LEADING PROFESSIONAL LEARNING: COMPARATIVE PERCEPTIONS OF TEACHERS AND SCHOOL LEADERS

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ABSTRACT

A comparison of responses from teachers and school leaders is used to assess the effectiveness of various leadership strategies in facilitating teacher professional learning. Analysis used t-tests at a 95% confidence level to determine significant differences between the responses of the two groups. Results about effectiveness of strategies used by school leaders show agreement between the teachers and school leaders, and confirm existing research about their efficacy. However, results about the frequency that school leaders use these strategies show statistically significant differences between teachers and school leaders' experiences of their use. These strategies include the use of school leader/teacher collaboration on professional learning, professional learning that is directly applicable to a teachers' classroom, and the use of inquiry in the learning process. Additionally, significant differences were reported in the frequency with which school leaders observe teachers teach.

ETHICS STATEMENT

Work described in this thesis received research ethics approval from the University of Alberta Research Ethics Board, Project Name “LEADING PROFESSIONAL LEARNING: COMPARATIVE PERCEPTIONS OF TEACHERS AND SCHOOL LEADERS”, No. Pro00139365, April 20, 2024.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: INTRODUCTION

Teachers' engagement in professional development has ebbed and flowed over the decades and has been supported in many ways by school leaders (OECD, 2019). The leadership standards, styles, views of effective professional learning, and instructional leadership all have influences on the extent to which teachers engage in meaningful professional learning. The perceived size of the influence of each of these factors varies among teachers and leaders. Each teacher and school leader is different and as a result may utilize distinct strategies that may have levels of effectiveness that are different for each individual teacher. Teachers experience instructional leadership in various ways, which could be the result of the differentiated strategies school leaders use to engage teachers in professional learning.

Schools are complex organizations that incorporate a wide variety of elements to educate students. Teachers, formal and informal leaders, and students have essential roles to play and constitute the primary human elements that interact to contribute to ensuring success for all students. Government legislation and policy, funding levels, community socioeconomic status, and parental involvement are all factors that influence the success for students but exist outside of the school itself (Gruenert & Whitaker, 2015). Further complicating these systems are the "multi-faceted and nuanced links between leadership, school improvement, teaching effectiveness, and student learning" (Adams et al., 2019, p. xvi)

An additional element of influence is posited by Gruenert and Whitaker (2015), who identified leadership as a key component that contributes to the effective functioning of schools. They contended that school leaders influence in some way and to some degree

all aspects of school functioning. The skill of the leaders in a school is particularly important in impacting and guiding these complex organizations. As Leithwood et al. (2008) observed, "as far as [the authors] are aware, there is not a single documented case of a school successfully turning around its pupil achievement trajectory in the absence of talented leadership" (p. 29). Earlier, Leithwood et al. (2004) suggested the only factor exerting more influence on student learning besides classroom instruction is that of the school leader. School leaders exert this influence through their impact on staff motivation and commitment, working conditions, and professional development (Donaldson, 2013; Leithwood et al., 2008). The actions and decisions made by a school leader are essential to the growth of teachers and the success of students, not only as a complete entity but also at the level of each classroom, teacher, and student.

Promoting and supporting teachers' professional learning is one of the responsibilities that leaders undertake to contribute to student success. School leaders are mandated to provide instructional leadership and evaluate the quality of the teaching in their school (Government of Alberta, 2012). School leaders must ensure that teachers use evidence based teaching and learning strategies in classrooms (Alberta Education, 2015, 2018a). As part of this process, teachers are required to "engage in career-long professional learning and ongoing critical reflection to improve teaching and learning" (Alberta Education, 2018b, p. 4) and must submit annual professional growth plans to the school leader (Alberta Education, 2015). Thus, legislation in Alberta, Canada requires teachers and school leaders to work together to engage in ongoing, cyclical, and reflective professional learning that ensures students have optimum learning experiences.

1.1 Purpose of the Study

The perceptions of teachers and school leaders as to what is effective in encouraging teachers' engagement in their professional learning warrants investigation. As a teacher with 15 years of experience teaching students at all grade levels but primarily high school students, I have worked with a variety of school leaders who have all taken different approaches to guiding my professional learning. I perceived that some specific actions taken by those leaders were more helpful while others were less helpful in engaging me in my professional learning. Simultaneously, some school leaders have made it clear that growth is not optional; it is expected. Some of my colleagues have shared strategies used by leadership teams to encourage their participation in professional learning. Interestingly, teachers do not seem to experience the same level of effectiveness in these approaches to encouraging their professional learning. Why is there a difference in the experiences of these teachers?

The primary research question that guided this investigation into these differences was: What are the elements of school leadership that teachers and school leaders identify as contributing to teacher engagement in effective professional learning?

What do non-urban K-12 teachers identify as the behaviours of school leaders that contribute to their engagement in professional learning? How does this differ from school leaders? Is there any agreement between teachers and school leaders about what is effective in engaging teachers in professional learning? I have observed that school leaders use various strategies to engage teachers in professional learning with varying results. Is this because they have different levels of effectiveness with different teachers or is it because different strategies are more effective with certain leadership styles?

Determining the answer to these questions would provide information to better inform the decisions school leaders make when attempting to facilitate learning in teachers and may also suggest common themes about how leaders can support and promote effective professional learning.

1.2 Situating Myself in the Issue

I have taught in multiple non-urban schools in Alberta for the last 15 years with eight different formal leaders, each having their own impact on the learning culture of the building. Under some of these leaders, the staff fragmented into cliques and the culture was dedicated to maintaining the status quo. New initiatives were openly greeted with strong opposition in staff meetings; these sentiments seemed to originate in the belief that our students were doing "fine" so change and professional growth were unnecessary. The result was that I engaged in little professional learning while working in this culture. Other leaders established a culture that valued learning and worked to improve student learning. Staff worked collaboratively to overcome challenges and collectively engaged in professional learning.

When discussing professional learning with friends and colleagues, there is an enormous range in the quality of support that teachers have received as they engaged in teaching and professional learning. Some do not recall having a single conversation with a colleague or school leader about how their pedagogy impacts learning or could change to improve that learning. One colleague who was about to begin teaching a course they had never taught before recalled seeking assistance from colleagues who had taught that course before and all they received was an electronic file of resources. Another described staff meetings as long "sit and get" information sessions that, despite occurring every two

weeks, often lasted over two hours. They identified the focus of these meetings as primarily managerial, while students and their learning were rarely discussed.

I have also heard of the problems associated with there being very little support and trust between staff and school leaders. A relatively new teacher related one episode that illuminates this lack of support from school leadership. They were confronted in the hallway by a parent who believed the teacher was biased against their child and who berated the teacher for it. The principal poked their head out of a nearby classroom, saw what was happening, and ducked back inside. They later told the teacher "You seemed to have it under control." The teacher found this lack of support deeply unnerving and wondered if the principal agreed with the parent but was unwilling to say anything themself. After this incident, the teacher felt that it was difficult to trust the principal to support them in anything they attempted. In a separate incident a colleague had a student submit several late assignments that they were able to prove was not written by the student. Without these assignments being completed, the student would fail the course and be unable to graduate. When my colleague took these assignments to their principal, told them what was happening, and indicated that these assignments should not be marked, the principal told my colleague that the assignments must be marked and the plagiarism ignored so that the student could graduate. Incidents such as these led the staff in these schools to expect little support from their principal and likely contributed to a lack of self-efficacy and desire to engage in professional learning. Both teachers reported that they felt it was not worth the risk to try something new when the principal failed to provide them with support when it was needed.

