

Making Reflective Practice Visible:
Supporting Shifts in Practice Towards Personalized Learning

by

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Abstract

The world continues to change at an ever-increasing rate, impacting many aspects of education. Today's learners are evolving in response to changes in their home, social, and learning environments and advancements in technology. The relevance of meaningful ongoing professional development that is current, connected, and purposeful is more necessary now, perhaps, than ever before. Engagement in a visible, collaborative reflective practice may enable educators to better respond to individual student strengths, needs, and interests to fully embrace a personalized approach to learning and teaching. Through iterative professional learning that reflects on and questions educational content, methods, subjects, tools, activities, strategies, and/or experiences, and links to current research, educators can strive to expand their own practice and positively engage students. This project explores the impact of teacher participation in a collaborative reflective practice publicly shared through social media, to move towards a personalized approach to education, ultimately leading to professional growth.

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Dedication

This work is dedicated to my mother, who may never remember or know of this accomplishment, but who will still cheer me on in the moment when she is present. My mom's values have always been based in hard work and stick-with-it-ness and she would never accept anything less. Thank you, Mom, for always walking to the beat of your own drum and whistling your own tune; you will forever be my teacher.

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Chapter One: Introduction

I am always ready to learn, although I do not always like being taught

- Winston Churchill (Hansard [HNWC],1952, cc7-134)

Professional development for teachers plays a crucial role in student learning. In recent years, more attention has been given to how we might best utilize opportunities for professional learning to support shifts in practice that better meet learner needs in the 21st century. Industrial societies have traditionally focused their education models on the delivery of facts and procedures via teacher-centric direct instruction. As a result of new technologies (in this project the term technology will be used to refer to information and computing technology), however, knowledge and information are becoming much more accessible through means that are both immediate and far-reaching (British Columbia Ministry of Education, 2014). It is important to support teachers to be more effective in helping learners to develop the skills and habits they need for learning in the current landscape.

The British Columbia (BC) Ministry of Education (2013) released its draft of the new curriculum for grades K-9. There appears to be variability with respect to the implementation timeline and how it rolls out appears to differ by district. For reference see conversation thread via Twitter at <https://twitter.com/spedlearner/status/629370812131356673>. Funding has not yet been made available for this implementation, which may influence adoption, as lower resourced districts could potentially wait longer. With inadequate resources to support them, teachers will struggle to embrace the new framework for education. Within a context of limitations, what can we do to move towards a plan that yields best practice and learning for both teachers and students?

In this chapter, I provide an overview of the provincial education context, an introduction to my professional context, and a summary of how recent changes have impacted my teaching practice. I then describe how the need for shifting practice requires different professional development approaches. Namely, I focus on reflective practice that is visible within personal learning networks.

Provincial Education Context

“...many teachers have already recognised that their role is shifting” (Premier’s Technology Council, 2010, p. 4).

The new BC curriculum recommends a move from a generally teacher-centered model of instruction to a more collaborative, student-centered approach. The focus of this new curriculum is on core competencies and skills that better reflect the evolving nature and ever-expanding knowledge base of society. In this model, the teacher’s role is often described as the “guide-on-the-side” (e.g., Abbott, 2014). To keep pace with their students, teachers may benefit from continuous, regular professional learning opportunities.

While there will always be challenges and problems, those that we face in the future are largely unknown to us. Just as video game programming and cell phone sales were unimagined jobs in the 1950s, many of the jobs today’s students will be vying for have not yet been created (Schleicher, 2010). To ensure our children are ready to adapt, our education system must continually evaluate the current needs and adjust accordingly. More specifically, the uncertainty in predicting future needs requires a paradigm shift to a personalized learning approach, and a move away from more traditional educational practice which has been heavily focusing on a delivery of knowledge and standardized assessment of recall and procedural fluency (Gao, 2014). Further to this, Zhao (2011) says, “We need to view students as global entrepreneurs in

the sense that they need to become owners of their own learning” (p. 267). Personalized learning encourages a partnership between teacher and student through the inclusion of student voice, strengths, and interests in all aspects of the learning process.

In order to prepare students to succeed in an unknown future, BC’s new curriculum moves toward a focus on skills – critical thinking, problem solving, collaboration, technological literacy, communication, media literacy, motivation, self-regulation, adaptability, creativity, ethical awareness etc., and away from segregated content built on factual knowledge, rigid procedures and superficial understanding (Premier’s Technology Council, 2010). The role of the teacher, as a result, is becoming one focused on supporting participation, inquiry, problem solving, reflection, and dialogue over giving direction and instruction. In the video, *Born to Learn* (2011), narrator Damian Lewis explains that from birth, humans are hardwired to be curious and learn and, indeed, this is apparent in watching any young child interact with the world around him or her. The BC Education Plan stresses the importance of supporting individual motivations and interests, identifying personalized learning, flexibility and choice as our means achieving this. Further, it identifies quality teaching and learning as key elements to support transformation (BC Ministry of Education, 2014).

Personal Foundation

Technological advancements are occurring at an unprecedented rate and society’s needs are changing as a result. Reflective of this, the BC Ministry of Education (2014, p.10) identifies “learning empowered by technology” as one of its key components. When I started teaching more than 20 years ago, technology was limited to tape recorders, VHS tapes, Sony Walkmans, and 20 minutes twice a week in a computer lab that housed large computers with small screens and several computer games students could play. There was no Internet or World Wide Web,

there were no smartphones, and definitely little or no integration of technological tools into the classroom. Many of us who began our careers as educators during this era may be doing students a disservice unless we are able to work with technology as a tool to enhance our teaching and learning practices.

Bonk (2009) discusses accessing and using knowledge in the 21st century as crucial indicators of intelligence. He further highlights three converging trends that have impacted opportunities for human learning and potential in an educational context--availability of tools and infrastructure, availability of free and open resources, and movement towards a culture of open access and global sharing. Technology is positively influencing the culture of learning outside of our schools, by connecting us to informal global learning networks that were previously unavailable. Unfortunately, our current education system is slow to tap into newly accessible resources, such as options for open education and personal learning networks (via social media). Gradual change is evidenced, however, in the way of district-based learning hashtags and teacher and class blogs are becoming more commonplace.

Technology provides but one example of how change is impacting learners, teachers and our education system. In his work on reflective practice, Donald Schön speaks of the importance of professional learning and points to the ease with which we fall into a state of habituation, leading us to “knowing more than we can say” (1987, p. 22), or going through the motions of teaching without any thought as to how we are doing it. As an example of this, sometime ago, prior to a significant birthday, I recognized there was an absence of active, conscious learning in my life. My actions had, as van Manen describes, “sedimented into habituations, routines, kinesthetic memories...[responding] to the rituals of the situation in which we find ourselves” (2007, p. 22). I set three concrete goals for myself within that year: learn to snowboard, learn to

surf, and learn how to create tile mosaics. My attainment of my goals set my desire to learn into motion once again, and other intentional learning pursuits were inspired; I subsequently returned to school to obtain my Special Education Diploma and English as a Second Language certification. Transferring my newly acquired skills and knowledge into practice, I grew aware of the challenge of moving through personally uncharted waters. I recognized that my peers faced similar challenges in adjusting their practices and observed responses ranging from reluctant to willing.

Many factors contribute to both the reluctance and willingness of educators to dive into a new curriculum or intentionally shift their practice. I consider myself a lifelong learner and believe that most of my colleagues would be quick to claim the same. However, I do not see evidence of pedagogical change in our schools to the degree that one might expect. It is becoming apparent that gains may be made when we “consider the development of personalised expertise and the skills needed to build distributed expertise” (Järvelä, 2006, p. 33). Commitment to continuous professional learning opportunities that are reflective of changes “in curriculum, assessment, standards, and the overall learning environment” are imperative to the transformation of education (Trilling & Fadel, 2009b, p. 139).

In the alternative education environment in which I work, my students are exceptional in various ways, typically struggling academically, socially, and/or emotionally, I regularly seek to create opportunities where they might experience success at school; personalizing curriculum is necessary for most, if not all, of the students. Trilling and Fadel (2009b) discuss the importance of teachers stepping into a learning role, learning from inquiry, design, and collaborative approaches to develop their skills as educators in the same context. Perhaps through my own engagement in transitioning to an open teaching/visible/reflective practice model, I will be able

to more effectively support my students to engage in a collaborative inquiry based learning process, ultimately leading me to new perspectives and professional learning.

Pedagogy

Personalized learning is defined as “the tailoring of curriculum, methods and approaches, and learning environments to meet the interests, learning needs and aspirations of learners [and] provides them with the flexibility and choice to pursue their individual interests and passions” (BC Ministry of Education, 2013, Glossary, p. 6). This approach to education takes into consideration the skills and knowledge a student arrives with and focuses on their needs, strengths, and goals as an individual. While, for some, the term ‘personalized learning’ may evoke images of young students learning individually and independent of others, this is not a defining characteristic of this approach. Personalized learning is more about valuing each learner as an individual, thereby “[equalising] learning opportunities in terms of learning skills and motivation to learn” (Järvelä, 2006, p. 43).

Traditional environments, where the teacher is seen only as an expert, are no longer sustainable. At a time when Google and Siri can provide answers instantaneously, the need for memorization and a highly content-focused curriculum is even less relevant. The priority now is to help learners master strategies that will allow them to sift through the abundance of available information, to scrutinize the most relevant details, make judgements and propose solutions, then evaluate their process and solutions to see if they can transfer, revisit, challenge what they have discovered. This does not mean, of course, that we stand back and let a class of 28 students randomly go on 28 different scavenger hunts in pursuit of an education. Teachers’ skills and expertise continue to be valuable commodities in teaching; providing direction and re-direction, prompting, challenging, encouraging, and questioning students maintain relevance in today’s

classrooms. While teaching is changing, educators still have an integral role to play as facilitators of learning.

As partners in change, students are afforded their rights to shape their own educational experiences and redefine schools as environments in which they draw on resources to satisfy their own needs, to support their growth, and to help realize their potential rather than places where they acquire knowledge and skills imposed upon them by adults (Zhao, 2011, pp. 267-268). Throughout the course of each year, students arrive to our classrooms as quasi-experts in their own areas of experience, perhaps engineering for one and skateboarding for another, as a result of passion driven self-teaching and innate curiosity. Unfortunately, supporting both the deeper inquiry into specific areas of passion as well as utilizing one learner's expertise as a resource for another, is challenged by the limitations of traditional educational models and rigid curriculum. Traditional curriculum has focused too exclusively on the achievement of explicitly outlined goals. Perhaps this point highlights the greatest potential of this new curriculum; other types of learning situations can be established to nurture student appreciation of the value of what it is that is being learned (Järvelä, 2006). Our current educational model overlooks the characteristics of our population of learners whose experiences and needs can be seen as extremely diverse, contemporary and possibly unpredictable.

The principles of personalized learning lie in a vision of learning as a life-long undertaking where learning occurs on a continuous timeline rather than in compartmentalized units at pre-determined points in time. This approach is supported by the understanding that intellectual growth occurs alongside but independently of physical, social and emotional development (BC Ministry of Education, 2015, p.6). Just as we cannot compartmentalize units of

curriculum and learning, we cannot fully predict or assume learners' individual interests, strengths, or needs in the context of curriculum.

Shifting Practice to Personalized Learning

Any change or attempt to acquire a new skill or concept will generate some challenge; that is the joy in learning after all – and adopting a whole new approach to teaching is daunting, to say the least. Järvelä (2006) discusses, at length, the new roles for teachers and the transitional problems that are likely to occur as teachers try to implement personalized learning. Järvelä emphasizes the need to reconsider our skill set and the need to develop “new pedagogical reflective thinking in mentoring learning, mediating values and social skills, as well as systematically evaluating students’ and teacher’s own activities” (2006, p. 42). As professionals, we need to engage in and reflect upon our own meaningful learning activities to be able to move forward with personalized learning as a pedagogical approach.

Engagement in a reflective practice and visible learning, and participating in professional (or personal) learning networks (PLNs) are integral components of professional learning. Fullan (2007) stresses that teachers ought to be learning every day and notes two prerequisites to improving: self-assessment, or measurement, and maintaining an open perspective about what we are doing. Committing to a reflective practice that is characterised by visibility, openness, and inviting of collaboration, supports a move towards a personalized learning approach for teachers.

Reflective practice and visibility. Prytula (2012) shares the importance of teacher metacognition, or “awareness or analysis of one's own learning or thinking processes” (“Metacognition”, 2015), stressing that “if teachers are able to teach students to be metacognitive or to think metacognitively, then teachers must think metacognitively themselves, as well as be

aware of when metacognition is taking place” (2012, p.112). Knowing our learners requires intentional mindfulness and engagement in a reflective practice. Modelling our own metacognitive awareness and sharing our struggles can complement the learning activities we undertake with our students.

Through being visible, both with our peers and our learners, we model a growth mindset, as described by Carol Dweck (2006), inviting feedback, and seeking out further learning opportunities. It is integral to our profession that we value learning and we can best exemplify this by making our own learning visible. John Hattie (2009) highlights the positive impact on student learning that occurs as a result of a professional practice that places the teacher into the role of learner in the context of their own teaching and the student as his own teacher. Through engaging in an attentive and reflective practice we are better equipped to recognize and respond to the need for change or shifting perspective in our own practice.

