Examining the Nature of Theory–Practice Relationships in Initial Teacher Education: A Canadian Case Study

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Abstract

In this case study, the authors examined how theory–practice relationships were conceptualized and enacted in a new teacher preparation program. As well, the issues and tensions associated with theory–practice dynamics were explored. More specifically, the authors explored two questions: (a) What is the nature of theory–practice relationships in a new teacher preparation program? (b) What tensions will arise as theory–practice relationships are manifested in this new teacher preparation program? Through the analysis of a number of qualitative data sets, insights are shared about program design, practices, and pedagogy, as well as the perspectives of teacher educators and teacher candidates on the

nature of theory–practice relationships in their teacher preparation programs. Implications for teacher educators and teacher preparation are discussed.

Keywords: teacher educators, student teachers, teacher education, teacher education pedagogy, theory and practice

Résumé

Dans cette étude de cas, les auteurs examinent comment les relations entre la théorie et la pratique ont été conceptualisées et utilisées dans un nouveau programme de formation à l'enseignement. Les enjeux et les tensions associés à la dynamique théorie-pratique ont également été étudiés. En fait, les auteurs ont exploré deux questions : (a) Quelle est la nature des relations entre la théorie et la pratique dans un nouveau programme de formation à l'enseignement? (b) Quelles tensions surgiront à la suite de la manifestation des relations entre la théorie et la pratique dans ce nouveau programme de formation à l'enseignement? L'analyse de plusieurs ensembles de données qualitatives a permis de dégager des réflexions sur la conception du programme et les pratiques utilisées ainsi que les points de vue des professeurs de pédagogie et des futurs enseignants sur la nature des relations entre la théorie et la pratique dans leurs programmes de formation à l'enseignement. Des implications pour les professeurs de pédagogie et la formation à l'enseignement sont discutées.

Mots-clés : professeurs de pédagogie, étudiants en enseignement, formation à l'enseignement, pédagogie de la formation à l'enseignement, théorie et pratique

Introduction

Research about theory–practice relationships in teacher preparation has been prevalent since the early 1970s. Often, this "real" or "perceived" relationship has been characterized as a "gap" or "divide" between learning in university classrooms (theory) and classroom teaching (practice). In designing or renewing teacher preparation programs, issues such as the nature of theory and practice, how they relate to each other, and how theory–practice relationships are envisioned and enacted as teacher candidates learn to teach must be considered carefully. It is also important to consider teacher educator perspectives about the relationship between theory and practice and how these perspectives are reflected in their thinking and professional practice. K–12 classrooms are becoming increasingly complex (e.g., catering to needs of all children in the regular classroom, staying abreast of emerging technology, etc.), and warrant pedagogy that reflects inclusivity, standards-based curricula, and technology. The changing nature of the K–12 learning environment has implications for how teacher education programs are structured, as well as influence the pedagogy adopted that enables teacher candidates to integrate and connect theory and practice in ways that support their learning and development. Traditional approaches to teacher preparation often conceptualize the relationship between theory and practice as "a two-step process of knowledge acquisition and application or transfer" (Feiman-Nemser & Remillard, 1996, p. 79). In other words, teacher educators provide knowledge about teaching and learning in university settings, while teacher candidates are expected to apply this to their practice in classrooms as they learn to teach. However, recent research has shown that adopting a "theory first and practice later" perspective has not been effective in supporting teacher candidates in creating strong theory–practice connections (Brouwer & Korthagen, 2005; Grossman, 2008; Wideen, Mayer-Smith, & Moon, 1998).

In this case study, the authors report on data collected from a Canadian faculty of education in which a new post-degree K–12 teacher preparation program was implemented. The following research questions guided this study: (a) What is the nature of theory–practice relationships in a new teacher preparation program? (b) What tensions will arise as theory–practice relationships are manifested in this new teacher preparation program?

While there is no one "best" approach to program design and structure, emerging literature on the integration of theory and practice in teacher preparation suggests a

number of useful practices for offering high-quality teacher education programs, such as ensuring coherence across program components (Beck & Kosnik, 2006), developing strong partnerships with schools (Darling-Hammond, 2006), and offering theory-focused course learning with practice-focused field experiences in an integrated manner (Allen, 2009).

This study contributes to the teacher education literature by reporting on how theory–practice relationships were conceptualized and enacted in practice in a teacher preparation program that underwent reform. The study highlights the issues and tensions that arose and explores how these may be addressed or resolved as diverse personal and theoretical perspectives on theory–practice relationships "come to life" in a teacher preparation program. Little research exists on how teacher educators understand and experience theory–practice dynamics, thus this study adds to this body of research.

This program was chosen for the study because it had an explicit focus on creating strong theory–practice relationships through the adoption of a variety of structures and practices that will be described later in the article. While this study is not generalizable to all programs, many lessons can be extracted to inform the design of teacher preparation programs, especially in programs that have an explicit focus on fostering strong theory–practice relationships.

Theoretical Perspective

The role of theory and practice and their relationship in initial teacher education (ITE) has been debated for at least 100 years (Dewey, 1904/1964), and is still widely discussed in the literature surrounding the subject (Allen, 2009; Goodnough, 2011; Falkenberg, 2010; Cheng, Cheng, & Tang, 2010; Coffey, 2010; Eilam & Poyas, 2009; Korthagen, Kessels, Koster, Lagerwerf, & Wubbels, 2001; Korthagen & Kessels, 1999; Koutselini & Persianis, 2000; Maaranen & Krokfors, 2008; Smith & Hodson, 2010; Tsafos, 2009). It is clearly evident, after a review of the literature, that the terms "theory" and "practice" have a variety of meanings in ITE, and that different perspectives are held about the role of theory and practice. Furthermore, as we have reported elsewhere (Falkenberg, Goodnough, & MacDonald, 2015), substantial differences in conceptual understandings around theory and practice in ITE are also reflected in the differing views of teacher educators,

even those within the same teacher education program. The purpose of this section is to systematically discuss different conceptualizations of theory and practice and their relationship in ITE. We address the notion of practice first.