Other colleagues have told of experiences that were quite different. One reported that when a new principal started at their school, resistance to change and lack of trust undergirded the primary challenges for the new principal. Upon their arrival, the new principal began working to rebuild the missing trust between teachers and school leadership and encouraged teachers to build relationships with each other through carefully chosen team building activities. They celebrated the extra things that teachers did to make students' learning experiences more engaging and unique and ensured that their communication with the staff was as open as possible and were always willing to listen to staff concerns. My colleague stated that this approach created change in the school as staff became more collaborative, willing to talk about teaching and more likely to seek assistance from each other when they were struggling. After several years, this assistance went far beyond providing folders of resources and became weekly meetings scheduled during the school day that focused on insightful discussions about students, the teaching strategies that work for them, and the individual experiences that the students are having outside of school that can inform teachers' interactions with them. The principal took responsibility for all students during these meetings, providing powerful evidence of the value they placed on these meetings. I was told that despite their lack of participation in the decision-making process in these meetings, the principal rarely questioned those decisions, and when asked to become involved responded by asking "what do you need me to do to support you?"

In my experience school leadership has had a significant impact on the way I teach and reflect on my current teaching practice. When I had conversations with school leaders and with colleagues about student learning and teaching practices, I found I was

introduced to new ideas and felt empowered to make more purposeful decisions about my pedagogy and my professional learning. This shift in focus to student achievement helped me to question why some students struggle in my class but not in others and I believe it was an artefact of the learning culture that was established by that school leader. Examining differences in the way that my colleagues and I approach instruction made me a better teacher with a deeper understanding of my students and their learning needs. This reflection resulted in a great deal of learning that led to a substantial evidence-based change to my instruction and assessment practices centered on student learning. However, not all teachers I have talked to experienced a learning culture like this and some resisted the changes and avoided engaging in professional learning that would lead to changes in their instructional practices when presented with such a culture.

The disparity between the ways that teachers discussed their experiences of the changing expectations of the culture of their school led me to wonder why there was a difference. Based on my observations, not all teachers respond in the same way to the efforts that the school leadership team was making to create change. I have often felt that the school leaders not only expected that I would make changes to my instruction based on reflection and discussions with my colleagues, but they were there to support that learning. Through conversations with my colleagues about their learning journeys, I am reasonably certain that this support is available to all teachers regardless of which school they work in.

Despite the apparent support and encouragement that the school leaders provide to the teaching staff, some colleagues expressed to me their strong desire to maintain their existing teaching practices. They acknowledged the expectation for change yet felt what

they were doing had worked for years and thus did not require change. I wondered why I expected myself to make changes that would improve the learning of my students while other teachers were reluctant to take a risk on something new. Is it a limitation of their individual experiences with the school leaders or a belief about their ability to engage in professional learning? What do these reluctant teachers expect from the school leaders that will encourage them to take the risk of trying something new in their instructional practices? These curiosities caused me to contemplate a study that investigates the strategies that school leaders use to encourage their teachers to engage in professional learning while also assessing teacher perceptions of impact on their practice. By comparing the strategies that teachers and school leaders identify to be effective and comparing these to the strategies identified by the literature, I hope to answer these questions.

1.3 Definition of Key Terms and Constructs

Within the primary research question, several terms are variously defined in existing literature and, accordingly, require clarification and attribution. Throughout this study, several terms and phrases will be referred to that can be defined in particular and specific ways. These include:

Collaboration

Nguyen and Ng (2020) identified four characteristics that define collaboration: two or more parties working toward a shared goal; the interdependence of the parties who assist each other based on their expertise, skills, and qualifications; an equal voice and contribution from all parties involved; and sustained work toward the collective goal. In this study, collaboration will refer to a group of two or more teachers, which may or may

not include a school leader, who are working together with the goal of improving either their learning and/or student learning.

Culture

The culture of a school is the social norms and structure that people are required to learn to be active members of a group (Schein, 1992), something that develops as groups respond to challenges in their environment (Gruenert & Whitaker, 2015). The culture of a school is safeguarded by those in formal positions of leadership, and those who work behind the scenes to uphold the existing culture, what they see as the school's soul (Deal & Peterson, 2016). In this study's context, culture will refer to the norms that the school staff members accept regarding professional learning.

Learning Community

Hord (2015) suggested that the professional learning community is the most supportive place for teachers to examine their effectiveness and improve their students learning. The learning community of a school consists of several important aspects: growing mission and vision from within, a culture of learning, shared and supportive leadership, the expectation to provide evidence, and organizational processes and structures to support learning (Adams et al., 2019; Hord, 2015). Healthy learning communities often have their base in collaboration. In this study, learning communities will refer to the community of teachers and school leaders who learn together to benefit student learning.

Motivation

"Motivation concerns energy, direction, persistence, and equifinality – all aspects of activation and intention" (Ryan & Deci, 2000, p. 69). Thoonen et al. (2011) reported

that motivation could be divided into two facets: motivated behaviour and motivational factors. They identified expectancy, value, and affective as the motivational factors which positively influence motivated behaviour including professional learning and teaching behaviours. Expectancy is the teachers' beliefs about their ability to complete a task and is also known as self-efficacy. Value refers to the teachers' goals for doing a task and the importance they attribute to and the interest they take in the task. The affective component concerns the teachers' feelings and emotions related to the task or the school in general. Here, motivation will be specifically focused on teachers' willingness to engage in meaningful professional learning.

Non-Urban

According to Statistics Canada (2019), "urban areas are those continuously built-up areas having a minimum population concentration of 1,000 persons and a population density of at least 400 persons per square kilometer" (8.1 - Urban section) and "rural areas have concentrations or densities below the thresholds used to define urban areas" (8.2 – Rural section). The school division used to gather data for this study does not fit either of these descriptions, as it has communities as large as 16,000 people and encompasses large areas of agricultural land. As a result, the school division used to gather data for this study is described as non-urban.

School Leaders

Bush (2020) defined educational leadership as influencing values and purpose of an educational institution while guided by their vision. He goes on to highlight the important distinction between leadership and management, what he feels are the two sides of the leader's role in an organization. "While a clear vision may be helpful to

establish the nature and direction of change, it is equally important to ensure that the innovations are implemented effectively" (Bush, 2020, p. 6). In the context of this study, educational leaders will be defined synonymously with school leaders as those who are assessed according to the Alberta Education Leadership Quality Standard and hold formal roles in a school that require them to engage in educational leadership and whose job titles include principal, vice-principal, or assistant principal.

Teacher

For this study, teacher refers to "an individual who holds a certificate of qualification as a teacher issued under the *School Act*" (Alberta Education, 2018b, p. 3) and does not meet the definition of school leader provided above.

Teacher Professional Growth/Teacher Professional Learning

This process involves teachers developing and implementing professional learning plans, goals, or objectives that are consistent with the Teaching Quality Standard and lasts the entire length of every teacher's career (Alberta Education, 2015). As outlined in the Teaching Quality Standard, the purpose of this process is to improve teaching and learning (Alberta Education, 2018b). This study makes the assumption that teachers must engage in meaningful professional learning that leads to quality learning opportunities for all of their students.[1]

1.4 Summary

This chapter has identified the key question that will be explored by this study, outlined the experiences of the author in the context of this question, and discussed the importance of finding an answer to this question. A definition, based on existing

[1] Terms such as evaluation (p. 64), instructional leadership (p. 60), and supervision (p. 63) will be explored further in the literature review.

literature, has been provided for key terms in the question and repeatedly used in the chapters that follow. The upcoming chapter will survey existing research in the realm of school leadership and its influence on teacher professional learning to provide a foundation for the study to follow.

CHAPTER 2: LITERATURE REVIEW

The focus of this chapter is on an examination of the actions taken by school leaders to lead a learning community that normalizes teachers as active and involved learners themselves. The influence of leadership style, importance of relationships, and the culture of professional learning are examined in depth with the focus on a school leader's ability to inspire teachers to engage in meaningful professional learning. Lastly, the process of instructional leadership is discussed, framed by the formal processes that exist within the province of Alberta, Canada.

This chapter provided a sounding board against which the results of the study were compared as well as offering insight into the author's positionality on the topic through the choices made to include or exclude aspects of the body of research in educational leadership. It was also used to inform the creation of the data-gathering instrument detailed in chapter three.

2.1 Leadership Standards

Standards of practice "provide a vision for the profession" (Virginia Department of Education, 2012, p. 1). More specifically, they articulate professional expectations for excellence and ensure that growth planning and learning are purposeful (Brandon, Friesen, et al., 2018).