Personal learning network. A key component of an effective reflective practice is establishing regular interactions within a personal learning network (PLN). Collaboration, with both colleagues and learners, enables educators to engage in a reflective practice to effectively consider student engagement, student achievement, and their own practice, including strategies used, factors influencing, and decisions made in the context of student needs and successes (Halbert, Kaser & Koehn, 2011). When we honestly consider and share our successes and failures in a community of peers, greater professional growth may be achieved (Kelly, 2013). In documenting our actions, decisions, and interactions, we create opportunity to nurture the development of our critical thinking skills; publicly sharing reflections in a connected network invites collaboration which may support us to adjust knowledge, rethink our assumptions, and lead us to new decisions for action. This is consistent with a constructivist approach where

human development and learning are believed to occur through interactions between the individual and their environment, including people and material within it (Vygotsky, 1978).

Why it is important. According to the *Ministry of Education's Student Statistics – 2015/16 Report*, student enrollment in our public education system has seen a gradual but steady decline over the last five years, while the private school system has enjoyed a similar trend in the opposite direction. The Federation of Independent School Associations of British Columbia reveals a consistent year to year student enrolment increase in the independent proportion of BC's total student enrolment from 4.3% in 1977-78 to 13.0% in 2014-15 (2016). As educators in the public system, we need to consider how we might respond to student needs differently to foster improved student engagement and subsequent retention. As a long-standing teacher in BC's education system, I have personally observed shifts in student needs and strengths and find myself responding to these changes with questions such as, "What can I do differently to facilitate student engagement? How can I support student learning while addressing the needs of the whole child?" Indeed, as Gregory Bateson might say, "How can I be a difference that makes a difference?" (Bowers, Jucker, Oba, & Rengifo, 2011, p. 31).

Educators are integral to the adoption of personalized learning as an educational approach. If we hope to align with new learning theories and current research, our focus needs to turn to accessing to our own comprehensive professional learning opportunities. (Järvelä, 2006). I am often overwhelmed by the scope of my job, even without attempts to take on new pedagogical perspectives; however, I can also see that it is the process of change that is daunting, rather than the change itself. I am optimistic that personal professional learning pursued in the company of peers with a common interest will provide the support needed to shift my practice.

Research Problem

The topic of my Master's project is the adoption of personalized learning in the K-12 classroom. The current BC Ministry of Education curriculum documents support the move toward personalized learning, but change in practice to adopt it is not happening in K-12 as expected. We have been advised that we will have the 2015-2016 school year to actively explore the new curriculum for students in the context of our K-9 classrooms, with a target date for full implementation set for the fall of 2016. While the establishment of a new curriculum makes it apparent that we are on the brink of planned educational change, teacher engagement in related professional learning appears to be lagging.

Purpose and Project Description

The purpose of this Master of Education project is to identify factors that support teacher adoption of personalized learning in one's classroom. I plan to document my process as I engage in a reflective practice and move towards the adoption of a personalized learning approach in a multi-age classroom environment. My question within the context of this project is: Does visible teacher reflective practice within a community of learning influence the adoption of personalized learning? Through my own reflective practice within a community of learning, I will observe the impact of this practice, through peer support via social media and sharing of resources, on my adoption of a personalized learning approach.

My project plan centers on a visible reflective practice via vlogging (video blogging), once weekly, for 3-5 minutes per vlog. I will use a "what?-so what?-now what?" framework to guide my reflections, as I take strides towards adopting a personalized learning approach. As a supplement to my vlogging, I will keep a journal at the side of my desk to help guide topics and post content. I will publish each vlog post through my blog, as well as share it out publicly

through social Twitter, using the #sparKtalK5 hashtag. My timeline for vlogging for the purpose of this project will be September 1st to October 31st. In culmination, I will reflect on my reflections to analyze content, make observations, and draw conclusions regarding my learning process, specifically the impact it has had on my practice.

Chapter Two: Literature Review and Theoretical Framework

Little or nothing will change for young people unless educators actually do things differently. It isn't enough to sit in meetings, go to workshops, attend conferences and develop new insights – and then continue to do what we've always done. (Halbert & Kaser, 2013, p. 56)

Introduction

This literature review focuses on the role professional learning plays in shifting practice to a student-centered, personalized approach. The theoretical framework chosen for this inquiry is Constructivism, which focuses on the role of student as creator. I provide a background on this theory and how it connects to professional learning via reflective practice and personal learning networks. The push for teachers to shift practice to personalized learning requires new ways of learning for teachers as well as new proficiencies to integrate technology as a means to connect with others. With this in mind, research literature reviewed considers how personal learning networks and reflective practice can be accessed to support professional learning towards a personalized practice. I have divided the literature review into three sections, specifically: Theoretical Framework; Professional Learning Through Collaboration, which includes Personal Learning Networks, Connected Learning, and Visible Learning; and Reflective Practice.

Search methods. In searching the literature available, I largely relied on the University of Victoria's online summons database, using Boolean search methods to search terms such as, but not limited to, inquiry learning, personalized learning, collaborative inquiry, connected learning, visible learning, professional development, professional learning, professional growth, educational reform, shifting practice, transformative practice, reflective (reflexive) practice, reflective practitioner. Search dates in this database were limited to the years 2009-2015. I expanded my search to include works referenced in articles already found, selecting sources that

were particularly relevant. And, finally, through conversations with colleagues, material presented in other coursework, and interactions on Twitter I was able to add to my pool of resources and draw from particularly relevant scholarly articles and texts.

Theoretical Framework

Constructivism as a theory developed, to put it simply, out of the observation and scientific study of how people learn (Brandon, 2010). Constructivist theorists focus on the social nature of the mind and view learning as highly personal, where an individual's interpretation of an experience or his environment is his own. Through the constructivist lens, learning occurs in authentic, or real life, situations. Within this learning framework, learners construct meaning as a result of active participation in a learning activity, through their interactions with others, their environment, and/or materials. For this reason, constructivism as a theoretical framework, fits well with the focus of this literature review: professional learning through engagement in a reflective practice within a personal learning network, with the intention to see a shift, or shifts, in practice.

Key scholars in the constructivist movement include Jean Piaget and Lev Vygotsky. The roots of constructivism are often seen to have come from Piaget, who sees the construction of knowledge as occurring through the process of reconciling new knowledge into already existing knowledge, something he terms 'assimilation and accommodation' (Piaget, 1972). Piaget views individual understandings of the environment and experience as being under constant revision leading to further reconstruction over time. The background knowledge and experience brought to any new experience or interaction, plays a role in the construction of new knowledge or understanding. Piaget views the learner as an active participant in his own learning process and the teacher as facilitator, aiding and guiding when needed (Piaget, 1954; Liu & Chen, 2010).

Vygotsky's Social Constructivist Theory shifts focus away from the individual learner to the context of social interactions as part of learning. Vygotsky's zone of proximal development theory details learning as being best understood through the continual interactions between one individual and another or others (Vygotsky, 1978). Vygotsky (1978) defines the zone of proximal development as an individual's intellectual potential, or more specifically, "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (p. 86). From the social constructivist perspective, this interactive process is believed to support the learner's intellectual growth and development of self-regulatory skills (1978).

Constructivism "is foundational to understanding much of adult learning theory and practice" (Merriam & Bierema, 2013, p. 37) and, as such, fits with this project in the context of professional learning. Further, the BC Ministry of Education's draft curriculum documents emphasizes personalized learning as an educational approach, characterised by a student-centered approach where each student's prior learning and experiences must be taken into consideration in the context of curriculum and learning activities. Consistent with constructivism, the learner in a personalized learning environment draws from his current skills and knowledge to make new meaning using the current information and experiences available and is encouraged to constantly assess their understanding. Constructivism has been defined as a cycle of learning reliant upon a process of meaning-making that is continuous and ongoing (Marlowe & Page, 2005; Brandon, 2010). Additionally, the recursive nature of constructivism, continuous and reflective, is consistent with current models of effective professional learning and reflective practice.

Professional Learning in Education

There are many factors that contribute to successful professional development and learning, such as time provisions (Seo, 2014; Halbert, Kaser & Koehn, 2011; Butler & Schnellert, 2012), professional autonomy (Park & So, 2014; Halbert & Kaser, 2013), interpersonal dynamics impacting relationships such as peer reliance, perceived equity (Freire, 1970/2004; Latta & Buck, 2007), trust and vulnerability (Kelly, 2013), an open, or growth, mindset (Dweck, 2006) and knowledge and comprehension of current research (Cochran-Smith & Lytle, 1999a; Halbert & Kaser, 2011; Mann et al., 2007; York-Barr, 2006). For the purpose of this review, I am delimiting my focus to reflective practice as professional learning, enabled and supported via personal learning networks. This type of learning depends on visible practices and connected learning approaches for professional change, a network of peers, a supportive environment, and other characteristics identified as contributing to an effective reflective practice (which will be shared/reviewed in this chapter).

Traditionally, professional development is thought to be any continued, field-related learning that occurs after the completion of teacher training. Cochran Smith and Lytle (1999a) comment on the idea of professional development:

Different conceptions of teacher learning ... lead to very different ideas about how to improve teacher education and professional development, how to bring about school and curricular change, and how to assess and license teachers over the course of the professional life span. (p. 249)

Historically and presently, much professional development has been and continues to be offered in the context of workshops or presentations delivered on teacher in-service days (Cochran-Smith & Lytle, 1999a). These opportunities for professional development frequently see the

teacher professional as the recipient of information with an outside expert providing the content (Clarke & Hollingsworth, 2002; Fichtman Dana & Yendol-Hoppey, 2008). Little (2006) reports that research has shown teachers generally teach more ambitiously and effectively when they have experienced regular, rich learning opportunities. However, professional development for educators is typically “episodic, superficial, and disconnected from their own teaching interests or recurring problems of practice” (Little, p. 1).

Traditional professional development opportunities emphasize a type of training Cochran-Smith and Lytle (1999a) refer to as knowledge *for* practice, based on the idea that knowing equates to a more effective practice. Applying knowledge acquired from outside experts to one’s practice requires the teacher to “implement, translate, or otherwise put [it] into practice” (Cochran-Smith & Lytle, 1999a, p. 255). Knowledge *for* practice is “often reflected in traditional professional development efforts when a trainer shares with teachers information produced by educational researchers” (Fichtman Dana & Yendol-Hoppey, 2008, p. 2). While research holds significant potential for guiding teachers’ professional practice and growth, this potential is limited when shared as a stand-alone unit of information. Further to this, most teachers need support as they attempt to apply new knowledge to active learning opportunities within the classroom context (Fichtman Dana & Yendol-Hoppey, 2008). Professional development in the context of knowledge *for* practice is not able to take into consideration the complexities innate to teaching and the classroom. Teacher attempts to try new things in the classroom often results in unanticipated challenges and obstacles (Fichtman Dana & Yendol-Hoppey, 2008).

In order to tackle such dilemmas and challenges, teachers may benefit from the cultivation of knowledge *in* practice (Fichtman Dana & Yendol-Hoppey, 2008). Cochran-Smith

and Lytle (1999a) describe this as having an emphasis on knowledge in action, accommodating those unanticipated complexities of the classroom in real time. This type of learning occurs through experience and engagement in “considered and deliberative reflection about or inquiry into experience” (Cochran-Smith & Lytle, p. 262).

Knowledge *of* practice sees “outstanding teachers draw on the expertise of practice or, more precisely, on their previous experience and actions as well as their reflections on those experiences” (Cochran-Smith & Lytle, 1999a, p. 266). This idea of knowledge and learning is embedded in a practical context of professional learning, “produced in the activity of teaching itself,” and does not distinguish between expert and less competent or experienced teachers (Cochran-Smith & Lytle, 1999a, p. 273). This type of professional learning sees the teacher as an agent of change and knowledge as being “constructed collectively within local and broader communities” (Cochran-Smith & Lytle, 1999a, p. 274).

Having awareness of research can inspire teachers to explore how and/or why something works, test the evidence in the field, and/or follow their own lines of inquiry; this type of connection to research offer opportunity for teachers to embrace and commit wholeheartedly to shifting practice (Cochran-Smith & Lytle, 1999b). For educators to commit to change, Halbert and Kaser (2011) explain, they need first to understand why change is needed, or “‘why’ the new practice is more powerful than what they did before” (p. 54). They further add, “Theory matters because teaching effectively isn’t just about using a set of discrete strategies; teaching involves an integrated and holistic approach to promoting learning. Knowing ‘how’ also matters in changing practices and in developing greater adaptive expertise” (p. 54). Cochran-Smith and Lytle (1999a) go so far as to make some recommendations around linking research to practice so that it is meaningful and effective:

...teachers need opportunities to enhance, make explicit, and articulate the tacit knowledge embedded in experience and in the wise action of very competent professionals. Facilitated teacher groups, dyads composed of more and less experienced teachers, teacher communities, and other kinds of collaborative arrangements that support teachers' working together to participate in reflection *on* and *of* practice are the major contexts for teacher learning in this relationship. (, pp. 263-264)

Hanraets, Hulsebosch and de Laat (2011) discuss the advantages of *informal learning* as a means to professional learning, "where workers with their peers interact about their work experiences through sharing their practice, knowledge and contacts" (p. 86) and expand further on its importance in supporting professional learning in the workplace. Informal learning is described as including "all learning that occurs outside the curriculum of formal and non-formal educational institutions and programs...[In] the processes of informal learning there are not educational institutions, institutionally authorized instructors or prescribed curricula" (Schugurensky, 2000, pp. 1-2, adapted from Livingstone, 1999). Informal learning is often defined as learning through experience and may include self-directed learning, networking, guidance, coaching, modelling and/or trial and error (Campana, 2014; Marsick & Watkins, 1990); it is less likely to be involved in "a specific facilitated program of learning or development" (Campana, 2014, p. 214). Bell (as cited by Campana, 2014) defines informal learning as "planned learning which occurs in a setting or situation without a formal workshop, lesson plan, instructor, or examiner" (p. 214).

