training) for developing competencies—all of which constitutes an offering of professionalization" (p. 184). Wittorski refers to this professionalization as a prescribed identity. According to him, when professionalization is combined with organizational recognition, the identity is enacted and experienced. An identity-related mediation (between subject and organization) therefore takes place "whose stake is the organization's attribution … of competencies to an individual based on the results of the activity he or she has carried out" (p. 184). Wittorski speaks, in this case, of a recognized/attributed identity. In the curricular forms chosen by the ministry, one finds an effort to ensure training efficiency, as well as a legitimization of training practices.

In line with Lacourse and Moldoveanu (2011), it is worth mentioning that, through the professionalization process, "To become the author of one's [professional] identity is to integrate one's experiential knowledge and multiple identities given one's inherited origins and belonging to various social and cultural groups" (p. 125, our translation) as well as to integrate the teacher education that is undergone. In this dynamic of belonging, the future teacher

encounters times of continuity, compromise, or break points when it comes to university training, the teaching culture in the practicum, and him- or herself. The professional identity goes through a number of trends such as singularization, the rejection of teaching culture and training, or the questioning of one's values, beliefs, and aspirations. All of these yield effects on professionalization, including one's professionality and professionalism.

The Place of Competencies

The competency-based approach advanced by the reform seeks to support the construction of socio-professional action and the bases of professional development. Hence, for pre-service teachers, the learning and mastery of twelve competencies serving professional know-how constitutes the frame of the professionalization process.

This term of competency in a sense constitutes the symbolic figure of reforms in the province (reform of primary and secondary school programs and reform of teacher education). The concept of competency is the prerogative of the official discourse, incantatory and prescriptive, which targets socio-professional adaptability. Following Rey (1997), it is important to consider that there is no knowledge without competency, and no competency without knowledge. Astolfi (2003) pursues this idea as follows: "Holding knowledge does not only mean to memorize it, but to use it as a tool, with competence. Without knowledge to guide it, a competency would be no more than a recipe for success without understanding" (p. 36).

Certain principles can be identified in line with the development of competencies during training:

1. First, it is thought to follow a progression from simple to complex. A competency can therefore be situated at the same level of simplicity as a skill, just as a skill can be situated at a high level of complexity and require lower-level skills for its application (Government of Quebec, 2001, p. 48).
2. Competencies are based on a set of resources. They involve more than personal resources, as a competent person is able to identify and use all such resources in a context of action.
3. Competency is based on the ability to mobilize resources in a situation requiring professional action. The difference between this point and the previous one has to do with the distinction between context and situation. A professional teacher has to be a skilled person, and has to mobilize a resource in a real-life situation, not only within controlled situations.
4. Competency is part of intentional practice. "Competency can be more than a set of objectively observable movements; it is also an action on the world, defined by its social or technical utility—in other words, it has a practical function" (Rey 1998: p. 34).
5. Competency is demonstrated as a successful, effective, efficient, recurrent performance.
6. Competency is a project, an ongoing pursuit. The most important idea behind the competency-based approach is that nobody has ever definitely achieved competency.

The ambiguity within the reform (that is, a definition of professionalization that aims to address the development of the person, but an application that aims to address the construction of professionals through the attainment of competencies) creates tensions between research and training (Vanhulle & Lenoir, 2005; Perrenoud, Altet, Lessard & Paquay, 2007). In university programs, we can see that it is generally through practica that universities seek to establish the professionalization process in which future teachers must be engaged throughout their training. Generally speaking, there are different forms of practica in teacher education programs. Practica are organized so as to enable a gradual integration into the teaching profession, and usually go from observation practica to practica entailing professional responsibility, in which the student teacher is frequently alone in the classroom with a group of students over a period of several months. Different forms of practica can come between the stages of observation and professional responsibility, notably small-group sessions, specific lessons, practica with in-class teaching support, etc. It is undoubtedly practica that have gained the most ground in terms of training and university credits over the course of the most recent reform of teacher education. These practica do allow for the development of the competencies set forth in the curriculum, whether through observing or carrying out teaching practice. However, there is always a risk that future teachers will focus on their intervention to the exclusion of the development of their professional learning and activity. There is a continual risk that they will remain within the scope of an instrumentalist and technicist view of the profession (Lenoir, Laforest & Pellerin, 1995), and, when this occurs, it is impossible to say that they are truly engaged in a professionalization process.

Conclusion

The recent reform of the teacher education curriculum, which led to its definition in terms of competencies, values the professionalization process that takes place through professional and identity-related development. It attempts to reconcile professional development with the application of a model for measuring the attainment of competencies. Yet it appears that the definition of professionalization that seeks to promote the development of professional learning is not always explicitly supported by universities. This discourse on professionalization does not always appear to be assumed by university institutions, since its aims and stakes are evidently not sufficiently clarified and debated. It is important, beyond the attainment of the identified competencies, to discuss the added values contained within the objective of professionalization. It is also important to specify the different definitions of professionalization, as well as to make apparent its characteristics in line with professional training policies and frameworks. It therefore would seem relevant, in our view, to examine the meaning, status, and functions of professionalization based on the complex issue of professional learning through reflexive analysis. Greater convergence needs to be sought between the attainment of competency and the professional development of future teachers.