2.1.1 Leadership Standards in Alberta, Canada

In Alberta, Canada school leaders are required by two separate government policies to ensure that the teachers with whom they work participate in professional learning. The Teacher Growth, Supervision, and Evaluation Policy (TGSE) states that "…principals and teachers are responsible for facilitating quality improvement through

each teacher's career-long professional growth" (Alberta Education, 2015, p. 1). The TGSE also requires that principals and teachers "work together to develop and implement policy to ensure that all teachers practice consistently in keeping with the Teaching Quality Standard" (TQS) (Alberta Education, 2015, p. 1). The clear expectation is that professional learning is a collaborative process involving the teacher and school leader.

The Leadership Quality Standard (LQS), which applies to all leaders employed in a school authority, provides more specific guidance about what the process of professional learning entails. The LQS states that leaders must "nurture and sustain a culture that supports evidence-informed teaching and learning" (Alberta Education, 2018a, p. 3) and "ensure that every student has access to quality teaching and optimum learning experiences" (Alberta Education, 2018a, p. 4). Of the nine competencies outlined by the LQS, three apply directly or indirectly to what school leaders are expected to do with respect to leading professional learning. This suggests that school leaders should place a strong emphasis on leading this learning.

2.1.2 Leadership Standards Outside Alberta, Canada

Similar leadership standards exist for other jurisdictions within Canada. For school leaders in British Columbia, the BCPVPA Leadership Standards Review Committee (2019) expects that school leaders "focus professional learning and development on the needs of the population" (p. 16). They maintain that school leaders should create a professional learning culture of continuous improvement, inspire and support innovation in teaching, and encourage reflection and collegial discussion about teaching and learning within their schools. In Ontario, the expectations are slightly less specific but still require school leaders to be active participants in the instructional

improvement of their staff, in part by engaging in classroom observations to provide feedback to teachers (Ontario Institute for Educational Leadership, 2013). They are also supposed to ensure that professional learning in their schools is job-embedded and inquiry-based and designed to build teacher capacity, inform instructional practice, and contribute to a culture of learning (Ontario Institute for Educational Leadership, 2013).

The notion of job-embedded professional learning is also put forth by the National Policy Board for Educational Administration (2015) for school leaders in the United States of America. They hold that school leaders should create a workplace that promotes professional development to improve student learning and ensure that instructional practices are in line with knowledge about student learning and effective pedagogy. According to EA Education Authority (2008), school leaders in the United Kingdom "have a responsibility to set high expectations, [and] create the conditions for effective teaching and learning to flourish" (p. 2). Thus, the role of school leaders in the promotion and development of quality professional learning among the teachers in their school is well established in many education systems in the western world.

2.2 Characteristics of an Educational Leader

The study of leadership has been ongoing for well over 100 years, yet, as Bennis (2009) observed, it remains one of the most studied but least understood topics in the social sciences. There is no single and conclusive definition of leadership, nor is there a universally agreed-upon set of characteristics that specifically outlines effective leadership. Regardless, the construct of leadership is generally recognized as a key to the success of an organization, whether they are visionaries or strategists (Benmira &

Agboola, 2021). As systems undergo change, a great deal of focus is placed on leadership to enact that change and improve the system (Mowat, 2019).

2.2.1 Leadership Models

A variety of leadership models have been proposed that are influenced by the context, culture, and social norms that existed while the author of each model was developing their model of leadership. Despite the passage of time, few of these leadership models have been rendered completely irrelevant. Existing leadership models have influenced the development of new ones and, depending on the context, older models may be more relevant than newer ones. The current trend is to describe top-down approaches to leadership as over simplistic, ignoring the complexities of the system, and placing too much emphasis on the charismatic leader while overlooking the skills that exist within an organization and placing undue priority on accountability (Mowat, 2019). Research into the effectiveness of leadership is closely linked with leadership styles and is often founded in the style of leadership being used. The following overview is intended to provide context to the discussion of this link that will appear later in this chapter.

In 1847, Thomas Carlyle proposed the Great Man theory which proposed that great leaders are born with heroic potential and are not made or trained (Kahn et al., 2016). These great men would be able to inspire others to follow them through their innate skill and thus allow them to create change. The Great Man theory lead directly to the trait theories of the 1930s and 1940s that proposed a set of traits successful leaders all possessed but posited that those traits could be taught and learned (Benmira & Agboola, 2021). The theory fell out of favour when no definitive set of traits could be agreed upon,

but the work did suggest that there was a benefit of leaders developing certain traits at certain times (Kahn et al., 2016).

In the 1950s the focus of leadership theories shifted from traits and characteristics of leaders to their behaviours or style, asserting that leaders were made rather than born while ignoring the situation in which leaders found themselves (Benmira & Agboola, 2021). The situational theories of the 1960s recognized the importance of this context and placed importance on the leader's ability to choose the style that would best fit the context. Consequently, the effectiveness of a leader was largely dependent on the fit between style and the context (Benmira & Agboola, 2021).

The 1970s and early 1980s introduced transactional theories into the literature of leadership. These theories were based on the premise that the positional authority of the leader can be exerted to motivate followers based on the perception of fairness and equality in exchanges, or *transactions*, between followers and the leader (Benmira & Agboola, 2021). Followers were thought to be motivated by the expectation of rewards for meeting agreed upon objectives. Interactions between leaders and followers were seen to be agreements between the leader and follower and acknowledged that while followers were influenced by leaders, leaders were also influenced by followers (Kahn et al., 2016).

Transformational leadership theory is the basis for much of modern leadership theory where leaders inspire, encourage, and motivate their followers (Benmira & Agboola, 2021). Leadership is viewed as flexible, allowing organizations to adapt quickly to rapid changes. Rather than relying on formal or positional authority to motivate followers, transformational leaders rely on shared values and goals where members of the organization set aside their personal interests for the benefit of the organization (Kahn et

al., 2016). Transformational leaders are able to identify a need for change and create a vision to guide it while working individually with followers to move toward creating that change (Kahn et al., 2016). McGregor (2003) stated that transformational leaders are visionary leaders who appeal to their followers' good natures to move toward the betterment of the group.

Modern leadership theories such as servant leadership(Greenleaf, 2014), distributed leadership (Spillane, 2009), and instructional leadership (Hallinger, 2005) focus on relationships at all levels of the organization. Servant leaders focus on the individual needs of their followers and seek to support them in their work (Greenleaf, 2014). Distributed leadership involves interactions between multiple leaders and followers, with decisions about who leads and who follows changing depending on the situation (Timperley, 2005). Like servant leaders, inclusive leaders also focus on individuals, working to empower followers into becoming leaders (Kahn et al., 2016). Leadership in the twenty-first century is largely focused on distribution of leadership and relationships between a range of formal and informal leaders throughout the organization (Mowat, 2019).

2.2.1.1 Distributed Leadership

Distributed leadership can be directly linked to teacher job satisfaction and self-efficacy (Liu et al., 2021). The association between teacher job satisfaction and distributed leadership has been found to be greater than the link between teacher job satisfaction and instructional leadership, which Liu et al. (2021) suggested was a result of the shared decision making process. Bektaş et al. (2022) found that distributed leadership has a positive influence on teacher trust in school leaders. They proposed that with

increased trust in school leadership, teachers tend to participate more in professional learning activities and have greater motivation. By focusing on group action to create change and improve instruction, distributed leadership may empower teachers to improve, engaging in collaboration, reflection, and experimentation to improve their teaching (Bektaş et al., 2022). By focusing these collective efforts on specific students, rather than general problems, the challenges make more sense to teachers and allow them to better apply their existing knowledge and experience (Timperley, 2005).