When the focus is shifted from instruction to learning, it "represents a new way of thinking for many educators and requires a change in their mental models" (Kaser & Halbert, 2010, p. 59). Learning that occurs as an embedded aspect of daily professional experiences and

practice is the essence of participation and “this process of participation is best served through the ability of people to create and continually extend their social network” (Hanraets et al., 2011, p. 86). Haythornwaite (2008) describes learning in the context of using one’s network as a professional resource, as a *social network relation*, reflective of the shifts that are occurring as a result of our increased connectivity which offers access to resources and a means to professional learning.

Collaboration in professional learning. Traditionally, schools are built on an organizational structure of divisions, often relying on that term to distinguish one class grouping from another. The separation does not end there; doors may often be found closed, with teachers developing and using their own resources, enjoying the professional autonomy that can come with being a teacher. Sometimes, however, this can lead to a degree of professional isolation that does not lend itself to professional learning (Lortie, 1975; Hargreaves, 2010; Seo, 2014). Using teachers’ knowledge and questions as a starting point for professional learning dignifies the ‘wisdom of practice’ and encourages a professional culture that values inquiry and serves to break the isolation that can sometimes prevent teachers from becoming colleagues (Lieberman & Pointer Mace, 2009). Further to this, Lieberman and Pointer Mace note that teacher dialogue, as a starting point to professional development, can build the basis for a professional learning community. Colleagues grow to be a source of support, develop into knowledge partners, and become peers on a “quest to know more, to do more, and to internalize the idea that teaching is a ‘learning profession’” (p. 469).

The literature recognizes the need for collaboration if educational reform is to take hold, pointing to the value of professional collaboration with colleagues in the workplace as a way to positively impact teachers’ learning and growth (Cochran-Smith & Lytle, 2004; Tam, 2014).

Professional learning based on a collaborative model engages educators in shared inquiry about teaching and may lead to shifts in practice (Borko et al., 1997; Boudah, Logan, & Greenwood, 2001; Butler et al., 2004). Lieberman and Pointer Mace (2009) explain that effective teacher learning occurs in communities that are both long term and collaborative. Halbert, Kaser, and Koehn (2011) emphasize that working collaboratively within a framework ensures that professional learning opportunities will be sustained and both teacher and student inquiry as an approach to learning will thrive. A collaborative approach where peer and administrator support is apparent is seen as a pivotal factor impacting teacher change (McLaughlin & Talbert, 2006). Professional learning, in the context of peer-based reflection and collaboration ultimately enables ongoing, continuous learning that is relevant to day to day teacher practice (Halbert & Kaser, 2013).

Collaborative groups formed or organized for the purpose of professional learning will help to reduce occurrences of teachers working in isolation (Annenberg Institute for School Reform, 2004; Dickerson, 2011; Lieberman & Mace, 2009). Further, teacher engagement in collaborative work characterized by collegiality, openness, and trust in place of a professional tendency towards privacy, practicality, and independence is necessary if shifts in practice and, ultimately, school reform are to occur (Little, 1990; Park & So, 2014). A collaborative approach to professional learning that encourages teachers to engage in a reflective practice, may lead to greater professional learning when others in the group are experienced and able to offer reassurance (Pozuelos, Gonzalez, & Leon, 2010).

Certain factors have been identified as positively influencing the effectiveness of group learning opportunities. Knight (2011) offers seven partnership principles that identify characteristics important for the development of an effective collaborative learning environment:

1. Equality - power or control is perceived as balanced between participants, where members see each other as partners
2. Choice - the 'what' and 'how' of learning is guided by personal choice
3. Voice - group members are moved to contribute and respect the contributions of others
4. Reflection - seen as a key component of learning and embedded in professional practice
5. Dialogue - purposeful talking with the goal of digging deeper and exploring issues together
6. Praxis - learning theory is applied to day to day practice
7. Reciprocity - participation is expected, with all members offering and receiving feedback

Collaboration extends far beyond the concept of relationships. It is intensive interaction that engages educators in opening up their beliefs and practices to investigation and debate (Katz & Earl, 2010). Lave and Wenger (1991) emphasize the social aspect of learning, elaborating further to indicate that professional learning in the context of social interactions encourage a willingness to share ideas. Collaboration is integral to developing a school culture centered on inquiry and reflective practice and teachers are more inclined to develop their skills and experiment when they have access to sustained development opportunities and collaborative support (Halbert, Kaser & Koehn, 2011). Park and So (2014) comment on a lack of a discussion culture that appears to within the teaching profession. Peer based discussions focused on professional learning and reflection have “the potential to sustain momentum through inevitable challenges [and, further,] collaborative communities may generate energy and enthusiasm that fuels persistence with innovations” (Butler et al., 2004, p. 438).

When teachers are immersed in their own professional environment - be that the classroom, a teaching “team,” or one school - it can be a challenge for them to recognize their

own needs. Peer support in a collaborative context is one way to positively impact this shortcoming and may offer opportunity for significant professional learning (Timperley, 2011). Consistent with the limitations of working more independently, ongoing support from peers and opportunities for collaboration have been seen to improve implementation of learner-centered practices (Polly & Hannafin, 2011).

Defining collaborative learning groups. Various types of collaborative learning groups exist within different contexts of professional learning and working. A broad definition for a collaborative learning group could be: a group of individuals brought together and identified as a community and created or sought out for the purpose of learning (Seo, 2014; So, 2013). Professional engagement in such a community may both enhance a teacher's knowledge base and significantly impact his classroom practice (Seo, 2014; So, 2013). Participation in a learning community is seen, then, to lead to professional growth; collaborative discussion of one's professional practice with others and in an environment that is established to be open, encourage learning, and acknowledge both struggles and successes, yields professional learning (Lieberman & Pointer Mace, 2009). Through such established communities of learners, teachers both learn about their own practice and that of their peers and are often able to take new knowledge, skills, and ideas back to their own teaching and learning environments (Lieberman & Pointer Mace). In essence, a teacher's participation in a community of learners becomes "a part of their organizational and leadership learning" (Lieberman & Pointer Mace, p. 461).

There are numerous names for the various ways individuals organize themselves, or are organized, for the purpose of professional learning, influenced to some degree by the context in which they exist. Included in these are communities of practice (CoPs), professional learning

communities (PLCs), and personal learning networks (PLNs). Within this literature review, it is important to distinguish between these concepts.

Lave and Wenger (1991) view relationships between people as providing a context for shared practice and use the term “communities of practice” to describe a group of people where learning occurs between members. The CoP is defined as a group “of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger & Wenger-Trayner, 2015, p. 1). When learning occurs as a partnership, it is believed that the partnership may be enhanced and developed when the following characteristics are shared:

1. domain: a common domain of interest; being a member implies that you are committed to the domain--in this case, the discipline of teaching
2. community: community includes members, in this case teachers, who participate in activities and discussions, assist each other, and share knowledge and information, contributing to relationship building that, ultimately, leads to learning for the members
3. practice: practitioner members develop and share resources, which may include experiences, strategies, tools, materials, etc.
4. convening: attending to the roles of group members to ensure the partnership is sustainable in its productive inquiry. (Wenger, 2010, p. 194)

Seo (2014) sees the CoP as facilitating both the acquisition of knowledge, as well as the creation of knowledge, resulting in professional reciprocity of learning. Learning in a CoP generates the development of individual competence and, as such, holds potential for the transformation of the community itself (Seo, 2014).

In defining PLCs, Richard DuFour (2006) describes it as being focused on and committed to the learning of each student. When educators participate in a PLC in this context, the “educators within the organization embrace high levels of learning for all students as both the reason the organization exists and the fundamental responsibility of those who work within it” (DuFour, p. 3). It appears that the PLC is less about professional learning for its own sake, then, and more about professional learning as it specifically impacts student learning. DuFour characterizes PLCs as having the following traits:

- A focus on learning
- A collaborative culture where teams engage in a systematic process that sees participants working interdependently to achieve goals that link to learning for all
- Engagement in a collective inquiry into best practices in both teaching and learning
- Action orientation where the best learning occurs as a result of taking action, or learning by doing
- A commitment to continuous improvement, a cyclical process where evidence of student learning is collected, strategies are developed and implemented in response to strengths and weaknesses, and progress is continuously considered and analyzed to guide the development of new strategies and actions
- Results orientation where progress is regularly assessed based on results rather than intentions

A PLC that congregates via technology-based networks is typically termed a professional or personal learning network, or PLN, and can be defined as “a system of interpersonal connections and resources that support informal learning” (Trust, 2012, p. 133). Rajagopal et al. (2012) distinguish between professional and personal learning networks, however for the

purpose of this project, the acronym PLN will refer to *personal learning network*. Wenger claims that within a given CoP, individual members and their social relationships can also be seen as a network (2010). Wenger argues further that a network and a community are both organized processes that exist side by side, with complementary features, serving to expand the potential for learning within any given group. He distinguishes between the two by their structuring processes, stating, “Community emphasizes identity and network emphasizes connectivity” (p. 20). Further to this, a CoP exists as a network in that it is based on connections among members, but the CoP’s identification with a domain and a commitment to a learning partnership distinguishes it from a network, where such characteristics may or may not be present (2010, p. 20). Ultimately, Wenger (2010) sees advancements in technology, particularly the emergence of social media, as inspiring increased interest in CoPs and considers the PLN as being well-aligned with the peer-to peer learning processes that are typical of CoPs. “Networks seem more adapted to a world where learning needs and connections are becoming increasingly fluid; when the Internet sends its tentacles across the globe, the notion of community seems almost quaint” (2010, p. 10).

Personal learning networks (PLNs) as professional learning. Currently, students are often required to navigate and evaluate a growing network of information as part of their learning. Teachers model this for their students through engagement in continual learning via collaboration, professional development, and studying pedagogical techniques and best practices (Commission on Effective Teachers and Teaching, 2011). Online communities, websites, and blogs present opportunities for professional learning and many teachers are finding these to be valued environments for professional growth (Dunlap & Lowenthal, 2013). PLNs are seen as decreasing teacher isolation, encouraging independence in pursuit of learning, teacher-driven,

and geographically far-reaching (Flanigan, 2011). While PLNs can be utilized as a way to aggregate information and manage sources of news and literature for professional learning (Trust, 2012), for the purpose of this master's project and literature review, the focus will be on PLNs formed through social media connections with professional peers via blogs and Twitter. Visser, Calvert and Barret (2014) claim that Twitter, specifically, "provides opportunities for teachers to be active participants in specific communities of practice, thus affording more opportunities to connect and collaborate with teachers in similar situations" (p. 410).

Although social media can accommodate real-time interactions, my project focus will be on asynchronous learning, where questions, inquiries, resources, and comments are shared, and an immediate response is not expected (Trust, 2012). Teachers, motivated by the fact they can access support from others, share their own expertise, and engage in dialogue with peers about new information and feedback, "engage in PLNs to grow professionally, learn from others, and contribute to a community" (Trust, p.137). The online context of the PLN maintains an accessibility that allows for an 'anytime-anywhere' convenience (Campana, 2014) that may be appreciated by busy teachers who may be operating under great time restraints, but who still wish to pursue professional learning.

In exploring collaboration in the context of a network, Katz and Earl (2010) cite a model put forward by Church et al. (2002) where interactions among network members are characterised as "threads and knots." The threads represent the relationships and the knots signify the activities, structures, and content of collaboration. The knots of collaboration can be seen as the means through which professional learning occurs. "When colleagues engage in a dynamic process of interpretation and evaluation of practice, they enhance their own practice and that of the profession" (Katz & Earl, p.32). Moreover, these networks set an intention to find

and/or create activities, opportunities, and connections with people that are focused on learning and serve to push professional development beyond current parameters that exist in schools and districts (Katz & Earl, 2010).

Haythornthwaite and De Laat (2010) describe networked learning as “an emerging perspective on learning that aims to understand the network processes and properties— of ties, relations, roles and network formations – by asking how people develop and maintain a ‘web’ of social relations for their own and others’ learning” (p. 186). This perspective on networked learning is consistent with Lave & Wenger’s (1991) thoughts on situated learning, where opportunities for professional learning are embedded and maintained in shared practices that occur from day to day. Engagement in a PLN tends to encourage learning on an ongoing basis, often supporting active, organic learning that is embedded in daily events and this type of professional learning is more likely to produce enhanced knowledge and skills practice (Lock, 2006; Garet, Porter, Desimone, Birman, and Yoon, 2001). There appears to be value and meaning for teachers, then, in professional learning that occurs informally, as part of their practice.

Visser, Evering, & Barrett (2014) acknowledge PLNs as being a popular alternative to conventional models of professional development, recognizing them as potentially significant sources of professional learning. According to Campana, research in this area of learning for work, or professional learning, combines situated learning, self-directed learning and collective participation which together define the characteristics and ways of belonging to a community (2014). Lom & Sullenger (2011) cite the PLN environment, often one’s classroom or personal space, along with its focus which is often strongly connected to personal needs, as being factors contributing to the appeal and value of the PLN as a professional learning approach. A network

of peers can act as a safety net, and as such provide encouragement in professional learning (Halbert, Kaser & Koehn, 2011). Teachers that take the initiative to pursue professional learning online in a PLN demonstrate “adaptive expertise” (Bransford, 2000, p. 48). This expertise implies a willingness to be flexible and open to learning in response to the challenges they face (Trust, 2012). Teachers pursuing professional learning in this context “use metacognitive strategies to examine their knowledge and continually seek to improve their expertise...[incorporating] self-assessments to see where they can improve and then use their PLN to find information and connect with others who will help them” (Trust, 2012, p. 138). Online collaboration opportunities provide teachers with ongoing support to build networks and connections with colleagues, peers and experts (Lom & Sullenger, 2011).

