

Kaleidoscope of Orientations: A model of professional development for practicing teachers

Vandy Britton * and Awneet Sivia
University of the Fraser Valley, British Columbia, Canada

Introduction

Innovation is about recognizing that old approaches are not working for all learners, identifying what the key needs of our current learners are, and then creating new strategies based on knowledge about what does work (Halbert & Kaser, 2013, p. 9).

Given the myriad demands placed on K-12 teachers who practice in today's classrooms, this paper explores the foundations of professional development for practicing teachers (PDPT) and proposes a framework for professional learning in the context of innovation and educational reform. In British Columbia, the Ministry of Education proposed a comprehensive revision of the current K-12 curriculum that calls for teachers to innovate practice, alter pedagogical approaches and reimagine student and teacher roles in the context of a personalized, inquiry based, and flexible learning environment. Collectively, the redesign of this New Curriculum (NC) by the BC Ministry of Education (2012) attempts to respond to the needs of today's global realities, equipping students with foundational numerical and literacy skills, as well as the necessary knowledge they need in order to succeed in a rapidly changing world, with a goal of "removing the barriers that limit teachers' ability to innovate and personalize learning based on students' needs and the community context...[because] to truly transform education, the BC education system must empower innovation throughout the province" (p. 2). The cumulative effect of this large scale reform is the need for teachers to innovate practice to extend beyond the boundaries of conventional pedagogical structures.

Several questions emerge regarding the professional work of teachers who are grappling with these changes. How can we articulate what it means to be an innovative teacher in light of this redesign? How can professional development be (re)envisioned to support teachers to become innovative practitioners? How might a proposed model for PDPT be applied to professional learning in relation to other reform measures? While traditional professional development models aim to prepare teachers for a wide array of classroom contexts, the NC introduces an entirely new set of demands for innovation and imagination on the part of teachers. The authors assert that a particular composite of orientations for PDPT is therefore necessary. Hence, it is the aim of this paper to respond to two questions: what does it mean to be an innovative teacher in terms of changing professional practice?;

* Email: vandy.britton@ufv.ca

and, what might be an effective framework for PDPT that supports teachers to become innovative practitioners?

To respond to these questions, we examine literature surrounding professional development models and explore conceptions of innovative teachers and teaching in order to situate our proposed framework within the array of professional development approaches that currently exist. While the framework we suggest is particular for the case of a summer institute (SI) we developed at a small Western Canadian university, our intention is to inform the broader conversations about what theoretical and epistemological orientations are beneficial for cultivating innovative teachers. While the actual design of a professional development program (courses, timetables, topics, etc.) is not the focus of this paper, we do intend to: clarify what it means to be an innovative teacher in the context of this particular reform; propose a professional development framework for teachers' professional learning that supports the growth of innovative practitioners; and, present an argument for this framework for PDPT to include particular orientations that may inform program development beyond this local example.

The proposed *kaleidoscope of orientations*, a metaphor introduced by the authors to articulate our framework, includes four orientations to drive professional development programming: inquiry as stance, reflective practice, teacher learning communities, and three ways forward. The authors assert that the patterns of programming created by these orientations represent an approach to professional development that responds to the unique needs of practicing teachers engaged in innovation. At the outset, we situate our inquiry into the PDPT within our roles as certified BC teachers and teacher educators tasked with designing a summer institute program in response to the NC. Our vision to create a meaningful experience for the prospective SI participants required us to examine the research surrounding professional development, recall our own personal experiences as K-12 educators, and reflect on our scholarship and practices as teacher educators working with pre-service teachers.