Timperley (2005) suggested that, due to school politics, distributing leadership can be risky, as teacher leaders who are acceptable to their colleagues may not be the holders of expertise and conversely, those with expertise may not be acceptable. Thus, increasing distributed leadership should only be done "*if the quality of the leadership activities contributes to assisting teachers to provide more effective instruction to their students"* (Timperley, 2005, p. 417, emphasis in original). The direct effects of distributed leadership seem to depend on the social context according to a Turkish study conducted by Bektaş et al. (2022). They found that distributed leadership had no direct effect on teacher professional learning which they suggested may be due to difficulties that Turkish school leaders have in managing the core assumptions about leadership in that system and in integrating distributed leadership into teacher professional learning.

2.2.1.2 Servant Leadership

According to Greenleaf (2014), a servant leader is one who has a desire to serve and makes a conscious choice to become a leader. These leaders ensure that the high priority needs of others are served with the goal of having them grow as people. Change is affected by servant leaders by producing people who will create change to develop a

system that works best, which Greenleaf (2014) asserted will organically develop through servant leadership. He suggested "the only authority deserving one's allegiance is that which is freely and knowingly granted by the led to the leader in response to … the clearly evident servant stature of the leader" (p. 19).

2.2.1.3 Instructional Leadership

School leaders who are instructional leaders are focused on actions they take to improve teaching and learning in schools (Adams et al., 2019; Neumerski, 2013). These actions may include being visible in classes, making and following up on observations, building a culture of learning within the school, and having high expectations of the learning of teachers and students (Neumerski, 2013). Instructional leadership helps teachers improve the quality of their instruction by placing emphasis on improvement in their teaching practices (Liu et al., 2021) and varying their approach to address the individual needs of the teachers with whom they are working (Neumerski, 2013).

The link between instructional leadership and teacher outcomes has been established by a variety of studies. For example, Liu et al. (2021) found that school leader use of instructional leadership can be directly associated with teacher self-efficacy and job satisfaction. Goddard et al. (2010) observed that teachers were more likely to differentiate instruction when they perceived that their school leaders were engaging in instructional leadership. Quinn (2002) suggested that there was a link between teacher use of student-centered teaching and school leaders' use of instructional leadership.

The strength of the influence of instructional leadership on professional development and student learning depends on several factors. Robinson et al. (2008) found that while the reported impact of instructional leadership on student outcomes was

present, the strength of that impact varied substantially depending on the context, a conclusion also drawn by Neumerski (2013). Robinson et al. (2008) posited that higher performing schools that were focused on teaching and learning produced a stronger association between instructional leadership and teacher learning and professional development. Neumerski (2013) suggested that school norms, especially with respect to privacy of practice, and structural support for instructional leadership influenced providing feedback that supports improvement to pedagogy. Additionally, she proposed that the relationship between teachers and school leaders and a culture of high expectations for student and teacher achievement influenced the effectiveness of instructional leadership and the likelihood of instructional change. The definition of what quality teaching and instructional improvement looks like is also essential for the success of instructional leadership. Instructional leaders must know what improvement they are looking for before they help teachers work toward their teaching goals (Neumerski, 2013).

2.2.1.4 Transformational Leadership

The link between transformational leadership and school improvement seems strong. Robinson et al. (2008) stated "the types of motivational, collaborative, and interpersonal skills that are emphasized in transformational leadership are essential to leaders' ability to improve teaching and learning" (p. 666). Thoonen et al. (2011) agreed, arguing that teachers' engagement in professional learning and their motivation are associated with their school leaders' use of transformational leadership practices. They proposed that because transformational leadership stimulates teacher engagement in their professional learning, teachers are more likely to keep their teaching practices current and

relevant. Evidence shows a significant link between transformational leadership and teacher motivation, which may contribute to teachers' willingness to engage in professional learning (Thoonen et al., 2011). Finally, transformational leadership has been shown to improve teamwork among teachers through participation in the decision-making process, collaboration, and improvements in relational trust (Thoonen et al., 2011).

Research suggests that studies on transformational leadership may indicate more about the relationships between school staff and teachers than it does about the leaders' impact on student outcomes. When controlled for how much teachers like their school leaders, it significantly reduced the impact of transformational leadership on the success of the organization (Robinson et al., 2008). Thoonen et al. (2011) found that the process of vision building and individualized consideration and support for teachers learning needs, both aspects of transformational leadership practices could be counterproductive. They suggested that vision building decreased teachers' desire to keep up to date when they were not included in the vision building process. Individualized consideration and support reduced teachers' engagement in experimentation and reflective practices through the impression of agreement with current classroom practices.

2.2.2 Leader Influence on Professional Learning

In education, policy requires school leaders to engage in the process of leading learning, often described as instructional leadership (Alberta Education, 2015, 2018a; BCPVPA Leadership Standards Review Committee, 2019; National Policy Board for Educational Administration, 2015; Ontario Institute for Educational Leadership, 2013). This requirement makes the school leaders' work of leading their teachers to create

change a central part of their role. Regardless of the style of leadership a school leader uses, the more that they focus on teaching and learning, the more they will have a positive impact on students' outcomes (Robinson et al., 2008). Fullan (2006) argued that systems thinking, which he defined as the discipline that mixes all aspects of leadership into a coherent body of theory and practice, is essential to create change in a learning organization. When school leaders include the process of leading learning in their thinking as part of an interdependent system they will be able to effect the greatest change. Additionally, Robinson et al. (2008) observed that support exists for the effectiveness of school leaders being active participants in teacher learning and development as leaders of learners.

2.2.2.1 Leadership Style

In their study, Bektaş et al. (2022) stated that school leadership, whether transformational or instructional, can be both directly and indirectly associated with teacher professional learning. However, when looking at the effectiveness of leadership strategies in promoting teacher professional learning and improving student outcomes, research suggests that different leadership styles have stronger impacts in different areas. Robinson et al. (2008) found that instructional leadership is three to four times as effective at improving teacher professional learning and student outcomes than was transformational leadership. They proposed that this difference was caused by the focus transformational leadership has on relationships. When comparing instructional leadership and distributed leadership, Liu et al. (2021) found that there was a stronger relationship between instructional leadership and teacher self-efficacy than there was between distributed leadership and teacher self-efficacy. In contrast, they found a

stronger link between distributed leadership and teacher job satisfaction than between instructional leadership and teacher job satisfaction. When Neumerski (2013) looked into literature about the interdependent nature of leadership styles, she concluded that when combined, the effects of leadership styles were greater than the sum of their parts. This finding supports the notion presented by Fullan (2006) that school leaders should mix various aspects of leadership to create change in their organization.

2.3 Educational Leadership Practices

It is argued that school leaders support teacher's growth by giving them opportunities to improve their instruction and develop their skills (Meyer et al., 2022). Leithwood et al. (2020) suggested that many successful leaders have the same basic leadership practices: setting direction, building relationships and developing people, redesigning the organization to support desired practices, and improving the instructional program. Though divided up and defined slightly differently, Liebowitz and Porter (2019) found similar categories of school leader behaviour to be part of effective leadership: instructional management, internal relations, organizational management, administration, and external relations. With respect to professional learning, these lists lend themselves to four categories of leadership activities: the importance of building relationships as an educational leader, the quality of professional learning, vision and goal setting, and culture of professional learning.

2.3.1 Building Relationships

In Alberta, the first competency listed in the LQS for school leaders is fostering effective relationships, expecting them to "build positive working relationships with members of the school community and local community" (Alberta Education, 2018a, p.

3). Robinson et al. (2008) suggested that school leaders influence teaching through their relationships with teachers. They found that school leaders in high performing schools use strong relationships with teachers to encourage them to work toward the collective goals and meet expectations. “Effective leaders do not get relationships right and then tackle educational challenges – they incorporate both sets of constraints into their problem solving” (Robinson et al., 2008, p. 659).