Lampert (2010) has analyzed the use of the term "practice" in the context of ITE and has identified four different conceptualizations. The first use of the term "practice" denotes "that which contrasts with theory" (p. 23). Her second conceptualization of "practice" is used "to mean something like routine" (p. 25), as it might be used in the phrase "best practice." The third conceptualization considered practice as "rehearsal," as in the phrase "practicing something." The fourth and final conceptualization Lampert identified is the use of "practice" in phrases like "the practice of teaching" where "practice" refers to something the profession does. While all four conceptualizations of "practice" are used in the context of ITE in different ways, the first is of greatest interest for the purpose of this article.

In terms of theory in the context of ITE, there are three ways in which the term has been used. First, and probably the most general way of understanding "theory" in the context of ITE is in opposition to "practice." Here, theory (theoretical knowledge) is defined by place: one engages with or develops theory, but only outside of the context for which it was intended. With this understanding, all learning and all knowledge in a campus-based course is, by default, theoretical because it is learning and knowledge developed outside of the context for which it is learned, namely the K–12 classroom. This understanding of "theory" is generally used when the literature speaks of a "theory–practice gap" in professional programs (Roth, Mavin, & Dekker, 2014).

Second, "theory" in the ITE literature also refers to "educational theories" or "learning theories." Fenstermacher (1994, pp. 5–6) describes this as "formal teacher knowledge": the knowledge as it is "produced" in formal research. Contrasting "practice" in this understanding of "theory" in ITE would then be reflected in the distinction drawn by Fenstermacher (1986) between "the production or generation of knowledge" (theory) and "the use or application of knowledge" or theory (p. 43).

A third way in which the term "theory" is used in the ITE literature is to denote principles or assumptions that guide actions, regardless of whether the actor is conscious of those principles or able to articulate them. This conceptualization of theory is reflected in approaches in ITE that attempt to overcome what Britzman (2003) has called "knowledge fragmented from lived experience" (p. 64). Examples of this kind of understanding

of theory as knowledge gained from and enacted in lived experience, or "theorizing as social practice" (Britzman, 2003, p. 64), can be found in Connelly and Clandinin's (1985) approach to "personal practical knowledge," Kennedy's (1999) "situated knowledge" of teachers, or the idea of "ethical know-how" in Varela (1999).

The difference between the second and third way of conceptualizing "theory" in ITE—and its contrast with "practice"—is grounded in a distinction between different kinds of knowledge and is often framed in the questions about the types of knowledge that are important for teaching. As Back (2012) observed, "the theory–practice bifurcation has a long history. Its enlightenment salient spokesmen are Hume and Kant, and its prominent ancient Greek representative is Aristotle" (p. 34). It is Aristotle's (trans. 1976) distinction between episteme (theoretical knowledge) and phronesis (practical knowledge) that has generally been referenced in the ITE literature. It draws upon classical philosophers for its discussion of the central relevance of practical knowledge (phronesis) in ITE (see the references below). For Aristotle, episteme—and particularly in its highest form of philosophical knowledge ("sophia")—was of greater value than phronesis (Dunne, 1993), but as "the ordering agency in our lives" (p. 241), phronesis was central to "secur[ing] the conditions" for sophia to "com[e] into being" (p. 241). For ITE scholars, what has been at the core of Aristotle's distinction between episteme and phronesis is the notion that "through theory [i.e., episteme] we do not acquire a knowledge-content which can then be exploited in the practical business of life" (Dunne, 1993, p. 238)—but, so the argument goes, since teaching is a "practical business of life," learning to teach needs to be primarily concerned with the kind of knowledge that can be exploited in the practical business of teaching life.

Understanding the role of theoretical and practical knowledge in teaching, and thus in ITE, has resulted in three different approaches to relating "theory" and "practice." The theoretical knowledge from the academic disciplines, including education, is at the core of the first type of approach to the theory–practice distinction in ITE. It is characterized in Wideen, Mayer-Smith, and Moon's (1998) meta-analysis, in which they write: "The university provides the theory, skills, and knowledge; the school provides the field setting where such knowledge is applied and practiced" (p. 160). In this approach, the theoretical knowledge as created in academic disciplines, including education, is at the core of ITE, and field placements in schools serve the dual purpose of providing teacher candidates with the opportunity to "apply" that knowledge and to practice such

application, whereby "practice" is meant in the sense of the third conceptualization of "practice" as identified by Lampert (2010).

The second type is exemplified by Dewey's (1904/1964) approach to the relationship of theory to practice in ITE. He suggests that the main focus of ITE should be on "the mastery of educational principles in their application to that subject-matter which is at once the material of instruction" (p. 318) and that "practical work should be pursued primarily with reference to its reaction upon the professional pupil [i.e., the teacher candidate]…in making him a thoughtful and alert student of education, rather than to help him get immediate proficiency" (p. 320). Against the "argument that theoretical instruction is merely abstract and in the air unless students are set at once to test and illustrate it by practice–teaching of their own" (p. 322), Dewey suggests—based on his constructivist theory of learning—that theoretical instructions need to draw on "the greatest asset in the student's possession…his own direct and personal experience" (p. 323). It is the latter one that can be understood as suggesting that theoretical instructions in ITE are to help teacher candidates theorize their own direct and personal experience, thus, this distinguishes Dewey's approach to the role of theory and practice in ITE from the first approach.