Context: Educational Reform in British Columbia

The impetus behind this comprehensive reform of the current K-12 curriculum by the BC Ministry of Education was to more effectively meet the needs of all students. As such, the shifts in the redesigned BC curriculum are significant. Firstly, there is a shift in the way curriculum itself is envisioned. The redesign includes three elements: Content (Know); Curricular Competencies (Do); and Big Ideas (Understand). The “Know-Do-Understand” model supports a “concept-based, competency-driven” curriculum that encourages “deeper learning and inquiry” by engaging students in “authentic tasks that connect learning to the real world” (BC's New Curriculum, 2019, Curriculum Overview, Curriculum Model section). Meanwhile, “Core Competencies” of thinking, communicating, and personal/social identity/responsibility frame all of the learning, across grade and discipline (BC's New Curriculum, 2019, Curriculum Overview, Key Features of the New Curriculum section). The second significant shift in curricular redesign in the NC is the focus on personalized learning, with student-led inquiry as a key component of this curricular change. Students are encouraged to build on personal interests, goals and abilities in order to carry out learning activities in self-directed ways with the intention being to cultivate life-long learning beyond students' K-12 experiences (BC's New Curriculum, 2019, Curriculum Overview, Redesigned Curriculum in Action section). The third shift is in relation to the development of more flexible learning environments where continuous progress assessment, multi-grade classrooms, and technologically-enhanced teaching and learning are an expectation. Teachers are also encouraged to consider curriculum in a trans-disciplinary manner in order to heighten student interest (BC's New Curriculum, 2019, Curriculum Overview, Flexible Learning Environments section). Finally, there is intentional integration of Indigenous ways

of knowing and pedagogy into the backbone of each subject and/or grade (BC's New Curriculum, 2019, Curriculum Overview, Aboriginal Perspectives and Knowledge section, para. 3). This final shift in the redesign is particularly significant as it seeks to redress wrongs committed to Aboriginal peoples of BC by previous governments and citizens. Collectively, the redesign of the NC in these substantive ways attempts to respond to the needs of today's students, with the goal being to "remove the barriers that limit teachers' ability to innovate and personalize learning based on students' needs and the community context, ... [because] to truly transform education, the BC education system must empower innovation throughout the province" (BC Ministry of Education, 2012, p. 2).

Innovation and "Boundary Crossing"

To clarify our view of innovation as it relates to teachers, we draw on Akkerman and Bakker's (2011) notions of boundary crossing in the context of education. Their review of the research highlights the contributions of Suchman (1994) who introduced the term boundary crossing to represent how the work of professionals involves entering a "territory in which we are unfamiliar and, to some significant extent, therefore unqualified" (p. 25). We argue that this explanation aptly describes the challenge that educators face with a large-scale curricular reform such as the NC.

Akkerman and Bakker (2011) describe the mechanisms for potential learning within boundary crossings as identification, reflection, coordination, and transformation. In identification, the learning occurs at the boundary of two intersecting sites in two ways: by comparing one practice "in light of another, delineating how it differs from the other" (p. 134); and, by finding multiple membership within different sites. Coordination refers to the ability of diverse or differing practices and perspectives to co-exist, such that the overall functioning of both sites is not compromised. They cite the example of report cards in schools as being read differently by schools, governments, parents and students; hence, the boundary crossing described here is a coordinated set of perspectives on grading. Reflection, as a third mechanism of learning at boundary crossings, allows teachers to "realize and explicate differences between practices and thus to learn something new about their own and others' practices" (p. 133). As well, reflection allows for self-examination through the eyes of others. This perspective making and perspective taking (Boland & Tensaki, 1995) at boundaries by way of reflection serves to create greater harmony between differing sites. The fourth, and final, learning mechanism is described as transformation. Boundary crossing involves the transformation of practices based on a set of norms in one site to a new practice based on a new set of norms for another.

From this brief description, we take the fourth learning mechanism of transformation to be an effective lens through which we can view innovation in terms of altering teaching practices. Given the changes embedded in BC's curricular reform, we view the NC as a potential site that differs from the site of current classroom practice. Arguably, generating innovation and constructing innovative practices are representative of boundary crossing because they involve transformation on many levels. Furthermore, an innovative teacher is one who transforms practice and *crosses boundaries* – and does so with the vision of transforming current practice in new contexts or, at the very least, into a hybrid of current and future practice. We suggest that the NC presents a new site, another context for teachers to grow new practice that requires teachers to envision innovative teaching as boundary crossing.

