PERSEVERANCE:
FACILITATING LEADERSHIP AND MEANINGFUL SCHOOL IMPROVEMENT

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Dedication

To my parental units –

With immense gratitude I thank you for the love and support you have provided me throughout this lengthy journey of personal and professional exploration.

To my pedagogical mentors –

I am grateful for having been guided by two exception instructional leaders, Anthony and Flora who valued the intellectual engagement of both teachers and students.

Your impact on my professional practice has been immense.

To my professional friends and colleagues –

your beautiful words, brilliant minds, unwavering support, and loyalty have guided this reflective journey.

Thank you for helping me solidify my compassionate professional identity as we lead the journey down the river of change together.

Abstract

The actions of a system-level facilitator of both *professional learning* and school-based leadership were examined. Guiding the reflective research, was the question: How does an external expert facilitate and guide meaningful school change and improvement aligning with a system assessment initiative, the implementation of an outcomes-based report card? Specifically, through the pedagogical and *professional learning* facilitation with *instructional leaders*, and school-based leaders through a *distributed leadership* model in the evolution of reflective pedagogical practice to benefit student and teacher engagement, learning, and well-being. Through work around the *instructional core*, and job-embedded *professional learning* through *iterative cycles of inquiry* within school-based *professional learning communities*, the core business of schooling is clearly articulated. Exploration of resources and strategies are articulated in response to *instructional leadership* to guide professional practice, *instructional design*, assessment, and educational shift as articulated in *Inspiring Education* and the *Ministerial Order on Student Learning.* Results indicate responses to support must be context-specific where facilitator must exhibit *adaptive expertise* when applying a non-linear strategic approach; *iterative cycles of inquiry* must result in new learning opportunities for students; and coherence between system-level and school-based change must be supported by interconnected *professional learning communities* at all levels of the organization. Additional research is suggested to qualitatively and quantitatively assess and measure the longitudinal impacts of external facilitation on both student and teacher engagement, learning, and well-being.

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As I journey down the river of educational change and improvement, I acknowledge the vast, interconnected ecosystem of professionals that support and guide my work. I am extremely grateful to my Mum and Dad for their support when I was challenged; and their ability to celebrate each small milestone of completion along the way.

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With immense gratitude, I am thankful for the mentorship of Dr. David Townsend and Dr. Pamela Adams. For four years they have provided me with the tools and intellectual space to reflect on my role as a pedagogical and instructional leader. I will never be able to fully articulate my gratefulness for what I have learned from you through our times together.

It is with great hope and gratitude I continually learn and reflect on what it means to evoke change and improvement in these times.

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Background

TO MY FELLOW SWIMMERS:

Here is a river flowing now very fast.

It is so great and swift that there are those

who will be afraid, who will try

to hold onto the shore…

Know that the river has its destination.

The elders say we must let go of the shore.

Push off into the middle of the river,

and keep our heads above water…

All that we do now must be done

in a sacred manner and in celebration.

For we are the ones we have been waiting for.

(The Elders of Hopi Nation, as cited in Wheatley, 2010, p. i).

As I reflect upon my first ten years in the education profession, I am struck by the tremendous rate of change. The requirements of contemporary society are continually compelling education to shift and adapt as the swiftness of scientific discoveries, technological complexities, communication tools, and global interconnectedness increase. We are on the cusp of something extraordinary, but we must let go of the shore of what is known and wade into the rapidly flowing river, towards meaningful change, as it cuts new paths along its ancient route (Wheatley, 2010). The Elders of Hopi Nation describe change as the fast flowing river and call on us to release from the banks, join together, and celebrate this amazing time of evolution (as cited in Wheatley, 2010). The complete

poem can be found as Figure A1 in Appendix A. A historical meander belt map of the Mississippi River illustrates the course of change the river cuts over time through seasons of drought, stasis, and flood (Fiske, 1944). The meander belt map of the Mississippi River's ancient course can be viewed in Appendix B as Figure B1. To me, the image represents an eco-pedagogical metaphor of the educational improvement journey. The river of change flows rapidly today. For us as leaders of educational change, we must listen to the river and let it guide us, for it knows the way. We must shepherd those clinging to the banks where the river flows slowly, for this is where growth is only intermittent in nature. Over time, swales form as sediment is deposited and there is only additive growth, but there is never complete change (Kniffen, 1968). In addition, we must accompany those who have waded into the cutbanks where the river is at its fastest. Here thalwegs cut straight into the bank, meaning the bank is quickly eroded and overflow is likely to occur. Thalwegs signify change that cannot occur, as the water has not brought the ancient knowledge with it (Kniffen, 1968). Demonstrating leadership through the rapid course of the river means we must guide those holding on to the banks of the river to join us in the continual evolution of educational improvement. Leadership requires us to possess great perseverance, to gather together, to honour one another, and to let go of the banks of the river and wade into the swift flowing water:

> To lead is to live dangerously because when leadership counts, when you lead people through difficult change, you challenge what people hold dear – their daily habits, tools, loyalties, and ways of thinking – with nothing more to offer than perhaps a possibility. (Heifetz & Linsky, 2002, p. 2)

At this moment in time, we are at a genesis point of significant change in Alberta as a result of several preceding initiatives including *Inspiring Education*, the *Ministerial Order on Student Learning*, and the forthcoming Curriculum Redesign initiative (Alberta

Education, 2010, 2013a; Government of Alberta, 2013). The frenetic rate and demand of change can be attributed, in part, to globalization as education must prepare and train students to become accomplished in the modern world (Priestly, 2002). The imminent changes must be all encompassing and involve transformations to "curricula and social justice issues" (Branson, 2010, p. 80). To enact change and adequately prepare students, we must evolve the traditional didactic classroom into one that is progressive in nature, for "each and every student must learn how to work willingly and cooperatively with others" (Branson, 2010, p. 86).

Through my experiences as an educator in schools, working within the culture, protocols, rituals, and behaviours, I have witnessed change to be both sedate and emotional in nature. I have found that we must be compelled to let go of the banks of the river, to embrace the shift together, for, we must "change to remain relevant" (Branson, 2010, p. 80). As leaders of change, it is essential that we are bold, flexible, and nimble; apply wisdom and take risks; create new focal points of synergy; and look to establish new structures, communities, and networks to evolve. Individual teachers and schools perceive the actual flow rate of the river differently dependent upon their level of connectedness to the larger educational community, the rate of change required, and the ability to adapt and evolve in response to the societal demands. Thus, the local rate of the river might flow differently depending upon vision, context, culture, time of the school year, and perception of change required by contemporary society. River flow rate is measured by classes from one to five. A class one river is relatively calm and easy to navigate, and a class five river possesses extreme rapids. As Wheatley (2010) indicates, we must wade into the fast flowing river with an awareness that it is our eco-pedagogical

landscape. The river knows the way and will guide, inform, and nourish us on the journey of meaningful change. We keep our heads up and celebrate this amazing opportunity in history, gather ourselves and celebrate all that we are, for "we are the ones we have been waiting for" (as cited in Wheatley, 2010, p. i). Together, it is our time to affect significant change. The intent of the following reflective capstone is to capture and articulate my experience as a facilitator of instructional design and assessment as I support the change and improvement cycle in three schools in the Metropolitan School Board (MSB), a school jurisdiction in a large urban center in Western Canada. In addition, I will examine pertinent and influential scholarly literature and outline strategies and resources I have applied as I seek to lead meaningful educational change and improvement for both student and teacher learning, intellectual engagement, and well-being.

My Leadership Journey

My leadership journey began at an early age. From childhood to university, I participated in competitive team sports. Through training and high-pressure games, I developed several skills that now serve me well in my professional career. These skills include: setting goals; managing time; balancing training, work, and school; demonstrating dedication and loyalty to others in service of team goals; leading directly or indirectly; cooperation; collaborating for teamwork with focus, drive, and determination; and motivating others to achieve goals. Currently, I am the kindergarten to grade twelve Science Curricular Specialist for the MSB. The path I have taken to this position commenced when I became a science and mathematics teacher, and later a science Learning Leader in a middle school with approximately 750 students. In my capacity as a school-based leader, I acted as a peer coach and instructional leader of a

science *Professional Learning Community* (PLC). The work was guided by a focus on the keystone of instructional design and assessment, which is central to the relationship between the teacher, student, and curriculum known as Elmore's "*instructional core*" (Crow, 2008, p. 43). The objectives of the PLC encompassed evolving the collaborative community, assessment, instructional design, and inquiry-based learning practices to facilitate student-learning experiences.

Supporting my own professional needs, I attended multiple professional development (PD) sessions ranging from task design in science, to assessment and integration of technology into the classroom. Additionally, I joined a *Professional Learning Network* (PLN) known as the Science-Leaders' Group, which consisted of science educators from multiple jurisdictions in and around the city. The group is now in its sixth year, and I have led the group for the last three years. Additionally, I consider myself very fortunate to engage in *professional learning* (PL) with like-minded individuals, and have the mentorship of Dr. David Townsend and Dr. Pamela Adams of the University of Lethbridge.

In Fall 2010, I left my school-based position for an Alberta Initiative for School Improvement (AISI) Learning Leader position out of one of the five areas of MSB. I functioned as an external pedagogical support and expert to three middle – and junior high schools in one quadrant of the city. Through the AISI work, I collaborated with the Area Director and Principals to envision system, AISI, and school-based goals. The work was multifaceted and involved supporting PL, teachers, and curricular teams with the evolution of pedagogical practice. I worked in this position until I was hired as the Science Learning Leader to open one of MSB's four new middle schools in August 2012,

which was a brief experience before I moved into my current consultant position in late December that year.

The following section of this paper will outline the current international, national, and provincial contexts of education that have led the MSB to its current position in the fast-flowing river of educational change. I will describe how contexts have been influenced by the changing needs of an increasingly complex world which have impacted the articulation of strategic imperatives to focus and align initiatives. Specifically I will focus on a new outcomes-based report card initiative for 200 schools, which strives to assist in meeting the demands of the competency-focused learning and assessment of contemporary society.

Setting the Context

The course the MSB is currently navigating has been built upon decades of progression in education. In the transition and reflection period following World War Two, world leaders gathered to articulate the *United Nations (UN) Declaration of Human Rights* for all citizens, which was formally adopted on December 10, 1948 (The United Nations, 1948). Eleven years later, the UN General Assembly asserted the *Declaration of the Rights of the Child*, which included the concept of entitlement of free and compulsory education for all children (The United Nations, 1959). In 1990, world leaders gathered in Dakar, Senegal, to re-affirm the collective resolutions made in previous declarations. At Dakar, the United Nations Educational, Scientific and Cultural Organization (UNESCO) articulated: “all children…have the human right to benefit from an education that will meet their basic learning needs” (UNESCO, 2000, p. 8). Furthermore, education should be “geared to tapping each individual’s talents and potential, and develop learners’

personalities, so that they can improve their lives and transform societies" (UNESCO, 2000, p. 8).

The notions of equality of access to education gave rise to parallel themes and policies in the province of Alberta. In 2009, the Government of Alberta articulated *inclusive education* as a priority in which all students in the province were provided access to education regardless of race, cultural background, or special education needs (Government of Alberta, 2009). Furthermore, in response to the rapid speed of new discoveries, technologies, and changing society, the Government of Alberta sought to conceptualize and articulate the vision of the educated Albertan in the year 2030 (Alberta Education, 2010). The conclusion of province-wide consultations, as articulated in *Inspiring Education*, summarized that education should be learner-centered to develop the attitudes, skills, knowledge, and values to "instill the following qualities and abilities in our youth: engaged thinkers…ethical citizens…[with] an entrepreneurial spirit (Alberta Education, 2010, pp. 5-6; 2011b). In May 2013, Alberta Education passed an addendum to the *School Act*, the *Ministerial Order on Student Learning*, to mandate the essential competencies associated with the engaged thinker, ethical citizen, with an entrepreneurial spirit (Government of Alberta, 2013; Province of Alberta, 2011).

While government sought to articulate and mandate progressive shifts in education, from knowledge to competencies-focused curriculum, they executed synchronous cuts in funding to education. The ramifications of two 62-million dollar decreases in the MSB's operating budget in four years, and the elimination of the globally respected AISI initiative resulted in several impacts including: increased classroom sizes at all grade levels; significant reduction in central office staff including support services

for schools; and elimination of management positions (Hargreaves & Shirley, 2009, p. 100). Personally, the reduction in funding has resulted in a surplus of responsibilities and diversification of my Science Specialist position. Before the cuts, there were two Science Specialists; now there is one for the 225 schools in the jurisdiction (Calgary Board of Education, 2013c). My role now entails what the specialists traditionally did: writing Locally Developed Courses; liaising with the safety department to support safety and compliance in science classrooms; assisting other service units specific to science; researching and writing the science accountability reporting to the Board of Trustees for our Chief Superintendent's office; liaising with corporate and community partners; and increased pedagogical responsibilities aligning with the support of instructional design and assessment in our schools.

In June 2013, our Chief Superintendent responded to the briskly changing landscape by articulating five strategic imperatives to focus and guide the work of the schools, the system, and central office staff, including my department of Curriculum Services. The imperatives aligned with the personalization of learning and the MSB's *Three-Year Plan* (Calgary Board of Education, 2013b, 2013e). The strategic imperatives comprised of: high school flexibility, curricular redesign, a new kindergarten to grade nine outcomes-based report card, leadership development, and resources for learning (Calgary Board of Education, 2013b).

Strategic Imperative: New Outcomes-Based Report Card

The current *Three-Year Education Plan* of the Metropolitan School Board summarizes the big ideas inspired by the UN, UNESCO, *Action on Inclusion*, *Inspiring Education*, and the *Ministerial Order on Student Learning*. Specifically, the *Three-Year*

Plan states: "each student, in keeping with his or her individual abilities and gifts, will complete high school with a foundation of learning necessary to thrive in life, work and continued learning" (Calgary Board of Education, 2013e, p. 8). Further, the outcome of student success through the personalization of learning translates into the mantra and vision of "success for each student, every day, no exceptions" (Calgary Board of Education, 2013e, p. 8). Central to personalized learning within the instructional core is the objective of "assessment that informs teaching and learning; [and *metacognition*] where students know what they know, how they know it, how they show it, and what they need to learn next" (Calgary Board of Education, 2013e, p. 8).

The focus on both instructional design and assessment in the instructional core aims to guide the system vision by reinforcing the results of competency-focused learning articulated through MSB's goals of academic success, and non-academic goals of citizenship, personal development, and character (Calgary Board of Education, 2009). The foundation for envisioning the *Three-Year Plan* for schools rests with the principal who must guide strong instructional practice at the school level. By nurturing PLCs within schools, instructional leaders are supporting the ability of educators to make practice and learning visible, thereby strengthening the relationship within the instructional core.

In Fall 2012, accompanying the opening of the four new middle schools, the MSB moved forward with the personalization of learning through the collaborative development and piloting of a new outcomes-based report card. The MSB sought to adapt, change, and standardize assessment and reporting practices in relation to the provincial direction, as articulated by Albertans in *Inspiring Education*, and as mandated

in the *Ministerial Order on Student Learning* (Alberta Education, 2010; Calgary Board of Education, 2013b; Government of Alberta, 2013). The report card redesign aligns with the shift in teacher practice and formative assessment, seeking to improve student outcomes and enhance deep conceptual understanding of key concepts in the disciplines including Science, Social Studies, Mathematics, and English Language Arts (Black & Wiliam, 1998; Davies, 2012; Friesen, 2009; Hattie, 2012; Manitoba Education Citizenship and Youth, 2006; Townsend, Adams, & White, 2011). Additionally, the transition to outcomes-based reporting reflects a shift in assessment from a focus on general and specific-learner outcomes, to one of increased accuracy in grading and report where student learning is measured against stems that articulate the breadth of mandated Programs of Study (Cooper, 2011; Davies, 2012; O'Connor, 2009, 2011; Schimmer, 2014).