The third type of approach goes further than Dewey and suggests that it is practical knowledge (phronesis) that should be at the core of ITE. This practical wisdom approach to ITE has been suggested by a number of teacher education scholars (e.g., Korthagen, 2001; Phelan, 2005). Practical wisdom approaches to ITE involve a number of different understandings of theory and practice as distinguished above. First, they distinguish between theoretical and practical knowledge along the lines of Aristotle's distinction and give privilege in ITE to practical knowledge, because it is this kind of knowledge that is at the core of the practice of teaching (fourth understanding of "practice" as identified by Lampert, 2010). In order to develop practical wisdom, teacher candidates need to have "enough proper experience. For particulars only become familiar with experience, with a long process of perceiving, assessing situations, judging, choosing courses of action, and being confronted with their consequences" (Kessels & Korthagen, 1996, p. 20). This means then that a practical wisdom approach to ITE needs to provide opportunities for teacher candidates to practice (in the sense of the third understanding of "practice" identified by Lampert), and, namely, to practice perceiving, assessing, and judging, in order to develop what Varela (1999) has called ethical know-how.

The review of some of the core understandings of the role of theory and practice in the ITE literature suggests a range of understandings that are partially incompatible. In addition, in her more narrowly focused review, Lampert (2010) points to what she calls "paradoxes": "The idea that the work of teaching can be learned only in classrooms, where it is enacted, is challenged by the notion that pedagogies of enactment can make their way into preparatory course through activities like rehearsal" (p. 31). Another paradox might be seen in the circumstance that some teacher educators do research in ITE, and consequently contribute to the creation of "theoretical knowledge" about learning to teach, but might, on the other hand, promote a practical wisdom approach to ITE.

The question then arises, when we move from the theoretical perspectives to enactment of theory and practice in teacher preparation programs, how do programs "handle" the diversity of issues and tensions that may arise? How does a program function, considering the possibility of many perspectives about theory–practice relationships and the diversity of interests among those invested in their respective ITE programs? This research examines these questions through a case study of a new teacher preparation program.

Methodology

The teacher preparation program in this study is one year, a post-degree program (60 credit hours) that accommodates teacher candidates in one of two streams: elementary (Grades K–6) or junior/senior high (Grades 7–12). While intake in any particular year can fluctuate, the norm is 70–100 teacher candidates that enroll in the program each year. Teacher candidates complete a suite of core courses throughout three semesters, addressing topics such as teaching and learning theories, inclusionary practices, foundations of education, pedagogy, curriculum and assessment, child development, and legal and social contexts of education. Nine credit hours of the sixty are electives, while all other credit hours are dedicated to required program courses. Teacher candidates complete a number of school-based experiences that involve one day per week in schools throughout the program and three longer school-based practicum over the fall and winter semesters, with each being a progressively longer experience. In total, these practica require 12 weeks in classrooms. One of the core courses is closely linked to the school-based experiences,

with faculty and school-based personnel working closely in a co-teaching model to support teacher candidate learning (Roth & Tobin, 2004). Throughout the program, teacher candidates complete a variety of seminars and a curriculum inquiry project that is shared publicly at the end of the program.

Case study methodology was used in this study because of its "ability to examine, in-depth, a case within its 'real-life' context," thus allowing the development of insight into the structure of the program and faculty and teacher candidate perceptions, understanding, and experiences (Yin, 2005, p. 111). The unit for analysis in this study is the program. Its selection for study was based on it being a relatively new program (at the time of data collection, it was five years old), having undergone slight changes over this period. The case is descriptive, describing how the program was structured and implemented and how the program participants experienced the program in relation to theory–practice dynamics. As well, the case is exploratory, as it is used to examine the approaches and practices adopted to create strong theory–practice relationships and the issues and tensions associated with these processes (Yin, 2003).

A variety of data sources and methods were adopted, including:

(1) An in-depth document analysis of program design and content was conducted. This included the faculty of education website materials, as well as internal documents such as course syllabi and a practicum guide written for teacher candidates, mentor teachers, and faculty. This provided insight into the overall philosophy and implicit principles guiding the program, as well as how those principles were being conceptualized and applied in course syllabi and the planning of school-based experiences.

(2) Audiotaped 60-minute interviews were held with program personnel (full-time and part-time teacher educators, staff, dean, and associate dean) to explore their views on theory–practice relationships, program pedagogy and practices, and structures being adopted to foster strong theory–practice relationships. All interviews were transcribed for data analysis. Examples of interview questions included: What are your beliefs about the integration of theory and practice in teacher education? What is your rationale for your beliefs? What should be changed in this program to accommodate the integration of theory and practice? What strategies and

approaches could an instructor use in working with teacher candidates to facilitate the integration of theory and practice?

(3) Teacher candidates completed an open-ended questionnaire (n = 70) consisting of seven questions, requiring 30 minutes for completion. The questionnaire items focused on exploring teacher candidates' views about the role of theory and practice in teacher preparation, their program experiences that fostered theory–practice connections, and their perceptions of how well their program supported them in making theory and practice connections. Examples of questions included: How do you experience theory in your program? Please provide some examples. Please provide examples of theory and practice within the courses taught at the university. Overall, how well does your program support the integration of theory and practice?

(4) An 80-minute focus group interview was held with eight teacher candidates at the end of their teacher preparation program. Specific questions were posed, such as the following: What role does theory play in the education of a teacher? In what ways did your program support the integration of theory and practice? In what ways can your program better support the integration of theory and practice? In addition to asking probing questions, dynamic discussion was generated, fostering the development of more in-depth conversations about topics when compared to responses on the questionnaire items.

Data collection occurred during two visits to the Faculty of Education over a one-year period. Two of the researchers, the first and third author, collected the data over a one-week period during each visit.

Many elements of the research design were emergent. To enhance the validity and credibility of the researchers' explanations and interpretations, several procedures were used, such as the collection of rich, detailed data; respondent validation; and triangulation (Marshall & Rossman, 1999). All data were converted into text files and organized for use with MaxQDA, a qualitative software data analysis program. The authors engaged in constant reading of the data in a holistic manner, and recorded emerging thoughts and ideas as memos. After this initial review of the data, coding was conducted by the first author, generating initial broad categories for further analysis. Then, each of the other authors independently reviewed the broad coding scheme. Next, the three authors discussed

the scheme to determine agreement on categories, thus allowing for the convergence of different lines of evidence. The authors worked collaboratively to generate subthemes, such as the types of pedagogy adopted by faculty (e.g., problem-based learning, case studies, etc.), teacher educator and student perceptions of theory–practice relationships (e.g., theory should come first), issues and tensions (e.g., lack of time to focus on teaching), and program structures and practices (embedded practicum). Throughout the data analysis process, the authors engaged in constant comparison, identifying similar concepts for grouping into the same conceptual categories. This study was approved by the ethics review boards of each of the authors' respective universities and the case study site described in this article.