Innovative Teachers and Teaching

Overlapping Qualities

Ketelaar et al. (2012) conducted a study of teachers' reactions to a government mandated reform in a secondary school in the Netherlands. In analysing participants' responses to the reform measures, and in order to understand how teachers change practices in light of reform measures, they applied the

concepts of ownership, sense-making, and agency as lenses to view teacher positioning towards education innovation. Ownership, as described by Pierce, Kostova, & Dirks (2001) in Ketelaar et al. (2012), allows one to express “who one is as a teacher and what one finds important” (p. 273). Teachers who value and also communicate about an innovation are considered to demonstrate ownership towards the innovation. Sense-making, meanwhile, is described as the interaction of one’s identity with an innovation and the subsequent changes in one’s identity (Luttenberg, Imants, Van Vee, & Carpay, 2009). By examining personal and professional knowledge, beliefs, and experiences, teachers fit the new practice or experiences within their existing frames of reference. Sense-making, thus, is an interplay between the situational demands of the innovation and the cognitive schema held by teachers (Ketelaar, et al., 2012). The third lens, agency, is seen as a way of staying true to oneself while pursuing a direction or vision. This is predicated on the ability to make choices, have a sense of autonomy in making those choices, and to choose based on one’s own goals, interests, and motivations. This particular study found that all three concepts (ownership, sense-making, and agency) informed innovation in that teachers needed to express these concepts through their work within the innovation; and, all three lenses were influenced by each other. For example, one teacher felt her sense-making was impacted negatively by her lack of ownership and agency in the case of the government-imposed reform.

In the same vein, Ltm� & Williite (1996) suggest that innovative teaching, a construct comprised of a cluster of qualities including effective interaction with learners, openness to change, persistence, reflective practice, specificity of approach, and discipline-embedded pedagogy, is predicated on the interplay of these same three concepts. The qualities of innovative teaching serve as tools to poise teachers for innovation and are implicit in successful professional development models.

Be(com)ing: Defining Innovative Practitioners and Innovative Practice

Based on the preceding review of literature on innovative teachers and teaching, we clarify what it means to be an innovative practitioner. In suggesting PDPT in the context of the NC reform, we recognize the strength of blending these two complementary visions of innovative practice and innovative teachers. We regard innovative teachers as *boundary crossers* who exhibit a strong sense of ownership, sense-making, and personal agency in the face of substantive curricular reform that requires changes to the ways in which they teach and approach pedagogy. Rather than ranking in terms of importance, we argue that it is the combination, or overlapping, of the qualities associated with boundary crossing (Akkerman and Bakker, 2011) and the lenses of ownership, sense-making, and personal agency (Ketelaar et al. (2012) that gives a more fulsome meaning to our understanding of innovative teachers and teaching.

As boundary crossers, teachers engage themselves and their students in the transformation of their practices in relation to new aims and visions for education. The boundaries between current classroom contexts in BC and the enactment of the government-imposed NC are full of challenge and potential for change. Our definition of innovative practitioners and innovative practice rests on the assumption that teachers will take ownership of the challenge to innovate, will make sense through individual and collective inquiry, and will see the NC innovation as an opportunity to demonstrate personal agency as a practitioner. Thus, with a conception somewhat clarified of what it means to be an innovative practitioner, we turn to literature regarding professional development models and consider designs that best encourage innovation in the ways in which it has been conceptualized.

Teachers’ Professional Development

Models

Utilizing the definition of professional development as outlined in the National Centre on Time & Learning's study (2015), we define professional development and/or professional learning as "the entire set of activities in which teachers engage (especially with colleagues) to strengthen their own instructional practices and enhance their capacity to enable students to learn" (p. 7). While some may argue for a separation between these two concepts of professional development and professional learning (Groundwater-Smith & Mockler, 2009; Hardy, 2010), at the centre of both notions is the desire to improve one's pedagogy in order to further student growth (Loughran, 2014). Indeed, as Avalos (2011) in Loughran (2014) states, "at the core of such endeavours is the understanding that professional development is about teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of students' growth" (p. 10). While Loughran reminds us that multiple studies have been undertaken on the various models and/or approaches to professional development currently available to teachers, for the sake of this paper, we focus our attention on Kennedy's (2005) study of professional development models in which she outlines nine key models currently in use, each with their own strength and challenges:

1. Training model (skill-based, delivered by an 'expert' with participants passively participating);
2. Award-bearing model (a degree/certificate 'award' is granted by an outside institution that determines the course of learning);
3. Deficit model (filling a seeming need in a teacher who is perceived as 'underperforming');
4. Cascade model (teachers attend a 'training event' and then share what they consider important with their colleagues);
5. Standards-based model (designed to develop and then measure the relationship between teacher effectiveness and student learning but, unfortunately, limits teacher choice and undervalues collaboration);
6. Coaching/mentoring model (a more experienced colleague supports the professional learning of a less-experienced or novice teacher, usually in the same school site);
7. Community of practice model (similar to the coaching/mentoring model, but involves more people and is reliant on the skills and knowledge of teachers involved);
8. Action research model (teachers ask and answer critical questions about their own practice with professional autonomy being both the strength and deficit of this model); and,
9. Transformative model (incorporates aspects of the other models with the intent to support transformation).