Following *Inspiring Education*, Alberta Education (2011b) articulated the competencies essential to envision the engaged thinker, ethical citizen, with an entrepreneurial spirit through the *Framework for Student Learning*. Central to the framework were the competencies of literacy and numeracy, which marked a move away from rote memorization, towards developing a deep understanding of the big ideas and key concepts inherent in each discipline. The articulation through this student framework also conveyed the requirement for a balance of teaching and learning opportunities for students between the central ideas in each Program of Study, the *Front Matter*, and the general and specific-content learner outcomes. Specifically, the four new science report card stems were synthesized to encompass the Front Matter of the Program of Studies, which articulates the philosophy, and vision of science inquiry. Additionally, the stems

represent the four foundations of the Program of Studies including: science and its relation to technology and society, including social and environmental contexts; knowledge, which encompasses the concepts inherent in the discipline; skills, which includes communication tools through the *Socratic Method*; and attitudes, which entail collaboration, stewardship, and safety (Calgary Board of Education, 2013a).

The educational shift has been gaining momentum and can be observed provincially, nationally, and internationally. From the UN to UNESCO, countries and provinces have made efforts to gain a better understanding of promising and powerful for fair assessment (Joint Advisory Committee, 1993), inclusive education, and the competencies required to nurture the successful student of the future. Shifts in assessment and curriculum design can be observed internationally: Australia (Wales, 2013); New Zealand (Boustead, 2008; Hattie, 2012); and the United States (Scriffiny, 2008), including institutions such as the Massachusetts Institute of Technology (MIT) (Consortium on Financing Higher Education (COFHE), 2014), International Baccalaureate (IB) (International Baccalaureate Organization, 2012), and The College Board Advanced Placement (AP) curriculum (The College Board, 2013). Nationally, evolving perspectives on assessment and curriculum design can be observed in: Manitoba (Manitoba Education Citizenship and Youth, 2006); Ontario (Ontario Ministry of Education, 2013); and British Columbia (British Columbia Ministry of Education, 2009), including the University of British Columbia (UBC) (University of British Columbia: Faculty of Engineering, 2013), who, in collaboration with ten other universities across the country, is shifting to outcomes-based assessment to better meet the needs of the engineering profession. In Alberta, shifts to outcomes-based reporting can be observed in

districts such as the Rocky View School District (Rocky View Schools, 2014), Battle River (Battle River School Division, 2014), Calgary Catholic School District (Calgary Catholic School District, 2012), and Edmonton Public (Edmonton Public School Board, 2013).

In Fall 2013, the MSB began standardizing its kindergarten to grade nine report cards, impacting nearly 200 schools; the piloting for this process began in 2012 in the four new middle schools. Through efforts to evolve assessment and reporting practices to support and enhance student learning, the resulting shift was to an outcomes-based report card. The objectives of the transformation were to enhance assessment, improve grading accuracy, organize evidence, and report student levels of proficiency against the Alberta Programs of Study (Calgary Board of Education, 2014a). The outcomes-based report card stems represent a synthesis of the entire Programs of Study, including the Front Matter and general and specific learner outcomes. The purpose of the new reporting tool is to provide a means to represent a balanced approach to teaching, learning, and assessing by stressing the importance of assessing against the report card stems while removing non-academic factors that may have previously skewed or biased achievement reporting.

As reported by our Chief Superintendent in a senior leadership meeting, the processes entailed a new approach to reporting building upon "assessment practices that have been proven to have the greatest impact on learning and reduce the focus on summative reporting, the 'event' of report cards, while continuing to meet our legislative requirements" (Calgary Board of Education, 2013b). The objective of the MSB is to ensure that assessment is more descriptive, timely, relevant, and applicable to the learning for students and their parents. Our Chief Superintendent articulated how the draft of the

report card stems were designed to reflect the richness and rigour of the Programs of Study, and to "speak clearly to the outcomes mandated for learning in our province" (Calgary Board of Education, 2013b). Our Chief Superintendent reinforced the message of *Inspiring Education*, the *Ministerial Order on Student Learning*, and *The Framework for Student Learning* through the citation of the *Alberta Education Business Plan*, where it states: "teacher preparation and professional growth [should] focus on the competencies needed to help students learn" (Alberta Education, 2013b, p. 18). To encapsulate, the report card redesign aligns with government legislation and represents the shift to progressive and competencies-focused assessment and reporting in Alberta.

Facilitating the Shift to Outcomes-Focused Reporting

In Fall 2013, the nearly 200 elementary, middle, and junior high schools impacted by the report card redesign articulated their transition plans to full implementation of the outcomes-based report card for September 2014 (Calgary Board of Education, 2013c). Principal learning was facilitated with system-level working sessions, by Area Directors, fellow administrators, and personalized support from my department of Curriculum Services. As a result of feedback to my department, we ascertained the majority of support would be required in our traditional junior highs that had not reached the envisioned level of personalized learning environments of the system. The system level transition requirement provided the central catalyst for change and the subsequent challenges for my department. The outcomes-based report card transition has highlighted the different places schools are along the continuum of improvement from seeing the change as revolutionary and difficult, to seeing the change as evolutionary and natural. What has surfaced through the work is the reality that improvement in applying a variety

of assessment methods is required for several MSB schools. There is a need for schools to move from exclusively summative evaluations to a more comprehensive means of meeting student learning needs through ongoing assessment, diversifying evidence of learning, and involving student reflection and metacognition. Further, there is a requirement to ensure task design and assessment are addressing all aspects of the Program of Study, both front matter and learner outcomes, as represented in the knowledge, skills and competency-focused stems of the new report card. Instructional design and assessment is the work guiding the journey of improvement.

"Learning and teaching should not stand on opposite banks and just watch the river flow by; instead they should embark together on a journey down the water" (Malaguzzi, 1998, p. 83). Our Chief Superintendent reinforced this by stating:

> The most important work we do in reporting student learning has nothing to do with indicators and stems. It is the ongoing formative assessment that informs teaching and learning, and the reporting of growth, progress, obstacles and strategies, insights and epiphanies, that have the greatest impact. (Calgary Board of Education, 2013b)

Setting the Stage: School-Based Context

This section will describe three of the schools I am facilitating along the river of improvement. I will describe the individual contexts, the factors leading to initiating change, and strategies employed to engage schools in meaningful educational change and improvement.

Red Deer River Junior High. My relationship with Red Deer River Junior High (RDJH) began as an AISI Learning Leader. The junior high school spans grades seven to nine, has a student body of approximately 350 students, and 20 teachers (Calgary Board of Education, 2014c). The majority of the staff have taught from five to fifteen years at multiple schools, a few are in their first five years, and two have taught more than fifteen

years. Further, a few teachers are enrolled in their Masters studies, and one teacher on staff is a member of the Science Leaders' Group PLN. The teachers possess high standards for pedagogy, athletics, music programming, and special evening activities for female students to fortify self-confidence. The school is located in a middle-class neighbourhood, and it houses a community school program, and two exceptional needs classes: Paced Learning Program (PLP), and Behaviour, Social and Emotional (Bridges) Program (Calgary Board of Education, 2014e, 2014f).

As an AISI Learning Leader, I supported the school with gaining coherence and implementing several system initiatives to envision personalized and inclusive education including: inquiry-based learning (Miller, 2006); formative assessment (Black, Harrison, Lee, Marshall, & Wiliam, 2004; Wiliam, Lee, Harrison, & Black, 2004); *Universal Design for Learning* (Center for Applied Special Technology, 2014); *Understanding by Design* (Wiggins & McTighe, 2005); and the prototyping of the Career and Technology Foundations (CTF) Curriculum (Calgary Board of Education, 2010). I engaged in PL with staff, led PL sessions, coached teachers, and assisted PLCs with instructional design and assessment. Reflection and measurement of growth was gauged within the PLCs through the *Teacher Effectiveness Rubric* and reported through the *School Development Plan* (Friesen, 2009). Friesen's (2009) rubric encompasses research-elicited principles of effective teaching including: "teachers are designers of learning" (p. 7) pertaining to instructional design; the "work students undertake is worthwhile" (p. 8) regarding rich and relevant tasks; teacher-facilitated "assessment practices improve student learning and guide teaching" (p. 9) related to ongoing assessment and instructional refinements; strong

relationships exist" (p. 10) centered on the instructional core; and "teachers improve their practice in the company of their peers" (p. 12) referring to PLCs.

While I was in AISI, the staff was led by Judith, an instructional leader who had extremely high expectations for staff to constantly improve and stay current with both the provincial and system direction. The Principal nurtured an intellectual community where student and teacher adjustments through metacognition were constantly explored. Further, she commenced the necessary PL required to help staff to establish the foundations for cross-curricular and integrated studies in the prototyping of a new curriculum, Career and Technology Foundations (CTF); championed formative assessment and adjustments within the instructional core, and applied student learner profiles to the promotion of making student thinking visible in learning. It was quite common to hear teachers and administrators apply the language of system initiatives and research trends prevalent in education.

The culture of learning was built upon a distributed-leadership model where the Learning Leaders assisted in engaging teachers with school goals through the PLCs. Although the staff was a highly engaged, motivated, positive, and cohesive group of professionals, there existed a level of tension due to the demanding pace directed by the Principal. Furthermore, the Assistant Principal, Adam, was seen to struggle with the system initiatives. He was observed as disengaged from the school-wide PL and from the setting of school vision through the School Development Plan. He did not function as an instructional leader within the distributed-leadership model in comparison to administrators I have observed in other settings. I surmise the tension simmering in the culture of the school could have been alleviated had Judith slowed the rate of

improvement and provided more intentional reflection, as supported by Branson (2010) and Timperley (2011), such that teachers being able to personally reflect upon and understand personal responses to change, thus, making meaningful adjustments and evolving pedagogical practice.

In Fall 2012, a new administrator came to the school as Judith transitioned to a high school principalship. The new Principal, Angela, was one whom I had worked quite closely with at another school during my time in AISI. We had a very strong relationship, and I consider her one of my mentors and confidantes. From the outset, Angela was cognisant of the culture of the staff and sought to sustain the school trajectory of improvement. She strove to slow down the rate of change, increase reflection, celebrate accomplishments, and enhance the distributed-leadership model in the school. When I began my consultant position in December of 2012, I transitioned easily back into the school learning community. In my present role as system consultant, the ability to provide support to the classroom-level teacher is limited, but I continued to support PL planning with the administrators and Learning Leaders. Pertaining to the 2013 to 2014 school year, RDJH continues to align itself with system initiatives and advance instructional design and assessment for the benefit of student and teacher metacognition. Further, PLCs are centered on the *Teacher Effectiveness Rubric,* instructional design, assessment, and the annual goals of CTF integration projects at all grade levels. The school has embraced the transitional work required to shift to the outcomes-based report card. Moreover, RDJH has advanced pedagogically, which includes a shift in science and mathematics to performance-based assessments, from the traditional multiple-choice midterms and final examinations commonly observed in MSB's junior high schools. PL

has involved the development of a school-wide critical thinking rubric, which aligns with the vision of competencies outlined in Alberta Education's (2010) *Inspiring Education* and Alberta Education's (2013) *Ministerial Order on Student Learning*. As the learning community continues its journey, one can observe student-reported intellectual engagement to be above that of the MSB and the province (The Learning Bar, 2013c, p. 6). The December 2013 results also indicate that intellectual engagement declines from grades seven to nine, which parallels system and national results (The Learning Bar, 2013c, p. 6). I have given the school the pseudonym of the Red Deer River, a class three river, and historically was a transport route in Alberta. Overall, the core business of the school is centered on the instructional core; pedagogy is guided by curricular outcomes and developing competencies, such as critical thinking; although, at times there is turbulence due to the surplus of responsibilities at certain times of the year.

Bow River School. Bow River School (BRS) is a kindergarten to grade nine school of 500 students and 25 teachers (Calgary Board of Education, 2014c). The majority of staff have taught between five and ten years, and one teacher is an original member of the Science Leaders' Group PLN. The school is located in an aging and established middle-class community with a limited number of young families. The MSB commenced its second Science School at the site four years ago, which requires student application and additional program fees. Classes are capped in size. Additionally, BRS houses an un-capped community program, which formalizes the school's dual personality. The community program includes a small percentage of students from the local community who do not enter the science program, while the majority of students come from the adjacent First Nation reservation. When I began working with the school

Principal, Michael, he was just finishing his first year as the administrator. Michael was tasked with elevating the profile of the science program in the city, while attending to the complex needs required in the community program.

I first met Michael when we both taught grade eight science and mathematics in what was my very first full-time teaching position. He was a mentor and professional colleague who left the school to accept a job as Assistant Principal at another school. BRS was his first principalship. Pedagogically, we possess the same experiences and values of inquiry-based learning designed to intellectually engage students and teachers in the creation of a learning community. Michael welcomed my support as a professional colleague in shaping the PL plans to assist in developing a shared vision.

We commenced our work at developing leadership potential, constructing common perspectives on staff through careful PL planning, and imbedding purposeful reflection in PL sessions. Through a supportive coaching endeavour with Dr. Pamela Adams of the University of Lethbridge, Michael found himself able to articulate goals of intentional instructional leadership, including weekly classroom visits with his teachers centered on individual, team, and school goals. He also expressed the objective of elevating the pedagogical practice of all teachers within the school around the instructional core.

The uniqueness of the kindergarten to grade nine school has benefited Michael. The even distribution of teachers across all grades results in a concentration of teachers hired in the elementary areas. Their positive and motivated pedagogical methodologies have assisted in advancing experiences in the school, and entail varied approaches to aspects such as: task design and assessment, image of the child and their potential as learners, field research in the local provincial park, and diverse application of science

inquiry in the classroom. Michael has also intentionally supported teachers who do not agree with the vision of BRS to assisting them in finding new schools. Now in his second year, the culture has shown positive improvement. There exists, however, a persistent level of resistance from two of the junior high Learning Leaders, who are just undertaking the path of improvement.

Overall, the mindset of the staff is positive and supportive as Michael navigates the path they are charting along effective school improvement. The Learning Bar (2013a) reports that from grades four to six, "students who are interested and motivated" decreases steadily, and falls below the national average; with only 48 percent of grade six students reporting interest and motivation in December 2013 (The Learning Bar, 2013a, p. 3). Intellectual engagement falls below the national average in grade 8 at 53 percent; and above in grade seven (81 percent), and grade nine (69 percent), as reported in December 2013 (The Learning Bar, 2013a, p. 6). In closing, I selected the Bow River as the alias for this school as its namesake is a lengthy river that varies from class two to class four rapids while moving from Banff to Calgary, paralleling the phases of change and emotions that have run through the school at different times of the current school year. Overall, the core business of the school is centered on the instructional core at the elementary level, and less consistently at the junior high level; pedagogy is guided by curricular outcomes and developing competencies, more consistently in the elementary grades, such as creativity; and the turbulent times arise out of discord and incongruence articulated by a few teachers in junior high.

Milk River Junior High. Milk River Junior High (MRJH) is a grade seven to nine junior high with 650 students and 44 teachers, two of which are members of the Science Leaders' Group PLN. Programs at the school include a community program; English Language Learners (ELL) Program; Learning and Literacy Program, Paced Learning Program (PLP); and the Literacy, English and Academic Development (LEAD) Program for recent immigrants who have experienced interrupted schooling (Calgary Board of Education, 2014b, 2014d, 2014e, 2014f). The junior high is located in a blue-collar neighbourhood. I possess an intimate knowledge of the culture of the school as a result of having two close colleagues on staff, one of whom I have continually debated with since I began my system-level position, for he did not want me to work for the 'system'. My colleague's perspective is representative of the school's disconnect from the system vision. Further, the school has a cultural reputation throughout the system as either a place where teachers never leave or one where people will do anything to leave.