Connected learning. Licklider & Taylor (1968/1990) predicted people would connect and converse with others worldwide via the computer as a communication device, sharing in topics of interest and, perhaps, other newsworthy events. Technology is changing how we communicate, think, and learn and these changes are impacting the adult learning community (Merriam & Bierema, 2013). Connected learning occurs through a means of computer-mediated communication using some aspect of digital media; Merriam and Bierema (2013) describe this as “the many technologies and options for connecting virtually” (p. 192). Digital media includes audio, video, and/or photo media that can be created, viewed, distributed modified and preserved in a technology-based capacity. In the world of professional learning, access to media tools such as these creates opportunity for online networks and communities to “facilitate lifelong learning, including new skill development and personal growth” (p. 196).

CONNECTED Learning

EQUITABLE, SOCIAL, AND PARTICIPATORY

Connected learning is a model of learning that holds out the possibility of reimagining the experience of education in the information age. It draws on the power of today's technology to fuse young people's interests, friendships, and academic achievement through experiences laced with hands-on production, shared purpose, and open networks.

PRODUCTION CENTERED

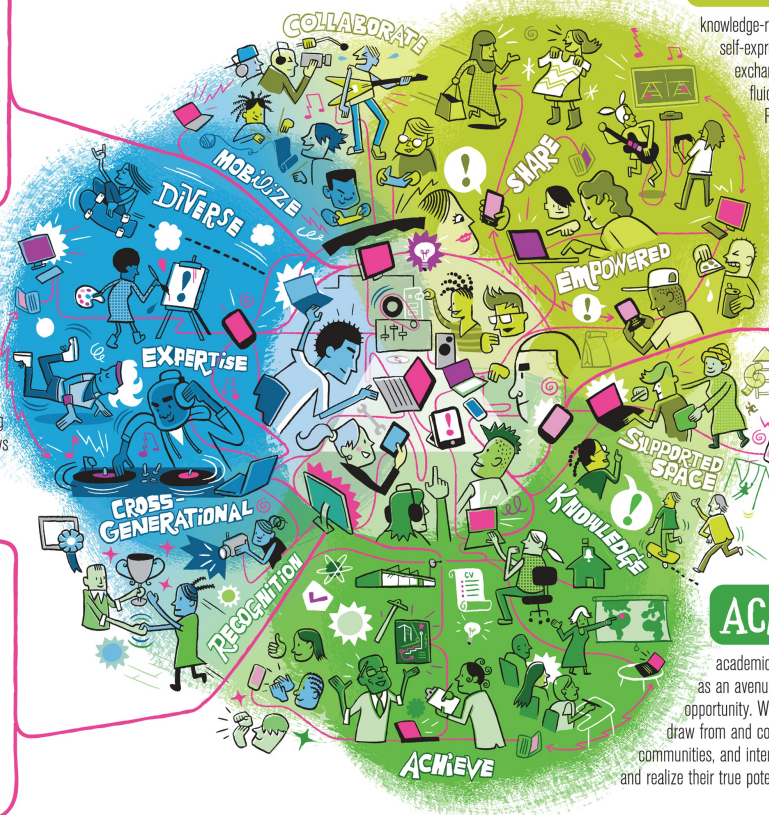
Connected learning prizes the learning that comes from **actively producing, creating, experimenting, and designing**, because it promotes skills and dispositions for lifelong learning, and for making meaningful contributions to today's rapidly changing work and social conditions.

INTERESTS

Interests foster the drive to gain knowledge and expertise. Research has repeatedly shown that when the topic is personally interesting and relevant, learners achieve much higher-order learning outcomes. Connected learning views interests and passions that are developed in a social context as essential elements.

SHARED PURPOSE

Today's social media and web-based communities provide unprecedented opportunities for caring adults, teachers, parents, learners, and their peers to share interests and contribute to a common purpose. The potential of **cross-generational learning and connection** unfolds when centered on common goals.



PEER CULTURE

Connected learning thrives in a socially meaningful and knowledge-rich ecology of ongoing participation, self-expression, and recognition. In their everyday exchanges with peers and friends, young people fluidly contribute, share and give feedback. Powered with possibilities made available by today's social media, this peer culture can produce learning that's engaging and powerful.

OPENLY NETWORKED

Connected learning environments **link learning in school, home, and community**, because learners achieve best when their learning is reinforced and supported in multiple settings. Online platforms can make learning resources abundant, accessible, and visible across all learner settings.

ACADEMIC

Connected learning recognizes the importance of academic success for intellectual growth and as an avenue towards economic and political opportunity. When academic studies and institutions draw from and connect to young people's peer culture, communities, and interest-driven pursuits, learners flourish and realize their true potential.

ACTIVE RELEVANT REAL-WORLD EFFECTIVE HANDS-ON
NETWORKED INNOVATIVE PERSONAL TRANSFORMATIVE

XPLANATIONS ©2012 Dachs Group

Figure 1. "Connected Learning Infographic" by Connected Learning Research Network and Digital Media & Learning Research Hub. Adapted from <http://connectedlearning.tv/infographic> and is licensed under Creative Commons Attribution 3.0 Unported License. Cropped from original.

An environment that is built on connected learning is defined as equitable, social, participatory, and as being embedded in a peer culture (Ito et al., 2013). Ito's work further describes connected learning as being "socially embedded, interest-driven, and oriented toward

educational, economic, or political opportunity” (p. 6). When an individual pursues a personal passion or area of interest, accessing the support of peers along the way, and is enabled to connect his learning and passions to his own growth--academic or otherwise--he is engaging in connected learning (Garcia (ed), 2014).

Connected Learning is characterized by aspects of *participatory culture*, specifically, being accessible, having abundant support for creating and sharing, informal peer teaching or mentoring for new members, and significant social connections (Jenkins, 2006). Literat and Reilly (2012) suggest that “teachers need to foster ‘participatory learning’ where communities of learners work together to develop conventional academic knowledge alongside newer networked knowledge” (2012, p.5). Antero Garcia (2014, p. 6) emphasizes the role that connected learning and its participatory culture can play in transforming classroom spaces, shifting expectations of expertise, and changing up content delivery; further, Garcia acknowledges this educational approach as enabling teachers to become active learners in their own connected learning environments.

Connected learning as a professional learning approach encourages teachers and other professionals to “access and interact with academic and scholarly expertise in universities and simultaneously with peers in different locations as well as with colleagues in their own workplace” (Mackey Evans, 2011, p. 13). As Fullan (2006) points out, connected learning by way of PLNs facilitates systemic change through cross-school and cross-district learning, something he refers to as “lateral capacity building” (p. 10). By expanding professional learning interactions beyond the walls of individual schools, greater contributions to a culture of learning and change are made. Fullan explains, “Breaking down the walls of schools is a concomitant part of breaking down the walls of the classroom” (p. 14). Abel et al. agree that connecting, by

extending learning interactions into other schools, districts, provinces, or even countries, teachers can share their questions, learning, and resources with others, all the while creating their own opportunities for professional growth (2013). They further add, “A connected learning environment offers new ways to connect things that were previously considered disparate and “un-connectable”: people, resources, experiences, diverse content, and communities, as well as experts and novices, formal and informal modes, mentors and advisors. Connected learning cuts across a wide variety of contexts, cultures, and perspectives; it is global with respect to reach” (p. 90). In this context, “learners are central to the [professional learning] process as they make the cognitive, social, and practical connections across networks enabled by technology” (Mackey Evans, p. 13).

Professional participation in a PLN has been shown to contribute positively to lifelong learning (Hanraets, et al., 2011; Johnson, 2008). Johnson (2008) identifies connecting professionally with relevant others as an essential lifelong learning skill that needs to be developed; connected learning provides teachers with professional learning opportunities where they can be at least partially supported through peer interactions. Connected learning supports professional autonomy and the collaborative aspects deemed requisite for meaningful and effective professional learning; Rajagopal et al. views teachers’ reliance on lifelong learning skills, including autonomous and self-directed learning, as contributing to their ability to perform flexibly and independently (2012).

Social networks present learning opportunities for educators to explore topics of interest, network with other educators, and share information (Bierema & Rand, 2008). Social networks present unique opportunities for meaningful professional learning that extends beyond a set community, such as one school or one district. George Siemens (2006) suggests, “The

importance of the shift from internal to external knowing is evident in the rise of the internet as a connected structure permitting the development of knowledge and learning, not simply data and information. The learning is the network” (p.16). Ferriter and Provenzano (2013) claim that “innovation happens when minds come together to share ideas” (p. 19). Previously such sharing demanded that people be “in the same place at the same time,” but today peer interactions can occur anytime, anywhere (p. 19).

Visible learning. John Hattie’s work provides a foundation for the idea of visible learning and can be described as the process that sees teachers take the perspective of their students as they become evaluators of their own teaching (2009, 2012). Visible learning occurs when teachers are able to shift perspective to see learning from the point of view of their students and help embrace the practice of being their own teachers (2009, 2012). Hattie explains that by making student learning visible, educators gain understanding and awareness of the effectiveness of their own teaching. This increased understanding and awareness, influences teachers’ ability to seek and offer appropriate feedback to support student learning (2009). When an educator acts in the role of both teacher and learner through the practice of evaluating their own teaching for example, learning becomes more visible (2009). A student’s ability to be his or her own teacher, is a factor in the development of lifelong learning (2009). Hattie explains that visibility in teaching and learning ensures that students know what to do and how to do it and teachers know if learning is taking place. Engagement in opportunities to develop metacognitive strategies, feedback and reciprocal teaching supports students’ ability to become their own teacher (2009).

In terms of educators seeking “self-directed, informal professional development ...the challenge is to articulate this nature of professional development and make it visible” (Lom & Sullenger, 2011). An individual’s thought process can be made visible through networked

technologies (Literat & Reilly, 2012). Through accessing learning networks, learning can occur through exploration within a collaborative learning community and lead to rich, meaningful learning opportunities (2012). Wien, Guyevskey and Berdoussis explain, “Pedagogical documentation is a research story, built upon a question or inquiry “owned by” the teachers” (2011). Wien et al. further emphasize that pedagogical documentation, as a means to making learning visible, implies a learning process that can be followed or recounted, and this contradicts the idea of learning as a transfer of knowledge to the learner. Through documentation of a learning story, the educator can explore a “*study* of learning in order to figure out how to teach”. Wien, Guyevskey, and Berdoussis, (2011) identify 5 steps in the progression toward achieving visibility as an educator:

1. developing habits of documenting,
2. becoming comfortable with going public with recounting of activities,
3. developing visual literacy skills,
4. conceptualizing a purpose of documentation as making learning visible, and
5. sharing visible theories with others for interpretation and further design of curriculum.

A move towards visibility helps to diminish professional isolation and extend the work of the educator into the community (Wien, Guyevskey, & Berdoussis, 2011). Teacher learning communities thrive when professional dilemmas can be shared, participants can engage in discourse, and peers can support each other to find solutions to problems faced in the area of professional practice, professional development and student learning (Little, 2006). Through a visible process, educators are able to trial new routines and develop new habits in their thinking process as it relates to their teaching (Wien, Guyevskey, & Berdoussis, 2011).

Reflective Practice

John Dewey was an early contributor to the concept of reflective practice, seeing active reflection as growing out of the need to solve a specific problem. He elaborated on the concept of reflection as being “the active persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it” (1910, p. 6). Dewey further described qualities of open-mindedness, responsibility and wholeheartedness as associated with engagement in a reflective practice (1933), characteristics that are consistent with the more recent work of Carol Dweck based on the concept of the growth mindset (2006) and its positive influence on professional growth and learning.

Later scholars added to the concept of reflective practice and, over time, various definitions have evolved according to perspective and context. As an example, van Manen (1977) discusses two types of reflection: interpretive and ethical. The first considers both “the nature and quality of educational experience and...making practical choices” (p. 226-227), while the second, looks at actions in terms of their value from a moral standpoint. Donald Schön is frequently referred to in reflective practice research; his work stresses the ongoing, critical nature of reflection, and its potential positive impact on educators who actively engage in its practice (Schön, 1983). Reflection is defined in a variety of ways, but generally it is seen as “deliberate thinking about action with a view to its improvement” (Hatton & Smith, 1995, p. 40). More recently, Pandey (2012) describes reflection as “the ability to convert the abstract into the practical and the idea into action.” (p. 47).

John Loughran (2002) describes reflective practice as an opportunity for questioning, “a lens into the world of practice” (p. 33), but notes that in order to make it meaningful, there is a need to identify contexts and increase our awareness of assumptions. Reflection offers a means

to seeing one's own practice from others' perspectives (Harrison, 2012) and engagement in a regular reflective practice asks educators to take "a constant critical look at teaching and learning and at the work of you, the teacher" (p. 8). Reflective practice requires educators to commit to "intellectual and affective activities in which [they] engage to explore their experiences in order to lead to new understandings and appreciations" (Boud, Keogh, & Walker, 1985, p. 19).