Component Practices

While the models of professional development are fairly straightforward, according to a broad study of professional development commissioned by the Teacher Development Trust is the "carefully designed" (Cordingley, et al, 2015, p. 4) organization of any professional development that determines its actual effectiveness; where certain component pieces must be in place in order for professional learning to have significant impact upon student achievement. According to the report, the following should be considered:

- duration and rhythm (ideally prolonged and involving follow-up, consolidation and support activities)
- participants' learning needs (content needs to be relevant and differentiated to support participants' professional interests)

- alignment between content and instructional strategies/activities
- equal import given to both pedagogic and subject-based knowledge
- experiential learning with opportunities to synthesize new learning through experimentation and reflection;
- role of external providers and specialists (introduce new knowledge and skills, inspire confidence)
- role of collaboration and peers to reinforce learning (particularly in school settings); and,
- role of school/district/government leaders in providing supports for professional learning.

Collectively, these factors form a sound basis for designing professional development and informed our own careful design.

Kaplan, Chan, Farbman, and Novoryta (2015), in their study of six practices put in place to support teachers at seventeen schools that follow an expanded time format of instruction, uncovered three components of their own that reinforce what other research revealed regarding developing effective professional development opportunities for teachers: creating a professional culture, with a shared commitment to continuous improvement and learning, matters); including teachers as leaders (serving as mentors and coaches); and, situating the locus of learning within the school site where it is school-directed and driven by school-wide instructional goals. The six practices engaged in by the teachers in the seventeen schools included in the study included: collaborative lesson planning, embedded professional development, summer training, data analysis, individualized coaching, and peer observation. Valuable lessons learned from the three component pieces, as well as the six practices in which the teachers engaged, can also be lifted from this model and transferred to other situations.

Developing a Framework for PDPT

The authors engaged in their own “boundary crossing” (Suchman, 1994) as we sought to combine these components into viable PDPT and design the SI based on the literature we surveyed. In the development of our framework, we took into account the practices discussed and critically analysed them in order to determine appropriateness of fit in terms of the vision for the SI, thus allowing us to narrow our vision for the program (given that the program is only a summer offering) and identify aims/practices that align with our conception of innovative teachers who could respond to the boundary of the NC. While we recognize that literature highlights the limitations of short-term professional development that sits apart from schools and is somewhat decontextualized, of no less import to us was the need to provide opportunities for teachers to have intensive, focused investigation into practice. As such, our framework for a SI needed to not only support professional learning beyond the school setting; it also needed to support the development of innovative teaching as an enduring set of practices. Consequently, we identified our framework as transformative (as one that intends to support transformation), that included the following aims: a) building pedagogic and subject-based knowledge; b) providing multiple opportunities for teachers to synthesize new learning through application, experimentation, and reflection; c) allowing for collaboration and peer learning; and, d) supporting collaborative lesson planning, embedded professional development, and summer training through the development of a professional culture with teachers leading teachers. This transformative framework represents an integration of existing models and a “hybridization, [where] ingredients from different contexts are combined into something new and unfamiliar” (Akkerman & Bakker, 2011, p. 148): it focuses on professional learning that is delivered off-site by exemplary practitioners who are ‘experts’ (training and coaching/mentoring models); it includes academic credit awarded upon successful completion (award-bearing model); it is centered around the needs of the NC (standards-based model); and, it is course-based with students self-selecting to attend out of

interest and/or need (deficit model, community of practice model) with the intention to transform one's practice in significant ways. Collectively, the integration of the models, aims and component pieces gave us a springboard from which to envision the SI program and develop the framework of PDPT.