References

Anadón, M. (2004). Quelques repères sociaux et épistémologiques de la recherche en éducation au Quebec. In T. Karsenti & L. Savoie-Zajc (Eds.), *La recherche en éducation: Étapes et approches* (pp. 19-36). Sherbrooke, QC: Éditions du CRP.

Astolfi, J.-P. (2003). *Savoirs en actions et acteurs de la formation*. Rouen, France: Presses de l'Université de Rouen.

Bancel, D. (1989). *Rapport présenté au Ministre d'État, Ministre de l'Éducation nationale, de la jeunesse et des sports, France*. Accessible at: http://formerlesformateurs.free.fr/rapport_bancel_10oct2006.html

Bourdoncle, R. (1991). La professionnalisation des enseignants : Analyses sociologiques anglaises et américaines. 1. la fascination des professions. *Revue française de pédagogie, 94*, 73-91.

Conceptions de l'université et formation professionnelle. *Revue française de pédagogie*, *139,* 131-153.

Freitag, M., & Pineau, É. (1999). *Le monde enchaîné*. Montréal: Nota bene.

Gauthier, C., & Mellouki, M. (2006). *La formation des enseignants au Québec: à la croisée des chemins*. Quebec, QC: Presses de l'Université Laval.

Government of Quebec (1993). *Moving ahead – Elementary and secondary education in Québec: Orientations, proposals and issues*. Québec, QC: Ministry of Education.

Government of Quebec (1996). *Les États généraux sur l'éducation, 1995-1996*. Quebéc, QC: Ministère de l'Éducation, Commission des États généraux sur l'éducation.

Government of Quebec (1997). *Québec school on course*. Quebec, QC: Ministry of Education. Accessible at: http://www.mels.gouv.qc.ca/reforme/pol_eco/anglais/ecole_a.pdf.

Government of Quebec (2001). *Teacher training: Orientations, professional competencies*. Québec, QC: Ministry of Education. Accessible at: www.mels.gouv.qc.ca/dftps/interieur/PDF/formation_ens_a.pdf

Government of Quebec. (1965). *Rapport de la commission royale d'enquête sur l'enseignement dans la province de Québec*. Québec, QC: Commission royale d'enquête sur l'enseignement.

Hensler, H., & Baillauquès, S. (1993). *La recherche en formation des maîtres: Détour ou passage obligé sur la voie de la professionnalisation?* Sherbrooke, QC: Éditions du CRP.

Holms Group. (1986). *Tomorrow's Teachers: A report of the Holmes Group*. East Lansing, MI: Author.

Lacourse, F., & Moldoveanu, M. (2011). Le développement professionnel et identitaire du personnel enseignant. In F. Lacourse, S. Martineau & T. Nault (Eds.), *Profession enseignante. Démarches et soutien à l'insertion professionnelle* (p. 121-138). Montréal: CEC.

Lang, V. (1999). *La professionnalisation des enseignants*. Paris: Presses universitaires de France.

Le Boterf, G. (1985). L'ingénierie des ressources humaines: de quoi s'agit-il ? *Education Permanente, 81*, 7-24.

Le Borterf, G. (2000). *Construire les compétences individuelles et collectives*. Paris: Editions d'organisations.

Lenoir, Y. (Ed.). (2005). L'éducation à la citoyenneté: un processus sociohistorique de mutation de l'Université à l'école primaire. In B. Mabilon-Bonfils (Ed.), *Violences scolaires et cultures* (pp. 145-187). Paris: L'Harmattan.

Lenoir, Y., Laforest, M., & Pellerin, B. (1995). Objets de formation privilégiés dans des curricula de formation des maîtres du primaire au Quebec au cours des années 80. *Spirale, 16,* 107-135.

Lessard, C., & Bourdoncle, R. (2002). Qu'est-ce qu'une formation professionnelle universitaire ? Conception de l'université et formation professionnelle. *Revue française de pédagogie*, *139*, 131-154.

Martineau, S. (2008). L'identité professionnelle et l'insertion professionnelle: essai de problématique. *Formation et profession, 15*(1)*,* 40-43.

Maubant, P., & Roger, L. (in press). Faire de la situation de formation-apprentissage le sens du processus de professionnalisation des enseignants. In P. Roquet & R. Wittorski (Eds.), *Méthodes et approches de la professionnalisation*. Paris: L'Harmattan.

Mialaret (2005). Les sciences de l'éducation. Paris : Presses universitaires de France

Pastré, P. (2005). Formation et professionnalisation: le point de vue de la didactique professionnelle. In M. Sorel & R. Wittorski (Eds.), *La professionnalisation en actes et en questions* (pp. 141-144). Paris: L'Harmattan.

Perrenoud, P. (1997). Construire des compétences dès l'école. Paris: ESF éditeur.

Perrenoud, P. (1999). *Dix nouvelles compétences pour enseigner.* Paris: ESF.

Piot, T. (2009). Quels indicateurs pour mesurer le développement professionnel dans les métiers adressés à autrui? *Revue Questions vives en éducation et formation*, *5*(11), 259-275.