Ultimately, engagement in a reflective practice that is effective and meaningful is seen to lead to professional growth and learning (Pandey, 2012; Pollard & Anderson, 2008).

Effective reflective practice. One's reflective practice may be deemed "effective" when it incites change or growth in one's teaching practice (Loughran, 2002). When considering the traits of an effective reflective practice, there is a range in terminology and characteristics identified, but in broad terms a reflective practice is characterized as being concerned with aims and consequences, recursive or cyclical, critical and leading to action, continuous/ongoing, personalized and/or authentic (coming from a place of open-mindedness), collaborative in nature, and connected to current research (Harrison, 2012; Lin, Hong, Yang & Lee, 2013; Pollard & Tann, 1994). Boud et al. (1985), for example, cover many of these traits in their model that identifies 3 stages in the reflective process: *returning to the experience* (recursive, continuous), *attending to feelings* (authentic, personalized), and *re-evaluating the experience* (critical, cyclical). Similarly, Zeichner and Liston (1996) identify five characteristics of the reflective practitioner:

1. examines, frames, and attempts to solve the dilemmas of classroom practice
2. is aware of and questions the assumptions and values he or she brings to teaching
3. is attentive to the institutional and cultural contexts in which he or she teaches
4. takes part in curriculum development and is involved in school change efforts

5. takes responsibility for his or her own professional development. (p6)

Pollard and Anderson (2008) outline seven characteristics of reflective teaching:

1. Reflective teaching implies an active concern with aims and consequences, as well as means and technical efficiency.
2. Reflective teaching is applied in a cyclical or spiralling process, in which teachers monitor, evaluate and revise their own practice continuously.
3. Reflective teaching requires competence in methods of evidence-based classroom enquiry, to support the progressive development of higher standards of teaching.
4. Reflective teaching requires attitudes of open-mindedness, responsibility and wholeheartedness.
5. Reflective teaching is based on teacher judgement, informed by evidence-based enquiry and insights from other research.
6. Reflective teaching, professional learning and personal fulfilment are enhanced by dialogue with colleagues.
7. Reflective teaching enables teachers to creatively mediate externally developed frameworks for teaching and learning. (pp. 14-15)

A reflective practice that is regularly occurring and recursive in nature supports the idea that professional learning and growth as a continuous process. Certain skills and characteristics are noted by Dewey (1910) as being both integral to reflection and developed through its practice, such as observation, reasoning and analysis. Schön emphasizes the importance of moving from a reflective practice that is embedded in knowing-in-action to one that is based in reflection-on-action, as a way for teachers to have increased control over their own professional learning.

Harrison (2012) further explains that reflective practice can be “used to explore more critically

the underlying assumptions in our teaching practices” (p. 9), supporting educators to expand their definitions of learning and teaching, ultimately leading to professional development. This process of critical reflection enables the development of a new vantage point for action and, over time, a more empowered teacher emerges (Warwick, 2007).

Harrison (2012) cites the critical nature of reflective practice as being integral to creating the conditions that enable one to “become more aware of the power of agency and the possibilities for action” (p. 35). Critical and reflective collaboration helps to build trust and leads to maximizing the potential of the inquiry process within the learning community by challenging beliefs and broadening the critical lens of teachers (Nelson & Slavit, 2008). Through engagement in critical reflection practices, teachers may recognize the relationship of culture, social, moral and ethical issues to their practice. This enables reflection to occur beyond the classroom and school contexts to the greater contexts as communities of learning for teachers and students (Danielowich, 2007).

Educators who recognize the value of personalization in the context of learning, are able to “make problematic their own knowledge and practice as well as the knowledge and practice of others” through systematic inquiry, a concept termed “knowledge of practice” (Cochran-Smith & Lytle, 1999a, p. 273). When they ask questions about and systematically reflect on their own teaching practices, teachers are able to achieve this knowledge and understanding of practice (Fichtman Dana & Yendol-Hoppey, 2008, p. 3). Vulnerability, the act of opening oneself up to others through sharing of a personal nature, is found to encourage others within a community to do the same (Kelly, 2013; Pignatelli, 2011). A practice which is characterised by being vulnerable requires peers to demonstrate “confidence and support” of an authentic nature (Kelly, 2013). “When one makes the active choice to make oneself vulnerable there is a greater

opportunity of reframing knowledge, moving ‘in the midst of uncertainty’ and seeking strength from others” (Latta & Buck 2007, p. 194). The uncertainty that comes from having to reveal feelings of incompetence with a group of peers can yield the most beneficial professional growth (Kelly, 2013).

Value of engaging in a reflective practice. Teacher engagement in regular reflective action demonstrates a willingness to participate in constant self-appraisal and development (Pollard & Anderson, 2008). “Among other things it implies flexibility, rigorous analysis and social awareness” (p. 14). Reflecting as a process is integral to professional growth with its potential for increasing teacher self-awareness of assumptions and behaviours that, together, may be nurturing biases in practice (Brookfield, 2000; Ferraro, 2000; Harrison, 2012; Pollard & Anderson, 2008; Briddon, Senior & Scales, 2013). Through an active practice, teachers may gain “a better understanding of their own individual teaching styles...[and] can improve their effectiveness in the classroom” (Ferraro, 2000, Conclusion section, para. 1). As a means to continuous professional learning, critical reflection is seen to lead to “transformative change for the learners and those with whom they are engaged, through questioning of assumptions that underlie habitual patterns of thought and action” (Webster-Wright, 2009, p. 22).

Mitchell and Sackney (2009) describe high and low capacity learning communities, noting that high capacity environments see teachers continuously questioning and reflecting upon their own practice, and sharing their process with others. Modelling a reflective practice that incorporates visible elements characteristic of this type of learning may also improve students’ classroom performance (Mathew, 2012). Many, in fact, view teacher engagement in an active reflective practice as leading to the development of learners and teachers alike through the

integration of theory and practice (Bartlett, 1990; Bruce, Esmonde, Ross, Dookie & Beatty, 2010; Rahgozaran & Gholami, 2014).

Engagement in a reflective practice contributes to professional learning that influences teachers to develop more broadly as researchers and leaders (Lieberman & Pointer Mace, 2009; Mathew, 2012). Pollard and Anderson (2008) claim, “The creative mediation of externally developed frameworks for teaching and learning” is really only possible from a professional stance of understanding, evidence and reflection (p. 23). “Building integrated knowledge bases requires an active approach to learning that leads to understanding and linking new to existing knowledge” (Mann et al., 2007, p. 596). Reflection as a professional tool holds significant value for the integration of theory and practice, as York-Barr (2006) explains:

“As educators consider externally generated theory and knowledge from the research community and then determine appropriate, customized applications to their specific contexts of practice, they bridge the gaps between research, theory, and practice. In doing so, they contribute to the overall knowledge base of the profession. Reflective practices can also bridge gaps between what we say (our espoused theory) and what we do.

Bridging this gap is at the heart of integrity and authenticity.” (pp.12-13)

Through reflection, educators are able to link practical learning with action and experience, as opposed to the more traditional idea in which theory is intended as preparation for action and experience (Reynolds, 2011). Ultimately, a reflective practice that is based in evidence derived from research, “supports initial training students, newly qualified teachers, teaching assistants and experienced professionals in satisfying performance standards and competences” (Pollard & Anderson, 2008, p. 5).

Reflective practice, then, is seen to play an invaluable role as a “catalyst for continuous learning about educational practice” (York-Barr, 2006, p. 12) and to increase teacher efficacy (Bruce et al., 2010; Rahgozaran & Gholami, 2014). York-Barr (2006) further explains, “Efficacy increases as educators see positive effects of their actions. As the internal capacities of teachers to learn and make a positive difference are recognized and harnessed, a collective sense of efficacy and empowerment emerges,” (p. 14) ultimately improving the quality of education for learners (Pollard & Anderson, 2008).

Conclusion

“The insistence that the oppressed engage in reflection on their concrete situation is not a call to armchair revolution. On the contrary, reflection—true reflection—leads to action.”

Paulo Freire (2000, p. 66)

In conclusion, engagement in a visible reflective practice in the context of PLNs holds significant potential as a means to shifting educational practice to a student-centered, personalized approach. Constructivism, as a theoretical framework, provides a foundation that fits well with professional reflection as a means to learning; consistent with this, Brookfield recognizes aspects of a constructivist phenomenology within the process of reflection through “the understanding that identity and experience are culturally and personally sculpted rather than existing in some kind of objectively discoverable limbo” (1995, p. 214). As Bill Ferriter observes, “Preparing an ever-changing student population for an ever-changing world requires a highly skilled workforce” (Ferriter, 2013, p. 20). It is imperative that today and tomorrow’s teachers be proactive in their professional development as the world continues to change at an unfathomable rate; students are consistently evolving in response to the social, political,

technological, and cultural shifts in their world, and educators need to keep pace with these changes. It is necessary for teachers to maintain what Carol Dweck (2006) identifies as a *growth mindset* in order to be able to adopt new learning practices and skills and to better facilitate and support student learning. Engagement in a reflective practice that is collaborative and expands beyond the walls of one's classroom provides a means to professional learning that reflects the reality of today's global connectedness. As Donald Schön says, reflective practice provides opportunity for a “dialogue of thinking and doing through which [one may] become more skillful” (1983, p. 31) and, perhaps more than ever before, it is becoming necessary for today's teachers to engage in such dialogue to connect to professional learning that is relevant.

Chapter Three: Project

Introduction to sparKtalk5

My project is made up of a series of vlog (video log) posts titled “sparKtalk5,” which I shared through my blogging site, *SpedLearner’s Blog* (Ross, 2015a). The vlogs are my own video reflections on my practice as a teacher of grades three through eight in an alternative education environment. These blog embedded vlogs were tagged on both Blogger and Twitter with various labels/hashtags, but always included the #sparKtalk5 tag to encourage people in my PLN and beyond to follow and interact with me based on the vlog’s content. In this chapter, I share text from each blog post, URLs to each individual blog post and the accompanying vlog, the date posted, and examples of informal journaling. Informal journal entries were used to guide my reflective practice and choice of topic for each post.

As blog posts are typically a more informal form of writing and tone in contrast to academic writing, please note that the posts below are copied and pasted from the original blog site. As I use this blog site as a professional platform for sharing, colleagues are named on the actual blog, but in this research document, I have removed specific names and any other identifiers, referring to individuals, where necessary, by role only.

Vlog #1: Intro

Date posted: Monday, 14 September 2015

Blog post URL: <http://spedlearner.blogspot.ca/2015/09/talkless-than5-vlog.html>

Direct video link: <https://youtu.be/QTZgbDnFRX8>

Tags used: #talk<5, #tiegrad; #sd61learn, #inquirylearning, #personalizedlearning, #collaborate, #collaboration, #professionallearning, #pln

Text excerpt from blog post:

Initially, I chose the name “Talk<5 Vlog” with the idea that my videos would always be less than 5 minutes. However, in putting together my initial post, I ran into all sorts of technical obstacles due to the “<” symbol in the title. In the end, my first post went out without the “<” symbol and I changed the vlog title for subsequent posts to “sparKtalk5,” maintaining the same goal, to have all videos be less than five minutes.

So, there's this Master's project I'm working on and it's kind of timely because I just started a brand-new position in my school district. First things first: the position. I'm teaching in an alternative education program that brings together students in grades 3-8 who are looking for an alternative to the regular school format. It's meant to be a flexible learning environment where learners can focus on passion driven curriculum that encompasses an inquiry approach.

Coming from a SpEd background, I'm diving into this having very limited exposure to inquiry learning, multi-age groupings, and personalized learning, never mind the fact that I haven't had my own full group of kids--a "class" as it's commonly known--in a very long time. I'm feeling like I'm going to need a lot of help. I'm calling on my personal learning network and professional peers to please support me and allow me access to your expertise, ideas and experiences as I move through this educational journey.

I'm going to be posting (at the very least) weekly vlog posts to share out my "What" (as in what's been going on), "So What" (what I need, what I want, what I don't know, what I need help with, etc), and "Now What" (my action plan if I've been able to formulate one, but the "now what" may need to come through the collaborative cycle). What I need from others is your comments, your thoughts, your ideas, your experiences,

your questions, your sharing, your suggestions, your CONTRIBUTIONS to my blog. I want to engage with you and learn with you/from you. Please tune in, follow the #talk<5 on Twitter (and me, @spedlearner) while I bravely soldier ahead in what feels like a very scary venture. (Ross, 2015a)



Figure 2. Photo of original vlog title. Image from blog post #1.

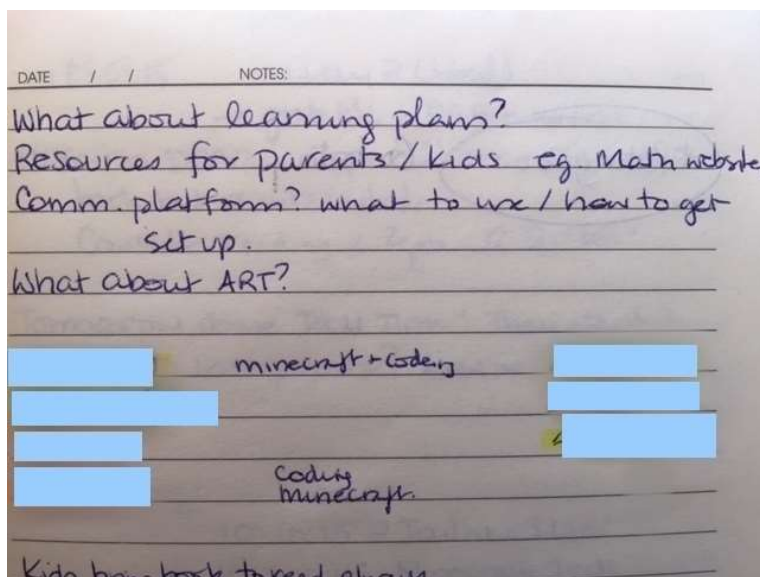


Figure 3. Journal entry #1 Wednesday, 9 September, 2015.