Outcomes

While a set of guiding principles for the program described here is not published on the Faculty of Education website, an examination of a number of artifacts and an analysis of the other data from different sources revealed a number of features that are being adopted to foster strong theory–practice relationships. These include: (a) the embedded practicum, (b) the teaching and learning seminar (connecting university course content and school-based experiences, (c) diverse assessment and pedagogical approaches in courses, and (d) teacher candidate reflection and inquiry.

The subsequent section describes these features, as well the views held by teacher educators and teacher candidates about the role of theory and practice in ITE. Furthermore, the following section also illustrates the issues and tensions that arose as faculty and staff attempted to foster strong theory–practice relationships in the program.

The Embedded Practicum

In the fall semester, teacher candidates begin their school-based experience at the beginning of the program with a two-week practicum, following a three-day orientation to teaching that occurs at the university. During this two-week session, teacher candidates become familiar with school and classroom policies and procedures, are actively engaged in classroom activities under the direction of a cooperating teacher, prepare instructional materials with the cooperating teacher and/or other teachers, and complete guided

reflections based on their experiences. After this two-week experience, they return to university course work for four days, while still visiting a school for one day per week. The one-day experience is explicitly linked to a core program course. Each teacher candidate, during the practicum, is supported by several cooperating teachers, a university supervisor, and a school-based liaison teacher who coordinates school-based activities for teacher candidates and others involved in supporting the teacher candidates.

At the latter part of the first semester, teacher candidates complete a three-week practicum, paired with one cooperating teacher. Teacher candidates now take more responsibility for teaching and learning activities when compared to the initial practicum. In the next semester, teacher candidates continue course work at the university, as well as the one-day per week in schools. In the latter part of this semester, teacher candidates complete a seven-week practicum. At this point, the teacher candidate is expected to take responsibility for at least 50% of the teaching assignment of the cooperating teacher.

This embedded practicum model (several school-based practices and one-day per week in schools in conjunction with university course work) was identified by all faculty as one of the key ways the program supports and fosters strong theory–practice relationships. Because teacher candidates start school-based experiences at the outset of the program and this continues throughout the program on a weekly basis, faculty commented on how this enriches their courses and allows stronger theory–practice relationships to be established. One teacher educator shared her perspective:

> They are getting experience immediately, especially through the one-day sessions. Overall, the program and classes are richer. Because they're able to learn that there are multiple ways of teaching and multiple ways of responding to children.

She continued to elaborate on other advantages of the practicum approach:

> I think a number of different faculty members have made relationships with schools where they can take the university students with their content area into the school to do projects. So that's helped. I think that makes the link really apparent.

While faculty valued and supported the embedded practicum, establishing this practicum approach presented some tensions for faculty, school-based personnel, and teacher candidates. These will be discussed later.

The Teaching and Learning Seminar

In addition to opportunities for the professors to foster theory–practice connections through their content area courses (e.g., language arts education, science education), one of the core courses in the program deliberately and explicitly connects what teacher candidates are doing in their once-per-week teaching days with university course work. Topics in the course are generated in collaboration with the cooperating teachers that mentor the teacher candidates. Some of the topics in this course may include higher-level thinking, assessment, and learner engagement. The topic for a particular week becomes a focus for the one-day experience in schools. Faculty noted that this approach fosters higher levels of reflection and allows teacher candidates to "share their insights with their peers, and to make stronger connections with course work and experience." As well, faculty who teach in this core course also work with teacher candidates in schools as they complete their practicum and one-day sessions. Several faculty members noted that the one day of in-school experience per week allowed many teacher candidates to become involved in the schools' extra-curricular activities and clubs.

Likewise, when teacher candidates were asked about the types of experiences that allowed them to connect theory and practice, all noted the practicum and school-based days as being the most important part of the program. This is reflected in teacher candidate comments such as, "the practicum was so important; especially the one day in schools per week," "these experiences were invaluable," "the amount of teaching we were expected to do in each practicum was appropriate," "I like how we were gradually introduced to teaching in a sheltered environment first…teaching peers at university… and then the actual teaching in classrooms." While teacher candidates noted the importance of the school-based experiences, they also noted how course pedagogy supported their learning and provided "practice in the program" to prepare them to accept more responsibility for classroom learning.

Diverse Assessment and Pedagogical Approaches

Faculty members reported using a wide range of assessment and learning approaches and strategies in their courses to support teacher candidates in fostering strong theory–practice relationships, including case studies, collaborative group work and discussion, literature and reading, guest speakers, journal writing, micro- and peer teaching,

instructor modelling, individual and group reflection, technology, team teaching, rubrics, self-evaluation, and teacher inquiry, to name a few. Underpinning these approaches were key principles and concepts that the faculty talked about in their interviews. Several examples were shared by faculty of how they promote active learning and work diligently with teacher candidates to co-construct meaning with their students. One teacher educator described her process for co-constructing assessment criteria with teacher candidates:

> For every assignment, we co-construct the criteria. We talk about it. We edit it. We go through quite a process and then they can peer- and self-review as well. And then they give me their assignments and I respond to them, and I give them feedback. On the best days, I give them feedback before they get a grade and I say, "Read my questions, comments, and make whatever changes you want using the different colour fonts. Send it back to me when you're ready for the grade." If they're not satisfied with the grade, they have the opportunity to go back and improve. Because I'm constantly saying to them it's about learning, not about grading, and I want them to treat children with that kind of respect, right? So, I'm always flipping it back to the classroom.