2.3.1.1 Trust

Relational trust is an essential element for improvement in schools (Bryk & Schneider, 2003). Without trusting relationships, the reciprocal bonds of responsibility within a school are broken which hinders the ability of the teachers to provide high quality learning opportunities for students (Sergiovanni, 2005). According to Tschannen-Moran and Gareis (2015b), “trust is defined as the willingness to be vulnerable to another party based on the confidence that the other party is benevolent, honest, open, reliable, and competent” (p. 257). Trust is earned by school leaders based on these elements of their interactions with staff. Li et al. (2016) noted that trust is gained over time through persistent effort on the part of the school leader. They cautioned that because trust is something that can be given, it can also be withdrawn, leading to distrust which can have strong negative influences on an organization by eroding the connection that enables the group to achieve its goals. The challenge for school leaders lies in the contradictory nature of their expectation of accountability to the bureaucracy of the school system and their need to trust teachers to make competent decisions based on their professional knowledge (Tschannen-Moran, 2009). Skilled school leaders strike a balance between these competing requirements. A climate of trust allows for a school’s strengths to shine

and enables the development of a community with a love of learning (Tschannen-Moran & Gareis, 2015b).

2.3.1.1.1 Building trusting relationships. According to Handford and Leithwood (2013), the characteristics upon which trust is built vary depending upon the author you are referencing, and there is a lack of agreed-upon terminology. Their analysis of 18 studies revealed various combinations of 13 characteristics that the authors identified as leading to teacher trust in school leaders. They proposed that five categories were of greatest importance: competence, consistency and reliability, openness, respect, and integrity.

2.3.1.1.1.1 Competence. Competence has two branches. The first is functional, the ability of a school leader to accomplish tasks that are expected of them as part of their role in the organization (Handford & Leithwood, 2013; Tschannen-Moran & Gareis, 2015b). The second is interpersonal, how a school leader engages in problem solving, fosters conflict resolution (rather than avoidance), handles difficult situations, and is flexible in changing situations (Tschannen-Moran, 2004). Tschannen-Moran and Gareis (2015b) found that competence is the most mentioned characteristic when teachers are asked about their trust or distrust of a school leader. Thus, it is essential that school leaders not only work to ensure that they are competent, but that they demonstrate that competence consistently in their interactions with the teachers in their school.

2.3.1.1.1.2 Consistency and Reliability. A school leader who is consistent and reliable creates an environment where there is certainty about the future (Handford & Leithwood, 2013). Tschannen-Moran and Gareis (2015b) proposed that when school leaders are consistent, confidence is inspired in teachers, who believe that the school

leader can be counted on in difficult situations thus reducing the amount that they worry about having that support. They further suggested that when teachers can depend on their school leaders' actions, they have more confidence to make their own decisions. However, when a school leader is not there to support a teacher in a time of need, trust is unlikely to be added to that relationship (Tschannen-Moran & Gareis, 2015b). Additionally, Handford and Leithwood (2013) found that a leader's motivation for consistency and reliability are important; if a school leader consistently acts in their own best interest, it does not develop trust.

2.3.1.1.1.3 Openness. School leaders demonstrate their openness through their willingness to share information, influence and control over decisions and allow for professional discretion (Handford & Leithwood, 2013; Tschannen-Moran & Gareis, 2015b). Tschannen-Moran and Gareis (2015b) suggested that delegating some decision-making authority to teachers fosters trust and promotes teacher professionalism. They go on to state that when a school leader is perceived as approachable and willing to hear questions and different opinions, teachers have greater trust in that school leader. All these descriptors fit well with a distributed leadership style which Bektaş et al. (2022) observed improves trust in the school leader.

2.3.1.1.1.4 Respect. School leaders can gain respect in a variety of ways. Bryk and Schneider (2003) proposed that respect is gained through exchanges where school leaders genuinely listen to others' thoughts and opinions and consider them in future decisions. People usually try to avoid demeaning situations if they can, and if experience suggests that this will occur, all communication can stop as they attempt to avoid such a situation. Respect can also be gained by recognizing the role that people play in

accomplishing goals and in student successes (Tschannen-Moran, 2004). Openness, as described above, also leads to respect as both the quality and quantity of information that school leaders share and the amount they give up control of the decision making process also help to create respect (Handford & Leithwood, 2013).

2.3.1.1.1.5 Integrity. Integrity "demands that a moral-ethical perspective guides one's work (Bryk & Schneider, 2003, p. 42). School leaders are seen to have integrity when there is a close relationship between what they say they will do and what they do, as well as how closely teachers principles match those of the school leader (Handford & Leithwood, 2013). Tschannen-Moran and Gareis (2015b) contended that honesty is an essential part of building integrity because when a school leader is caught in a lie teachers will lose faith and rebuilding trust will be difficult. While trust may survive one broken promise, a pattern of broken promises will undermine any trust that exists. School leaders need to be willing to take responsibility for their mistakes without excuses, finger pointing, or blaming others (Tschannen-Moran & Gareis, 2015b).

2.3.1.1.2 Benefits of trusting relationships. School leaders set the tone for trusting relationships in schools (Tschannen-Moran, 2009). When teachers can put their trust in school leaders, they are more likely to have a higher perception of their colleagues' professionalism, their commitment to student learning, and competence (Tschannen-Moran, 2009; Tschannen-Moran & Gareis, 2015a). Students also benefit as collegial trust between teachers increases the amount of trust teachers have for their students (Tschannen-Moran, 2009; Tschannen-Moran & Gareis, 2015b). The contrary also seems to be true, with reduced trust in school leaders leading to both reduced

collegial trust between teachers and reduced perceptions of professional competence, and reduced trust of students by teachers (Tschannen-Moran & Gareis, 2015a).

"Relational trust supports a moral imperative to take on the difficult work of school improvement" (Bryk & Schneider, 2003, p. 43). When trust in school leaders is low, teachers are less enthusiastic and engaged in their teaching, which may lead to the indirect link between trust in school leaders and student achievement (Tschannen-Moran & Gareis, 2015a). Trustworthy leadership by school leaders has a significant relationship with teacher self-efficacy, teacher professionalism, academic press, teacher engagement with the instructional program, and community engagement (Kosar, 2015; Tschannen-Moran & Gareis, 2015a). Additionally, Bryk and Schneider (2003) stated that strong relational trust leads to better collective decision making, which results in greater teacher buy in.

Bryk and Schneider (2002) suggested that in schools where trust in the school leaders is high, teachers are more likely to take risks and engage in professional development. Strong relational trust also increases the extent to which new initiatives are adopted across a school by reducing the risk associated with change (Bryk & Schneider, 2003). In schools with high relational trust, teachers are more likely to discuss difficulties and engage in honest discussions about their contributions to those difficulties (Tschannen-Moran, 2009). Li et al. (2016) affirmed the link between school leadership, trust, and teacher learning and identified trust as a mediator in the efforts of a school leader to foster teacher learning and development. Kosar (2015) also found a link between trust and teacher professional learning, stating that trust is an important requirement to develop teachers' professional knowledge and skills and transform the

school into a learning environment that values the collaboration of teachers and school leaders.

2.3.1.2 Vulnerability

The interdependent nature of teaching inherently introduces an element of vulnerability between educators (Tschannen-Moran & Gareis, 2015b). This vulnerability can be positive, as demonstrated by a willingness to be honest and open to learning by accepting one's own fallibility and understanding what is needed to grow. Alternately vulnerability can be negative, which can be observed as a fear of embarrassment or perceived as a threat (Meyer et al., 2017). The former leads to taking responsibility for one's actions, a growth mindset, and can be seen as a sign of strength while the latter often results in protective or unproductive behaviour (Meyer et al., 2017; Tschannen-Moran & Gareis, 2015b). Positive vulnerability underlies trust-based relationships and results from a combination of accepting responsibility and admitting mistakes or weaknesses (Meyer et al., 2017). The degree to which teachers are willing to see errors as learning opportunities is an indicator of both their enthusiasm for taking risks and the overall trust that exists within an organization (Hattie, 2015).