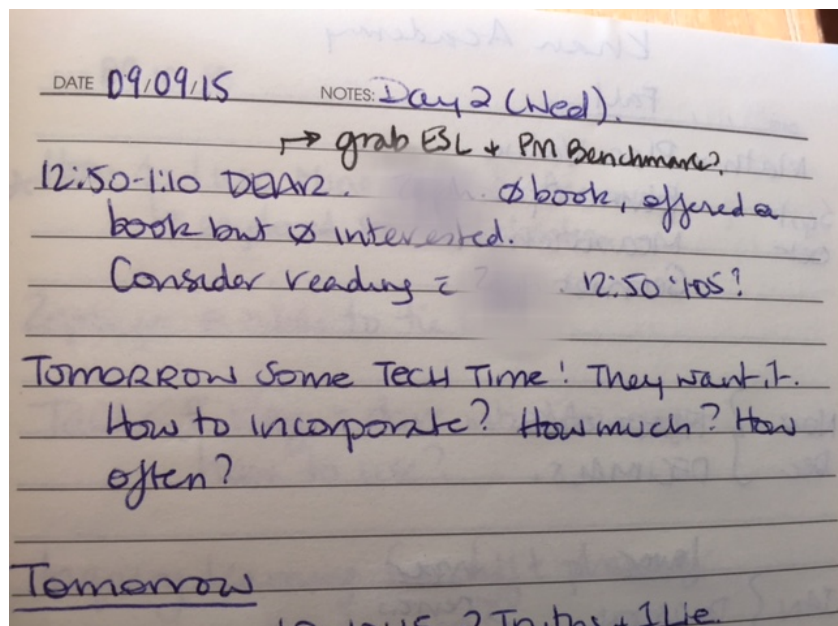


Figure 4. Journal entry #2 Wednesday, 9 September, 2015.

Vlog #2: sparKtalk5

Date posted: Monday, 21 September 2015

Blog post URL: <http://spedlearner.blogspot.ca/2015/09/sparktalk5.html>

Direct video link: <https://youtu.be/dnv1HO0jsEo>

Tags used: #blogging, #collaborate, #edtech, #inquirylearning, #learningplans,

#personalizedlearning, #pln, #sparktalk5, #tiegrad

Text excerpt from blog post:

Incidental learning embraced me these last couple of weeks. At times, it's squeezed me so hard, it's taken my breath away. Or maybe that has just been my anxiety creeping in. This new venture has me overwhelmed.

First things first: my vlog has required a name change. I may have mentioned that certain tech doesn't like formatting the "<" symbol. I have learned that there are ways

around this, but to keep it simple, I'm just going to re-brand. It's still early, right? So, out with the old ("talk<5") and in with the new... new name, new hashtag, but same location:

#sparKtalK5

I hope my vlog posts will spark your interest, start conversation, and help me to build a community of connected learners. I'm jumping in the deep end this fall, definitely feeling in WAY over my head, as I try to navigate, support, and nurture a personalized learning environment with the learners in my (new-to-me) multi-age classroom. All ideas, suggestions, questions, comments, feedback, and recommendations are greatly appreciated.

I have so many questions and it's been challenging to even prioritize them--how to set up our space, how to connect learners in 5 different grades to the curriculum, how to assess and track learning, and how to use the GAFE tools available to me. Then there's FreshGrade and Khan Academy. Our days have been full of hands-on, interactive and collaborative learning activities as we try to establish ourselves as a community of learners, build trust, and get to know one another. However, I know we need to start dipping our toes into the pool of inquiry and personalization. Where to even start??

Here is this weekend's post (video'd a week ago) outlining my "what-so what-now what" for the week. (Ross, 2015a)

Vlog #3: Tackling Overwhelm

Date posted: Sunday, 27 September 2015

Blog post URL: <http://spedlearner.blogspot.ca/2015/09/sparktalk5-tackling-overwhelm.html>

Direct video link: <https://youtu.be/hC9u0ywcFyI>

Tags used: #blogging, #collaborate, #inquiry, #inquirylearning, #personalizedlearning, #sparktalk5, #studentcentered, #tiegrad

Text excerpt from blog post:

A sparKtalk5 vlog post to share; I wish it was an update on Learning Plans, but alas, it is not. Just tackling my looming overwhelm this week. Really appreciate the support I've been getting both via this blog and via text/email from friends who are teachers. Please keep it coming as it really does help!

And, just to be clear, the tears were indeed my own and I did, in fact, recover before students arrived. Boo-hoo-ing at work is really not something that happens for me, so this was a big deal. Onward! (Ross, 2015a)

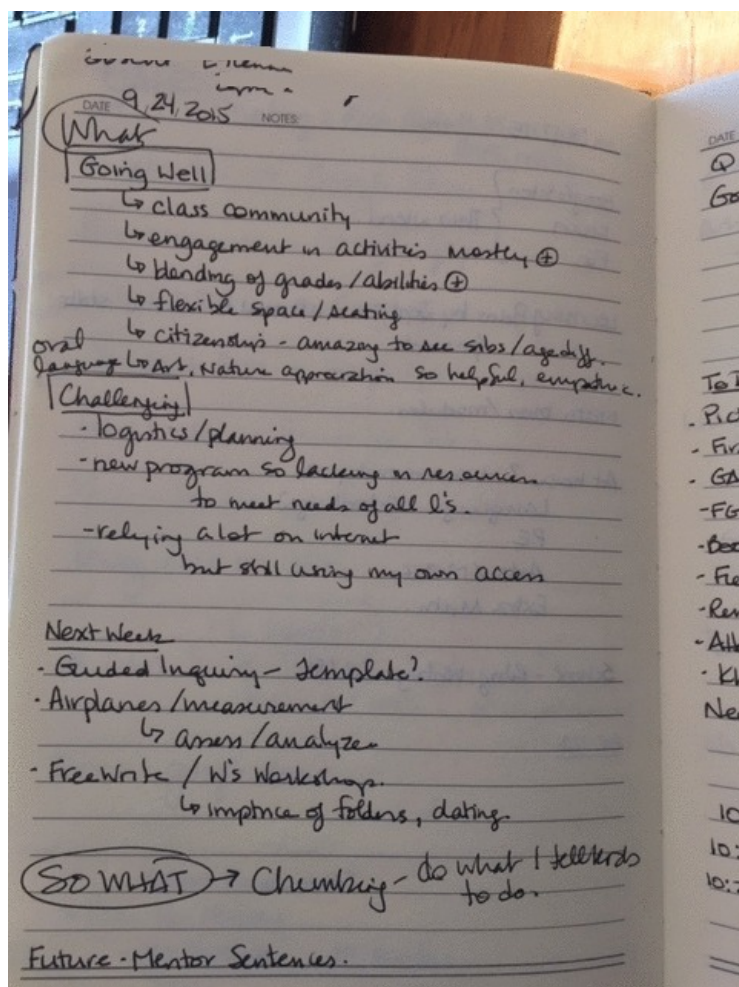


Figure 5. Journal entry Thursday, 24 September, 2015.

Vlog #4: Flexibility on the Spot

Date posted: Sunday, 4 October 2015

Blog post URL: <http://spedlearner.blogspot.ca/2015/10/sparktalk5-vlog-flexibility-on-spot.html>

Direct video link: https://youtu.be/h491_S4UTGg

Tags used: #21stcenturylearning, #bcdchat, #bcdplan, #collaboration, #collaborative, #edtech, #inquiry, #personalizedlearning, #pln, #sd61learn, #tiegrad

Text excerpt from blog post:

This week, the learners I worked with pushed me to be more flexible. It really got me wondering if there are times/situations where we can't really afford the flexibility our learners need. I want to believe no, but I also know that logistically, I'm one person, trying to support a number of different learners at very different places in their learning. Please comment and share with me how you handle student tangents in learning, learners moving in a different direction, and other opportunities for practicing flexibility.

In the example I share, my goal was have learners create an artistic image that uses line and colour to communicate the mood and theme of fall. Pre-activity, we all looked at the same work sample, discussed the connection to our Autumn theme, and the creative process we would be exploring. Sharing the experience, we all sat around one big table together, and a natural evolution of creation occurred; learners began to make suggestions to each other (leaf drawing strategies, ways to add texture through rubbing, and how to shade the leaf as opposed to "colouring" it, for example). One learner went in a completely different direction (see photo). (Ross, 2015a)

I'm working really hard to support and respect learner differences (be that in their understanding of directions, their own desire to do something different, or simply where they are "at" in their learning) and a big part of that is being flexible. Reflecting also allows me to consider what my role might have been, if any, in influencing the learner's

diverted path.



Figure 6. Photo of student art. Image from blog post #4.

I am feeling a little lonely in my program and my attempts to pursue personalized learning and inquiry in a multi-age (7-13 years) environment. *Any* comments, questions, advice, constructive criticism, feedback, or words of wisdom are *greatly* appreciated!! (Does that sound too desperate??)

Thanks for watching and please subscribe! (Ross, 2015a)

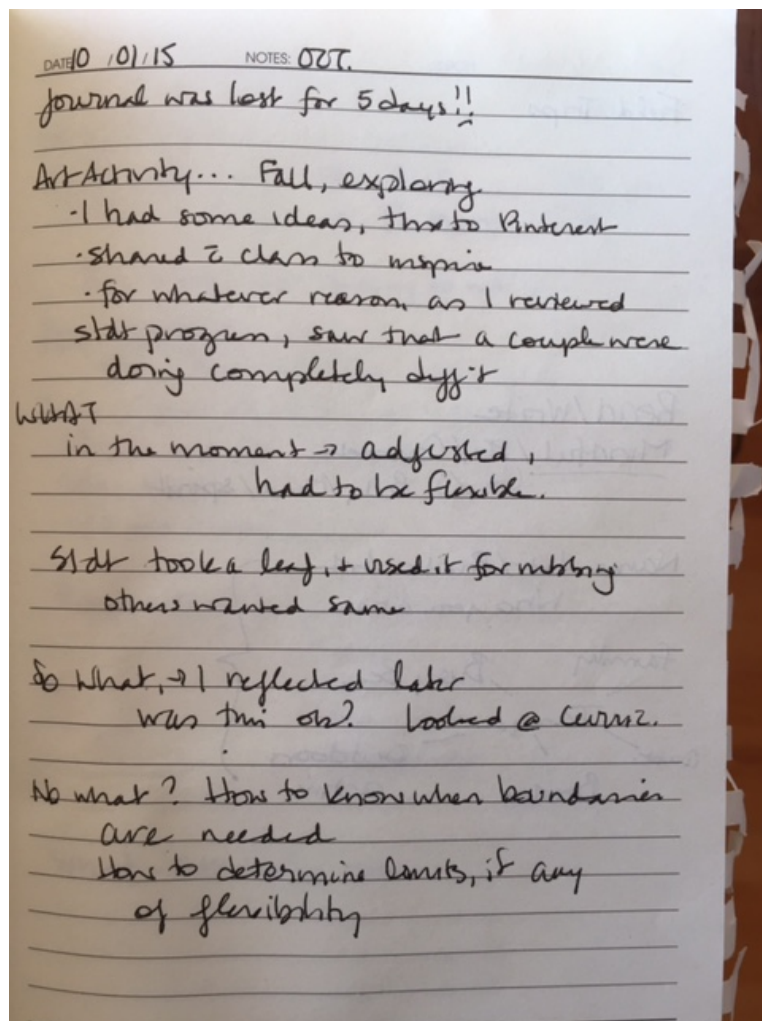


Figure 7. Journal entry Thursday, 1 October, 2015.