Generally speaking, the school can be described as one that has resisted change promulgated by the system. There exists a strong, and explicitly articulated, 'us versus them' attitude when the staff describe the dichotomy between themselves and the system. They do not feel part of the system and initiatives are things 'done' to them. Initiatives are perceived as add-ons, which increase workload and negatively impact teachers' ability to function as effective educators for high-needs students. I view the school as existing in a silo in the larger system that has evolved over time. They possess a large distrust of the system and do not see themselves as part of a larger educational ecosystem. They are detached. Administration noted that initial conversations with school staff, at the beginning of the school year, were themed on theories and ideas they engaged in eight

years earlier in other settings. The conclusions drawn from the initial conversation were that structures and processes have ossified; additionally, pedagogical practices are antiquated as staff have not fully explored nor applied formative assessment, inquiry-based learning, the 2007 Mathematics Program of Studies, math and literacy interventions, and CTF. Thus, MRJH is the example of the school clinging to the banks where swales form. There has been additive change over the years, but the basis of pedagogical practice has persisted and meaningful change has not occurred.

The catalysts for change included the arrival of two new administrators in Fall 2013, and the transitional work required by our Chief Superintendent, Area Director, and Superintendent of Curriculum Services to move from a percentage-based report card to an outcomes-based report card for Fall 2014. The Principal, Andrea, in her first principalship, was informed MRJH was a fantastic school. Upon entering, she discovered a positive staff with extreme compassion for students. Concern for students, however, concentrated on social development and well-being through extracurricular and intramural athletics, as well as other activities centered on fortifying the interpersonal relationships between staff and students. It is not uncommon to have students hang out and play sports after school until seven o'clock in the evening. Yet, the care of the staff for the students does not appear to transfer completely to the academic realm. For the first time in at least seven years, the staff was presented with additional data when the administrators were working on the School Development Plan, which provoked a level of shock in the staff, as reported by the administrators. The data included intellectual engagement and benchmark testing in mathematics and literacy. The results indicated intellectual engagement declined from grade seven to grade eight by 27 percent; and

increased from grade eight to grade nine by fifteen percent; and, the school's results from grade seven to nine were below the Canadian average (The Learning Bar, 2013b, p. 6). School-based benchmark testing revealed fifty-percent of the student population was one-to-two grade levels below in reading; and seventy-percent was one-to-two or more grade levels below in mathematics (Clark, 2013).

As a result of the cultural context and mindset, an initial meeting was carefully crafted with the entire school-based leadership team including the Principal, Assistant Principal, and Learning Leaders. I led the meeting and outlined the context of present educational change leading to significant changes in assessment and reporting. Throughout the lengthy meeting, the compassion the leaders held for students was evident. Discussion focused on the contribution of poverty to student learning needs. The Learning Leaders fully understood the role poverty played in learning and how the shift they needed to initiate was beyond a shift in reporting, toward one where teachers must morally respond to enhance learning opportunities for students to meet their complex requirements and gaps in basic attitudes, skills, and knowledge in order to address the root of the sociopolitical realities of these students.

Through exploration and provocation, a few more progressive Learning Leaders understood the requirement to shift instructional design, assessment, and reporting to make meaningful change for their students' learning, engagement, and well-being. The leadership team had surfaced what Branson (2010) calls the essential "why" (p. 79) of change. I facilitated the 'how' and helped to ascertain a start point of change. The end result was the initiation of work at MRJH. In conclusion, I provided this school with the pseudonym of the Milk River for it is a slow-flowing river with minimal water that dries

up every summer. The annual drought through the summer represents the lack of substantial progress and the existence of the school in a silo, completely unconnected to the larger learning community ecosystem. Overall, the core business requires refocusing on the instructional design and assessment for student learning and intellectual engagement in the instructional core. Pedagogy is guided by general and specific learning outcomes in the Programs of Study, with the purpose of preparing students to write grade nine Provincial Achievement Tests; turbulence arises as new initiatives are met with resistance as there is an inability to make connections to antiquated pedagogical practice. Overall, the school requires a shift in focus to re-center on the instructional core and the development of competencies essential for future success of students in contemporary society.

Scholarly Theory Examination

The following section of this paper will describe the scholarly theory supporting, guiding, and driving my work as a facilitator of educational change. I will describe three texts that profoundly influenced my ability to: nurture readiness for wise leadership; acknowledge and guide the structures and processes crucial for school improvement; and develop a deeper understanding of inquiry-driven PLCs that guide pedagogical change.

Readiness of the Mind for Meaningful Change

One of the most influential pieces of writing to guide my work was Branson's (2010) *Leading Educational Change Wisely*. The educational philosopher synthesizes what is critical to lead the paradigm shift in education including reflecting, applying, and incorporating the powerful works of authors such as Fullan (1982, 1991, 2001, 2009), Hargreaves (2004, 2005), Wheatley (1992, 2006), and Csikszentmihalyi and Rathunde

(1990). Branson (2010) articulates the qualities leaders must possess, who leaders must attend to, how they must approach the shift, and raises awareness when he cites possible barriers to meaningful change.

Leaders must first begin with "personal transformation" (p. 162), where they surface their ability to enhance "human development and wisdom" (Duigan, 2006, p. 162). Through the practice of reflective and meaningful self-awareness, leaders may possess a "new consciousness…of how to synthesize and integrate an emotionally charged, complex, chaotic, conflict-ridden, and highly subjective world" (Branson, 2010, p. 17). As leaders purposefully reflect, they are compelled to "embrace the importance of being a real human being…[who is] true to their self and to others" (Branson, 2010, p. 127). Further, through reflection, leaders enhance their wisdom, which is the keystone of living by the values of improvement.

Research supports the notion that resistance to change and mistrust of leaders of change is a natural phenomenon (Blenkin, Edwards, & Kelly, 1997; Dawson, 2003; House & McQuillan, 1998; Schein, 2004; Snowdon & Gorton, 1998). Change is intimate and personal, impacting the "feelings, emotions, values, beliefs, and sensitivities" (p. 14) of those experiencing the journey of improvement. It is essential for leaders to attend to how "people actually experience change as distinct from how it might have been intended" (p. 4) to ensure successful educational reform (Fullan, 1982). Hargreaves (2005) supports leaders moving beyond the continuum of predictable goal achievement to relating to the "moral, political and relational struggle" (p.126) of the people engaged in the improvement process (as cited in Branson, 2010). Wheatley (2006) emphasizes a shift to a culture of change where there is the "need [of] leaders to understand that we are best

controlled by concepts that invite our participation, not policies and procedures that curtail our contribution" (p. 131). Further, Branson (2010) conveys the notion that leaders are required to comprehend that change is not a "prescribed process" (p. 5); instead, leaders must be bold and embrace the "open-looped process which necessitates" (p. 69) dynamic responses and adjustments. Leaders cannot plan every "finite step of the change, they just have to know where they want to go" (Branson, 2010, p. 109). Heifetz and Linsky (2002) describe this as the ability of leaders to apply an "improvisational art…[where what they] actually do from moment to moment cannot be scripted" (p. 73). Leaders must articulate what is valued most in creating a vision of meaningful change, that which is beyond simplistic goals:

> The call of meaning is unlike any other, and we would do well to spend more time together listening for the deep wells of purpose that nourish all of us…With meaning as our centering piece, we can journey through the realms of chaos and make sense of the world. With meaning as an attractor, we can re-create ourselves to carry forward what we value most. (Wheatley, 2006, p. 133)

The following summary will articulate Branson's (2010) themes of paying attention to self, development of new intelligences, and visioning innovation beyond traditional leadership and management.

Attention to self. To lead educational change wisely, reflection is the foremost process for leaders to understand self and how they engage with their environment. Through practiced reflection leaders enhance self-consciousness, and self-knowledge "which increases their capacity to use wisdom and guide the change process that they are immersed in" (Branson, 2010, p. 47).

Self-reflection. Branson (2010) asserts that "self-reflection in the form of reflective inquiry and reflective self-evaluation, is not something that people do naturally, do accurately, or that automatically influences their behaviour" (p. 47). Branson (2010)

asserts that leaders are required to intentionally reflect to seek their "espoused values" (p. 51) versus those, which they practice to minimize the "three ways in which their thinking can become misguided or ill-founded, through self-deceit, impulsiveness, and a lack of self control" (p.61). In order to minimize misguided and biased thought, reflection is essential for we are "prone to repetitive-compulsive behaviour" (Branson, 2010, p. 27). Thus, if leaders are deliberate in self-reflecting, predicting, and visualizing their reactions through a process to minimize bias, they will increase the likelihood of a positive and achievable outcome. Through self-reflection, leaders can apply consciousness and generate wisdom to achieve the moral capacity to determine "what is significant, what is right and what is worthwhile. It is this wisdom that elevates leaders' actions above mere pragmatics or expediency in order to transform their self and those they lead" (Branson, 2010, p. 64).

Self-consciousness and self-knowledge. Through expanding one's consciousness and self-knowledge, leaders can nurture wisdom, where they are cognisant of their values, emotions, and biases regarding contextual, cultural, political, historical, and dispositional perspectives (Branson, 2010). Further, the blossoming of wisdom "requires them to let go of their individual identity and, instead, merge with the greater wisdom or intelligence that transcends their own individual ego" (Branson, 2010, p. 73). Increasing self-knowledge, states Branson (2010): "directs us to come to know *how* [emphasis added] we know" (p. 36), which enhances wisdom and increases "personal capacity to lead deep and sustainable educational change" (p. 45).

Wisdom. Leaders of successful educational change must embed self-inquiry and self-reflection into the practice of "daily professional life" (Branson, 2010, p. 47).

Branson (2010) deduces that wisdom will enable leaders to act insightfully, ethically, with integrity and care to establish what is "worthwhile as the change process unfolds" (p. 20). The immense power of possessing and nurturing wisdom is that it "engenders relationships. Wisdom recognizes that the most precious resource we have for coping with life in an unstable, discontinuous and constantly changing world is not information, but each other" (Branson, 2010, p. 29). Through wise leadership, a learning community can be cultivated where the journey of educational shift will provide the lessons that "inevitably teach us about who we are and what we should be doing" (Branson, 2010, p. 29).

Developing new intelligences. Branson (2010) states that self-reflective and wise leaders of educational change must develop new skills and knowledge including: relational intelligence, moral integrity, emotional intelligence, and gestalt in the shared vision.

Relational intelligence. We live in a world socially constructed by humans; thus, relationships are the central vehicle by which change can occur (Branson, 2010). Consequently, a leader should attend to the authentic source of power in the organization, "the capacity generated by relationships" (Wheatley, 2006, p. 39). It is through synchronous collaboration that significance and intention arise by "cultivating the capacity to understand the living world and ourselves as an interconnected whole" (Senge, Scharmer, Jaworski, & Flowers, 2007). O'Murchu (1995) supports the notion of dynamic connectedness through relationships and shared vision for it is "with the whole that the part gains its identity, its qualities, its characteristics" (as cited in Branson, 2010,

p. 121). Conclusively, Wheatley (2006) describes the importance of relational intelligence:

> In this participative universe, nothing lives alone. Everything comes into form because of relationship. We are constantly called to be in relationship – to information, people, events, ideas, life. Even reality is created through our participation in relationships. We co-create our world. If we are interested in effecting change, it is crucial to remember we are working with these webs of relations. (p. 145)

Wise and reflective leaders of educational change must possess relational intelligence and a "deep desire to help others" (p. 63), for one cannot journey down the river as a lone wolf (Branson, 2010). Through common social values and shared vision, a big idea can be nurtured, and there can be a genesis of a pedagogical culture centered on the instructional core. Leaders must remember to resist letting the goals become the end all, and rather, keep gestalt in the forefront, in service of the shared vision. Wheatley (2006) states "people who are deeply connected to a cause don't need directives, rewards, or [superiors] to tell them what to do" (p. 181). The attractor and cohesive force is the construction of meaning, for "when highly motivated and eminently capable people share a common vision, they do not need to be micro-managed" (Hamel, 2007, p. 111). Thus, it is the people who will envision the paradigm shift, those working in schools with children:

> The successful leader of educational change is about working with people so they can grow, develop, and change, which automatically means that change happens and will continue to happen within a school. This is about seeing schools as a complex network of human beings…We must first see schooling in all its human qualities; designed by humans for humans to benefit humans. (Branson, 2010, p. 110)

In developing relational intelligence, leaders acknowledge and engage the emotional manifestations of resistance to change as a natural occurrence to enhance the change process (Branson, 2010). Such emotions of resistance include "open criticism,

conflict and defiance, or implicitly as apathy, disinterest, and non-compliance" (Branson, 2010, p. 48). Fullan (2001) states that "dissent should be seen as a source of new ideas and breakthroughs…and the absence of conflict [could well be] a sign of decay" (as cited in Branson, 2010, p. 101).

Branson (2010) surmises leaders must possess the "knowledge and capacity to build personal and interpersonal relationships, to build interdependency, to create sincere and authentic professional collaborations" (p. 116); a genuine empathy and "concern for the welfare of others" (p. 90), and have a "profound commitment to help their well being" (p. 91). Responsibility, states Branson (2010), lies with leaders "being able to understand and nurture their followers" (p. 93) to create what Wheatley (2006) describes as "dynamic interconnectedness" (as cited in Branson, 2010, p. 121). The intertwined relationships must be between the "school leader and their higher system authority, along with their school community, [for they] are not isolatable parts but, rather, together [form] an integral whole" (Branson, 2010, p. 121). Bohm (2006) describes the process of relational building as social construction where people endeavour to "make something in common [by] creating something new together" (p. 3). To conclude, as leaders acknowledge the power of the social construction of relationships perspective, along a common vision, there is an increased likelihood of enhanced relational intelligence, which reinforces collaborative leadership models (Bensimon & Neumann, 1993), *distributed leadership* models (Hargreaves & Fink, 2008; Harris, 2010; Leithwood & Jantzi, 2000; Seashore Louis & Wahlstrom, 2011), and PLC models (DuFour, 2004; Townsend & Adams, 2009; Townsend et al., 2011).

Emotional and moral intelligence. Branson (2010) asserts the leadership of educational reform must sustain a managerial scope while embracing a new ethical significance. Leaders should make a profound commitment to transformation of the individuals involved, while possessing authentic "moral integrity…[which is] genuineness, sincerity, honesty, integrity" (Branson, 2010, p. 92). Leadership required for the demands of contemporary society necessitates wisdom, which is dependent upon emotional intelligence (Fullan, 2006; Hargreaves & Fink, 2008; Schein, 2004). Goleman, Boyatzis, and McKee (2002a) outline emotional intelligence to include "self-awareness, self-management, social awareness, and relationship management" (as cited in Branson, 2010, p. 49). Overall, in application of moral integrity, emotional and relational intelligence, self-reflection, consciousness, and wisdom, leaders of educational change can lead the sustainable reforms as they journey with others along the river of change, for it is together, as we travel down the fast paced river, that we can lead and evoke meaningful educational change and improvement.