Tschannen-Moran and Gareis (2015b) asserted that school leaders can show trust through acknowledging the vulnerability of others and by demonstrating a degree of vulnerability to others. According to a study conducted by Meyer et al. (2017) school leaders demonstrating vulnerability to others can have effects beyond building and demonstrating trust. They observed that when leaders shared their contribution to the problem with others, it sometimes led to similar disclosures from others in the conversation. "By communicating their own vulnerability leaders promote an

environment of trust, which can encourage others to discuss mistakes and failures more openly, rather than avoid them out of fear of emotional reactions" (Meyer et al., 2017, p. 230). Meyer et al. (2017) suggested that when school leaders see their vulnerability as a chance for growth they are more likely to communicate and reflect on their own contributions to the problems they are attempting to solve. They concluded that to encourage collaborative problem solving and improvement, school leaders must create a culture that sees mistakes and weaknesses as opportunities for growth. Dweck (2014) suggested that finding these opportunities is about mindset, making a commitment to learn from setbacks, and a conscious choice to learn and grow from challenges. She suggested that this mindset is characteristic of teachers who understand that growth is their responsibility and it is their choice to make it happen.

2.3.2 Quality Professional Learning

Organizations are most likely to learn when the individuals who make up that organization learn; in this regard leaders are responsible for creating coherence in this learning and guiding its implementation (Smith, 2001). Nguyen and Ng (2020) contended that professional learning is a critical contributor to improving teaching quality and student learning. They suggest that formal professional development workshops and informal, job-embedded learning both have a crucial part to play in teachers' learning. However, caution must be exercised as the expectations of professional development providers and the teachers who attend their workshops may not align. Often professional development providers expect teachers to change their beliefs or practices while teachers are not looking for sweeping changes but something that is helpful in their ongoing learning journey (Timperley & Alton-Lee, 2008). These beliefs are influenced by the

context of each individual school. School norms and beliefs about learning influence the effectiveness of professional learning and the change it can create in the pedagogical beliefs of teachers (Opfer & Pedder, 2011).

2.3.2.1 Teacher Engagement

Harper-Hill et al. (2022) claimed that teachers are more likely to be engaged in professional learning when they deem it to be authentic and credible. For professional learning to be authentic, they contended that teachers should perceive that the strategies have an application in their classrooms. Credibility is defined as a teachers' belief that the source of the learning is a source of expertise with lived experiences to share. Thoonen et al. (2011) found that teachers are more engaged in professional learning that they believe will have a positive impact on the quality of instruction they are able to provide. Impactful professional learning also increases teacher self-efficacy, job satisfaction, and the frequency with which they implement new, effective classroom practices (OECD, 2019).

2.3.3 Characteristics of Effective Professional Learning

The characteristics of effective professional learning have been written about extensively, with authors all contributing slight variations to the list. However, five characteristics are consistently present: professional learning should be sustained, collaborative, differentiated, practice-based, and inquiry oriented (Harris & Jones, 2019).

2.3.3.1 Sustained

The majority of professional learning activities that teachers engage in are short, often half day, full day, or a series of days (Campbell et al., 2016). This results in a phenomenon that Adams et al. (2019) referred to as professional development attention

deficit disorder, the tendency for educators to jump from one initiative to another without developing a thorough understanding of the application of the strategies in the current initiative. To create long lasting change, time is required to build commitment among staff members and to allow for collective knowledge to develop that will drive the change (Talbert, 2009). Campbell et al. (2016) suggested that building time into teachers' schedules for professional learning provides the time they need to sustain their learning and helps them to balance their other work with their professional learning. Building cycles of professional learning helps teachers maintain the momentum of their learning and encourages reflection (Adams et al., 2019).

2.3.3.2 Collaborative

Teachers place a high value on collaborative learning experiences, which can take a variety of forms ranging from professional learning communities to collaborative inquiry processes (Campbell et al., 2016). Collaborative professional learning creates shared responsibility for learning that is located at all levels in the organization and creates capacity for learning (Stoll, 2020). Despite these benefits, professional learning has often been viewed as an activity teachers do for selfish reasons, a trend that school leaders should work to change (Adams et al., 2019). Knight (2011) proposed that teachers should think of professional learning not as an opportunity for them to learn but as an opportunity for all to learn. By sharing learning with others, it humanizes all involved and spreads the enthusiasm for learning throughout the school.

2.3.3.3 Differentiated

Campbell et al. (2016) stated that teachers need access to a variety of learning opportunities, both in content and delivery method, and that professional learning needs

to be differentiated for the needs of the teacher, their career stage, working context, and personal circumstances. Adams et al. (2019) contended that learning comes from an internal locus and is maximized when teachers can make learning choices that take into account their unique combination of knowledge, skills, and the learning needs of their students. The number of choices that teachers have available to them needs to be carefully considered, as too much choice can become a barrier in itself (Knight, 2011).

2.3.3.4 Practice Based

Professional learning should be relevant to and practical for teachers, something that they can clearly use in their classrooms to improve student learning (Campbell et al., 2016). Cole (2012) suggested that professional learning can be made more easily implemented in classrooms by breaking learning into 'bite sized' tasks which are easy to learn and implement in classrooms. He claimed that by breaking professional learning down in this way, improvement will be made into a continuous process and makes the success of strategies easier to evaluate. Knight (2011) described the importance of teachers applying their learning as they learn it, something he called praxis:

> Praxis is enabled when teachers have a chance to explore, prod, stretch, and re-create whatever it is they are studying – to roll up their sleeves, really consider how they teach, really learn a new approach, and then reconsider their teaching practices and reshape the new approach, if necessary, until it can work in their classroom (p. 43).

2.3.3.5 Inquiry Oriented

Inquiry and professional judgement are needed to sort through the data used to inform professional learning (Campbell et al., 2016). Through cycles of inquiry where

teachers explore student learning, they think deeply about their practice. When reflecting on changes that are made teachers have the tools for powerful professional learning (Stoll, 2020). Adams et al. (2019) contended that reflection is a key characteristic of the inquiry process and is an important way that school leaders can influence the professional learning practices of teachers – the amount that they model, share, promote, and celebrate reflection determines the likelihood that teachers will use reflection as a part of their own professional learning. The process of action research was described by Mills (2011) as a systematic inquiry conducted by teachers for the purpose of gathering information about how they teach and how their students learn. Mertler (2020) outlined a process where teachers engage in cycles of planning (identifying a topic), acting (collecting and analyzing data), developing (creating an action plan), and reflecting (sharing results and reflecting on the process). Using this description, action research includes all the characteristics outlined above and could provide a powerful tool to guide teachers' professional learning.

2.3.4 Vision and Goal Setting

In Alberta, school leaders are expected to "collaborate with the school community to create and implement a shared vision for student success, engagement, learning, and well-being" in part by fostering a commitment to continuous improvement (Alberta Education, 2018a, p. 3). Fullan and Quinn (2016) stated that there is a problem of too many goals in schools that are unconnected and constantly changing. They suggested that having too many goals creates two problems for those implementing the school's goals – one of depth, where teachers do not have the time to devote to accomplishing all goals, and one of fragmentation as the goals are not seen as a cohesive set of ideas. It should

thus be the job of the school leader to reduce the number of goals by grouping similar goals into two or three groups, to reframe goals into a cohesive vision to ensure focus, and to remove goals that waste time or distract from their overall vision (Fullan & Quinn, 2016). Coherence in professional learning to support these goals is difficult to achieve and requires the support and collaboration of district level leadership and depends on the vision that exists for what effective professional learning looks like (Firestone et al., 2005). It is often an important consideration for school leaders to align their vision and goals with those of their school district (Beddard et al., 2013).

The school leader is responsible for creating a shared vision, communicate it with the school community, maintain focus on achieving it, and celebrating success (Mombourquette, 2017). This process does not look the same in all schools, as there are many different definitions of the term *vision*. Some focus on the role of school leader in creating and communicating a compelling future for the school while others see the process as a collective effort to create goals that will lead to the improvement of the organization (Mombourquette, 2017). Regardless of the methods used to arrive at the vision, Mombourquette (2017) found that in high achieving schools, when school leaders were asked about the vision of their school, they focused on the big idea of the vision that was the driving force of the school rather than quoting the formal version of the vision. He found that these school leaders saw the school's vision as a living part of the school community and that being keepers of the school's vision was a significant part of their role. Leithwood et al. (2010) proposes that by focusing their efforts on improving instruction, school leaders can increase the overall quality of teaching in the school. While the overall impact of leadership on students is often small, school leaders' role as

direction setter has a more direct impact than any other dimension of leadership (Robinson et al., 2008). By creating a vision that includes goals that focus on the development of their teachers, school leaders can have a significant impact on the lived experience of teachers who are part of their school community.