Vlog #5: If You Build It, They Don't Necessarily Come

Date posted: Saturday, 10 October 2015

Blogpost URL: <http://spedlearner.blogspot.ca/2015/10/sparktalk5-vlog-if-you-build-it-they.html>

Direct video link: https://youtu.be/h491_S4UTGg

Tags used: #pln, #tiegrad, #sd61learn, #inquirylearning, #personalizedlearning, #edtech,

#collaboration, #bcdchat, #reflectivepractice, #studentcentered

Text excerpt from blog post:

Thanks for tuning in to this week's #sparKtalkK5 vlog post. In attempting to reflect and collaborate, I'm learning it isn't enough to just share out a vlog each week. If I really want to build, nurture, and maintain meaningful professional and learning relationships in my PLN, I have to continue to connect in a variety of ways with my peers. I've been seeking collaborators to share in my journey, and a few show up here and there via blog comments, but I'm realizing it's only one means of generating discussion. Here's my #sparKtalkK5 vlog on the topic:

Storify URL - <https://storify.com/spedlearner/collaborating-with-my-pln-via-twitter>

Feeling more hopeful, I'll leave it at that for this week. So appreciative of the interactions that come my way. Leave a comment below! I promise I'll reply!...Keeping it real (and brief) via #sparKtalkK5. (Ross, 2015a)

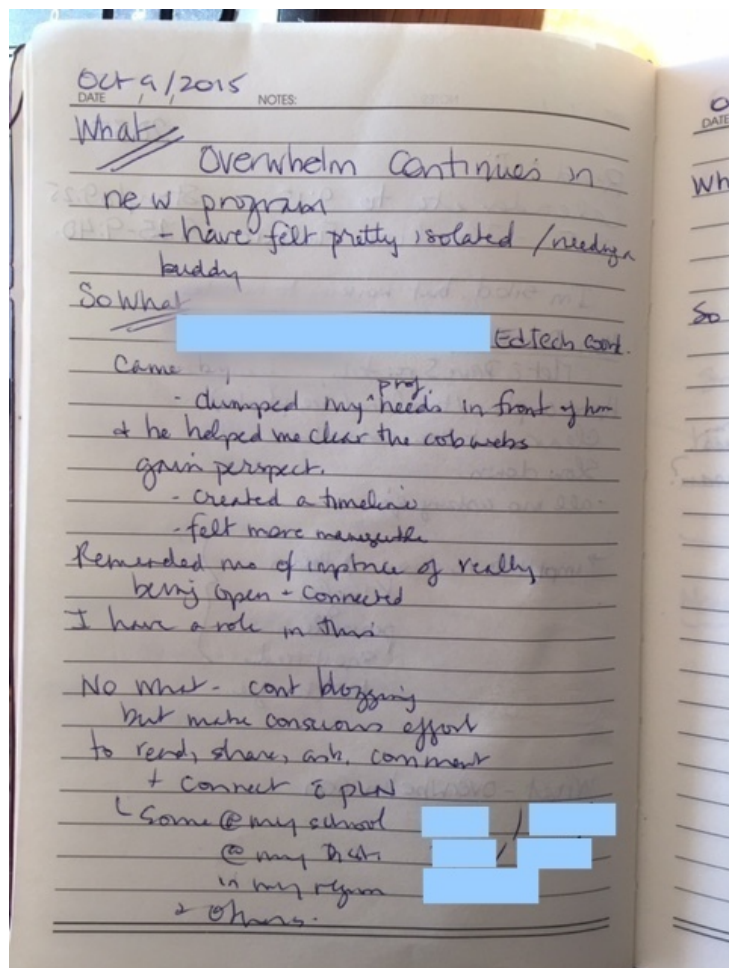


Figure 8. Journal entry Thursday, 9 October, 2015.

Vlog #6: Make Me a Maker

Date posted: Saturday, 17 October 2015

Blog post URL: <http://spedlearner.blogspot.ca/2015/10/make-me-maker.html>

Direct video link: <https://youtu.be/szitbYoNB98>

Tags used: #collaborate, #edtech, #geniushour, #innovate, #inquiry, #makered, #makerspace, #personalizedlearning, #pln, #prod, #sd61learn, #sparktalk5, #studentcentered, #tiegrad

Text excerpt from blog post:

So, hands-on-collaborate-create-make-and-maybe-even-bake, seems like one big undertaking to me. I've done some reading, some viewing, and some consulting to try to

figure out this whole maker movement thing. Inspired last year by (maker expert and author) Sylvia Martinez's visit to our #tiegrad cohort (thank you to our instructor for setting that up), I made sure this year's class supplies included a MakeyMakey and a Raspberry Pi. I know very little about either, but it seems like a good starting point. We are barebones in terms of our maker space otherwise. Please view this week's #sparKtalk5 vlog to hear my what-so-what-now-what explanation!

Comments, criticisms, questions, contributions, and any other forms of collaborative efforts are GREATLY appreciated! Please add your two cents worth below.

(Ross, 2015a)

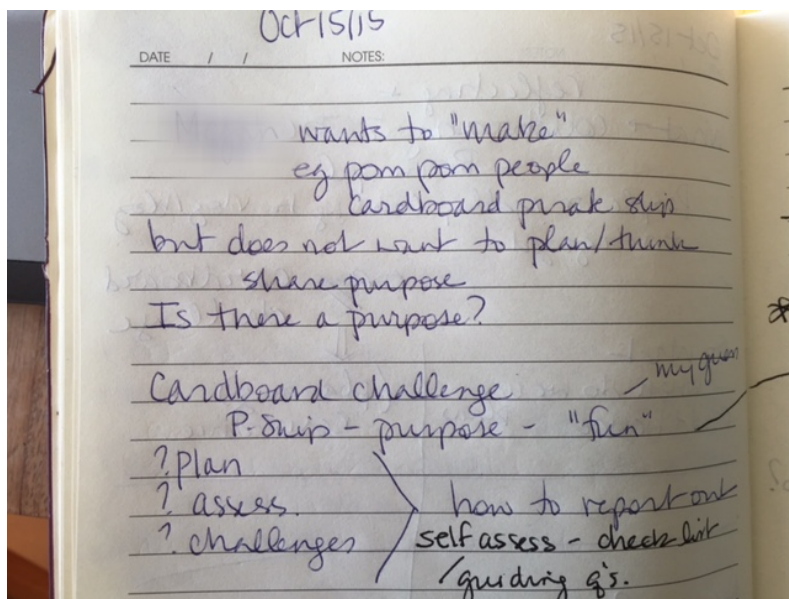


Figure 9. Journal entry no. 1 Thursday, 15 October, 2015.

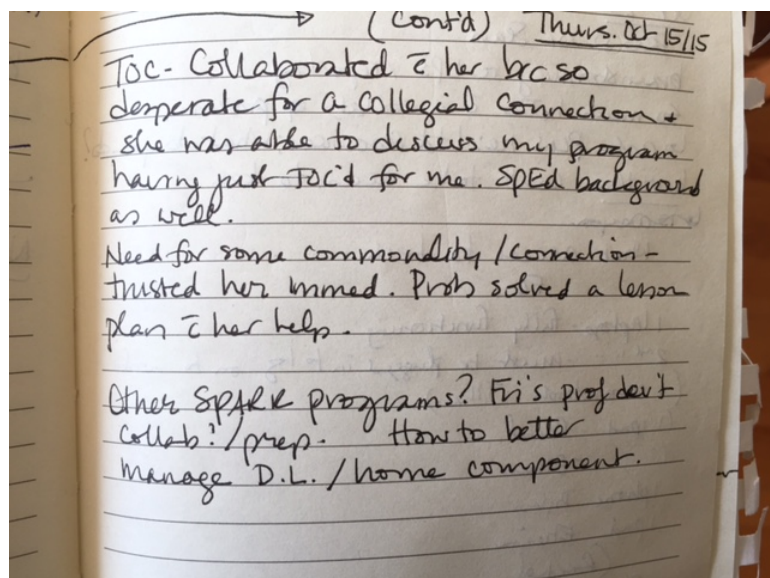


Figure 10. Journal entry no. 2 Thursday, 15 October, 2015.

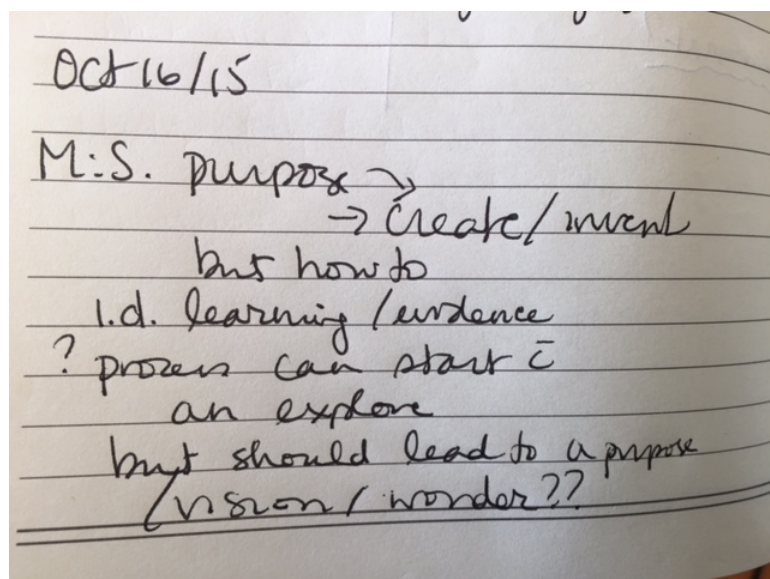


Figure 11. Journal entry Friday, 16 October, 2015.

Vlog #7: The Big Reveal

Date posted: Monday, 26 October 2015

Blog post URL: <http://spedlearner.blogspot.ca/2015/10/sparktalk5-vlog-big-reveal.html>

Direct video link: <https://youtu.be/QHt7LgMoH8g>

Tags used: #cardboardchallenge, #collaborate, #collaboration, #professionallearning, #innovate, #inquirylearning, #personalizedlearning, #pln, #reflectivepractice, #sd61learn, #sparktalk5, #studentcentered, #tiegrad

Text excerpt from blog post:

Ah, delayed reflection reaps the greatest reward, at least for me through this week's vlog post. I struggled with what to do with my learners' apparent lack of ability in the area of making connections earlier this week. Of course, I was quick to interpret this as a problem of *theirs* that *I* would need to support them with. However, after taping my reflection, walking home from school, I considered this whole connecting thing further. What did I do wrong? Why, after watching a video they all seemed completely intrigued by, was it so difficult to draw out some connections? What role did I play in this struggle?

Watch this week's vlog post, beginning with my embarrassingly early and quick resolve as I explain my "what", followed by a later reflective post sharing my own more significant learning. The big reveal. Here it is!

Thanks for watching! As usual, I'd love to hear back from you! Questions, comments, criticisms, cheers, or chit chat—all feedback is welcome and appreciated!

(Ross, 2015a)

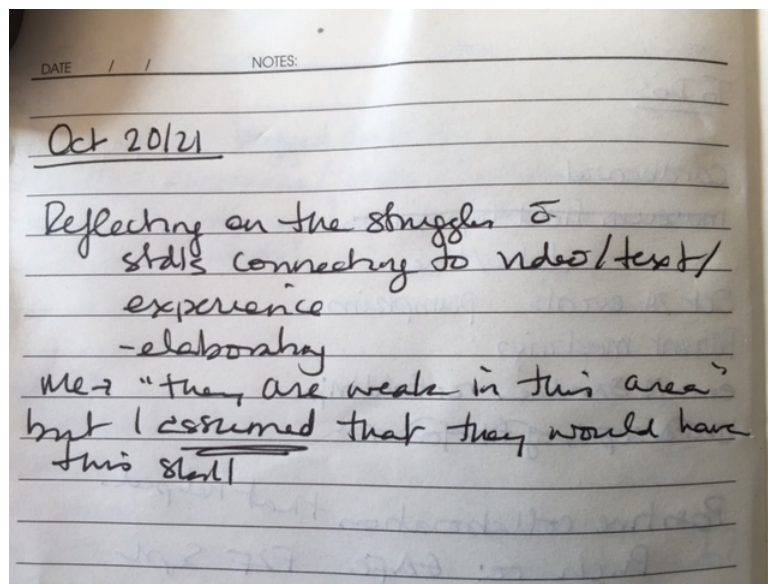


Figure 12. Journal entry Wednesday, 21 October, 2015.

Vlog #8: Solutions Sought

Date posted: Saturday, 31 October 2015

Blog post URL: <http://spedlearner.blogspot.ca/2015/10/sparktalk5-solutions-sought.html>

Direct video link: <https://youtu.be/gDIIWh3FyD4>

Tags used: #21stcenturylearning, #bcdchat, #collaboration, #edchat, #edtech, #inquiry, #inquirylearning, #pln, #sd61learn, #steam, #strengthsbased, #tiegrad

Text excerpt from blog post:

What-so-what-now-what...Indeed. After an especially productive pro-d session with my principal, I reflected on the amazingly positive impact a collaborative partner can have on my own attempts to problem solve. Unfortunately, he's a busy guy and not always available. My program is a pilot: a multi age group of learners (7-13 years) in the annex of an elementary school, focusing on inquiry and hands-on learning opportunities in a highly personalized learning environment, sees me with a "schedule" that is different than that of the school we are situated at. As a result, we are almost always on our own;

we have recess breaks on our own and lunch on our own and the peer group is very small. My school-based peer group is even smaller.

Following my pro-d morning where my principal and I tackled learning plans and reporting options, I am all the more aware of my lack of readily available collaborative opportunities. Unfortunately, I've got more than my fair share of new-program-problems to solve and am feeling a little desperate for collaboration opportunities. I've been sharing out through my #sparKtalk vlog posts trying to build a network with which to collaborate, but the momentum continues to be...non-existent. I am pushing through however, and am committed to my vlog through to the end of June with the hope that things pick up. As well, I will continue to pursue interactions with my PLN on Twitter and consult with professional and community contacts as that network continues to grow.

This week's "What"...Technology and limited resources. Have a watch (it's brief! honest!!) and please comment, questions, critique, chat, collaborate, or contribute in any way shape or form in the space below, via Twitter (@spedlearner) or via email:

tross@sd61learn.ca (Ross, 2015a)

Conclusion

While posts were shared regularly with both varied and consistent tags via Blogger and Twitter, viewing results were significantly different between the two content sharing platforms, as shown in Table 1. The Blogger data indicates the average number of blog post views as 111.75 (ranging from 67-179 views), while the Youtube data indicates videos were viewed an average of 10.75 times each (ranging from 2-16 views).

Table 1. Viewing Data.

<i>Vlog No.</i>	<i>Blog Views</i>	<i>Video Views</i>	<i>Number of Interactions on Blog</i>
1	97	2	2
2	67	16	10
3	179	16	0
4	74	13	6
5	92	6	0
6	87	13	2
7	161	7	0
8	137	13	5

This project sought to establish collaboration within a learning network through engagement in a reflective practice with the hope that the adoption of a personalized learning approach would be supported. In the next chapter I will provide reflections on this project and recommendations for my future practice and that of others interested in pursuing reflective practice within a PLN context.