Experiences with Professional Development

From the authors' own experiences as K-12 educators in BC who attended multiple professional development days (Pro-D Days), we recognize that most professional development has, up to this time, been designed to focus solely on student achievement and professional standards with the intention to develop teacher practice in line with normative trends such as provincial exams and grade-wide foundation skills assessments. Workshops offered at district and/or provincial Pro-D conferences, in our experience, tend to fall into a 'skills-based' category where teachers learn about a particular program, strategy, or resource and the necessary skills and/or strategies to implement them. While teachers have some autonomy to self-select from the offerings, there is rarely follow-up or an opportunity to consider what is learned in relation to one's own practice due to the time constraints of the pre-determined Pro-D program. School-based professional development, meanwhile, is usually mandated by administrators and offers little scope for personalizing and contextualizing the information provided to meet the needs of individual teachers. Sadly, our experience indicates that the professional development is often haphazardly configured, is offered in one off sessions, and is somewhat disconnected, with an apparent lack of vision threading these professional development opportunities together, an approach which Mockler (2005) refers to as "spray-on" professional development. Additionally, the literature raises concerns that professional development programs can actually limit teacher autonomy and creativity if the programs are not guided by a strong theoretical framework (Cochran-Smith & Lytle, 1999; 2009) that positions practitioners as the drivers of professional growth. Master degrees or post-graduate diplomas (awards-based models of professional development) also have issues – the largest being that the courses offered very often have little connection to one's actual teaching practice and are taught by university professors who, as in our experiences, sometimes have no teaching experience outside of the university context. Subsequently, such inert knowledge fails to provoke change and innovation in teaching practice, thus rendering it ineffective as PDPT. This is echoed in the large body of literature that examines disconnects between theory and practice (Korthagen & Kessells, 1999; Zeichner, 2014).

A Framework for PDPT

Design Metaphor

In proposing a framework for professional development that supports teachers to "cross boundaries", we introduce the image of a kaleidoscope to serve as a metaphor for the ways in which we can describe the structural and functional components of our PDPT framework. A kaleidoscope is coloured by particles of glass that take a particular shape and pattern at each turn of the handle. Once a pattern is set, one can see clearly how these seemingly disparate 'bits' all fit together to present a clear, synergistic image through the kaleidoscope. When there is a shift or change introduced by turning the handle of the kaleidoscope, the pattern changes and the shards of glass re-orient themselves into a new arrangement; the same glass bits are still present, but are now represented differently. We apply this metaphor to represent the four orientations within our framework as particles of glass; all four orientations are present in the kaleidoscope (and our framework), but as teachers begin to apply what they learn to their specific contexts, they 'turn' the kaleidoscope to create a pattern of professional learning that responds to and impacts the issues at play in their classroom contexts supporting them to develop ownership over their practice, make sense of the newly shaped orientations, and gain

agency through intentional focus and response to the pattern. The framework we propose then includes particular “orientations” to professional learning: they become the fixed components of our kaleidoscope that shift as teachers engage in the proposed PDPT model and situate learning within their particular contexts. The following sections outline the four orientations we believe are critical for the reform context we have described thus far.

Four Orientations

Reflective practice. Reflective practice, as described by Brookfield (1995) and Larrivee (2000), is an integral component of the PDPT framework. Brookfield reminds us that curriculum does not exist in a vacuum; but, rather, is a site that is open for interpretation by both teachers and students. His description of how critical reflection comes into play in the lives of educators assists us in understanding that, in essence, all choices made regarding education are “contested decisions whose outcomes reflect the interests and agendas of specific people in specific situations” (p. 40). This is certainly the case for the curriculum reform in British Columbia. The NC, as a government-imposed edict, reflects the interests of those who have long argued that the current curriculum is too narrow or discipline-specific and does not meet the needs of today’s learners.