Perrenoud, P., Altet, M., Lessard, C., & Paquay, L. (2007). *Conflits de savoirs en formation des enseignants. Entre savoirs issus de la recherche et savoirs issus de l'expérience*. Bruxelles: De Boeck.

PRISME (2008). *Professionnalité enseignante.* Available at: http://www.prisme-asso.org.

Roquet, P. (2007). La diversité des processus de professionnalisation: une question de temporalités. *Carriérologie, 11*(1)*,* 195-207.

Rey, B. (1998). Faire la classe à l'école élémentaire. Paris: ESF.

Tardif, M. (2005). Histoire et avenir de la profession enseignante au Québec. *Virages, 7*(3), 11-11-13.

Tardif, M., Lessard, C., & Gauthier, C. (1998). *Formation des maîtres et contextes sociaux: Perspectives internationales*. Paris: Presses universitaires de France.

Vanhulle, S., & Lenoir, Y. (2005). L'état de la recherche au Québec sur la formation à l'enseignement: Vers de nouvelles perspectives en recherche. Sherbrooke, QC: Éditions du CRP.

Wittorski, R. (2007). *Professionnalisation et développement professionnel.* Paris: L'Harmattan.

Wittorski, R. (2009). À propos de la professionnalisation. In J.-M. Barbier, E. Bourgeois, G. Lachapelle, & J.-C. Ruano-Borbalan (Eds.), *Encyclopédie de la formation* (p. 780-793). Paris: Presses universitaires de France.

APPENDIX

Twelve Competencies (Government of Québec, 2001):

To act as a professional inheritor, critic and interpreter of knowledge or culture when teaching students.
To communicate clearly in the language of instruction, both orally and in writing, using correct grammar, in various contexts related to teaching.
To develop teaching/learning situations that are appropriate to the students concerned and the subject content with a view to developing the competencies targeted in the programs of study.
To pilot teaching/learning situations that are appropriate to the students concerned and to the subject content with a view to developing the competencies targeted in the programs of study.
To evaluate student progress in learning the subject content and mastering the related competencies.
To plan, organize and supervise a class in such a way as to promote students' learning and social development.
To adapt his or her teaching to the needs and characteristics of students with learning disabilities, social maladjustments or handicaps.
To integrate information and communications technologies (ICT) in the preparation and delivery of teaching/learning activities and for instructional management and professional development purposes.
To cooperate with school staff, parents, partners in the community and students in pursuing the educational objectives of the school.
To cooperate with members of the teaching team in carrying out tasks involving the development and evaluation of the competencies targeted in the pro- grams of study, taking into account the students concerned.
To engage in professional development individually and with others.
To demonstrate ethical and responsible professional behaviour in the performance of his or her duties.

Chapter 18

Providing Evidence that Counts in Teacher Education Review: A Self-Study Example

LYNN THOMAS

An examination of what the literature counts as evidence in teacher education in terms of either acknowledging what is effective or identifying elements for improvement reveals little in the way of systematic programme-wide data collection. Decisions on changes to programmes are often made in response to changing government policy, media headlines or administrative limitations, rather than on studies of exemplary teacher education programmes. One exception to this reality is the self-study approach to examining and improving one's own teacher education practices. This paper describes one such study, where, amid wide-spread educational reform initiatives in Quebec, a teacher educator seeks to make her methods courses more relevant and purposeful for her students. The effects of mandated large-scale reforms, prompted by a political response to a perceived failing school system are contrasted with the small scale changes implemented by an individual with relation to specific courses, including a discussion of the way in which evidence drives each of these contrasting, and sometimes competing, agendas.

Introduction

Teacher education programmes are frequently faced with evaluation and imposed reforms to bring them in line with new Ministry of Education requirements, changing university structures and budget realities, and the increasingly complex demands of the school milieu. In addition, education faculties are required to submit to periodic evaluations of their programmes in much the same way all university faculties are. The numbers of evaluations and the competing agendas of the various evaluating committees can lead to decisions about programming that are based on compromise, fiscal restraint and appeasing various stakeholders, rather than on the evidence of what makes a good teacher. In my 16 years as a teacher educator I have participated in six programme evaluations in three different institutions. The majority of programming changes that have taken place as a result of these evaluations have been to respond to an external demand, such as increasing the number of credits in a certain field or implementing a language proficiency test, or an internal decision using the trial and error approach: 'Well, that didn't work, so why not try…" In my experience, the most effective means for evaluating and improving the part of the teacher education programme that I am responsible for has been to examine my own practice using self-study methodology. With this approach I have been able to create micro-level evidence of effective teacher education

 T. Falkenberg & H. Smits (Eds.). (2011). *The question of evidence in research in teacher education in the context of teacher education program review in Canada* (2 vols., pp. 287-298). Winnipeg, MB: Faculty of Education of the University of Manitoba.

practices through documenting and reflecting on my own learning process as a teacher educator, and then participating in a critical process of exchange through the self-study community.