Chapter Four: Reflections

What

My Master's project centers on my engagement in a visible reflective practice within a network of learners and its subsequent impact on the adoption of personalized learning. I video recorded myself reflecting on my practice at weekly intervals and embedded the videos as video logs (vlogs) in blog posts through my Blogger account, adding brief text as needed. I shared out the blogs by posting them to Twitter using a variety of hashtags, including consistent use of the hashtag #sparKtalK5, to encourage people to follow my posts and interact with me. I limited my reflective vlogs to five minutes with the hope that people would be more inclined to watch my vlog if it was under five minutes in duration.

For my reflections, I used a structured format of “What-So What-Now What,” a model that was developed in 1970 by Terry Borton. Initially, this model appealed to me as a way to keep reflections brief, focused, and to the point. However, upon further research into the philosophical foundation driving Borton's model and later work based on it (Rolfe et al., 2001), it revealed itself as an ideal fit for my project. Ralph Tyler argues that learning is not one-dimensional, but has three components: feelings—thoughts—actions (1949/2004). Consistent with this, Rolfe (2014) explains that Borton's model “translates into a process curriculum based firmly on experience (Sensing), sense-making (Transforming) and engagement with the world (Acting)” (p. 488). Thinking about an event or experience in terms of what worked/did not work (sensing), making changes accordingly (transforming), and taking new subsequent action (acting) in a cyclical way, provides the basis of a reflective practice. This project, sharing reflections within a PLN, was intended to create opportunity to connect and interact in a way that

would facilitate a process of feeling, thinking and acting to make meaning and positively impact a student-centered curriculum.

I opted to use a vlog as my means of reflection over writing a blog as a way to ensure I pushed my own level of comfort with online sharing and interactions. I used my personal discomfort with publishing videos of myself in an effort to strive for engagement in an authentic reflective practice. I hoped that by sharing my own vulnerability and taking a risk, I would encourage others to be open and honest in their interactions with me. I posted the vlogs to my Blogger account (*SpedLearner's Blog*) and introduced each post with a short written text. I kept a journal at the side of my desk to quickly and easily record brief thoughts and issues throughout the week and used them to guide my weekly reflection. Comments from my PLN provided potential for further reflection and conversation, but these comments were limited in number.

This Master of Education program has served to inspire me, spark new insights and expand previously held beliefs and understandings. Ultimately, it has led me to shift my professional thinking and practice. Some of my new learnings and growth have surprised me, while other beliefs and values have been reinforced in a way that has brought about new perspectives and enabled humbling growth. The highlights can be summed up in three headings: curriculum, community, and reflection.

Community

The value of being part of a cohort provided a strong foundation of community and wove its way through each and every experience of my graduate work. I regularly consulted, commiserated, learned and laughed with my cohort community. One instructor, Alec Couros, helped to broaden my understanding and appreciation of the role of community in learning through our EDCI 569 course, *The Distributed, Blended, & Open Classroom*. Community, as a

factor in learning, was made clear through an online learning project I completed. My own project, pursuing an online yoga practice, was completely independent in nature. However, I also participated in another project, using the Fitbit activity tracker, which drew in a number of members of our grad cohort. These two activities yielded experiences that were in stark contrast to each other—my online yoga practice was solitary and I generally lacked motivation to do it, while my participation in the Fitbit group learning activity inspired increased engagement and enthusiasm. Similarly, I had the opportunity to work independently on a Directed Studies course this summer and the timing of it coincided with another course which, due to circumstances, required me join a brand new cohort face to face for just one month. Although the cohort members were unfamiliar to me, my experience was the same--the Directed Studies course was a significant struggle to move through, even though I chose the topic and it was of interest to me, compared to the cohort course, which provided a lot of opportunity for collaboration, discussion and debate. The sense of community I experienced in the face to face cohort course was more enjoyable and yielded greater personal learning. This MEd program has increased my awareness and understanding of the benefits a learning community brings--motivation, accountability, encouragement, and depth of learning to name a few.

Curriculum Personalization

This Master's program has moved me to value the skill of asking quality questions and to better understand the role that questioning plays in deep learning, whether that learning is my own or my students'. Quality questioning has the power to take a learner on a personalized path where content can be shaped, relevant connections can be made, and learners can take their learning to a more meaningful place by becoming experts who can teach others.

As I prepare to walk away from my graduate work experience, I take with me a much greater understanding of the importance of slowing down and doing more with less. Through discussions, readings and coursework completed as part of my EDCI 531 course, Curriculum Discourses in Curriculum Studies under Dr. Jennifer Thom, my working definition of curriculum evolved and expanded. I had always operated from a tight interpretation of “curriculum” as a Ministry of Education document that needed to be closely adhered to. As I moved through this summer course, however, I grew to understand that the idea of curriculum can be much more broadly defined and interpreted. In my final paper for this course, I commented:

Nel Noddings discusses “aims” for learning and the integral role they play in maintaining a learning program that has relevance and rigor (Noddings, 2004); it makes so much more sense to consider where, generally speaking, we want to end up. *What do we hope for you, the learner? Why is this important? How might we get there?* The path from A, where the learner currently is, to B, where he wants to go, represents the potential learning, and their interactions with other people, things, or materials, drawn from their world, their experiences and their culture, make up the curriculum. (Ross, 2015b)

In essence, curriculum must grow out of the learner through interactions with materials, the environment, and others to become meaningful learning; it is as much a process as it is an end or an outcome.

Reflection

I am a naturally reflective person and place high value on the reflective process. Through my readings, however, especially the work of Donald Schön (1983), I realized there was sometimes an absence of intention and/or awareness in my own reflections, and evidence of habituation in my own practice. In this context, my reflective efforts were unlikely to lead to

changes in my actions as they lacked a conscious purpose. I have developed a deeper understanding of the cycle of reflection and its practice, realizing it is most effective when it incorporates structure, intention, collaboration, action, and recursion. Through my coursework I have had much opportunity to exercise my reflective practice, both as a learner and a teacher. My best problem solving occurs when I tackle and process problems with others. I am working towards identifying new actions, as guided by my reflections, and being more recursive in my reflective process by continuing to assess and reassess decisions made and how I might be able to improve upon them further.

So What

Ultimately, my understanding of learning has shifted and broadened. My innate definition of learning used to focus on the end product, the result, the skill or concept learned (past tense). I believe I was overlooking the fact that learning is the active process of moving from can't do to can do, or don't know to know. Aoki's idea that learning takes place in the space between the spaces, wherein lies tension and discomfort (2005), brought home to me new insight into what learning is and can be. As a result of my coursework and my tangible, firsthand experience with concepts such as rigor, dissonance, and tension in learning, I am able to embrace the messiness of learning as both teacher and learner.

My graduate experience has already impacted my professional career. I have always sought to challenge myself and am quick to become professionally restless. Historically, I have operated on a five-year rule as a guideline for knowing when it was time to move schools, move grade levels, or make a professional change of one type or another. Professionally, my graduate experience has reinforced the value of this personal philosophy and, further, helped me to recognize where the learning occurs within such a shift. This year, with increased professional

confidence I took a great risk and moved into a completely different professional role; I moved away from a special education focus to teaching in a multi-age classroom which centers on hands-on, inquiry-based activities. My graduate experience has enabled me to deepen my understanding of the learning process and shifted my pedagogical values to be more broadly focused on activities that nurture flexibility, critical thinking, creativity and innovation. Perhaps more importantly, however, I appreciate how my own learning can connect to and inspire the learning of my students.

Now What

Moving forward, I will strive to speak up about the values and challenges of professional change and model a growth mindset to my students, their parents and my peers. I am inspired to share my enthusiasm for learning with others and highlight the value of failure and missteps and the discomfort that is integral to deep learning, by sharing my own experiences and living these values. Through my graduate work, I have learned the importance of actively reaching out firsthand to connect with others, whether virtually or face to face. I have fully realized and benefitted from the accessibility of professional peers near and far and the resources and opportunities available to me globally, through connecting with various experts including authors, museum curators, and scholars. It is crucial to my continued professional learning and development that I continue to reach out to and interact and share with my PLN.

My notion of leadership in education has tended toward the belief that one becomes an administrator to demonstrate leadership, something I have been, until now, resistant to. I now recognize that there are, indeed, many ways to demonstrate leadership in education and aspire to lead from a place of collaboration. I seek a leadership role that places me in the company of other leaders, as a valued member of a team, where sharing, guiding, and asking for help and

helping others provides the basis of the learning community and that, ultimately, views teachers as active learners. My goal is to connect, engage, and interact with other educators in my district to share in meaningful professional learning, through reflective and collaborative efforts on a regular basis. Ultimately, I want to be part of a generation of teachers who are present in our practice, able to recognize when an approach or method is not working, and seek out other ways of doing what we do.

Recommendations

In conclusion, for anyone interested in engaging with this project, or in a similar project of their own, as a means of stretching their own professional learning through a reflective and collaborative practice, I would make the following recommendations:

1. **Be recursive** – In my opinion, recursion is a key characteristic of an effective reflective practice, but perhaps the hardest to commit to. Being recursive requires persistence and believing that something can always be better. My best learning occurred as a result of reflecting *on* my reflections. Through continuing to think about my thinking, and revisiting earlier thoughts and reflections, I reached new levels of insight and gained invaluable perspective. Consider how you will be recursive in your reflective practice - topics for me varied week to week and that reflected the ever-changing and unique challenges of being in a new position and role. Ideally, I would recommend a reflective practice that sees one reflect on one topic, problem, or question, which follows a cyclical inquiry process over the course of several or more weeks. In this way, the reflective practitioner will be able to maximize personal growth and ensure their reflective practice is effective.

2. **Be proactive and persistent in connecting with your PLN** - Throughout the course of my project there were far fewer comments and interactive responses on my blog posts, meaning limited opportunities for collaboration, than I had hoped for. As noted in the data included in Chapter 3 (see figure 12), significantly more people looked at my blog than watched the reflective vlogs linked within it. To encourage comments from and interactions with the PLN, I would recommend the following:

- a) Carefully consider which sharing platform will engage the maximum number of people in your PLN. Next time, I would survey people to determine which platform they would be most likely to comment on and/or interact with between vlogs, blogs, or Twitter chats, for example.
- b) Connect with your people with the intention of having a conversation. Tag specific people in your posts, use a consistent hashtag, and ask relevant questions to keep online discussions going. Consider pursuing face to face contact in contexts that allow for it, such as connecting at conferences, inviting contacts to visit your classroom, or to meet informally if they are nearby, structure a regular time for collaborating with people interested in your topic. Find a Twitter chat you can regularly participate in to support your reflective practice, or create your own if one does not exist, and include that chat's hashtag with other topic related posts and interactions, so you can continue to connect with like-minded peers.
- c) Seek out experts in your school, your district, your community or beyond. My richest collaborations occurred through intentional face to face meetings and direct tags with specific individuals on Twitter. People did not, unfortunately, engage with me or read my blog posts simply because I shared them on the web.

- d) Speak from the heart. Share failures *and* successes; do not worry about trying to be an expert.
3. **Consistency and Structure** - My project required me to be accountable to myself and, while this was a great personal exercise, the solo nature of it did create challenges relating to the consistency and structure of my reflective practice.
- a) Be prepared to commit to your reflective practice for a set period of time, such as a term or the school year, to maximize the benefits.
- b) Engaging in a reflective practice demands a segment or segments of time built into one's work week. I was successful in carving out that time, but the absence of an established peer group for the purpose of reflecting limited the potential impact of my reflective practice process. Using five minutes when students were silent reading to journal was effective for me; I quickly jotted down brief notes/thoughts that might be of use later on.
- c) Set a weekly deadline day/time for publishing posts to ensure posts are shared consistently and regularly. While I achieved my goal of posting reflections weekly, I did not post one the same day each week. Sticking to a specific day of the week may encourage people in your PLN to anticipate the post and watch for it, ultimately building a potential audience of people with whom you can interact. The use of a firm deadline also discourages any tendencies for procrastination.
- d) Establish and commit to a collaborative structure that requires a regular meeting time. Journaling provided an informal foundation on which I could base my more formal reflections, but occasionally I engaged in spontaneous reflections with peers in passing, and this increased my ability to clarify, identify, and/or prioritize

specific challenges I was having. My lack of a formal structure for collaboration limited my access to its potential benefits. Establishing a regular specific time and place for a peer-meet-up, virtually or face to face, where informal partner based or small group discussion can occur would likely provide the reflective practitioner more consistent opportunity to benefit the collaborative process.

As I complete this body of text that is to be representative of my graduate studies experience, I fully recognize it as only a snapshot of my learning. Engaging in a reflective practice has inspired invaluable learning and growth and I am grateful for this path that most often holds a general direction but has no hard and fixed destination. I more greatly appreciate the need to pause and observe my surroundings, to shift vantage points, to collaborate and stretch to another's perspective, and to consider the many possibilities as a means to my next place of pause. While my project did not yield the opportunities for collaboration that I had anticipated, engaging in a reflective practice that was visible enabled me to gain invaluable insight into whom I am as a learner. This Master's Project afforded me opportunity to engage in a personalized learning environment and experience firsthand the importance of relevance and passion-driven education. Ultimately, I learned that in order to be an effective teacher, I must, myself, be an engaged learner.

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