Another teacher educator noted the importance of creating an active, collaborative learning environment that capitalized on teacher candidates' prior knowledge. She commented on her approach:

> I try so hard to assess where they're at in their understanding, and not to try to move things along more quickly than they should. But, at the same time, I need to move things along. I struggle with that, but I am committed to that idea because I think, again, back to your comment about modelling, that's what we want them to be doing too, right?

In addition to helping teacher candidates take ownership of their learning, faculty noted the importance of making the connections between theory and practice explicit in their teaching. For example, faculty mentioned making theories more meaningful and relevant for students by sharing personal examples of their own experiences as teachers and/or other practical classroom examples of how theory is used to guide practice. Modelling was mentioned by faculty interviewees as a way to achieve this outcome. The chair of the faculty confirmed this, sharing her views:

> I think that's one of the strengths of our faculty is diversity in perspectives about teaching, about teacher education, and about the way that unfolds…we take pride in, that is, we are strong in this. We promote that there would be more than one way of doing anything. And so I think that our students see many, many examples of various strong modelling.

The approaches and strategies identified by faculty in their teaching were also experienced by teacher candidates, according to their survey responses and the focus group discussion. Key phrases such as "some professors really walked the talk," "the learning was relevant," "we felt cohesion," "activities directly relate to theories," "peer teaching was great," and "using examples from the on-days in schools really helps" reflect how these approaches and strategies enhanced teacher candidates' development. Although teacher candidates were very positive about program experiences and the pedagogy adopted, they recognized that certain aspects of the program could be improved. During the focus group discussion, it was noted that not all professors engaged in modelling, although most did, and that a couple of courses in the program did not seem overly relevant to their K–12 classroom teaching. In the survey items, 10% noted that there could be stronger connections across course content. Reflection on change and the need for improvement in the program was summarized by one teacher candidate: "Every program has its faults though, but I think, this program does have some stuff that can be improved, but they do a very good job of preparing us for the realities of the workplace."

Teacher Candidate Reflection and Inquiry

Faculty and teacher candidates identified other program structures and practices that foster strong theory–practice relationships. Toward the latter part of the program, each teacher candidate, under the guidance of a faculty member, completes a teacher inquiry project with a partner, based on a topic that arises during the third extended practicum. At the very end of the program, a celebration is held to share what they have learned through the inquiry. Staff and faculty, community members, and other educators are invited to participate in the celebration. This culminating activity provides another opportunity to connect theory and practice as the topic for exploration arises from classroom practice; teacher candidates use theory, literature, and their insight gained through teaching experience to inform the design and implementation of their inquiry project.

Another program structure that is used to facilitate the connection of theory and practice is a teacher portfolio. This is introduced to teacher candidates early in their program as a tool to promote reflection, as well as a resource for seeking employment. The role of the portfolio is described by one of the teacher educators:

> Ongoing community-building and open communication with the portfolio is really good. I think they're working to construct themselves as educators and thinking about that actual process…that you are making choices and decisions about your philosophy as an educator and you're thinking towards that goal, your strengths, and also you're thinking about how you can sell yourself in a job interview. And they also do use those portfolios in those final interviews.

According to faculty and teacher candidates, "the portfolio became a set of artifacts to talk about education, and about beliefs and significant learning."

Faculty/Staff Views on Theory–Practice Relationships

All faculty interviewed either taught in the program and/or supported teacher candidates directly, or supported overall program functioning. In terms of theory, faculty referred to it as "concepts, ideas, frameworks and formal knowledge needed to inform the doing or practice" (Teacher educator S). Faculty views on the relationship between theory and practice in teacher preparation were consistent; they viewed theory and practice as existing in a reciprocal relationship or as being "seamless." When asked specifically to elaborate on their views, similar ideas emerged:

> I see them [theory and practice] as going hand-in-hand, that the practice produces theory; theory produces practice. It's a cyclical thing for me. (Teacher educator M)

> I think we all need to just constantly be cognizant of how we can best use those practical experiences, that experiential learning, to either build on it, to reflect more deeply, to make more connections, but at the same time keeping in mind that we're there also to push the envelope, to push their understanding. I think I go back and forth very fluidly between theory and practice. (Teacher educator T)

> What I've begun to realize in this role now is that this place, this teacher education place, has a responsibility to draw or connect some of the lines between intention and practice, between theory and practice. (Teacher educator X)

> I challenge them to consider, "What do you believe, for example, about the nature of children? What are your theories?" They tell me things they believe about children. And…. Where does that come from? Did you make it up? Is it informed by Rousseau or Dewey or Piaget? Where does it come from—and then what might it look like in what subject matter you decide to teach, how you decide to organize your classroom, what activities you have people do? How does what you believe show up in those things? (Teacher educator Y)

These comments reflect a strong perspective that values both theory and practice as being central to the preparation of teachers. When asked to rate their programs on how well it enables teacher candidates to integrate theory and practice, all faculty and staff interviewed gave it a rating of good or very good on a four-point scale.

Teacher Candidates' Views on Theory–Practice Relationships

One theme that emerged from the teacher candidate data focused on using theory as a guide to inform practice. Most teacher candidates (81%) recognized the importance of theory as a heuristic to assist with structuring practice, explaining why things happen, reflecting on classroom actions and decision-making, and gaining insight into student needs and thinking. The role of theory as a heuristic is reflected in comments as:

> Theory presents various options and strategies and then we are responsible for using them to form our own ideas. (Teacher candidate 8)

> Theory plays a huge part in the education of a teacher. We have learned that as teachers we are always learning. By learning theory, we learn what others believed, but more importantly we learn how to adjust these theories into our own practices and teaching. (Teacher candidate 16)

> Theory can help teachers come up with current and productive ways to teach content, manage classrooms, and question pedagogy and practice observed or experienced. (Teacher candidate 47)

Theory can help you understand the rationale of different pedagogies and can also help you develop your own. It can shape how a teacher views his or her practices and styles. (Teacher candidate 60)

A second theme reported by 25% of the teacher candidates centred on theory being used to prepare them for classroom experiences. For example, one teacher candidate reflected on how theory could help prepare them for classroom experience: "Theory helps teachers become aware of what to expect when entering a classroom. It can provide a broad scope of what could take place within a school setting" (Teacher candidate 20). Another teacher candidate noted that "theory allows beginning teachers to be exposed to teaching theories in a comfortable environment, without the pressure of being expected to have this knowledge already" (Teacher candidate 57).