This paper looks at the way one teacher educator in a Quebec university has attempted to improve the courses that she teaches in order to better prepare teachers for their eventual roles, based on a critical examination of what students were learning in her classes. The process is outlined against the backdrop of overall teacher education reform that has taken place over the past two decades. The effects of mandated large-scale reforms, prompted by a political response to a perceived failing school system are contrasted with the small scale changes implemented by an individual with relation to specific courses, followed by a discussion of the way in which evidence drives each of these contrasting, and sometimes competing, agendas.

Teacher Education Reform in Quebec

Over the past two decades teacher education programmes in Quebec universities have undergone two major revisions at the demand of the Quebec Ministry of Education (*Ministère d'Éducation, Loisirs et Sports*). One, which took place in 1994, involved changing from either a three-year B.Ed. degree or an undergraduate degree and a one year diploma to a 4 year B.Ed. degree for all students. This is regardless of the previous educational background of applicants, including university degrees. The mandated change includes programmes for teaching at elementary and secondary schools, including vocational programmes at the secondary school level. The impetus for this change was to withdraw the control over teacher education programmes from the disciplinary faculties and place it within faculties of education while substantially increasing the amount of time pre-service teachers spent in schools on practicum.

The second change, implemented in 2002, was to adopt a competency-based approach, based on a list of 12 competencies, which universities are required to use as a foundation for their teacher education programmes. As well as being competency-based, these programmes must conform to an overall structure that includes a programme-based approach. The required competencies were determined by a small committee of bureaucrats and academics. Basing teacher education on the development of 12 competencies was mandated as a means to standardize teacher education across the province in an attempt to better prepare beginning teachers to meet the perceived new challenges in the 21st century classrooms of the province.

> The changes that have occurred in society have created new tensions and brought about a major redefinition of the work of teachers. They must now develop high-level professional competencies that can no longer be acquired by trial and error, but rather must be learned systematically as part of a training process designed to produce cultured professionals. (MEQ, 2001 pp. 8-9)

The twelve competencies are organised into four sections: (1) foundations, (2) the teaching act, (3) the social and educational context and (4) professional identity. There are two foundational competencies that relate to knowledge or culture and language skills, and four competencies related to aspects of the teaching act such as planning, teaching, evaluating and managing classes. Another four competencies, which touch the social and educational context,

mention working with students with difficulties, integrating technologies and working in school-based teams. The final two competencies are related to professional development and ethical behaviour. Each competency is made up of several features, and the required end of program outcomes are clearly spelled out. Universities with teacher education programs are now required to provide a written explanation of how they ensure that pre-service teachers develop each of the competencies to a particular level as part of their education programs.

While the reform process in both cases related above involved consultation with universities and other educational stakeholders, I have not found any indication that the changes are based on evidence that has been generated by research. In my experience even the consultation process with universities offering teacher education was somewhat perfunctory, as the following anecdote reveals. At the time the ministry was preparing for the second change I was director of the School of Education at a small anglophone university, and I remember receiving only one notice (only in French) that the very profound required change in focus for teacher education was being considered. I was given less than a month in which to submit any comments I might have had at that time. This was little time to fully comprehend a document in my second language, let along carry out a consultative process among my colleagues and members of the local school milieu. Certainly the documents produced by the Ministry of Education emphasize the consultation process rather than any research evidence that might have informed the decisions for change:

> The Estates General on Education, a large-scale public consultation process launched in the spring of 1995, provided a diagnostic assessment of the state of education in Quebec. At the end of its proceedings, the Commission for the Estates General on Education attempted to clarify the aims of the education system…. This working paper on teacher training (sic) is an outgrowth of the reform process. … *The proposed adjustments to teacher training programs are not the reflection of a systematic evaluation of reform efforts over the last decade* (italics added), but rather of a desire to ensure that teacher training remains responsive to the changes taking place in Quebec schools. (MEQ, 2001, p. ix)

Elsewhere on the same page the document states,

> The commission for the Estates General on Education … recommended that the mission of the education system be redefined in terms of three main goals: to instruct, to socialise and to provide qualifications. (MEQ, 2001, p. ix)

The requirements for teacher education programmes in the province are clearly designed to reflect these aims, in particular the aim of socialisation of pupils, as the first competency in the list of twelve reads "To act as a professional who is inheritor, critic and interpreter of knowledge or culture when teaching students" (MEQ, 2001, p. 55). (See the Appendix for a full list of the required competencies.) This competency is further explained as follows,

> Schools, as secondary cultural venues, also provide excellent cultural education for their students. It is often during the long periods at school that students progress from primary culture to secondary culture. Schools therefore play a major role in developing cultural awareness. (MEQ, 2001, p. 57)

The ministry takes the definitions for primary and secondary culture from the works of Fernand Dumont, who defines primary culture as that which one is born with and secondary culture as a second way of regarding reality, "… a secondary universe in which my historical community has attempted to give itself, as a horizon, a coherent explanation for itself" (Dumont, 1968 p. 41 as quoted in MEQ, 2001, p. 32). Clearly, children in Quebec, regardless of their home backgrounds, are to learn, through schooling, to live in the universe of Quebec's historical community, and teachers will be charged with ensuring that this learning takes place.