Visioning. Visioning is the crucial step in forming moral integrity and creating the relational and emotional intelligence of those along the passage of educational reform. The required paradigm shift involves schools moving from their "current 'factory' structure to a more post-industrial structure" (Branson, 2010, p. 83). As cited in Branson (2010), Fullan (1991) indicates, we must embrace and acculturate the multi-dimensional nature of change, for schools today must manage and integrate multiple innovations and changes all at once. Before we create a meaningful vision, we must first pose the primary question – "Why Change?" (Branson, 2010, p. 79). As relational intelligence is fortified, the "organization [can] share…wisdom, openly communicate new ideas, and creatively

describe new ways of acting" (Branson, 2010, p. 72). By creating a shared vision, the organization forms a culture which provides the gestalt to guide the work. As cited in Branson, (2010), Senge (1990) supports shared vision that should be able to "foster risk taking and experimentation" (p. 209), and generate a potent culture where individuals are "more likely to expose their ways of thinking, and give up deeply held views, and recognize personal and organizational shortcomings" (p. 209). Additionally, the individuals at the school level must subscribe to the complex and vast array of networks within the larger educational organization, for if this is not attended to, "thinking ends up painting lovely pictures of the future with no deep understanding of the forces that must be mastered" (p. 12) to evoke meaningful reform (Senge, 1990). Overall, leaders of educational change must nurture multiple intelligences, act morally, be reflective, and maintain gestalt thinking to evoke sustainable change.

Cautions. Branson (2010) cautions leaders of educational change by addressing finances and the notion of time. First, he warns that "under resourced change processes invariably fail" (Branson, 2010, p. 77). Essentially, leaders and government must ensure adequate finances are provided for the "design, implementation, and acculturation of the change" (Branson, 2010, p. 78). Second, Branson (2010) addresses the workload of the teacher when he states: "each teacher already spends a great deal of the non-teaching time preparing for their teaching time. It is irrational and immoral to do more in their own time" (p. 79). Thus, leaders must provide sufficient resources and time to permit those involved in the "planning and execution of the change to meet and organize the plan during school time" (Branson, 2010, p. 78).

Generally, the highly intuitive and influential writing of the educational philosopher Branson (2010) has enabled me to develop a deeper awareness of the personal and emotional endeavour that is educational leadership for change. I am both highly motivated by and overwhelmed by the relational and emotional complexities of meaningful reform. I heed the words of Wheatley (2006) when she speaks about the nurturing and guiding energy within living systems:

> When we encounter life's processes for change, we enter a new world. We move from billiard balls banging into one another to effect change, to networks that change because of information they find meaningful. We stop dealing with mass and work with energy. We discard mechanistic practices and learn from the behaviours of living systems. [Leaders must] leave behind the imaginary organization they design and try to control and learn to work with the real organization – a dense network of interdependent relationships. (p. 144)

Essential Framework for Meaningful Change

During my Masters program, I returned to Townsend and Adams' (2009) book, *The Essential Equation: A Handbook for School Improvement*, after first being introduced to them and their work four years ago. They are the reason my personal journey of educational improvement centered on leadership, and why I selected to pursue my studies at the University of Lethbridge. Upon a more detailed analysis of their book through Master's coursework, I have a broader perspective of the breadth and pace of the river of improvement, what is required to navigate it, and who must be alongside me in the journey.

Townsend and Adams (2009) unpack over twenty-five years of "experiences in more than 300 schools" (p. 9) to encapsulate actions leaders can take through collaborative learning communities to evoke improvement. The authors found the "rate of change in teaching practice and other aspects of school improvement is uneven, generally slow and difficult to sustain" (Townsend & Adams, 2009, p. 41). No leadership journey,

however, is without challenges and as the world shifts, so do the expectations of school leadership, so we may continue on the journey of improvement. Townsend and Adams (2009) express critical elements required to elicit meaningful and strategic school improvement which include a focus on: enabling a sustainable learning community that engages in collaborative inquiry; nurturing people who act as educational leaders; realizing the process of job-embedded PD; maintaining a central focus on classroom instructional practice; and committing to the gathering of evidence of school improvement.

Essential structure: A learning community. Barth (2001) contends that the vision of a school is one of a learning community which houses an extended family of children and adults, where all of the individuals work together for the good of the many. The only caveats "for membership in the community is that one learn, continue to learn, and support the learning of others" (as cited in, Townsend & Adams, 2009, p. 15). The essential structure of a learning community has been shown to provide the framework through which "collaborative learning and professional growth can thrive, leading to improved student learning" (Townsend & Adams, 2009, p. 15). Hord (1997) first articulated the current understanding and practice of PLCs, and defining them as collaborative groups that engage in continuous inquiry, with a focus on the development and refinement of pedagogical practice. Further, Hord (2004) outlined effective attributes of a PLC to include: collegiality, distributed leadership, a shared vision, student-centered, and constructivist application of new knowledge through examination of student learning (as cited in, Townsend & Adams, 2009). Distributed leadership describes a move away from traditional, leader as "hero" (p. 53), where power and decision-making is

concentrated with one individual (Chappuis, Chappuis, & Stiggins, 2009). Instead, the roles and responsibilities associated with leadership are dispersed amongst various levels of the school, and relationships are created through interactions rather than structured through the traditional hierarchical structures with principal acting as the instructional leader (Seashore Louis & Wahlstrom, 2011). DuFour and Eaker (1998) enhanced and popularized Hord's (1997, 2004) work by outlining the PLC processes and affirming that their existence "demonstrates qualities that differentiate… [progressive schools] from more traditional schools" (as cited in, Townsend & Adams, 2009, p. 17). Additionally, DuFour and Eaker (1998) stressed the positive psychological impact of relationships that can develop within the PLC as "designed to touch the heart…[fulfilling] the need to feel successful in our work, the need to feel a sense of belonging, and the need to live a life of significance by making a difference" (p. 6).

The learning community structure described by Townsend and Adams (2009) is interpreted as both the school, in its entirety, and the individual PLCs existing within schools as focused in grade or curricular groups. The overarching frame is that of a community of learners committed to intellectual engagement through the instructional core, and it requires five dimensions for optimal operation and effectiveness (Townsend & Adams, 2009). Townsend and Adams (2009) note that it was "very rare for any one school to meet all the criteria of an effective learning community" (p. 18). The five dimensions entail "mission and vision, leadership, learning, culture, and organizational structure" (Townsend & Adams, 2009, p. 20). The first dimension includes a mission and vision connected to core values and principles of the school (Townsend & Adams, 2009). Second, relationships are central to the role of the leadership dimension where risk taking

is encouraged and modeling occurs to enhance professional growth (Townsend & Adams, 2009). Learning must be the central focus of the learning community and be, at its heart, the instructional core, which promotes both student and organizational growth (Townsend & Adams, 2009). The organizational structure represents the values and goals of a collaborative learning community. Finally, the culture of the school should represent the collective values of trust and conflict management inherent in the learning community (Townsend & Adams, 2009). The generative learning within a PLC should be "committed to continuous inquiry" (p. 17) and assessment for the purposes of intellectual engagement and deep learning of students and educators (Townsend & Adams, 2009). Further, the learning community articulated by Townsend and Adams (2009), parallels communities of inquiry such as those participating in *action research* (Mertler, 2012), and the *Data-Wise Process* of adjustment cycles of inquiry around student work used by the MSB (Harvard Graduate School of Education, 2012; Parker Boudett, City, & Murnane, 2005).

Sparks (2001) states the initiation of the generative process "cannot be imposed; it must be internally nurtured to unleash the forces of innovation and passion of individuals" (p. 6). This statement by Sparks (2001) has significant implications for leaders and facilitators of educational improvement on developing the culture, vision, and atmosphere to stimulate the desire to engage in collaborative inquiry. To summarize, the learning community creates the essential structure for learning and intellectual engagement. The learning community must be generated and nurtured as the bedrock for collaborative inquiry to exist.

Essential structure: Collaborative inquiry. PLCs exist to continuously and collaboratively inquire into instructional design and assessment strategies that optimize student learning. The structure of the PLC is "rarely accidental" (p. 53), thus, it is through distributed leadership that the processes and relationships are nurtured and learned (Townsend & Adams, 2009). Collaborative inquiry is an essential structure within PLCs and schools (Townsend & Adams, 2009). Townsend and Adams (2009) cite Fullan (1998) when they describe the essential actions of the PLC through collaborative inquiry: "all change is a hypothesis – a process of action, enquiry and experimentation to create a cumulative and collective knowledge about what works and how it works from within" (p. 41). In summary, the continuous inquiry must present a relevant problem of practice for a group of professional colleagues in a PLC to engage in, to uncover, and explore on their journey of pedagogical improvement centered on the instructional core. As teachers engage in the inquiry process they seek out PD to attend to and support their question. As teachers journey, gather information, debate, and construct new information, they diversify their "professional knowledge and skill, contribute to an exponential increase in professional reading, and help produce an impressive array of new learning and teaching resources" (Townsend & Adams, 2009, p. 41). As a result, teachers generate new resources and strategies to meet the needs of their present group of students, and are not reusing the plethora of binders of worksheets, and slide presentations that came before which are guised as curriculum.

The reported benefits for teachers engaged in collaborative inquiry include: "improved teaching practices, increased confidence, enhanced collaborative skills, and a sense of empowerment (Diaz-Maggioli, 2004; Zeichner, 2003); plus a "greater awareness

and use of curriculum documents and assessment strategies" (Townsend & Adams, 2009, p. 41). For collaborative inquiry to be advantageous, the importance of culture arises, for relationships must be built upon trust and safety to engage in the inevitable debates arising through the inquiry process. Furthermore, essential in the structure of the relationships within PLCs is "interdependence…effective communication skills and a common language for conversations" (p. 43) which must envelop the entire school through the culture of shared vision, values, and goals (Townsend & Adams, 2009).

Collaborative inquiry arises through reflection of professional practice around the instructional core; it begins when a PLC develops a "compelling question about a chosen element…followed by a cycle of examination, experimentation, exploration, and public reflection (Townsend & Adams, 2009, p. 43). Townsend and Adams (2009) align with the aforementioned vision of Branson (2010) with respect to educators possessing reflective behaviours. Intentional reflection enables educators to become aware of their own biases (Townsend & Adams, 2009). To ensure intellectual engagement and reflection of all members, "the [PLC] process involves often lengthy and challenging conversations that reflect the values, beliefs and teaching philosophies of participants" (Townsend & Adams, 2009, p. 45). Further, the PLC process must include time to participate in debate, incorporate relevant research, and consult with external expertise to construct new pedagogical understandings (Townsend & Adams, 2009).

The process of inquiry must be job-embedded and context-dependent, with a focus on the quality of relationships and shared responsibility placed on all members of the PLC (Townsend & Adams, 2009). Townsend and Adams (2009) report that collaborative inquiries are a form of progressive PD, for they are known to provide

teachers with "intellectual experiences that are illuminative rather than prescriptive and empowering rather than coercive" (p. 42). Moreover, research indicates collaboration through PLCs can assist in diminishing the factors that lead to isolation of teachers in schools (Butler, Beckingham, Novak-Lauscher, & Jarvis-Selinger, 2004; Rogers, 2002). Townsend and Adams (2009) also stress the importance of documenting and reflecting on the results of the cyclical process, and they provide resources to assist the essential actions supporting the collaborative inquiry structure. Overall, the collaborative inquiry process through PLCs coalesces the:

> culture and history of each school. Norms and mores of acceptable professional behaviour, the role of professional development, the relative value participants place on collegiality versus collaboration, and the link between professional development are all critical factors when teams are creating a research question that is relevant and unique yet still aligns with school and district goals. (Townsend & Adams, 2009, p. 45).

Essential people: Educational leaders. Educational leaders are essential in the journey of change and improvement. Education has progressed through a history of leaders as managers; yet, as they shift to one of increased instructional leadership roles, the frenetic rate of change persists. Individuals in organizations require new qualities, and substantial diversification of roles through distributed leadership must occur. Distributed leadership implies a large shift of power within a political and bureaucratic structure to the notion of shared responsibilities among all layers of an organization (Townsend & Adams, 2009).

Through research in New York City public schools, Elmore (2000) contends that "instructional improvement…should be the primary focus of all educational leadership" (as cited in, Townsend & Adams, 2009, p. 65). In addition, the educational leader must nurture the landscape of the school with the purpose of "enhancing the skills and

knowledge of people in the organization, creating a common culture of expectations around those skills and knowledge…and holding individuals accountable for their contributions to the collective result" (Elmore, 2000, p. 15).

Townsend and Adams (2009) adapt the work of Goleman, Boyatzis, and McKee (2002b) to articulate the necessary which must be possessed by educational leaders. These include "self-awareness, self-management, social awareness" (p. 69), emotional intelligence, and relational intelligence (Townsend & Adams, 2009). These align with the aforementioned shifting traits articulated by Branson (2010). Townsend and Adams (2009) provide measuring tools for the passionate leader to apply reflection on leadership qualities possessed, and a continuum for improvement.

Townsend and Adams (2009) are critical of the plethora of meetings and professional sessions that pull leaders from their schools, warning that "a true indicator of the effectiveness of educational leadership should be time-on-task; specifically, the amount of time that leaders are engaged in activities with a direct link to student learning" (p. 63). Townsend and Adams (2007) strongly believe instructional leaders must ensure their focus is on the core business of education and student learning; thus, time "in classrooms and in conversations with teachers about teaching and learning" (p. 63) are tantamount to impactful educational leadership in the instructional core (as cited in Townsend & Adams, 2009). Further, an instructional leader is seen as a designer of learning responsible for intellectual engaging all educators, building the culture, nurturing the shared vision based on school and system goals, developing common pedagogical understandings, setting of instructional and assessment expectations, and fostering what it

means to engage in high quality teaching practice in the school (Barth, 2002; Crow, 2008; DuFour, 2002; Fullan, 2002).

The layers of instructional and distributed leadership must be beyond that of individual schools to the system level in order to create an organizational learning community (Townsend & Adams, 2009). The presence of leadership beyond the school is pertinent to my role as a facilitator of PL. Chappuis et al. (2009) describes a facilitator as an "advanced learner" (p. 58) who assists instructional leaders in selecting appropriate activities, readings, or provocations to elicit discussion, surface points of tension, engage in debate, and who has the ability to "steer team members through unfamiliar or complex concepts" (p. 58). Townsend and Adams (2009) believe districts must promote collaborative inquiry and distributed leadership through the clarity of shared vision and goals, a focus on learning, and apt measures of improvement. It is difficult to facilitate PL for facilitators must "walk a fine line between practices that support *bureaucratic accountability* and those that promote *joint responsibility*" (Townsend & Adams, 2009, p. 72). To be an effective facilitator, district leaders must utilize "strategies that integrate varying dimensions and facets of emotional intelligence" (p. 72) to the divergent contexts existing in the organization (Townsend & Adams, 2009). Further, facilitators must be artful in the timing and application of new strategies and initiatives to prevent the erosion of trust and forward momentum, by understanding and applying emotional intelligence to understand the history, morale, and context in which they are supporting PL (Townsend & Adams, 2009). To conclude, the educational leader must be focused on the instructional core, possess self-awareness, create and nurture a school atmosphere that

fosters a climate and culture of positive educational improvement. The facilitator must artfully assist the instructional leader in the journey of educational improvement.

Essential process: Professional development. PD, or what is now better understood as PL (Timperley, 2011), to better describe its cyclical nature, is viewed as the supporting element to the reflective, collaborative inquiry of PLCs. PL should no longer entail the traditional "sit n' git" (p. 84), teacher as "tabula rasa" (p. 84), never used, and "irrelevant and incongruent" (p. 85) to daily pedagogical practice (Townsend & Adams, 2009). The turbulent rate of change in society signifies "if there ever was a time when teachers could be content with their levels of knowledge and skills, and pay scant heed to the need for continuous learning, that time has certainly passed" (Townsend & Adams, 2009, pp. 83-84). Teachers as learners and reflective pedagogues engage in PL to support their effectiveness as practitioners, and to demonstrate and enhance "professional reflection and inquiry, willingness to learn and grow, and an unshakable commitment to student learning" (Townsend & Adams, 2009, p. 84).