To create change in a school, organizational learning should be considered a cornerstone of the visioning process (Seashore Louis & Lee, 2016). As part of this process, school leaders need to consider the context of their school, as this has an influence on teachers' capacity for organizational learning. Lee and Seashore Louis (2019) contend that if the school leader's goal is to create continuous improvement, they cannot ignore the value of strong school culture. They found that there is a significant positive association between the culture of a school and levels of school performance, and suggested that this effect is enduring and a counter to organizational inertia.

2.3.5 Culture of Professional Learning

"Unless there is agreement about what constitutes effective teaching and a positive professional learning culture within the school, the transference of this learning is likely to be very low" (Cole, 2012, p. 5). It is essential that when teachers engage in professional learning they discuss their learning with their colleagues (Cole, 2012; Gruenert & Whitaker, 2015). Seashore Louis and Wahlstrom (2011) found that school leaders are integral to creating conversations about classroom practice and encouraging teachers to reflect on their instruction and learning on a regular basis. Liu et al. (2021) suggested that specific leadership styles, instructional leadership, and distributed leadership, could help build a supportive school culture. They found a significant connection exists between instructional leadership and teacher self-efficacy that is made

stronger by supportive school culture. When school leaders provide support for teacher learning and risk taking it becomes more likely that a professional learning culture will develop (Cole, 2012). Such a school culture is defined by several key elements which include professional learning to acquire new knowledge, shared responsibility for collective learning, reflective dialogue, deprivatized practice, and experimentation (Adams et al., 2019; Cole, 2012; Lee & Seashore Louis, 2019).

2.3.5.1 Collaboration

School leader use of instructional leadership and distributed leadership helps change the way that teachers communicate, connect, and collaborate (Liu et al., 2021). Cole (2012) asserted that a collaborative culture within a school is the single most important factor in successful school improvement initiatives. He stated that research supports the idea that when school leaders engage in collaboration, the practice spreads through their school. Meyer et al. (2022) found a significant, large, and direct link between principal engagement in instructional and staff development and teacher collaboration. They suggest that school leaders can promote teacher collaboration by creating supportive structures in their schools, giving scheduled collaborative time as an example. Tschannen-Moran (2001) found that when school leaders collaborate with teachers, those teachers were more likely to collaborate with their colleagues and with parents.

Teacher collaboration also depends on the quality of the relationships among staff members (Meyer et al., 2022). Tschannen-Moran (2001) found a significant link between trust in the school leader and collaboration with the school leader; the more a school leader collaborates with teachers, the more they trust the school leader. She also proposed

that the reverse is also true, as high levels of trust tend to create higher levels of collaboration between school leaders and teachers on a variety of decisions made within the school. The collaboration process helps the teachers stay motivated by providing support as they go through the process (Nguyen & Ng, 2020). Thoonen et al. (2011) found that there is a positive effect of collaboration in schools on teacher motivation and teacher professionalism. They suggested that this positive effect is created by increasing the amount that teachers experiment in their classrooms with new materials and teaching methods, and how much they reflect on their teaching. Additionally, the support and assistance provided by collaboration creates a more positive culture and increases teacher involvement with the school community.

Nguyen and Ng (2020) proposed that there are three stages to teacher collaboration: sharing, improving, and spreading. They stated that teachers begin collaboration by sharing resources, practices, or strategies to implement initiatives because it is a comfortable way to engage in peer learning. In this stage, sharing failed practices is important to help colleagues learn from those experiences. Next, teachers take responsibility to improve the initiative, "*contributing constructive feedback, brainstorming collectively solutions to emergent issues,* and *trailling* [*sic*] *alternative implementation methods* [original emphasis]" (Nguyen & Ng, 2020, p. 647). This allows the team to solve the problems as they arise to improve the initiative's effectiveness. Finally, the teachers spread the initiative to more teachers, sharing their improvements as they do. Adams (2016) asserted that school leaders must take every opportunity they can to encourage collaboration among their staff and be active participants in that collaboration whenever possible.

2.3.5.1.1 Collaborative Inquiry. Collaborative inquiry is a model of professional learning that focuses on teachers co-learning as part of a community of practice that involves school leaders, district leaders, and external partners to address challenges of practice and learning in their classrooms with the goal of improving student learning (DeLuca et al., 2017; Planche & Donohoo, 2018). A key part of inquiry is using research and evidence to inform professional learning, and Harris and Jones (2019) highlighted the importance of using action research to guide the process. Harris and Jones (2022) suggested that teachers thrive in the process of creating knowledge with others and the process of collaborative inquiry creates opportunities for teachers to take the lead in their professional learning. DeLuca et al. (2017) identified seven characteristics that they believe to be essential for effective collaborative inquiry:

1. Relevance: Student learning guides inquiry.
2. Collaborative: Teacher inquiry is a shared process.
3. Reflective: Actions are informed by reflection.
4. Iterative: Progressive understanding grows from cycles of inquiry.
5. Reasoned: Analysis drives deep learning.
6. Adaptive: Inquiry shapes practice and practice shapes inquiry.
7. Reciprocal: Theory and practice connect dynamically (p. 9).

Collaborative inquiry is a model of professional learning that should be embedded in teachers work and focused on teacher learning and sharing based on data (DeLuca et al., 2017)

Schnellert and Butler (2014) stated that for collaborative inquiry to be effective, a strong culture of trust and a culture of collaboration are essential for participants to

become equal participants in learning. It is important that this learning is differentiated to fit the learning needs of each teacher in their own unique context (Adams & Townsend, 2014) and the teacher has the freedom to choose their own problem of practice (DeLuca et al., 2017). When choosing the problem of practice they wish to address, teachers should begin by asking themselves how their learning will impact their students' learning (Harris & Jones, 2022). To effectively engage in the inquiry process, teachers must have access to resources that fit their context and learning style and have ownership of their learning (Schnellert & Butler, 2014). Finally, Donohoo (2017) suggested that co-teaching, where teachers observe other teachers teach and share strategies was an effective way to create teacher agency in the process.

DeLuca et al. (2017) found that teachers in their study felt that there were benefits to both their teaching and student learning as a result of their engagement in collaborative inquiry as a key aspect of their professional learning. Their participants also highlighted the increased amount that teachers were talking about their practice, that they engaged in reflective practices more frequently, and they were more confident in taking risks. Planche and Donohoo (2018) suggested that by having experienced and new teachers working together, a stronger sense of team is developed through the problem solving process and trusting relationships are reinforced. Schnellert and Butler (2014) stated that collaborative inquiry increases teachers' ability to use new practices in their classrooms by giving them control over the testing of these new ideas while supported by their peers. They also found that in the long term, collaborative inquiry helps teachers to sustain change to their teaching practice due to the flexibility of the approach they take to reaching their goals.

The role of the school leader in collaborative inquiry is twofold. First, they should make the time to be co-learners with teachers, which strengthens the learning relationships between school leaders and teachers (Planche & Donohoo, 2018). Harris and Jones (2022) suggested this because it gives school leaders a chance to explore and experiment with pedagogical ideas alongside the teachers. Second, school leaders must provide teachers with the tools they need to effectively engage in the inquiry process. Teachers may need assistance collecting, analyzing, and interpreting the data that they will use to create the iterative nature of the inquiry process and support accessing and using theoretical documents to support their learning (DeLuca et al., 2017). It is also necessary for school leaders to facilitate the creation of groups of teachers in response to the needs identified through the inquiry process (Adams & Townsend, 2014).