> Training teachers also involves preparing them to take on the role of cultural broker. They must be trained to bring students to new shores, guiding them critically and helping them get their bearings in the world. (MEQ, 2001, p. 38)

Establishing What Counts as Evidence for Teacher Education Review

Creating a teacher education programme that is not based on research, but rather as a reaction to perceived changes in society raises many questions about the way in which that society views teacher education, its purpose, and its impact on the education system in general. It is quite clear that the changes proposed in 1994 and again in 2002 were not based on research, which suggests that evidence-based research is not perceived as necessary or important to the improvement of teacher education. Paradoxically, the theme of professionalization is a key element in the documents quoted above: "The guidelines for elementary and secondary school teacher training [*sic*] programs contained in this document centre on the concept of professionalization" (MEQ, 2001, p. iii). In an era where professionalization is a current topic of ministry rhetoric (MEQ, 2001; Conseil supérieur de l'éducation, 2004) it appears contradictory to dictate mandatory all-encompassing programme changes ostensibly in reaction to changes taking place in schools and society, while deliberately ignoring any evidence for reform based on research.

At the same time, there remain many questions about the nature of evidence-based educational research. What counts as evidence? For a topic that is so hotly debated in the public forum as education, what is the relationship between consultation and educational research? In terms of teacher education programs, can we conclude that findings from studies about teacher education provide evidence suitable and applicable for program review? How can those involved in teacher education program review learn from and adapt findings from research that has been done (see Darling-Hammond, 2006; among many others) in order to inform their own particular complex contexts? Considering the situation in Quebec, where it does not appear that the Ministry of Education is interested in exploring these questions, what recourse does a group of teacher educators who are interested in creating an effective teacher education program have? How does a university begin the process of teacher education programme review under these circumstances?

An Example of Self-Study as Evidence for Teacher Education Review

In response to the question about what type of evidence should be used in studies on teacher education, I believe that it is equally, if not more, important to pay attention to small

details such as the components of individual courses within a programme and the interactions that are developed between teacher educators and pre-service teachers, as it is to focus on larger questions of how many years and which courses. One way to do this is through self-study of teaching practices. A teacher educator who engages in self-study is concerned about the ways in which his or her students learn about becoming a teacher, and how to improve that process for both the pre-service teachers and the teacher educator her or himself (Hamilton, 1998; Kosnick, Beck, Freese, & Samaras, 2006). Russell (1998) states that in self-study "the goal is to turn the focus of inquiry onto the self, as expressed in the teaching activities of teacher education" (p.6). Researchers using this approach believe that self-study promotes reflective teaching (Dinkleman, 1999), and provides a means for challenging practitioners' assumptions about knowledge and reality (LaBoskey, 2004). Berry (2009) explains the relationship between practice and research when using a self-study approach to examine one's work as teacher educator:

> Through researching their own practice, self-study practitioners develop personally meaningful understandings of their practice and are able to contribute to collective understandings of the learning to teach process. In this way, learning about practice through self-study is continually facilitated and reinforced, as research informs practice, which in turn, informs research. (p.159)

Although relatively recent as a research methodology and not well-known outside of the self-study special interest group of the American Educational Research Association (AERA), self-study shows considerable promise for providing evidence of the types of learning that takes place in teacher education. According to Zeichner (1999), "self-study is the single most significant development in the field of teacher education research" (p.8). Myers (1997) suggests that the absence of a self-study approach when undertaking teacher education programme reviews means that any resulting reforms are doomed to failure. If reforms do not take into account the lived experience of the participants, they will be unlikely to be adopted in any significant way. Kornfeld, Grady, Marker, and Rapp Ruddell (2007) describe a collaborative self-study that they undertook as a form of response to mandated teacher education reforms in California. Their findings show how important the study was for providing a language that allowed them to maintain a critical stance towards the reforms and still enact the educational values they believed in while making the required changes.

Several of the questions that I have been reflecting on include the following: What does being a teacher educator mean in terms of the relationships I build with students, colleagues and with the profession itself? How do I reconcile the various roles of the teacher educator, such as the importance of showing and explaining the "how to teach" with the importance of helping students discover "who am I as a teacher?" How can I make my classes practical and engaging for students when I am conscious of the fact that I am preparing them for professional roles in a future that I can only imagine? How do I make choices of what to include based on what I know to be important about how people learn to teach when I am required to build my courses around the development of a set of competencies that I don't entirely believe in, particularly when I am also required to explain how my students are developing these competencies?

It is only in the last few years that I have been actively thinking about being a teacher educator, although I began teaching courses to pre-service teachers about 15 years ago. A lack

of personal satisfaction about how I was teaching people to teach led to a process of attempting to determine what is important to include in a teacher education programme, or at least in my own classes. It has been a fascinating process to examine in detail the various beliefs that support my interactions with pre-service teachers, particularly across languages and cultures, as I prepare francophone students to become teachers of English as a second language in Quebec. Self-study has provided a framework for me to closely examine my practice as a teacher educator, and in doing so, learn more precisely what my students are learning about becoming teachers from me.