The process of PL has its roots in Vygotsky's constructivist learning model (as cited in Fosnot, 1996) and socially-arbitrated learning (Townsend & Adams, 2009). PL encompasses adult learning which Edwards (2004) describes a group of adult learners intersecting at the point of PD and job-embedded inquiry (Townsend & Adams, 2009). The process of adult learning involves collaborative inquiry and intentional reflection on classroom practice by "engaging teachers in the same processes of continual learning and improvement that we ask our students to strive for in their work" (Chappuis et al., 2009, p. 60). Moreover, all adult learners need to inspect and foster "critical reflection" (Mezirow, 1990, p. 357) to address "their own taken-for granted assumptions"

(Townsend & Adams, 2009, p. 90). As adult learners examine and challenge their own biases, and those of others, they engage in a "learning process that eventually allows them to reconstruct a philosophy of teaching and forms of professional practice that resonate in greater harmony with their daily classroom experiences" (Townsend & Adams, 2009, p. 86). Townsend and Adams (2009) put forth the notion of teachers as "*reflective practitioners*" (Schön, 1983) to encapsulate the PL process. Brookfield (1986) asserts that the aim of relevant PL should be for "the nurturing of self-directed, [and] empowered adults. Such adults will see themselves as proactive, initiating individuals engaging in a continuous re-creation…rather than as reactive individuals buffeted by uncontrollable [external] forces of circumstance" (p. 10).

For schools to be effective, Townsend and Adams (2009) summarize indicators they observed through their research, which are elements that influence PL and teacher efficacy. Some of the indicators of effective schools entail: Teacher Professional Growth Plans (TPGP) linked to personalized goals connected to school-based goals; the notion of each staff member contributing to the aims of the school; taking the time to celebrate and honour achievements and personal growth; and the central focus on student learning (Townsend & Adams, 2009). Leaders in school improvement support professional learning through designing an organizational structure that sustains the goals and vision of the school. Further, leaders encourage, model, and guard the precious nature of adult learning, mediate conflict, move to engage the disengaged, and willingly challenge "colleagues whose attitude and behavior threatens the school's ability to accomplish its goals" (Townsend & Adams, 2009, p. 95). Overall, the instructional leader plays a

pertinent role in supporting and nurturing the PL that is part of the cycle of inquiry in PLCs.

Essential focus: Classroom practice. To comprehend the importance and central emphasis of the classroom as essential, all educators should embrace the larger vision and moral purpose of public and inclusive education. Teachers must possess emotional and relational intelligence, engage in learning as reflective practitioners around the instructional core, focus on quality instructional design and assessment, and share experiences openly with professional colleagues (Townsend & Adams, 2009). Thus, "more can be done to improve education by improving the effectiveness of teachers than by any other factor" (Wright, Horn, & Sanders, 1997, p. 63). When effective schools journey on the path of improvement, initiatives "reflect a form of teacher development that concentrates upon enhancing teaching skills, knowledge, and competency" (Harris, 2002, p. 99). Moreover, Townsend and Adams (2009) cite Marzano (2003) who states that a focus on three teacher-influenced elements of "instructional strategies, classroom management, and classroom curriculum design" (p. 103) impact student-learning outcomes (Townsend & Adams, 2009). Townsend and Adams (2009) warn, however, that teachers who focus exclusively on student behaviour are unable to relocate attention on instructional design and realize the interplay between design and student conduct.

To align collaborative inquiry with effective instructional design and assessment, Townsend and Adams (2009) propose a model centered on the appraisal of student learning through PLC that induces collaborative inquiry and growth around "classroom leadership, professionalism, professional growth, and ethical conduct" (pp. 110-113). Instructional and distributed leadership ought to promote intentional reflective practice

and offer direction or comments to educators (Townsend & Adams, 2009). The authors warn that the existence of collaboration must be nurtured and cannot be assumed to be spontaneous and effective. Townsend and Adams (2009) indicate that, as the cyclical inquiry process occurs, differences in values and perspectives on student learning will surface, and these tendencies must be engaged and examined to avoid "misunderstandings and unintended conflict" (p. 120).

Through instructional and distributed leadership, essential classroom focus can be supported by the interacting elements of the TPGP and classroom observations to reinforce, support, nurture, and model collaborative inquiry and reflective practice around the instructional core. I have been fortunate to work directly with Townsend and Adams; thus, I have had first-hand instruction on application of the TPGP (Adams, 2013), which provides the basis of the collaborative inquiry framework and supports the reflective process. The TPGP is built upon self-reflection of the knowledge, skills, and attitudes (KSAs) as iterated within Alberta Education's (1997) *Teaching Quality Standard Applicable to the Provision of Basic Education in Alberta* (TQS). Teachers and PLCs set meaningful and measurable goals for collaborative inquiry that align with school and system goals, with the assumption that school goals reflect the context of the school and learning requirements of students. An example of the TPGP template is included as Figure C1 in Appendix C (Adams, 2013). Townsend and Adams (2009) promote classroom observation in a distributed leadership model, where the lead learner observes and coaches learning either through video or in person. The three steps to observation of the reflective practice include the pre-observation conversation, where the teacher

articulates the focus of the observation, which likely aligns with a TPGP goal; an observation and data collection; and the post-observation conference.

Altogether, the interaction of TPGP goals, classroom observations, and coaching learning in the classroom assists reflective, research-driven pedagogical practice that can be impactful on student learning. Further, the focus on classroom practice centers the instructional design and assessment within the instructional core as the heart of all operations of the school.

Essential commitment: Evidence of school improvement. Townsend and Adams (2009) have outlined essential elements to successful school improvement that center on cycles of learning through collaborative inquiry, with professionals acting as reflective practitioners. The authors stress the documentation and gathering of evidence as the purposeful necessity to gauge improvement (Townsend & Adams, 2009). "Evaluation is an essential, integral component of all innovative programs" (Somekh, 2001, p. 76). Evaluation of the program can then be applied to increasing the likelihood of achievement and stability, and subsequent sharing of results between schools for increased cohesiveness within a school district (Townsend & Adams, 2009). The generative qualitative and quantitative data collection of student learning, teacher development, and metacognition must be stressed from the outset of each cycle of inquiry (Townsend & Adams, 2009). The intentional data collection functions to empower adult learners by providing them with the evidence to examine, reflect upon, adapt, and refine instructional practice (Townsend & Adams, 2009).

Townsend and Adams (2009) stress the importance of "evidence versus results" (p. 134), where results can be traditional and summative-in-nature, and evidence may

include measures such as "increased professional dialogue, enhanced professional learning…or changes in classroom practice" (p. 134). Townsend and Adams (2009) articulate the long-term benefits of evidence-informed decisions where improvement is founded on student learning by stating: "schools become more likely to adopt practices and create structures that are sustainable because they adapt their existing cultures based on persuasive evidence of the positive results of the goal-focused work in which they are engaged" (p. 133). Last, Townsend and Adams (2009) articulate the necessity to provide ample time for reflection and adaptation to school improvement initiatives for optimal sustainability. Reflection has significant meaning to me as a facilitator, for I must be cognisant of misunderstandings and miscommunication that might arise, prevent them if possible by ensuring a framework for coherence is provided, and further, ensure ample time is given to reflect and adapt to new initiatives and make sense of them in the context of each teacher in each school.

To conclude, Townsend and Adams (2009) describe essential elements to school improvement, which are PLCs focused on: classroom practice, instructional design and assessment; engagement in collaborative inquiry; ongoing and supportive PL and action research; and guidance by instructional leaders through a distributed leadership model.

Timperley: Teacher as Professional Learner

The third scholarly text reviewed represents a connection to the work of the educational philosopher Branson (2010), and a deepening of the collaborative inquiry cycle, and teacher as reflective practitioner presented by Townsend and Adams (2009). Timperley's (2011) book, *Realizing the Power of Professional Learning*, contributes themes to guide meaningful educational change that embrace the development of

adaptive expertise through continuous *iterative cycles of inquiry.* Timperley (2011) articulates the iterative cycle of inquiry to embrace: the necessity to concentrate on student learning; a focus on a new vision of professionalism to include the development of new learning opportunities for students through collaborative and reflective PLCs; and a mindful shift from traditional PD to job-embedded PL. Further, Timperley (2011) emphasizes the subsequent shifts and resulting implications required by educational leaders to spearhead sustainable and meaningful change. Through articulation of the thread of leadership from the district-level to school-based leadership, Timperley (2011) outlines the requirements to guide, promote, and facilitate PL and pedagogical practice for teacher and student engagement, learning, and well-being.

Iterative cycle of inquiry: Focus on students' knowledge and skills. There is a necessity for a substantial shift to educational practice and professionalism to solve deep-rooted educational issues, rather than the historical tendency to make "additive changes to teaching practice" (p. 5), which lacks coherence and the profound, meaningful change required by contemporary society (Timperley, 2011). The educational community must embrace PL through systematic and reflective inquiry by critiquing instructional design and assessment (Timperley, 2011). The ultimate objective of a reflective and iterative cycle of inquiry is for students to achieve engagement, well-being, and the ability to become self-regulated learners (Timperley, 2011).

Timperley (2011) connects the intentional and reflective practitioner to a modern vision of professionalism, one where "student learning and well-being are not a by-product of professional learning but rather its central purpose" (p. 5). The student is the essential precondition for framing the iterative cycle of inquiry, for "their engagement,

learning and well-being" (p. 10) are the central purpose of education (Timperley, 2011). Thus, "evidence about students, their learning and well-being form the touchstone for teaching and learning in ways that challenge existing assumptions" (Timperley, 2011, p. 8). Reflection is promoted with a detailed description of the iterative cycle of inquiry, where evidence from student learning is linked directly to pedagogical practice and teaching, with the key purpose to gain new methods to solve persistent problems, while addressing the learning needs of all students (Timperley, 2011).

Teachers enter the "*inquiry and knowledge building cycle*" (p. 40) to address the learning needs of their current students (Timperley, 2011). Collection of information for PL and teaching represents a shift from "grouping, labeling or credentialing students" (p. 14), to the professional responsibility to "contextualize the class in front of you" (Timperley, 2011, p. 13). Finding out about students involves an approach to profiling students that might appear rote and superficial, without intentionally speaking to the assumptions held by the teachers. Examples of prompting questions are provided, such as, "what do they already know? What do they need to learn and do?" (Timperley, 2011, p. 13). Assessment is intended to move from filling out learning style questionnaires to the necessity of involving layers of formative assessment, combined with specific pedagogical content knowledge throughout the entire school year. It is important to stress collection of student knowledge and skills must include high-quality data from a vast range of sources, for PL develops from the collected evidence guides pedagogical decisions (Timperley, 2011).

Timperley (2011) addresses the collection and interpretation of evidence of students' knowledge and skills when speaking to the personal theories that are held by all

educators. People are prone to interpret evidence based on socially constructed theories, which may contain unknown bias (Timperley, 2011). Personal theories can influence the image of the child – how they learn and how to teach them, and what evidence leaders and teachers choose to collect about students (Timperley, 2011). Thus, leadership must be intentional and explicit to surface, debate, and "unpack these assumptions for teaching and learning" (Timperley, 2011, p. 41). Upon reflection on students, leaders and teachers can ask themselves what knowledge and skills they need to meet the requirements raised by the "individual or groups of students, particularly those not achieving as well as others" (Timperley, 2011, p. 10).

Iterative cycle of inquiry: Professional learning to enhance teacher knowledge and skills. The key motivator to shift pedagogical practice arises when there is applicability of PL experiences to a current "problem of practice, or to improve a particular outcome for students" (Timperley, 2011, p. 47). Teacher inquiry and knowledge building must involve the thread of leadership from school-based distributed leadership, to the instructional leader, to district-level leadership in simultaneous iterative cycles of inquiry centered upon student and teacher learning needs. The "deepening of professional knowledge and refining skills is fundamental to change and improvement" (p. 59) in pedagogical practice (Timperley, 2011). The second stage in the iterative cycle of inquiry involves stratums of complexity within a PL structure. First, the identification of teacher learning necessities must be in response to the specific learning requirements of students (Timperley, 2011). Second, the teacher inquiry to deepen professional knowledge must occur in a collaborative learning community, with professional colleagues.

Timperley (2011) expresses the best conditions for developing deep knowledge is through intentional collaboration and the resulting social construction of knowledge. When student work is presented to a collaborative group of educators, they can debate, discuss, acquire new knowledge and skills, and apply new strategies to meet the needs of students. If they are unable to surmise solutions, teachers can then seek out external expertise or PL experiences to enhance knowledge and skills with the intention of adjusting pedagogical practice (Timperley, 2011). The iterative process, described by Timperley (2011), parallels the aforementioned PLC process and adjustment cycle used by the MSB. Teachers participate in PL to meet learning needs identified in the iterative cycle of inquiry. Timperley (2011) suggests that care must be exercised ahead of PL, for, if educators "move directly into developing knowledge without establishing student and teacher learning needs, there is little evidence changes in entrenched patterns of student engagement, learning and well-being" (p. 59) occur.

An additional factor Timperley (2011) emphasizes is the significance of teachers' pedagogical content knowledge. It is essential to understand concepts deeply to possess the ability to predict, respond to or analyze misconceptions, and adjust teaching strategies (Timperley, 2011). If conceptual understanding is strong, teachers respond intelligently when adjusting practice to fortify students' deep understandings and knowledge integration of key concepts in learning (Timperley, 2011). This issue of misconceptions is prevalent in educational literature and perhaps best summarized in Hattie and Anderman's (2013) amalgamation of research, the *International Guide to Student Achievement*, where Vosniadou and Panagiotis (2013) surface the requirement for deep pedagogical content knowledge when students are presented with increasingly difficult

concepts, which often results in fortification of misconceptions in science class. Specifically, Vosniadou, Vamvakoussi, and Skopeliti (2008) surmise that "when exposed to counterintuitive scientific explanations, students use the usual constructive, implicit learning mechanisms to incorporate new knowledge, [and] in the process create fragmentation and misconceptions" (p. 51), which can amplify over subsequent years of schooling (as cited in Vosniadou & Panagiotis, 2013). Thus, deep pedagogical content knowledge is an essential factor for applying formative assessment to surface misconceptions, and sustaining student learning, engagement and well-being.

Leadership through iterative cycle of inquiry. There are immense implications for leadership if there is to be a successful transition to PL that focuses the heart of all school operations around the instructional core. Timperley (2011) outlines the requirements for school-based distributed leadership, instructional leadership, and district-level leadership, which entails facilitation through PL opportunities and classroom observations with pedagogical coaching. Internal leadership, specialist expertise, and facilitators fortify teachers' learning, which thereby strengthens the larger learning community within an organization and accompanying partnerships.

PL is effective when teachers are able to respond to their students by identifying their own learning needs, which is based on the iterative cycle of inquiry (Timperley, 2011). Timperley (2011) stresses this often requires the assistance and support of leaders or learning coaches within the school or external facilitators and expertise. Caution is required for the identification of problems of practice and subsequent conversations "can touch raw nerves…[and] can impinge on teachers' sense of professional identity and competence" (Timperley, 2011, p. 6). Consequently, PL cannot be imposed; it must be a

generative process deeply rooted in student and teacher learning needs. In my professional experience, the "art" of guiding professional learners by "planting a seed" requires emotional and relational intelligence and the ability to subtly guide learners to self-generate the idea. It does happen successfully if the facilitator or leader is artful, although the consequence is that change takes much longer than the "thou-shalt", or "I told them" approach.