While teacher candidates valued the role of theory in learning to teach, they noted that "this was only one component" (Teacher candidate 10), giving practice a much more significant role in learning to teach. They stated that practice, as structured and supported in their program, served several critical roles:

It provided an opportunity to try ideas and reflect. (Teacher candidate 5)

It allowed us to get feedback based on what we were doing. (Teacher candidate 17)

Practice helps us develop confidence and hone our skills and really lets us see the potential of theory in the "real world." (Teacher candidate 33)

Teaching is not like being an education student! Practice is a reality check and allows us to confirm that we love what we do! Practice is invaluable. (Teacher candidate 42)

Teacher candidates reported many of the same pedagogical classroom-based approaches that faculty identified as ways to introduce theory and/or to connect and integrate theory and practice (reviewing and discussing literature, collaborative group work, teacher educator modelling, presentations by teacher candidates, problem-based learning, role playing, and other student-centred pedagogies). Like faculty, teacher candidates identified a variety of structures and practices at a program level that facilitated the integration of theory and practice, such as the one-day-per-week school-based experience, the

creation of a program portfolio, lesson planning, practising skills learned in university classes, peer teaching, receiving frequent feedback from teacher mentors and faculty mentors, high levels of collaboration, and internship experiences.

Teacher candidates, for the most part, were pleased with their teacher preparation program. In response to this question, "Overall, how well does your program support the integration of theory and practice?" 90% selected well or very well. They reported that the program allowed for a balance of theory and practice, yet a few did note there was room for improvement in the form of having more practice time in schools and changing the one-day experience in the program (21%). The latter suggestion resulted from teacher candidates feeling that the expectations for these days were not always clear for them and the school-based teachers.

Tensions in Fostering Theory–Practice Relationships

While the teacher preparation program described here adopted program structures and practices to foster strong theory–practice relationships, tensions and issues did arise. Faculty and staff identified two key issues: establishing a shared vision for teacher education among faculty and among all stakeholders, and being cognizant of the needs of teacher candidates as they learn to teach. Being aware of these tensions and finding ways to address them is critical in teacher preparation.

Establishing a shared vision for teacher education. Establishing and nurturing a shared vision for teacher preparation was identified as an ongoing issue for the program. While the faculty interviewed felt that they had moved in the direction of having shared goals for the program, there were still faculty who did not support the program or understand its intent. When the dean of the faculty was asked about the faculty having a shared vision, she noted, "We are all starting to look in the same direction, but not everyone agrees with all components of the program, but at least we are thinking similar things. We do have ongoing discussions and people still disagree on program things." Another faculty member felt there was a shared vision for the most part, but remarked that varying views on the role of theory in the program were very heated. She reflected back to when the program was being planned: "I can remember…when we used to argue about the place of theory in our program versus the place of practice in our program. And there were people who would say that this isn't the place for practice. They get that in the

schools. Our job is to teach them the theory framework and understandings." Over the five years that the program unfolded, program practices evolved, and, as one senior faculty member suggested, there is a need "as people come and go to keep revisiting our core principles that are guiding the program. Yes, the shared vision is there; but it's evolving and not a monolithic vision."

The shared vision for teacher education also created some initial tension among university and school-based personnel, especially in terms of establishing shared expectations for the embedded practicum. While each school had a teacher liaison to foster communication among school-based mentor teachers, faculty supervisors, and teacher candidates, mentor teachers were not always clear on what students were expected to be doing during certain parts of the embedded practicum model, especially during the one day a week students spent in schools. To foster stronger communication and to facilitate shared understandings, everyone involved in supporting teacher candidates during the embedded practicum was brought together several times during the year at strategic points. The chair of the program described their efforts to foster this understanding:

> We brought everyone together probably three times throughout the year since the beginning of the program. We would have brought them together in the Fall, late September, early October to talk about, debrief on how the opening went and what everybody should be doing through the Fall and then again at the end of that term before they went out for the three weeks.… And again maybe in January or February again to debrief and go over the three weeks. And how that went and certainly, and then again before the extended block.

The leadership team and the faculty assigned a lot of credit to the internship coordinator for working diligently toward fostering strong communication between the university and partner schools. For example, the dean shared this view of the importance of cultivating these strong partnerships:

> Our coordinator is amazing at going around individually to all of the schools and talking with liaison teachers, talking with the principals; she is a marvelous PR person to stay on top of all of that…and we would never stop doing it because it is really important. We don't ever want the schools to feel as though we're just

putting people out and we're not paying any attention to them or giving them any support whatsoever.

The leadership team, faculty, and staff were committed to fostering strong school–university partnerships through ongoing, frequent communication and supporting school personnel and teachers as they, in turn, supported teacher candidates.

Being cognizant of the needs of teacher candidates. The use of particular strategies and practices in this program to foster strong theory–practice relationships—teacher candidates completing university course work while gaining experience in schools (embedded practicum model and the teaching and learning seminar), cultivating dynamic school–university partnerships, and adopting diverse pedagogies that explicitly examine theory–practice relationships—necessitates a sensitivity to and awareness of teacher candidates' changing needs as they move through the program. Being aware of this and being able to respond appropriately was identified as an ongoing issue for faculty. For example, one faculty member recognized that teacher candidates' development as teachers is varied and each has a different trajectory. She commented, "The students are at different levels in terms of their professional learning; some take up the ideas and internalize them, while others need more experience before this can happen." Another faculty member talked about the students in this program, compared to the old program, "maturing as teachers sooner than they used to…" He further noted that we have "to support them and empower them, especially when they become frustrated and confused." Helping the teacher candidates make sense of their school experiences was cited as an issue among faculty and is reflected in the chair's comments: "We meet with them one-on-one to share with us how they are doing. We help them look at the evidence for their views and support how they are seeing things."