As a result of reading Amanda Berry's (2007) book *Tensions in teaching about teaching: Understanding practice as a teacher educator*, I have begun to keep a public journal about my teaching. For the past three years, after each class, I sit down and reflect in writing about my teaching and then share it with the students in the class. Berry wrote her reflections on her teaching and made them available to her students in a blog. She writes: "This journal contained a record of my purposes for each session, how I saw these purposes unfold…. 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" (p. 24). In this way Berry makes her tacit knowledge explicit for her students. Loughran (2006) explains that in doing so teacher educators also "carefully consider the nature of their own knowledge of teaching and begin to clarify the role that it does, and should, play in their own conceptualization and practice in teaching about teaching" (p. 46).

Students are also invited to respond to my reflections, and as a result, I have received much clearer and more focused feedback than in the past. One of my students, a 45 year old man pursuing his second career, is very open about his opinions. One exchange after class, which was a follow up to a response that he had sent to my journal entry, led to the reaction "I haven't learned a thing in this class since the beginning of term!" When I questioned him about this statement he stated that he was very frustrated with the programme:

> I came into the programme thinking I knew how to teach, and quickly learned that I did not know how. I was expecting that a course in methods in teaching would show me what to do, where to stand, what to say, how to behave, etc., but it hasn't. We sit around and talk about theories, when my body needs to learn how to move as a teacher.
> (Student participant B)

Methodology

I began this self-study on my own but after a year joined up with a Dutch colleague so that this is now an international collaborative study. In terms of the methodology, we each send our own students a written reflection on our teaching after classes we taught. We were careful to focus the reflections on ourselves and not on the students. The public journal is not discussed in class, but generates a space for private conversations between the teacher educator and the students about their own beliefs, expectations, questions and fears about teaching. At this time I have made over 50 reflections on my methods in teaching English as a foreign language classes. My colleague, Janneke Geursen of Vrije Universiteit in Amsterdam, has written over 25

reflections on her teaching and shared them with students in classes in second language teaching and a class in general curriculum design. We share our reflections and the responses we receive with each other by email. Because we live on two different continents, we rely primarily on email and Skype, although we have been able to meet on a few occasions.

The data analysis involved collecting the reflections we wrote and the responses we received from our students, along with journal entries we each kept at the same time. During this process we discovered that simply relating the answers to our original questions was not enough. We became aware that we learnt different things about ourselves. In order to enable us to compare our experiences and insights, we needed another frame of reference and we found this in Berry's (2007) 'tensions'. She intended these tensions "to capture the feelings of internal turmoils that many teacher educators experience in their teaching about teaching," (p.32). We could easily relate to the six listed tensions: Telling and Growth/ Confidence and Uncertainty/ Action and Intent/ Safety and Challenge/ Valuing and Reconstructing Experience/ Planning and Being Responsive. Referring to this publicized framework also helped us to move beyond the personal and link our experiences to a broader knowledge base of teacher educators. It helped us acknowledge personal differences but at the same time enabled us to transcend the personal and make connections between our respective teacher education practices.

We compiled the two sets of data (Canadian and Dutch) and organized them according to two main themes: 1.The original intentions of the study and 2. What we learned about ourselves when rereading the journal with Berry's (2007) tensions in mind. Within these broader themes we set up a chart with the following categories: original questions, tensions that emerged in the study, evidence from journal entries and student responses, and implications for our learning as teacher educators. We also compiled a short online questionnaire for our students, referring to our joint research questions. We also created a section where we identified some of the tensions that arose from the study design that we needed to overcome and/or work through in order to continue with the study. Once the data was organized, we were able to reflect on these themes and to consider appropriate ways to adapt our teaching to better respond to students' articulated needs.

Discussion of the findings

The findings of the study has led me to understand that the students' insecurities about how to move and behave as a teacher were preventing them from opening their minds to discussions about what communicative competency really means, and who is served by including it in the curriculum. Their resistance to learning theory was equalled by my resistance to feeding them quick and easy "how-to's", and allowing them to play act in university classes. My first response to Student B's comments were to point out that students have plenty of time to work out how to stand and what to say while on practicum. As mentioned earlier in this paper, the only teacher education programmes permitted in Quebec are four year current programmes leading to a Bachelor of Education, even for secondary school teaching, which include 700 to 900 hours of practice teaching, depending on the university. In contrast, my methods class is 36 hours long. However, I was quickly informed that on practicum, the students believe that the stakes are too high to start trying things out. Pre-service teachers are judged and graded on their practica, and they feel like they should already know what they are doing. They need to demonstrate "competence", which can be judged and evaluated in a variety of ways. In my programme, the Bachelor in teaching English as a second language, the stakes are doubly high, as students must teach in their second language, so they are being

judged on their language skills as well as their teaching skills. What they want is an opportunity to try things out in the security of a university classroom, before having to "do it for real."