Brookfield’s four lenses provide pathways for teachers to interrogate their teaching practice. The first lens, the autobiography, allows teachers to see their practice “from the other side of the mirror” (p. 29), as they recall their own experiences as students and connect these to the experiences of the students in front of them. The second lens, student eyes, offers teachers the vantage point of knowing whether there is a ‘dis-connect’ between what they are saying and doing in the classroom and how their students are interpreting it. The third lens, the eyes of one’s colleagues, asks teachers to call on the experience and opinions of others in order to “serve as critical mirrors [to reflect] back to images of [their] actions” (p. 35). And, finally, the fourth lens asks teachers to delve into research in order to consider their experience in relation to what scholars have said about similar events and experiences. Combined, these lenses situate professional learning within and across the multiple facets and relationships that constitute the life of a teacher. Echoing Brookfield, Larrivee (2000) reminds educators that they must constantly call their own attitudes and beliefs into question by challenging their assumptions and questioning their practice, “thereby continuously accessing new lenses to view their practice and alter their perspectives” (p. 296). Her model asks practitioners to consider their practice in light of past experiences, beliefs, assumptions and expectations, feelings and mood, and personal agendas and aspirations where, ultimately, “critical reflection is not only a way of approaching teaching – it is a way of life” (Larrivee, 2000, p. 306).

As such, our first orientation of reflective practice requires that teachers engage in deliberate examination of their attitudes and assumptions, challenging them to reflect upon their teaching through these different lenses. It is our belief that teachers engaged in professional development to foster innovation should have multiple opportunities to reflect upon their current practice as teachers and consider alternative, innovative ways to teach that only surface through intentional attention to these complementary lenses. In essence, this orientation in the kaleidoscope pattern brings to bear the multiplicity of views held by colleagues, students, researchers, as well as the individual teachers engaged in the ‘shape shifting’. We argue that in order for teachers to take ownership of their learning, they must first start by examining their own attitudes and beliefs about learners and learning. As boundary crossers who transgress boundaries into sites of new practice, teachers must continuously engage in critical reflection to make sense of what they think and develop personal agency through deliberate interrogation of their teaching practices.

Inquiry-as-stance. Cochran-Smith's and Lytle's (1999; 2009) seminal contributions on practitioner-led inquiry are foundational to understanding how teachers learn, what drives their learning, and how teacher identity is a core element in learning. Thus, a key orientation in the framework we propose is their notion of "inquiry-as-stance" described as an orientation to professional learning that speaks to practitioner growth as being inside out: growth initiated, directed and constructed by practitioners in response to external elements of teaching, learning, and schooling. Inquiry in this view is markedly different than inquiry as a method, inquiry as a set of skills, or inquiry as an outcome: rather, a stance denotes that practitioners take a position that allows for the full dialectic between practice and theory to emerge such that "theorizing practice as a part of practice itself" (Cochran-Smith & Lytle, 2009, p. 2) is a constant feature of one's professional work.

Envisioning this framework of professional development as including a stance of inquiry presumes several conditions are in effect. First, practice is seen as a complex set of relationships to be unfolded and unpacked in the context of broader educational, social, and political factors. For instance, a teaching strategy such as cooperative learning, which bears a strong pedagogical argument for improving engagement, is arguably questionable when considered in the context of blended learning environments. Second, while it is presumed that teachers are oriented or disposed to posing questions as a matter of their professional identity, the ability to raise critical and profound questions about practice that engage the practitioner at a deeper level takes a stance – a way of using questions to drive one's professional learning. Finally, inquiry-as-stance requires that teachers accept the tentative and fallible nature of discipline-specific knowledge and, consequently, knowledge about teaching as an enterprise.

Our proposed framework includes Cochran-Smith's and Lytle's (2009) inquiry-as-stance as one of its orientations in order to promote the possibility of a "transformative agenda ... [that] "transforms teaching, learning and leading into pursuits that go beyond the basics" (p. 148). Inquiry-as-stance is a concept associated with a questioning and critical edge that promotes profound change, paradigmatic shifts and innovative directions within the aims and purposes of education. Educators who embrace an inquiry-as-stance mindset work both within and against the system in order to transform teaching and learning. Thus, inquiry-as-stance is a concept that undergirds a vision for professional learning that aims to innovate schools and education. Cochran-Smith and Lytle (2009) remind us that "when practitioners work from an inquiry stance, they often challenge practices that are fundamental to schooling" and work to "investigate, critique, and seek to alter cultures" (p. 141). Our framework, as informed by this orientation, is designed to position the practitioner as an innovator who is driven to transform practice.