PL must be explicit and engage prior philosophies, uncover theoretical biases linked to pedagogical practice, and develop deep factual knowledge (Timperley, 2011). By revealing discrepancies between theory and practice, biases and assumptions can be surfaced, wise reflection can be applied, and shifts to cognitive frameworks can occur (Branson, 2010; Timperley, 2011). Educators can therefore "understand the fundamental difference between what is proposed and their current practice" (p. 58); otherwise, incongruities between existing and proposed practice are over-assimilated into current frameworks and only the illusion of deep and meaningful change occurs (Timperley, 2011).

Timperley (2011) warns educational leaders when she cites Donovan, Bransford, and Pellegrino (1999): "in professional learning situations, if initial understandings are not engaged…[teachers] may fail to grasp new concepts and information that are presented or may participate for purposes of compliance but revert to their preconceptions once back in the classroom" (p. 28). Such a statement has significant importance for leaders of educational change, and it parallels the aforementioned pertinence of Branson's (2010) notion of the reflective and wise practitioner. A false impression of understanding forms if teachers' prior knowledge and beliefs are not

surfaced and engaged. The subsequent impact on pedagogical practice is, as Timperley (2011) cites Hammerness et al. (2005):

> Teachers usually adopt new ideas at a superficial level only, while *believing they understand more deeply* [emphasis added]…this happens because they interpret new ideas in terms of their existing cognitive frameworks and believe their existing practice is more similar to the new ideas than it really is…[as a result,] they just superficially tweak [pedagogical practice]. (p. 27)

It is essential for teachers to have access to external experts, either through PL sessions in the broader community, or as provided through the district (Timperley, 2011). External expertise can convey a "new lens to the interpretation process and can also help challenge existing social norms within groups, especially where those norms are directed to reinforcing rather than challenging the status quo" (p. 86). In my role as facilitator, I must heed the advice of Timperley (2011) who warns that there are differing perspectives when approaching PL. First, the facilitators often take the perspective that the learners have plenty to learn and change in their practice. Second, teachers feel they have nothing to learn from the outsiders. Thus, relational and emotional intelligence and the ability to cater PL to meet teachers where they are at, and where they require PL, are essential. Additionally, it is a critical skill for facilitators to have the ability to ascertain the learning needs of teachers, which often comes through conversation with leaders or the teachers themselves (Timperley, 2011).

Traditional PD initiatives rarely lead to adjustments of teaching practice to meet the needs of students (Le Fevre, 2010). The larger vision articulated by Timperley (2011) is to move away from a traditional form of PD to one where PL is embedded in the iterative cycle of inquiry, to meet the needs of both teachers and students and where facilitators personalize the learning to meet specific needs. Further, PL integrated and personalized into the iterative cycle of inquiry must result in modifications to pedagogical

practice (Timperley, 2011). Teachers cannot engage in learning experiences applicable to their students without learning, adjusting, and adapting. The intentionality of professionalism is essential, for to return to the classroom without adjustments to fulfill the needs of students is antithetical to the ideal of an evolving and professional practitioner (Timperley, 2011).

Timperley's perspective on student well-being and persistent references to students who are unsuccessful in traditional schooling speak strongly to me, for nearly thirty-percent of students in the MSB do not meet the ultimate goal of the *Three-Year Plan*, which is the successful completion of high school (Calgary Board of Education, 2013d). By centering learning on the student, it should no longer be adequate to indicate students did not learn through the opportunities provided. In its place, PL, in an inclusive setting, entails the creation of "conditions where everyone learns including leaders, teachers and students" (Timperley, 2011, p. 6). Timperley (2011) states:

> to inquire into students' learning needs and one's own learning needs as a professional, only to be confronted with a set of scripted lessons for either themselves or their students, would be antithetical to the values of professionalism…and the research on how people learn. (Timperley, 2011, p. 170)

Leadership supporting the instructional core, pedagogical improvement, and new learning opportunities for students. Leaders of each school-based PLC and the administration have the imperative responsibility to be instructional leaders. Leadership entails: nurturing culture, vision, and an intellectual learning community; managing the surplus of demands to ensure educators comprehend the coherence of initiatives; modeling iterative cycles of inquiry; and leading and provoking debate to surface and challenge personal theories of practice. Further, leaders must guide and provoke the understanding of intellectually engaging pedagogical practice; co-construct instructional

design and assessment through classroom observations while acting as a learning coach; and assist the gathering of evidence through classroom observations. Until school-based leadership is able to shift from solely managerial roles, challenge current pedagogical practice, and act as authentic instructional leaders, there will be no change. Schools and educational districts that never let go of the shores to enter the river of change and improvement will become irrelevant to society.

Timperley (2011) outlines the classroom observation and learning coach process, which parallels that of Garmston, Linder, and Whitaker (1993); MacKinnon and Pynch-Worthylake (2001); Townsend and Adams (2009); and promoted by Alberta Education (2014). The process revolves around the iterative cycle of inquiry and the identified problem of practice. The stages of coaching learning entails: engaging in a pre-classroom observation conversation with the teacher that is designed to co-generate the parameters of the classroom observation; the classroom observation; debrief and analysis with the teacher; and reflection on the effectiveness of the observed teaching practice on student learning and engagement (Timperley, 2011; Townsend and Adams, 2009). Support in the form of exemplar questions, are provided by Timperley (2011), which are designed to elicit reflective practice, deepen knowledge, and probe "teachers' existing beliefs" (p. 131). In the reflective space, through deliberation, there is a promotion of "learning and changes to practice in the interests of students" (Timperley, 2011, p. 117). Timperley (2011) reports "teachers have consistently rated these [post-observation] conservations as having a powerful influence on their professional learning" (p. 126).

In summary, the teacher inquiry phase of the iterative cycle requires intentional reflection of biases and assumptions, strong instructional leadership, and the support of

external expertise and facilitation. Imagining a shift in instructional leadership within a school would evolve the present roles and responsibilities and align the vision of schooling on teacher and student learning, engagement, and well-being. As leaders act as instructional leaders, they enhance their own abilities and cultivate the adaptive capacity of the entire school learning community (Timperley, 2011). Further, the relationship between the educational organization and individual expertise assists in fortifying culture and shared vision, and a common language and understanding develops, as all learners strive to deepen knowledge and refine skills simultaneously from the classroom to all levels of the educational organization (Spillane, Halverson, & Diamond, 2004). Timperley (2011) indicates that engagement in the iterative cycle of inquiry must lead to the evolution and application of new learning opportunities for students, and the collection of relevant information to ascertain the effectiveness of the new applications.

Data collection. As teachers adapt pedagogical strategies to meet the current needs of their students, there is a requirement to verify the impact on student learning through intentional data collection throughout the iterative cycle of inquiry (Timperley, 2011). Teachers are then provided with concrete information to reflect upon, to determine subsequent actions in the "next iteration of the inquiry and knowledge-building cycle" (Timperley, 2011, pp. 88-89). The analysis of progress focused on pedagogical practice is the constitutive focus for developing professional self-regulation, which is a fundamental factor for deep and meaningful learning (Timperley, 2011). As teachers and leaders continue to engage in ongoing iterative cycles of inquiry in the instructional core, they are generating the skillset of adaptive expertise essential for the postmodern educator (Timperley, 2011).

Becoming an adaptive expert. Through active engagement in the iterative cycle of learning, adaptive expertise can be developed. Timperley (2011) outlines the iterative cycle to include the following key stages: gathering of information regarding students' knowledge and skills; identifying teachers' knowledge and skills; deepening professional knowledge in targeted areas; providing new learning opportunities for students; assessing the outcomes; and re-engaging in the process. Such a process highlights the importance on focusing on the instructional core and the personalization of learning articulated in the MSB's *Three-Year Plan*. Through the iterative cycle of inquiry, educators form new partnerships, create new frameworks to advance their knowledge and skills, uncover assumptions of thought, cultivate instructional practice, deepen knowledge, generate new knowledge, and adjust and enhance instructional design and assessment strategies (Timperley, 2011).

Teachers develop adaptive expertise and acquire the flexibility to pursue expansion of their intelligence regarding teaching strategies (Timperley, 2011). Timperley (2011) states that rather than developing "routine expertise" (p. 12), in the traditional sense, teachers and leaders develop adaptive expertise through the iterative cycle of inquiry to "retrieve, organize and apply professional knowledge" (p. 11) in response to the dynamic changes in the classroom. The practice of developing adaptive expertise is a lengthy endeavour requiring the aforementioned reflective spaces for metacognition, application of new teaching opportunities for students, and development of self-regulated learning by teachers (Timperley, 2011). Bransford, Brown, and Cocking (2000) found that "learners become metacognitive and self-regulated through developing

their own learning goals and monitoring their own effectiveness" (as cited in Timperley, 2011, p. 73).

Timperley (2011) speaks of deep and meaningful change and warns that we should not be deceived with shallow change to practices often observed within shorter time frames, for the superficial nature does not surface and confront the "deep entrenched problems with students engagement, learning and well-being" (Timperley, 2011, p. 17). Significant changes, through the continuous iterative cycles of inquiry, require fortitude and time to enact the envisioned shift in teaching practice. The evolution of pedagogical practice and the process of implementation where teachers "try things out in practice" (p. 18) are initially only partially comprehended (Timperley, 2011). From initiating new pedagogical strategies, new issues arise and adjustments must be made and applied through subsequent iterative cycles of inquiry (Timperley, 2011). Eventually, with sufficient time, adjustments, effort, and high levels of professionalism, teachers "deepen their understandings, retrieve knowledge more easily and enact their skills in the face of daily classroom challenges" (Timperley, 2011, p. 17).

The concept of an adaptive expert, to develop the disposition to inquire, and to engage in iterative knowledge-building cycles is at the core of teachers' professionalism (Timperley, 2011). The original notion of an adaptive expert was put forth by Hatano and Inagaki (1986) in Japan, and enriched by Timperley (2005) in the United States. Timperley (2011) suggests the image of the adaptive expert entails: deep discipline content knowledge; innovative and diverse instructional strategies; the ability to understand and question the assumptions behind practice; expertise in "retrieving, organizing and applying professional knowledge in light of the challenges and needs

presented by students" (p. 88); reflection on daily impact on "students' engagement, learning and well-being" (p. 88); attentiveness to the assessment of students "on relevant attributes over both short and long time frames" (p. 88); and the ability to recognize the requirement for assistance.

Iterative cycle of inquiry for all leaders. Principals have a moral obligation to work with all teachers, regardless of resistance, if deep and meaningful change is to be created for the benefit of all students (Timperley, 2011). Timperley (2011) puts forth a notion of professionalism where "patches of brilliance for the engaged and mediocrity or worse for those who are not" (pp. 22-23) is unacceptable. If principals situate themselves as the lead learners engaging in the iterative cycle of inquiry and nurturing the adaptive expertise of their teachers, then meaningful change is possible and sustainable (Timperley, 2011).

PL must cut across all levels of an educational organization to guide the focus on the instructional core and student learning, engagement, and well-being (Timperley, 2011). Adaptive expertise through multiple and simultaneous iterative cycles of inquiry would result as a system focused on addressing meaningful change for all learners (Timperley, 2011). Systems with "few important strategic" (p. 183) imperatives have the potential of developing high adaptive expertise, as they are able to center on student learning as the central purpose of all PL (Timperley, 2011). As mentioned previously, such a strategy was applied in Fall 2013 when the MSB outlined five strategic imperatives to focus and guide the system (Calgary Board of Education, 2013a).

To conclude, adhered to the application of the iterative cycles of inquiry Timperley (2011) promotes at all levels of the educational organization. The ability to

constantly reflect and inquire is pertinent to my present role as facilitator of learning. Timperley (2011) provides insightful lessons through which I can ground and guide my leadership work in facilitating and promoting meaningful educational change in the MSB.

Results

The following section of this paper will summarize my work in three schools: RDJH, BRS, and MRJH. Important factors common to all schools will be outlined, which I have identified as essential in successful and meaningful facilitation. I will articulate the goals outlined at each school, catalysts for change specific to each school, where they are at, and what is envisioned as next steps as we journey together down the river of meaningful change. Finally, I will outline a vision of a strategic plan and applied resources to evoke educational change and improvement.

Common Factors

The common factors underpinning the beginning of my facilitation of pedagogical practice at the three schools include the presence of new administration, responses to a system initiative, and personal connections at each site. First, all three principals have now been in their respective schools from six months to two years. Through interactions and observations, I surmise all three understand the concept of instructional leadership and envision themselves on the journey to lead practice and PL around the instructional core. Second, the requirement to meet the transitional plans for the system initiative of a new September 2014 outcomes-based report card was a substantial factor in the request for external expertise and facilitation from Curriculum Services. Further, a personal connection to each school contributed to enhanced professional credibility as I acted as an external facilitator to learning. Thus, I was not seen as yet another person “doing

something to them"; I was present to collaborate, guide, and mentor change and improvement. Last, I cannot ascertain whether it is a mere coincidence or a reflection of a cultural element of each school and standards of professionalism, but all three schools contain one to two members of my PLN. As previously mentioned, this long-running science PLN meets monthly outside of school time, without any financial compensation, to share pedagogical experiences in science. Although beyond the scope of this paper, I suggest further studies of readiness factors to surface relevance, importance, and impact of an external facilitator on educational change and improvement.

School-Based Results and Improvement

Red Deer River Junior High. The junior high of Red Deer River has been on the journey of improvement for several years through its previous and present principals. In August, the Principal, two Learning Leaders, a colleague from Curriculum Services, and I met to outline the PL goals for the year. The staff wished to continue along the assessment continuum by incorporating a personalization of learning tool to assist in making student metacognition visible. Other goals included: transitioning to new report card stems; shifting from traditional multiple choice final examinations in science and math to performance-based assessments; developing a school-wide, competency-focused, critical-thinking rubric; and ongoing work centered on instructional design. We decided to incorporate the Townsend and Adams' (2009) inquiry-driven TPGP for the purpose of self-reflection on the KSAs in the TQS, goal-writing that aligned with the school's development plan, structured in a way that allowed for meaningful collection of evidence around student learning, engagement, and well-being. An additional support was provided through a school-based Learning Leader who is a member of the science PLN in

the rollout of this new format to the TPGP. Upon reflection and observation, I feel more facilitation is required to connect the TPGP with instructional design and assessment improvements throughout the school year in all PLCs in the school.

The overarching catalyst for the school's goals align with two of MSB's strategic imperatives: first, a tool designed to surface student metacognition; second, the transition to outcomes-based reporting, and subsequent impacts on instructional design and assessment. The staff were well equipped to transition to both the metacognition tool and new report card stems for each built upon coherence with previous PL. Last, with my external facilitation, the Principal has infused a reflective element to ensure pedagogical changes are well understood and result in meaningful change, as suggested by Branson (2010) and Timperley (2011).

Part of my focus for the school-year was to transition reluctant leader and Assistant Principal, Adam, into a more substantial role in facilitating PL for the staff. The year commenced with me presenting and facilitating the PL, after establishing the path with the Principal. Planning for the second PL session was, again, only with the Principal, however, we strategically turned the reins over to Adam in the afternoon of the day to enable him to act as leader. Our strategy paid off and he responded positively. The next planning session included themes outlined by Angela and myself, and included Adam. At this session, I informed them that due to my surplus of duties, my expertise was required at other schools and they would have to lead the PL day. Following the PL day, we debriefed and scheduled a pre-planning session for the next PL day. To my surprise, Adam had transitioned from reluctant leader to one who accepted a leadership role for the upcoming session. Prior to my arrival, he had planned and outlined the PL experience for

his staff around formative assessment. Although he required some of my input, the day was well outlined and I felt he did not require my further support. The PL day was successful and initiated the focus for continuing adjacent work on understanding all learners in the building, the connection to formative assessment, and the visible-thinking tool used by the school.