While it is sometimes frustrating to have to move the focus of my classes away from what I think we need to be working on, I know that it is essential to allow student teachers to develop their own knowledge in ways that are meaningful for them, as Loughran (2002) has pointed out:

> If the focus is genuinely on the student teacher as learner, then it is their ability to analyse and make meaning from experience that matters most—as opposed to when the teacher educator filters, develops, and shares the knowledge with the student teachers. (p. 38)

What I am learning through this systematic examination of my own practice is to listen to my students' perceived needs, and to try to help them find responses to these needs, without compromising my own beliefs about what is important for teachers to know and understand. I have discovered that some, though far from all students not only read the public journal, but reflected in their turn on its contents. Several students were astounded that a teacher educator would question her practice, and many were encouraged to learn that lessons do not always go according to plan, even for experienced educators. "I was not aware that you also have a learning process", one student wrote. Another stated "I didn't realize that so much thought went into designing a lecture." Other students suddenly became aware of some of the choices that teachers can make, such as the way we strive to create safe positive learning environments for language learning. I am learning that my sense that some students do not believe they learn anything from their methods classes, only from the practicum, is only partly true. The case of David does represent some students, but not all. I am still looking to understand why some students are able to learn skills for teaching from books, articles and listening to me talk, while others are not. When I wrote that I did not see the need for role playing in a methods course there were several responses:

> We love expressing ourselves but we do not do it very often at university. We are going to be teachers and we want to do practical things. I know that the practicum helps but even at the university, should we not do more teaching?
> (Student E response)

> The thing I find stressful about teaching is that the standards are really high. We want to be good because of the peer pressure and pressure from associate teachers and supervisors. I never felt the right to make mistakes or try stuff in the practicum because we are always evaluated. I want to try things out first.
> (Student C response)

These exchanges have helped me understand that the desire to role play in class stems from a lack of confidence in being able to perform well on practicum, rather than a lack of interest in learning about the theoretical background to being a language teacher. It was really interesting to take the time to write about my teaching. I have learned that it is challenging to write reflectively after each class, particularly when I knew that people would be reading what I wrote. I have found that my intentions are not always clear, but when I describe them in written form, they become clearer for my students and for me. At the same time, a comment

from a student helps me to remember to let go of controlling the learning as it is not always necessary for students to learn exactly what I intended for them to learn:

> Sometimes it is not only from you that we have to get the answers, we have to figure them out on our own. We have to get our brains working. For sure, not everyone has it working the same way; we all retain what we want, when we want and in our own way.
> (Student H response)

In a previous study of the development of a professional identity in new teachers (Beauchamp & Thomas, 2009; Beauchamp & Thomas, 2010, Thomas & Beauchamp, 2007), my colleague and I found that in our teacher education programs we tend to do a very good job of teaching people to be exemplary students of education: they learn how to complete assignments to please us, what types of things we like to read in their portfolios, and how to copy our mannerisms in the classroom. We don't necessarily do a good job of teaching people to be professionals who are prepared for the multitude of challenges that face them in their careers.

I believe that my exchanges with my students through my public journal incorporates an element of professionalism in my courses that could not otherwise exist in traditional classes where the topics are pre-determined by the teacher according to requirements laid down by the Ministry of Education. My students see a teacher's reflective writing modeled in such a way that uncertainties, questions and concerns about teaching are shared, much as they might be with a colleague. They are invited to respond to these uncertainties and questions in a way that comes closer to an exchange with a colleague than anything else that takes place in the teacher education program where I work. They are also free to bring up their own topics of discussion as they attempt to make links between what they know and what they want to learn about becoming a teacher. One additional advantage is that students have noted that the journal helps them to think about their teaching all week, rather than just during the class.

> Thank you so much for your email with the open journal. I really found it valuable since it reminded me of some of the things that we did in class and I had forgotten.
> (Student K response)

Conclusion

Through my exchanges with students on this reflective open journal about ways of coming to know what is being presented in the class, I have been able to engage with both the students and the topics in question in much deeper and more meaningful ways. I see and record the evidence for this improvement on a weekly basis, and take the time to document and share my learning process with colleagues (Thomas, 2009; Thomas & Geursen, 2010). I believe this form of evidence-based research is making a significant difference in my own classes, but I am fully aware that, to date, it has had little or no impact on the other courses that are offered in my program. I believe that there are three main reasons for this lack of impact, one being ideological, a second structural and administrative, and the last one related

to personal influence and status among faculty members. In order for the findings of one professor's self-study research to become an accepted basis for reform in other teacher education classes, other faculty members need to be sufficiently aware of self-study as a research methodology in order to fully understand its implications and possibilities. Secondly, there needs to be a willingness to adopt some form of a program-based approach to teacher education in an institution in order to be able to make links between different courses and different parts of the program and constructively apply evidence of improvement from one course to others. Finally, the person undertaking the self-study must have some form of authority within the faculty in order to ensure that any findings resulting from a self-study are noticed and taken seriously. Universities are hierarchical places, and faculties of education are no exception. Given that that the tradition has not been to seek evidence for implementing reforms in teacher education, it becomes imperative for self-study researchers to ensure that they take on leadership roles and promote the methodology in order to raise the profile of self-study and help to legitimise research findings.

The question of what counts as evidence in teacher education remains and it is up to teacher educators to take on the challenge and attempt to respond in productive and realistic ways. It is argued in this paper that self-study is one possible way of doing this, provided self-study researchers are able to inform colleagues of the possibilities and limitations of self-study while programs in order to be able to apply the findings with credibility.