At the time of data collection in this study, the program had been in place for five years. According to faculty and staff, ongoing program assessment and evaluation was a salient feature of being responsive to teacher candidates, as well as other program stakeholders such as mentoring teachers and principals. Graduates of the program were surveyed for their feedback during each year of the program and school-based educators were asked for their feedback. Listening carefully to teacher candidates, encouraging them to make their thinking explicit through individual reflection and collaborative

reflection about both their university and school-based experiences, and fostering critical thinking about their experiences were important ways of supporting teacher candidates throughout the program.

Implications/Conclusions

In the teacher preparation program described in this study, many program components and practices contributed to enabling teacher candidates to develop insights into the complex relationship between theory and practice. Theory and practice were viewed by faculty as existing in an integrated, reciprocal relationship, with many program structures and practices organized around school-based experiences. Faculty adopted a variety of student-centred, active pedagogical approaches (course- and program-based) that explicitly enabled teacher candidates to make theory and practice connections. A key feature of the program that fostered theory–practice connections was the embedded practicum model, which allowed for a gradual enculturation into the teaching profession. This prepared teacher candidates to gradually participate in the life of teaching, starting with low-risk activities in safe learning environments (e.g., viewing case studies of classroom practice, peer teaching) and gradually progressing to more complete complex teaching responsibilities (planning and implementing assessment with children) over time.

This aligns with the notion of approximations of practice or "opportunities for novices to engage in practices that are more or less proximal to the practices of a profession" (Grossman, Hammerness, & McDonald, 2009). These simulated practices are meaningful, but may vary in authenticity and degree of complexity. For example, planning lessons in a methods course would be viewed as less authentic when compared to planning for and implementing a lesson with children. In addition to this graduated approach to the practicum, teacher candidates experienced explicit connections between university course work and practicum experiences. For the most part, faculty who worked in the program held a shared vision for teacher preparation. They worked closely with schools and other teacher educators involved with the program to support teacher candidates in being part of and contributing to this shared vision. Collaboration was a key factor in contributing to the creation of a coherent teacher preparation program for

teacher candidates, an essential element in creating and fostering strong theory–practice relationships.

Earlier in this article, we theorized about three approaches to teacher preparation: traditional, Deweyan, and practical wisdom. Other scholars, such as Grossman, Hammerness, and McDonald (2009), have also suggested that teacher preparation be premised on the ideas of the latter two approaches. These authors suggest that teacher education be organized around core principles of practice, skills, and teacher identity to best prepare teacher candidates for the teaching profession. They state that traditional divides between foundation and methods courses and divides between schools and universities need to be dismantled. This implies a particular role for teacher educators if teacher candidates are to examine discrete aspects of the complex act of teaching. It would require faculty to envision course content differently, and to view program and pedagogy from the starting point of clinical practice. Of course, any new visioning of teacher education may present challenges to the status quo of policies, practice, and orientations that have been historically established.

As mentioned at the beginning of this article, emerging literature does suggest a number of principles for offering high-quality teacher education programs (Allen, 2009; Beck & Kosnik, 2006; Darling-Hammond, 2006). These principles and their associated practices were evident in the design and implementation of the program described in this article. The principles underpinning a teacher preparation program have implications for the scope and sequencing of content and experiences, as well as program structure and pedagogy, and will influence how teacher candidates experience and understand theory–practice relationships.

We, the authors, recommend that teacher educators and those involved in teacher preparation, development, and implementation constantly reflect on how teacher candidates are constructing their understanding of teaching and theory–practice relationships. Enabling teacher candidates to establish a sound foundation to start their teaching careers is one of the broad goals of teacher preparation. More research is needed to understand the context of teacher preparation and how programs and individual faculty can offer appropriate, coherent learning experiences that shift away from the traditional divide between theory and practice. While a considerable body of literature about theory and practice in teacher education exists, theory–practice dynamics continue to be a challenge in

terms of how teacher educators can best support teacher candidates as they develop their own understanding of theory–practice relationships in the context of learning to teach.

This case study research adds to the knowledge base of teacher education, providing insight into the nature of faculty and teacher candidates' thinking about theory–practice relationships and how this may shape practice. It also provides insight into some of the tensions and challenges faculties of education may experience as they implement new programs and/or practices that explicitly attend to creating strong theory–practice relationships.

References

Allen, J. M. (2009). Valuing practice over theory: How beginning teachers re-orient their practice in the transition from the university to the workplace. *Teaching and Teacher Education*, *25*(5), 647–654. doi:10.1016/j.tate.2008.11.011

Aristotle (1976). *The ethics of Aristotle: The Nicomachean ethics* (rev. ed.; J. A. K. Thomson, Trans.). London, England: Penguin Books.

Back, S. (2012). *Ways of learning to teach: A philosophical inspired analysis of teacher education programs*. Rotterdam, Netherlands: Sense Publishers.

Beck, C., & Kosnik, C. (2006). *Innovations in teacher education: A social constructivist approach* (pp. 1–159). Albany, NY: State University of New York Press.

Britzman, D. P. (2003). *Practice makes practice: A critical study of learning to teach* (rev. ed.). Albany, NY: SUNY Press.

Brouwer, N., & Korthagen, F. (2005). Can teacher education make a difference? *American Educational Research Journal*, *42*, 153–224. doi: 10.3102/00028312042001153

Cheng, M. M. H., Cheng, A. Y. N., & Tang, S. Y. F. (2010). Closing the gap between the theory and practice of teaching: Implications for teacher education programmes in Hong Kong. *Journal of Education for Teaching*, *36*(1), 91–104.