Teacher learning communities. Shulman & Shulman (2004), in framing their conception of teacher learning as "fostering communities of teachers as learners" (FCTL), promote a vision for practitioner development that is predicated on a teacher's classroom as being "theory-rich, open-ended, context dependent" (p. 2). This particular approach to envisioning teacher learning, we argue, supports the development of innovative practitioners. The conceptual principles of FCTL include: ready ("possessing vision" and ready to pursue a vision of classrooms or schools that utilizes innovative practices); willing ("having motivation" and being willing to expend the energy to sustain profession learning towards honing that vision); able ("both knowing and being able to do" and understanding the complex forms of pedagogical and organizational practice needed to transform vision into a functioning, pragmatic reality); reflective ("learning from experience" and capable of delving into their practice through questioning and actively reflecting on actions and consequences); and, communal ("acting as a member of a professional community" and participating in meaning

making and learning exchange to further learning). These five principles integrate and connect the ‘nuts and bolts’ of everyday practice into a more sophisticated vision of the educational experiences of teachers. Collectively, the principles describe a kind of teacher learning community that promotes inquiry, reflection and contextualized learning. As an orientation, the FCTL expects teachers to draw on the power of the collective experiences of their colleagues, their own individual experiences, and their understanding about content and curriculum to promote innovative transformations in teaching, learning and schooling.

Professional development as practiced by FCTL is another orientation in the proposed model. Several conditions in the design of the SI are needed to foster such teacher learning communities. First, teachers in the SI are engaged in communal deliberation, collaboration and construction of knowledge about practice. Second, the FCTL orientation is predicated on teachers being willing to change, and motivated to learn new ways of teaching. Lastly, the model with this orientation is informed by inquiry, where questions about one’s practice are explored and deliberated upon within teacher learning communities as a mechanism for fostering innovation.

Three ways forward. The concepts behind “three ways forward” come from a conversation that teacher education researchers, Halbert and Kaser, had with two teachers who likened their inquiry orientation to a game of snakes and ladders “in which some of the ladders were more like spirals than direct routes” (Halbert and Kaser, 2013, p. 9). This became the inspiration for *Spirals of Inquiry for equity and quality* – to provide educators with tools for approaching inquiry work, along with research evidence and examples of practice from BC schools to support their ideas. Halbert and Kaser (2013) approach inquiry as a “judicious weaving of three ways forward” – what they characterize as “wise, strong and new ways” that: (a) draw from traditions informed by the wisdom of local Indigenous practices – wise; (b) apply current knowledge about learning and teaching from international research and practice – strong; and, (c) foster innovation through the championing of novel practice and knowledge development – new (p. 13). This approach nicely aligns with the aspects of inquiry described in the previous three component parts of the kaleidoscope model.

Wise Ways require educators to appreciate and accept that Indigenous ways of knowing and pedagogy are beneficial to all learners. Educators are asked to regard “oral traditions, identity, the power of storytelling, the life-shaping importance of deep listening and the critical imperatives of developing an intimate understanding of, and respect for, the natural world” (p. 14) as significant. Wise ways asks what different choices would be made if educators considered the possible impact that decisions could have seven generations later.

It champions the *First Peoples’ Principles of Learning*¹ as powerful pedagogy – a pedagogy that values intergenerational learning; that recognizes that learning takes both time and patience; that is holistic

¹ The First Peoples’ Principles of Learning: learning ultimately supports the well-being of the self, the family, the community, the land, the spirits and the ancestors; learning is holistic, reflexive, experiential and relational – focusing on connectedness, or reciprocal relationships, and a sense of place; learning involves recognizing the consequences of one’s actions; learning involves generational

and embraces the interconnectivity of all things; and, that supports the well-being of the individual, the family, the community, the land, the spirits and the ancestors.

Strong Ways begins with the recognition that there is a plethora of research-based evidence at teachers' fingertips to help inform practice. Halbert and Kaser argue that teachers, learners, leaders and community members need to embrace a "growth mindset" (Dweck, 2006) in order to create learning systems that meet the needs of today's learners. They believe that it is not enough to merely become familiar with some of this research, but assert that educators must also implement it into their teaching practice in order for system-wide, systemic changes to occur. The instructional strategies and practices they highlight are ones where the research is robust and where the effect on student learning is most pronounced.