References

Beauchamp, C., & Thomas, L. (2009). Preparing prospective teachers for a context of change: Reconsidering the role of teacher education in the development of identity. *Cambridge Journal of Education*, *39*(2), 175-189.

Beauchamp, C., &Thomas, L. (2010). Reflecting on an ideal: Student teachers envision a future identity. *Reflective Practice, 11*(5), 631-642.

Berry, A. (2007). *Tensions in teaching about teaching: Understanding practice as a teacher educator*. Dordrecht, The Netherlands: Springer.

Berry, A. (2009). Exploring vision in self-study. *Studying Teacher Education, 5*(2), 159-162.

Conseil supérieur de l'éducation. (2004). *Un nouveau soufflé pour la profession enseignante*. Quebec, QC: Author.

Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco, CA: Jossey-Bass.

Dinkleman, T. (1999, April). *Self-study in teacher education: A means and ends tool for promoting reflective teaching*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Hamilton, M. L. (with Pinnegar, S. Russell, T., Loughran, J., & LaBoskey, V.) (Eds.). (1998). *Reconceptualising teaching practice: Self-study in teacher education*. London: Falmer Press.

Kornfeld, J., Grady, K., Marker, K., & Rapp Ruddell, M. (2007). Caught in the current: A self-study of state-mandated compliance in a teacher education program. *Teachers College Record, 109*(8), 1902-1930.

Kosnick, C., Beck, C., Freese, A., & Samaras, A. (Eds.), (2006). *Making a difference in teacher education through self-study: Studies of personal, professional and program renewal*. Dordrecht, The Netherlands: Springer.

LaBoskey, V. (2004). The methodology of self-study and its theoretical underpinnings. In J. Loughran, M. L. Hamilton, V. LaBoskey, & T. Russell (Eds.), *International handbook of self-study of teaching and teacher education practices*. (Vol. 1, pp. 817-869). Dodrecht, The Netherlands: Kluwer Academic Publishers.

Loughran, J. J. (2002). Effective reflective practice: In search of meaning in learning about teaching. *Journal of Teacher Education, 53*(1), 33-44.

Loughran, J. (2006). *Developing a pedagogy of teacher education*. London/New York: Routledge.

Ministry of Education of Quebec (2001). *Teacher training: Orientations and professional competencies*. Quebec, QC: Author.

Myers, C. (1997, March). *The absence of self-study in school-university teacher education reform*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Russell, T. (1998). Introduction: Philosophical perspectives. In Hamilton, M. L., (with Pinnegar, S. Russell, T., Loughran, J., & LaBoskey, V.) (Eds.). (1998). *Reconceptualising teaching practice: Self-study in teacher education* (pp. 5-6). London: Falmer Press.

Thomas, L. (2009, May). *Introducing a public journal to create spaces for discussions about learning to teach*. Paper presented at the annual conference of the Canadian Association for Teacher Education, Ottawa, ON.

Thomas, L., & Beauchamp, C. (2007).Learning to live well as teachers in a changing world: Insights into developing a professional identity. *Journal of Educational Thought, 41*(3), 229-244.

Thomas, L., & Geursen, J. (2010). The Use of a public journal to create safe spaces for reflections on learning to teach a foreign language: A Canadian-Dutch self-study. *Conference Proceedings of the Eighth International Conference on Self-Study of Teacher Education Practices, Herstmonceux Castle, East Sussex, UK, 8,* 261-264. (Accessible at: http://wiki.apa.uoit.ca/education/selfstudyteachereducationpractices/index.php/File: SSTEP2010Proceedings.pdf)

Zeichner, K. (1999). The new scholarship in teacher education. *Educational Researcher, 28*(9), 4-15.

APPENDIX

Core professional competencies for the teaching profession (MEQ, 2001)

Foundations

1. To act as a professional inheritor, critic and interpreter of knowledge or culture when teaching students.
2. To communicate clearly in the language of instruction, both orally and in writing, using correct grammar, in various contexts related to teaching.

Teaching Act

3. To develop teaching/learning situations that are appropriate to the students concerned and the subject content with a view to developing the competencies targeted in the programs of study.
4. To pilot teaching/learning situations that are appropriate to the students concerned and the subject content with a view to developing the competencies targeted in the programs of study.
5. To evaluate student progress in learning the subject content and mastering the related competencies.
6. To plan organise and supervise a class in such a way as to promote student learning and social development.

Social and Educational Context

7. To adapt his or her teaching to the needs and characteristics of students with learning disabilities, social maladjustments or handicaps.
8. To integrate information and communication technologies (ICT) in the preparation and delivery of teaching/learning activities and for instructional management and professional development purposes.
9. To cooperate with school staff, parents, partners in the community, and students in pursuing the educational objectives of the school.
10. To cooperate with members of the teaching team in carrying out tasks involving the development and evaluation of the competencies targeted in the programs of study, taking into account the students concerned.

Professional identity

11. To engage in professional development individually and with others.
12. To demonstrate ethical and responsible professional behaviour in the performance of his or her duties.

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