Coffey, H. (2010). "They taught me": The benefits of early community-based field experiences in teacher education. *Teaching and Teacher Education*, *26*, 335–342.

Connelly, E. M., & Clandinin, D. J. (1985). Personal practical knowledge and the modes of knowing: Relevance for teaching and learning. In E. Eisner (Ed.), *Learning and teaching the ways of knowing* (pp. 174–198). Chicago, IL: University of Chicago Press.

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

Dewey, J. (1964). The relation of theory to practice in education. In R. D. Archambault (Ed.), *John Dewey on education* (pp. 313–338). Chicago, IL: University of Chicago Press. (Original work published 1904)

Dunne, J. (1993). *Back to the rough ground: 'Phronesis' and 'techne' in modern philosophy and in Aristotle*. Notre Dame, IN: University of Notre Dame Press.

Eilam, B., & Poyas, Y. (2009). Learning to teach: Enhancing pre-service teachers' awareness of the complexity of teaching-learning processes. *Teachers and Teaching: Theory and Practice*, *15*(1), 87–107.

Falkenberg, T., Goodnough, K., & MacDonald, R. (2015). Views on and practices of integrating theory and practice in teacher education programs in Atlantic Canada. *Alberta Journal of Educational Research*, *60*(2), 339–360. Retrieved from AJER website: http://ajer.journalhosting.ucalgary.ca/index.php/ajer/article/view/1289

Feiman-Nemser, S., & Remillard, J. (1996). Perspectives on learning to teach. In F. Murray (Ed.), *The teacher educator's handbook* (pp. 63–91). San Francisco, CA: Jossey-Bass.

Fenstermacher, G. D. (1986). Philosophy of research on teaching: Three aspects. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 37–49). New York, NY: Macmillan.

Fenstermacher, G. D. (1994). The knower and the known: The nature of knowledge in research on teaching. *Review of Research in Education*, *20*, 3–56. Retrieved from the JSTOR website: http://www.jstor.org/stable/1167381

Grossman, P. (2008). Responding to our critics: From crisis to opportunity in research on teacher education. *Journal of Teacher Education*, *59*(1), 10–23. doi: 10.1177/0022487107310748

Grossman, P., Hammerness, K., & McDonald, M. (2009). Redefining teaching, re-imagining teacher education. *Teachers and Teaching: Theory and Practice*, *15*(2), 273–289. doi: 10.1080/13540600902875340

Kennedy, M. (1999). The role of preservice teacher education. In L. Darling-Hammond & G. Sikes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 54–86). San Francisco, CA: Jossey-Bass.

Kessels, P. A. M., & Korthagen, F. A. J. (1996). The relationship between theory and practice: Back to the classics. *Educational Researcher*, *25*(3), 17–22. Retrieved from the JSTOR website: http://www.jstor.org/stable/1176664

Korthagen, F. A. J., & Kessels, P. A. M. (1999). Linking theory and practice: Changing the pedagogy of teacher education. *Educational Researcher*, *28*(4), 4–17.

Korthagen, F. A. J., Kessels, J., Koster, B., Lagerwerf, B., & Wubbels, T. (2001). *Linking practice and theory: The pedagogy of realistic teacher education* (pp. 1–309). Mahwah, NJ: Lawrence Erlbaum.

Koutselini, M., & Persianis, P. (2000). Theory-practice divide in teacher education at the University of Cyprus and the role of the traditional values of the Orthodox Church. *Teaching in Higher Education*, *5*(4), 501–520.

Lampert, M. (2010). Learning teaching in, from, and for practice: What do we mean? *Journal of Teacher Education*, *61*(1–2), 21–34. doi: 10.1177/0022487109347321

Leinhardt, G., McCarthy Young, K., & Merriman, J. (1995). Integrating professional knowledge: The theory of practice and the practice of theory. *Learning and Instruction*, *5*, 401–408. doi:10.1016/0959-4752(95)00025-9

Maaranen, K., & Krokfors, L. (2008). Researching pupils, schools and oneself: Teachers as integrators of theory and practice in initial teacher education. *Journal of Education for Teaching*, *34*(3), 207–222.

Marshall, C., & Rossman, G. B. (1999). *Designing qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Phelan, A. M. (2005). On discernment: The wisdom of practice and the practice of wisdom in teacher education. In G. Hoban (Ed.), *The missing links in teacher education design* (pp. 57–73). Dordrecht, Netherlands: Springer.

Roth, W., & Tobin, K. (2004). Coteaching: From praxis to theory. Teachers and Teaching: *Theory and Practice*, *10*(2), 161–179. doi: 10.1080/0954025032000188017

Roth, W.-M., Mavin, T., & Dekker, S. (2014). The theory-practice gap: Epistemology, identity, and education. *Education and Training*, *56*(6), 521–536.

Smith, K., & Hodson, E. (2010). Theorising practice in initial teacher education. J*ournal of Education for Teaching*, *36*(3), 259–275.

Tsafos, V. (2010). Developing a practice-theory model in pre-service teacher education in Greece. *Action Research*, *8*(2), 153–170. doi:10.1177/1476750309335041

Varela, F. J. (1999). *Ethical know-how: Action, wisdom, and cognition* (Board of Trustees of the Leland Stanford Junior University, Trans.). Stanford, CA: Stanford University Press.

Wideen, M., 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 Educational Research*, *68*(2), 30–178. doi:10.3102/00346543068002130

Yin, R. (2003). *Case study design: Design and methods* (3rd ed.). Thousand Oaks, CA: Sage.

Yin, R. (2005). Case study methods. In J. L. Green, G. Camilli, & P. B. Elmore (Eds.), *Handbook of complementary methods in education research* (pp. 279–298). Washington, DC: American Educational Research Association.