Finally, New Ways requires K-12 teachers and other educators to dream and envision: it embraces experimentation, it celebrates risk-taking and it champions innovation. Instead of lamenting and railing against any and all change – including curricular reform – new ways encourages educators to see change as an opportunity for turning dreams into reality. Halbert and Kaser ask educators to envision what learning in BC schools *could* be and then, by utilizing the knowledge gained from Indigenous ways of knowing/learning, along with strong research-based evidence, seek to turn that vision into a reality in creative and innovative ways. They encourage teachers to take risks and shift their practice in order to create new learning experiences for their students that allow them the same opportunity for growth and transformation that they, as teachers, have undertaken.

We connect the work of three ways forward in our proposed framework with innovative teaching: sense-making that comes from applying the traditional knowledge acquired through the intentional integration of Indigenous ways of knowing into one's practice; the ownership that arises from the satisfaction of knowing that one's practice is grounded in robust research; and the sense of agency that is evoked through the intentional focus on the transformation of one's practice. Thus, three ways forward encourages boundary crossing through its weaving together of the wise, the strong and the new in order to foster innovations in teaching, learning and schooling.

A Kaleidoscope of Orientations: Completing the Pattern

We have argued for the inclusion of particular orientations in a framework for PDPT. These orientations served to inform programmatic and instructional decisions about the design of the SI at our institution. For example, we integrated First Peoples Principles of Learning throughout all courses and focused on generating a questions-driven curriculum. We also called upon instructors to include experiential tasks in their course design and use reflection as both a process and a product. The SI courses also provided students opportunities to pursue self-directed inquiries into practices that connected with particular course topics, such as literacy development in early learners. Finally, courses were designed to develop and foster learning communities through collaborative activities, group projects, and co-constructed assignments. While the four orientations, as a theoretical framework, informed the design of the SI and impacted individual course structures, they also 'shifted' as

roles and responsibilities; learning recognizes the role of Indigenous knowledge; learning is embedded in memory, history and story; learning involves patience and time; learning requires exploration of one's identity; learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations (British Columbia Ministry of Education First Peoples' Principles of Learning, 2008.)

component parts of the kaleidoscope to respond to the specific needs of the teachers involved in our professional development offering; that is, teachers shifted the kaleidoscope of these orientations into a pattern that resonated with their particular contexts and needs as educators. While all four orientations were at play in the design of the SI, individual teachers created individualized patterns of these orientations in order to target their learning in more specific ways.

Discussion and Implications

In conclusion, it was important to establish the need for innovative teachers in response to the NC reform put forth by the BC Ministry of Education. We defined innovative teachers as boundary crossers and the NC as a new site that required teachers to cross and go beyond current contexts of pedagogical practices and curricular implementation. Further, we suggested that the lenses of sense-making, agency, and ownership were necessary for innovative teaching to occur. We examined models of professional development and presented the need for our PDPT to not only be integrative (transformative) but to also draw upon multiple aims of professional learning as described in the literature. Our chosen metaphor, the kaleidoscope of orientations, enabled us to understand how teachers shaped their professional development and learning to their own classrooms and reform contexts. We argued for each to be represented by the bits of coloured glass in a kaleidoscope and to be ‘in play’ for effective professional development for teachers who must respond confidently to the calls for innovation in the NC. The model of the kaleidoscope of orientations further allowed us to argue that each teacher taking our program could create their own individualized ‘pattern’ of orientations, by having choice in programming (agency), paying intentional attention to personal strengths and needs (ownership), and contextualizing their learning to the environment in which teach (sense-making). Thus, the shifting patterns of professional learning that are informed by these four orientations were seen as a powerful foundation for supporting innovation.

As we look ahead to other potential professional development models, our framework is but one of many that might have been suggested. The strength of our proposed framework is that the four orientations support a comprehensive and wide-ranging vision for professional development that can be extrapolated beyond our immediate situation. Practicing teachers registered in a SI envisioned in this way, we argue, are more likely to be able to respond to the calls for innovation because of the *unique combination* of the orientations that drive the SI’s design. We support further study utilizing the “kaleidoscope of orientations” model to assess incoming and outgoing perceptions of professional learning by practicing teachers enrolled in a summer institute. We contend that more research looking at how these orientations impact individual teacher’s practice as they respond to curriculum changes locally and globally would be warranted.

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