Due to my reflection upon the works of Townsend and Adams (2009), Branson (2010), and Timperley (2011), I conclude that RDJH is well engaged along the river of change and improvement. The school represents a class three river for it emits a positive energy of transformational change that is coupled with tension as a result of the frenetic pace and surplus of duties for the teachers. Reflection on the scholarly texts has enabled me to see that there is still a long way to go. Upon discussion with the administration, we must continue to focus on the instructional core and teacher effectiveness. One area of focus that remains elusive is the iterative cycle of inquiry in the PLCs at the school. Teachers and Learning Leaders engage in study around student learning outcomes, but do not consistently gather evidence. I will also strive to further enhance the instructional leadership through the Learning Leaders within each PLC. Further, as the school moves to performance-based assessments for the end of the year, it will be imperative to reflect on evidence gathered around the new report card stems.

Additionally, work with the science and mathematics team has elicited the need to surface personal theories regarding summative and cumulative assessment and reporting as it relates to the new report card stems. Through my own cycle of inquiry with my team in Curriculum Services, I have sought support to engage the administration in the debate around cumulative mark reporting in June before surfacing the debate with the staff.

Overall, I appreciate the positive nature of the building, the essence and energy of the learning community that has been established within the school centered on the instructional core, which connects more broadly to Curriculum Services.

Bow River School. My facilitation at Bow River School began in the Spring 2013. I met with the Principal, Michael, and we outlined the goals for the school, which included: development of a shared vision, transition to authentic PLCs, and continued focus on instructional design and assessment. There were two main catalysts initiating my work at Bow River School including: the goal of elevating the pedagogical practice at the science school; and, the transition to the outcomes-based report card. The shift in reporting to include competency-focused outcomes surfaced the need to place an emphasis on formative assessment strategies, and instructional design within the instructional core, particularly for the junior high teachers.

Change and improvement has been slow at BRS, as the Principal has faced dissonance and misunderstanding amongst the junior high teachers. It has been essential to apply the reflective element asserted by Branson (2010), Timperley (2011), and promoted by Townsend and Adams (2009), to surface personal theories and assumptions. To support the journey with BRS, we began using reflective journals with all staff to record notes, thoughts, and reflections at all PL sessions. We included the element of the free-fall write, which I had learned through my work with Townsend and Adams. The seminal work on the free-fall writing technique was by Brande (1934) and it involves three phases. The entire process is initiated by a provocative and intellectually stimulating writing prompt. Writers are instructed to clear their minds, and keep their pen moving on the paper, and simply write. When blockages arise, writers are advised to keep their pen

moving on the page by drawing random lines or writing random words if necessary. The idea is to let free flow writing surface onto the paper. The first phase ends when, after a pre-determined period of time, the writer stops. The second phase entails the writer re-reading what they wrote, highlighting common themes, words, or passages. In the last phase, if trust is present, the writer shares and discusses the outcomes and insights from the free-write with one or more professional colleagues.

Free-fall writing was used to surface the teachers' personal theories and engage in debate on topics such as: what a science school should look like, theories of assessment, and assumptions regarding the instructional design for intellectual engagement. Further, the surfacing of personal theories assisted in guiding the next steps in our iterative cycle of inquiry, which enabled me to gather support from my colleagues in Curriculum Services, support the Principal with the theory, and share experiences with similar issues at other schools in the jurisdiction. Thus, our PL planning attempted to balance reflective practice with enhanced focus on the application of pedagogical theory in the classroom.

PL opportunities have included the development of a shared vision for the science school, which was translated into each grade-level PLC. The application of the inquiry-driven TPGP was met with less success. Upon reflection, poor time management resulted in the rollout to Learning Leaders occurring without Michael's presence and full comprehension. In retrospect, we should have waited another year. I feel the TPGP connects strongly to the larger work required in PLCs. I believe the unequal rollout of this TPGP was the result of unfocused PLC meeting times on Friday afternoons. Stating this, the TPGP is being used quite efficiently in the elementary grades, including the classroom of a science PLN colleague.

Overall, BRS still has a long way to go. Future strategies include continued focus on instructional design and assessment with immediate focus on the development of more effective PLCs, including appropriate placement of Learning Leaders within them to envision effective distributed leadership. Another element that arose through my work with Michael was the opportunity to consult with Dr. Pamela Adams of the University of Lethbridge. Through structured questioning, Adams enabled Michael to articulate the true goal of his work: to be an instructional leader in his classrooms. In conclusion, future strategies must include: nurturing PLCs; distributed leadership, where Learning Leaders act as learning coaches within PLCs; and sustained focus on instructional design and assessment.

Milk River Junior High. The stimulus for external facilitation at Milk River Junior High was a system-led, outcomes-based reporting session in early November, 2013. At the session, our Chief Superintendent, and Area Directors articulated the requirement of a transition plan for the full rollout of the new reporting method in Fall 2014. Shortly after this session, Curriculum Services was contacted for support. At an initial meeting with the Principal, Assistant Principal, and a colleague from Curriculum Services, and myself, the culture of the school was outlined, and we determined the broad objective: to prepare staff for the new report card stems. Through my own iterative cycle of inquiry, and in consultation with the Principal, the first step was determined. We determined that we must first meet with the school's entire leadership team, for there was a belief that the report card initiative was another add-on to teacher's practice. Through debate and discussion, I outlined the context and development of the initiative in an effort to guide coherence to previous initiatives the school had not taken up. Other initiatives

the school had not engaged in included: evolution of transitions from didactic teaching methods, formative assessment, the so-called 'new' 2007 Mathematics Program of Study, CTF, and antiquated and punitive reporting. The discussion centered on the intellectual engagement and significant below-grade level achievement in reading and mathematics. Out of the conversation arose personal theories on grading, assessment, and the pedagogical approach of lecture and student as *tabula rasa* prevalent in the school. Subsequently, the topics such as poverty and accompanying social issues for students; image and potential of the child, instructional design misconceptions based on pre-loading of information prior to engagement in higher order thinking tasks as related to misconceptions *Bloom's Taxonomy* arose (Case, 2013). Fortunately, three Learning Leaders understood the imperative for change, and they were significantly provoked by the debate and ensuing conversation. They realized their school had existed in a silo and needed to evolve.

Following the meeting with the Learning Leaders, I met with the Principal and Assistant Principal. We debriefed and outlined next steps, which included further conversations with the identified leaders amongst the leadership team. Out of this arose the design of PL series, where staff elicited personal theories of grading and assessment, and one Learning Leader modeled how he had evolved his practice to incorporate the new report card stems. On a concentrated PL day, several members of Curriculum Services met with each curricular team to explore the incorporation of the report card stems into practice and the shift required. From a science perspective, this work entailed four separate sessions with the science team before transition to the theory of the new stems was observable. I was met with anxiety, anger, and frustration, which required

perseverance. Ultimately, I observed moments with all teachers when the tension dissipated, a point of comprehension was reached, and they let go of the banks of the river to engage in the evolution of educational improvement.

Overall, I believe we have just begun the work at MRJH, and a long journey remains ahead. There are several factors that must be addressed to shift the school to increasing intellectual engagement and academic performance within the instructional core. In Alberta, the Milk River is cloudy due to excessive silt which parallels the school that needs to gain clarity around academic and intellectual engagement. I will continue to meet and apply my adaptive expertise in order to respond to the needs of the school as we outline next steps. My overall goals with the administration is to improve intellectual engagement and academic performance through instructional design, establish student metacognition through assessment, and shift structures at the school to accommodate a functional model in order to address significant academic deficiencies. Certainly, these goals encompass many years of sustained focus, but it is our moral obligation to meet the needs of all students in our system, and these precious ones deserve better. The journey will be long and challenging; still, MRJH must fully let go of the shore and enter the river of educational change and improvement.

Strategic Plan

The following section of this paper will describe the strategic plan of navigating the river of change. I will outline some of the powerful resources I have applied that assist in surfacing personal theories and assumptions; and others that guide rich, relevant, and intellectually engaging instructional design and assessment for student and teacher learning, engagement, and well-being.

I enter my role as facilitator of educational change and improvement with an understanding of the precipitating structures and processes essential for growth, while acknowledging the strategy cannot be summarized easily, for it is a non-linear and personalized process (Timperley, 2011; Townsend & Adams, 2009).

Timperley (2011) notes that the iterative model for improvement is nonlinear; therefore, I must exhibit adaptive expertise to personalize my response to teach context, and not enter with pre-conceived plans that may not meet the learning needs of each school. The personalization of response must adjust each school's journey by reframing the collaborative strategic plan with administrators in response to the perceptions of teachers, and their individual reactions to change. Although it would be extremely beneficial to a reader to articulate an outlined approach, I will not be doing so, for this negates the unpredictability and personalization that must occur when facilitating change and improvement. Branson (2010) supports this position, for no simple blueprint exists and "the specific realities associated with each change are so unpredictable that it is a total impossibility to publish every possibility" (p. 76).

At the outset of any new relationship with a school, I must work collaboratively with leadership to ascertain a starting point. I must parallel this with an astute awareness of the end goal and vision for the system, regardless of the level of comprehension at the school. Timperley (2011) surmises one cannot initiate change until the learners are ready. Thus, a reflective space must be created to surface and engage personal theories, biases, and assumptions that occur at all levels of the school. Through leadership and artfully provoking conversations, where one assists in surfacing alternative theories and perspectives, the start point for any school must ultimately be built upon strengths

(Branson, 2010). Branson (2010) identified the fortes area as the place to plant the "seed for growing" (p. 73) the idea. The strength area is where the fertilizer lies and is the optimal location for growth. Thus, growth can be nurtured and not imposed, intrinsic motivation can be elicited, and coherence can be made between educator's perspectives in the educational setting to that of the entire system. "A new idea arises…[and] a new professional understanding that has perceived beneficial outcomes" (Branson, 2010, p. 73).

Overall, the start point arises out of a focus on the instructional core, determining the students' needs, and what skills, knowledge, and personal assumptions the teachers possess. Further, I must participate in my own iterative cycle of inquiry and development of adaptive expertise with a PLC at the system level. I must engage my own personal theories, for they ultimately filter my perception of each school, leadership team, and teachers. Branson (2010) supports the concept of adaptive expertise stating, "agility, intelligence, and wisdom are required to respond to the incessant barrage of frequent, unplanned changes" (p. 115). Wheatley (2006) articulates I must possess the ability to be nimble and flexible in response to school needs, when she puts forth the notion of acquiring new skills, "instead of the ability to analyze and predict, we need to know how to stay acutely aware of what is happening now, and we need to be better, faster learners from what just happened" (p. 38). Thus, in strategic planning, I must exhibit adaptive expertise, be present, and respond to the specific needs of each school; I must not enter situations with scripted outcomes to achieve.

A visual representation of the meaningful change and improvement strategy I developed to represent my understanding of the research, and the vision of the eco-

pedagogical ecosystem with interconnected and dynamic learning communities centered on the instructional core can be found in Appendix D as Figures D1 through D5. The elements of the approaches are present in the flow of the river, and include three iterative cycles of inquiry. The three cycles of inquiry that form the interdependent relationships in the larger learning community ecosystem include three areas of focus. First, the school-based student, teacher, and content centered on the instructional core; which is supported by the distributed leadership, within each PLC engaged in instructional design and assessment reflections. The school-based PLCs focused on the instructional core are situated upstream. Second, the school learning community led by the instructional leader. The instructional leader engages in an iterative cycle of inquiry centered on both the culture, vision, pedagogical leadership within the school learning community, and on the PLC experiences connected to system facilitators, experts, and leaders. The instructional leader cycle of inquiry leads the school-based PLCs down the river. Last, the system leadership and facilitators who engage in iterative cycles of inquiry at both the school and district level to influence meaningful change in the instructional core, within school learning communities, and align coherence and common vision as the larger ecosystem. The system-level facilitators and leaders guide the journey down the river of change and improvement.

Upstream lies the instructional core, which is where all guidance down the river is focused; it indicates the intimate connection between the student and the teacher. Strategies within school-based PLCs include reflective practice centered on student learning, engagement, and well-being. Just downstream is the wise and reflective instructional leader, who is the conduit between the school and larger system. Forging the

journey are system leaders, external experts, and facilitators that lead the navigation of the rapidly flowing water. Collectively, all educators are focused on the instructional core and guide meaningful change and improvement to circumnavigate the river along its ancient route. Together, if we are able to envision, create, and sustain multiple layers of interconnectedness in centering the instructional core to school and system leadership, we will create a powerful learning organization and the conditions to maintain buoyancy in these most difficult and rapidly changing times.

I have learned that one can make predictions, but it is essential that I be nimble and flexible to respond to the learning needs of each context. No all-inclusive toolkit exists. However, I must also possess a complement of resources, professional knowledge, expertise, experiences, and a collaborative network, to assist and respond appropriately to each school. Upon reflection, I am able to articulate some of the powerful resources and strategies I have applied to meaningful educational change PL experiences over the past five years.

Strategy: Resources

The purpose of applying strategies is to guide each school-based learning community away from the shore to join in the journey of meaningful educational change and improvement. Each strategy is applied, planned, and directed in collaboratively designed PL with school-based leadership. The application enables the larger learning community to gain clarity and coherence, and provides the larger community with buoyancy along the voyage of improvement along the fast flowing river. As adaptation to personal theories occurs, a new strategy must be co-constructed and applied to sustain buoyancy in the fast moving waters. The strategies I articulate are framed around: the

image of the child, instructional design, assessment, metacognition, leadership, reflection, and the ability to respond to unexpected and unanticipated learning needs.

I have learned through my experiences that perceptions of children and their potential are at the root of many misaligned personal theories of learning and assessment. Specifically, external causal attribution of a child's motivation to learn, for example, to a lack of support from home, is often applied by teachers, perhaps as a means to avoid internal conflict and protect the ego, rather than looking inward to one's role in instructional design and assessment. Thus, it is pertinent to acknowledge times when sustained focus, or reminders of children's abilities, regardless of learning disabilities, socio-economic status, or support from home, are required. I have applied the work of Malaguzzi (1994) as provocation to elicit such debates and conversations.

At the epicenter of the instructional core is instructional design and assessment. The focus on both design and assessment must be sustained and exist concurrently for meaningful change and improvement. One cannot exist in the absence of the other. To stimulate and surface personal theories, assumptions, and biases, I may be inclined to use the following resources as personalized to each school context: Doll's (1993) work on rich, relevant, recursive, and relational curriculum; Luo's (2004) extension of Doll's work; or the notion of relevance in instructional design when examining *The Bird in the Window* (Hawkins, 1974). Further, when exploring instructional design, it is essential for teachers to learn strategies to which can generate curriculum with students. This is an area I am continually learning about, but I have successfully applied the Questcussion technique (as cited in Clark, 2014a), and an adapted version of the original Taba (1962) Model (as cited in Clark, 2014b), where students are provoked to elicit essential

questions, themes or ideas around a concept or unit and (Clifford & Friesen, 2014; Wiggins & McTighe, 2005). Science inquiry and the comprehension of the importance of literacy and metacognition in the discipline can be explored with teachers through the works such as Campbell and Fulton (2003); Klentschy (2010); Douglas, Klentschy, Worth, and Binder (2006); Margulies and Maal (2002); Gelb (1998); Liem (1987); Annenburg Foundation (2013); and Wiggins and McTighe (2005).

The incorporation of assessment in instructional design forms a cohesive link between the student, teacher, and content. Formative assessments assists in surfacing misconceptions in science, while enhancing students' reflective abilities of their own learning which allows for metacognition, and strengthened learning of concepts essential for scientific literacy (Black & Wiliam, 1998; Davies, 2012; Hattie, 2012; Popham, 2011; Timperley, 2011). Further, the promotion of documentation of teaching and learning by Ritchhart, Church, and Morrison (2011), and Harvard Project Zero (2014) which have their roots in the Reggio Emilia philosophy as a means of articulating and forming connections in learning for students and teachers (Kocher, 2014).

Closely connected to instructional design and assessment I put forth an assumption when working with science teachers and leaders. Exploring a misconception in science is not simply alleviated by telling them about a concept. Students' understandings and beliefs about the world around them are based on years of experience with people they trust, like their parents. Teachers must apply formative assessment to surface and address misconceptions inherent in science (Vosniadou & Panagiotis, 2013). The pedagogue must nurture creativity and teach skills to which students can apply as they act as authentic scientists. Students should be given choice in demonstrating

understanding, and forming connections between previous concepts and new ideas. I believe that through creation of an atmosphere in a classroom, which enables students' to explore observations, inferences, and questions, they are guided to represent and make sense of their own learning. Students can act as authentic scientists, and enhance the competencies articulated in *Inspiring Education*, the *Ministerial Order on Student Learning*, and the Science Programs of Study when they are given choice in representing their learning through a variety of means; which, may include a combination of writing, sketches, diagrams, jot notes, and reflections through a journal or notebook structure.

To promote intellectual engagement to a larger learning community, I apply the notion of provocation to elicit reflection, debate, and learning landscapes, where common understandings can be co-constructed. Some of the resources I have used include *Into Thin Air* (Annenburg Foundation, 2013)*;* and *TedTalks* such as *Change Paradigms* (Robinson, 2011), *Build a School in the Cloud* (Mitra, 2013), *How Great Leaders Inspire Action* (Sinek, 2009); professional engagement focusing on results and strategies from *What Did You Do in School Today?* (Friesen, 2009, 2012; Willms, Friesen, & Milton, 2009); and *AISI Cycle Three: Successful Assessment for Learning Projects* (Townsend et al., 2011). Last, in my work as a facilitator, I have learned I must be responsive to unexpected changes in direction along the river of improvement, especially unpredicted and unforeseen situations. Thus, I must rely on my own iterative cycle of inquiry to reflect, adapt, and respond to support and shift school contexts. The following section will describe my exploration of the principals' leadership competencies required by Alberta Education (Alberta Education, 2011a).

My Journey to Developing Instructional Leadership Competencies

The notion of a system-level facilitator of learning has been a challenging endeavour through which I have had to display adaptive expertise to respond to the need needs and vision of each school context. The role of facilitator is challenging, for one must cultivate leaders' and teachers' capabilities to critically analyze the issues surrounding teaching, learning, and leading through iterative cycles of inquiry (Timperley, 2011). As I engage in my own iterative cycle of inquiry, and in reflecting on my own understandings with my PLC of Curriculum Services, I must consider the learning needs of students, teachers, and leaders in each context in which I facilitate (Timperley, 2011). Thus, I must demonstrate the ability to nurture instructional leadership and pedagogical evolution specific to science instructional design and assessment. To promote learning for students, I must apply my pedagogical and scientific knowledge (Timperley, 2011). To ensure I am laying the foundational work to ensure sustainability, I have learned that I must work in partnership with school-based leaders to personalize PL for each context. I need to consider the needs of students and staff, plus, while promoting the internal leadership to ensure their future capability to "take care of their own learning in the future" (Timperley, 2011, pp. 139-140). Through my collaborative and facilitative journey with school-based leadership, I have had the opportunity to explore my potential as instructional leader through the school leader competencies, as articulated in *The Alberta Professional Practice Competencies for School Leaders* (PPCSL) (Alberta Education, 2011a). Further, I have designed my TPGP upon reflection of the competencies, and set goals for growth, which align with MSB's

Three-Year Plan. My TPGP, which is adapted from Adams' (2013) TPGP, can be viewed in Appendix E as Figure E1.

Embodying Visionary Leadership (Alberta Education, 2011a, p. 5)

First, the ability to possess visionary leadership is fundamental to a facilitative leadership position (Alberta Education, 2011a). The ability to be "guided by an educational philosophy based upon sound research, personal experience and reflection" (p. 5) is crucial to lead change and improvement (Alberta Education, 2011a). My ability to possess these traits is based upon experience, and my ability to engage in an iterative cycle of inquiry with professional colleagues as we co-construct and adapt to changes presented through our work. Further, all work I engage in at the school level pertains to vision and applies to the "achievement of the school's mission and vision" (p. 5), and the vision of the system. Through collaborative conversations and comprehension of school contexts, I have found that I am able to involve the "school community in identifying and addressing areas for school improvement" (p. 5), and ensure that PL decisions are based upon the "vision shared by the school community and an understanding of school culture" (Alberta Education, 2011a, p. 5). Thus, PL has meaning and is not observed as something that is 'done to them'. Coherence is guided to form connections between previous and current system initiatives, which is a recommended by Timperley (2011) as a key factor to improvement. Last, I have demonstrated the ability to personalize PL and improvement decisions based on "current and anticipated school and community needs" (Alberta Education, 2011a, p. 5). The ability to assist the MRJH in developing a strategic plan of informing the School Council of the new report card indicators demonstrates this competency, for example.

Fostering Effective Relationships (Alberta Education, 2011a, p. 4)

The basis of all work as a facilitator is dependent upon my ability to "foster effective relationships" (Alberta Education, 2011a, p. 4). I believe this is a skill that is both inherent in and based on my experience in leadership and athletics throughout my life. I have demonstrated, and continually strive to center my pedagogical work on learning while acknowledging the importance of engagement and wellness of teachers and students. I am cognisant of the strengths of my personality and ability to form personal connections when I am able to "act with fairness, dignity and integrity; …[demonstrate] a sensitivity to and genuine caring for others…[when I cultivate] a climate of mutual respect" (p. 4) as both an individual leader and a representative of the system (Alberta Education, 2011a). By centering on the instructional core, I promote a school culture that is guided to make decisions that support learning of all students (Alberta Education, 2011a). Further, collaborative relationships are promoted and demonstrated through "effective communication, facilitation, and problem-solving skills" (Alberta Education, 2011a, p. 4).

Developing and Facilitating Leadership (Alberta Education, 2011a, p. 6)

Through my work in schools, I have demonstrated the ability to support leadership with "informed decision-making through open dialogue and consideration of multiple perspectives" (Alberta Education, 2011a, p. 6). Through careful PL planning with principals, I have promoted common understandings of pedagogy, and involvement of school-based Learning Leaders in planning and presentation, which assists in enhancing and solidifying "team building and shared leadership" (Alberta Education, 2011a, p. 7).

Providing Instructional Leadership (Alberta Education, 2011a, p. 6)

I believe instructional leadership is an area of strength, for I continually promote personalized instructional design and assessment around the instructional core. Thus, I am attending to, "a sound understanding of effective pedagogy and curriculum" (p. 6), supporting "appropriate pedagogy to respond to various dimensions of student diversity…[and] "implement strategies for meeting the standards of student achievement" (Alberta Education, 2011a, p. 6).

Leading a Learning Community (Alberta Education, 2011a, p. 5)

As a leader who continually learns through PL and an iterative cycle of inquiry with other professional colleagues, I "model lifelong learning" (Alberta Education, 2011a, p. 5). Additionally, by continuing to focus on the instructional core and quality of instructional design, I "foster a culture of high expectations…[for the] success and development of all students as a shared responsibility" (Alberta Education, 2011a, p. 5). Last, through intentional and strategic planning with school-based leadership, I strive to "promote and facilitate meaningful, collaborative professional learning for teachers" (Alberta Education, 2011a, p. 5).

Understanding and Responding to the Larger Societal Context (Alberta Education, 2011a, p. 7)

I believe I strongly "advocate for the needs and interests" (p. 7) of our students through my work with *Inspiring Education*, and the *Ministerial Order on Student Learning* (Alberta Education, 2011a). The complex work to articulate and guide coherence between system initiatives, government mandates, international trends, and research requires "knowledge of local, provincial, national and global issues and trends

related to education" (Alberta Education, 2011a, p. 7). Last, I must possess a very strong ability to understand and respond quickly to each school context to personalize PL and growth which assists in "fulfilling the school's mission and vision" (Alberta Education, 2011a, p. 7).

Managing School Operations and Resources (Alberta Education, 2011a, p. 7)

The opportunity to manage resources within the scope of my position is quite limited; however, I act as collaborative voice in ensuring "school operations align with provincial legislation, regulations, and policies" (p. 7) related to reporting; and that school-based management decisions align with "effective teaching, learning and student development as well as ethical leadership" (Alberta Education, 2011a, p. 7).

Conclusion

The river of educational change and improvement is flowing very fast, and it will constantly be moving cutting new paths into its ancient route. In a time of frenetically changing society, education is engaged in a transformation aligned with the social contract of *Inspiring Education.* Contemporary society demands why we must change, and the educational community demands who must engage in the change. Now is the time to gather together and embark on this powerful and evolutionary journey. Leaders must apply the improvisational art of guiding and applying strategies to sustain buoyancy and direction as we journey together. We must remember that we cannot predict nor plan ever step of the journey, we just have to know where we need to go to ensure we are always progressing.

We are at a point of convergence where students must gain competencies to function in contemporary society. The focus of all educational leaders must align with

student improvement within the instructional core. Together, we must help our teachers and schools let go of the shores of the river to avoid ossification, and the formation of swales and thalwegs to co-construct the meaningful change journey along the river.

To facilitate change, I must artfully assist work around the instructional core, for students are our "central purpose" (Timperley, 2011, p. 5). Through synchronous collaboration, dense and significant networks of "interdependent relationships" (p. 144) can arise (Wheatley, 2006). Professionalism must be promoted through an iterative cycle of inquiry to develop adaptive expertise with the purpose of designing new learning opportunities for students, and for educators to develop the ability to respond to the daily classroom challenges (Timperley, 2011). To evoke meaningful change, biases, assumptions, and personal theories of learning must be surfaced to shift cognitive frameworks for meaningful and sustainable change (Timperley, 2011). Additionally, through intentional reflection on personal theories, leaders shall gain wisdom and enhance emotional and relational intelligence (Branson, 2010). Leaders of educational change must acquire moral intelligence and use the presence of what Fullan (2001) describes as "dissent as a source of new ideas" (p. 101), to engage all who journey along the river of change and improvement (as cited in Branson, 2010).

Educational Leaders possess the knowledge and ability to create a pathway for new knowledge, and to sustain buoyancy as the river cuts new paths along this ancient route we travel upon. We must transform to remain relevant. Meaningful educational change and improvement will be challenging, but as a facilitator of student and teacher learning, engagement, and well-being, I know I am in the right place at the right time. Along with each other, we shall "push off into the middle of the river, and keep our heads

above water…all that we do now must be done. In a sacred manner and in celebration. For we are the ones we have been waiting for" (The Elders of Hopi Nation, as cited in Wheatley, 2010, p. i).

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Appendix A

From the Elders of the Hopi Nation

Oraibi, Arizona June 8, 2000

TO MY FELLOW SWIMMERS:

Here is a river flowing now very fast.
It is so great and swift that there are those
who will be afraid, who will try
to hold onto the shore.
They are being torn apart and
will suffer greatly.

Know that the river has its destination.
The elders say we must let go of the shore.
Push off into the middle of the river,
and keep our heads above water.

And I say see who is there with you
and celebrate.
At this time in history,
we are to take nothing personally,
least of all ourselves,
for the moment we do,
our spiritual growth and journey come to a halt.

The time of the lone wolf is over.
Gather yourselves
Banish the word struggle from your attitude
and vocabulary.

All that we do now must be done
in a sacred manner and in celebration.
For we are the ones we have been waiting for.

Figure A1. To My Fellow Swimmers, *From the Elders of Hopi Nation* (The Elders of Hopi Nation, as cited in Wheatley, 2010, p. i).

Appendix B

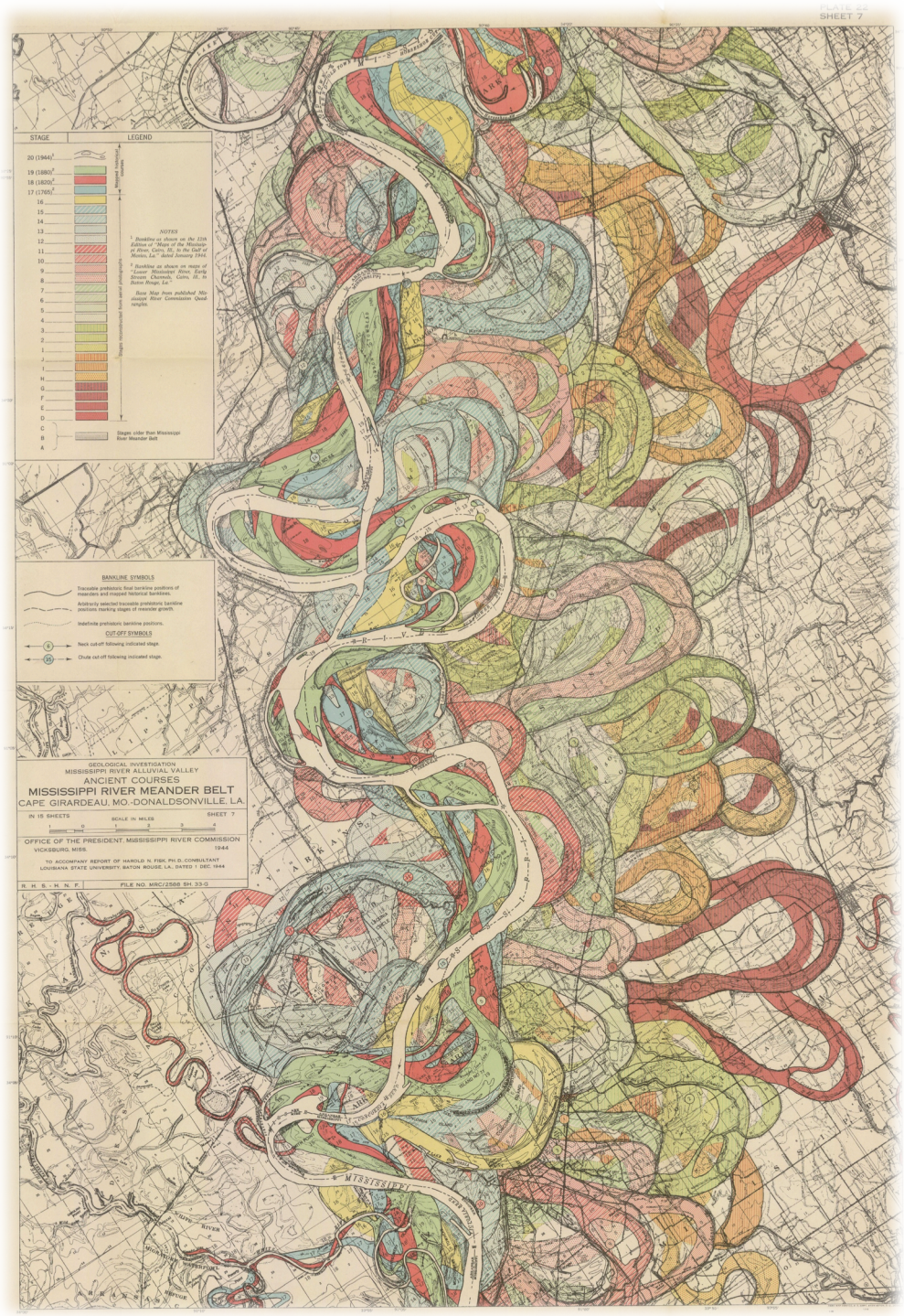

Figure B1. Ancient Courses: Mississippi River Meander Belt from Cape Girardeau, MO to Donaldsonville, LA. (Fiske, 1944).