2.3.5.2 Reflection

Adams et al. (2019) contended that reflection, especially collaborative reflection, plays a critical role in professional growth. Reflection is the process of looking back at prior learning and goals to determine if what has been learned is relevant in the given context and may include evaluations of learning, making interpretations, and solving problems (Mezirow, 1990). A key part of reflection is a pause, whether intentional or unexpected, to ask whether the current course of action is correct (Mezirow, 1990; York-Barr et al., 2005). Following this pause, York-Barr et al. (2005) posited that there are three dimensions to reflection: openness to other viewpoints, inquiry that involves questioning current practice, and thinking about goals, beliefs, and practices. They went on to state that learning is the end goal of reflection and moving toward achieving the goal of improved student learning. Thoonen et al. (2011) suggested that reflective

practice is a stronger predictor of quality instruction than keeping up to date with the latest instructional theories.

As the number of participants in the reflective process increases, the potential impact of that reflection increases but so does the personal risk of the person doing that reflection (York-Barr et al., 2005). It becomes essential that school leaders create a culture of trust that makes it safe for teachers to reflect on and learn from their practice alongside their colleagues. Brookfield (2017) posited that leading the reflective process requires specific actions on the part of school leaders. He stated that school leaders should focus on uncovering assumptions, including a variety of perspectives, placing value on the contributions of all participants, and setting norms that encourage multiple responses to a problem. Adams et al. (2019) summarized the role of leaders as

- Model it
- Model it publicly
- Model it publicly and be prepared to share it frequently
- Model it, share it, and learn from it
- Model it, share it, learn from it, and act on it
- Model it, share it, learn from it, act on it, and talk about it (p. 147).

Through this modeling process, school leaders can show the frustrations, challenges, and successes that are part of the reflection process (Adams, 2016).

2.3.5.3 Teacher Beliefs and Perceptions

Jacobsen and Bøgh Andersen (2015) observed that employees often perceive the actions of leaders differently than they intended, with employees imposing their own meaning on those actions. They found that leader-intended and employee-perceived

leadership are weakly related, and that organizational performance is only related to employee-perceived leadership practices and not to leader-intended practice. These findings create challenges for school leaders trying to create change as the difference between what they intend and what is perceived can lead to resistance to the change. There are several strategies that school leaders can use to overcome this resistance, including effective communication, engaging teachers in the change process, and expressing empathy when presented with concerns about the proposed change (Inandi et al., 2020). Inandi et al. (2020) proposed that change requires moving to something that is unknown, which creates uncertainty and anxiety that can manifest itself as resistance to the change. They stated that teachers tend to be shy when it comes to expressing dissent, but leadership style is loosely linked to how often dissent is expressed. Transformational leadership tends to create conditions where teachers are more comfortable expressing their opinions and that freedom increases the likelihood that the changes are adopted (Inandi et al., 2020).

Thoonen et al. (2011) suggested that teachers' emotions influence their engagement with professional learning and improving their teaching practice, with concern for well-being preventing participation in experimentation and reflection activities. They suggested that this reluctance to change could also stem from teacher satisfaction in their current practice; satisfied teachers lack motivation to change. DeLuca et al. (2017) suggested that both social and personal factors play a more important role than previously expected, citing teachers' lack of willingness to try new things, listen to the ideas of their colleagues, and expose personal teaching weakness as contributing factors. They stressed the need to build trust, both between teachers and between teachers

and school leaders, as a remedy to these challenges. In some cases, professional learning is hampered by teachers' pre-existing beliefs, as was suggested by Firestone et al. (2005). They found that in one district in their study, teachers' views of their students learning difficulties prevented the professional learning provided by that district from being effectively implemented in classrooms.

2.3.5.4 Teacher Motivation

Teachers' motivation to learn is a prerequisite for successful professional development (Zhang et al., 2021). Despite expectations and professional requirements for continuous professional learning, Ng (2019) contended that it would be erroneous to assume all teachers are equally motivated to engage in professional learning as many perceive it as a burden. However, teachers' motivation is a basic condition for successful professional development and through it, improved teaching quality and student learning (Zhang et al., 2021). According to Richter (2013), as teaching experience increases, teachers' participation in professional learning decreases. Thus, it becomes essential that school leaders understand the motivations of teachers to better enable them to improve their instructional practices. Many teachers engage in professional development because it provides an opportunity to address problems that they face daily in their classrooms (OECD, 2019). It follows that professional development programs should be aligned with the needs of teachers as an incentive to increase participation (Opfer & Pedder, 2011).

Leithwood et al. (2008) observed that school leaders have strong positive influences on teachers' motivation through the supportiveness of their working conditions. According to OECD (2019), conflicts with teachers' work schedules provide a barrier to teacher participation in professional development and the frequency that

teachers report this challenge has seen a significant increase. School leadership also plays a positive role in teacher motivation via their supportive role in professional learning (Zhang et al., 2021). When providing feedback, school leaders need to exercise caution as praise is rarely effective as a feedback tool, and feedback should avoid drawing attention to the learner as it reduces the likelihood that learners will take risks for fear of failure (Hattie & Timperley, 2007).

Self-determination theory (SDT), an approach to human motivation and personality that focuses on the importance of humans' innate resources for personality development and behavioural regulation, provides a useful framework for human motivation (Ryan & Deci, 2000). SDT divides human motivation into intrinsic motivation, activities done for their inherent interest and enjoyment, and extrinsic motivation, activities done for reasons other than their inherent satisfactions (Ryan & Deci, 2020). Gagné and Deci (2005) suggested that intrinsic motivation is more effective at improving performance on tasks that are interesting, while extrinsic motivation is more effective on tasks that are not interesting in themselves but are necessary and require discipline or determination. Ryan and Deci (2000, 2020) proposed a continuum of motivation that included six categories and their attributes: amotivation (lack of value or competence, irrelevance), external regulation (compliance based on external rewards of punishments), introjection (driven by ego and approval from self and others), identification (shared value and personal importance), integration (a more internalized version of identification), and intrinsic motivation (inherent interest, enjoyment, and satisfaction). As motivation progresses from amotivation to intrinsic motivation, the locus of causality shifts from purely external and impersonal to completely internal.

The characteristics of professional learning and of the teachers doing that learning can impact the motivation of those teachers in completing the learning.

2.3.5.4.1 Ongoing. Adams et al. (2019) stated that professional learning is best achieved through multiple repetitions of pondering, deconstructing, reconstructing, and actualizing learning. Power and Goodnough (2019) found that the ongoing nature of the program in their study was a key element to its success. Teachers were given time to explore new teaching methodologies and build on their learning at a pace that they were comfortable with while simultaneously receiving the support necessary to remain motivated in their learning. Ng (2019) found that strongly committed teachers were more likely to access the benefits of continuous professional learning.

2.3.5.4.3 Autonomy. Transformational leaders encourage teachers by giving them more autonomy to make decisions and providing them support to make and implement those decisions (Kahn et al., 2016). Schnellert and Butler (2014) found that a key feature of the professional learning program in their study was the support system that was in place for learner autonomy. They contended that without the support structure, participants would not have achieved the same level of growth and development. They also suggested that feelings of autonomy are necessary for teachers to fully endorse action and maximize their engagement in the learning activity. Ryan and Deci (2020) stated that as motivation moves from extrinsic to intrinsic, task autonomy increases and learning improves. Harper-Hill et al. (2022) emphasized the critical role that teacher autonomy played in their engagement in, and uptake of, the content presented by professional learning opportunities.

2.3.5.4.3 Collaboration. Nguyen and Ng (2020) stated that collaboration provides emotional support for peers, which helps them stay motivated through mutual support. Collaborative groups also provide motivation through shared commitment to and peer accountability for solving problems and generating better practices (Fullan, 2006). The collaborative nature of these groups demands results because they are peer based and members interact daily. Durksen et al. (2017) proposed that this interaction, especially between mid-career teachers and those at the beginning and end of their careers, provides momentum to the professional learning of the latter two groups. In a study based in the United Kingdom, Power and Goodnough (2019) found that participants highlighted the end of cycle conference was an inspirational experience that allowed them to learn from others and helped develop ideas for the future. Ng (2019) found that collaboration is also linked to self-efficacy, as those with higher self-efficacy are more likely to seek collaborative opportunities with their peers. One way to promote teacher self-efficacy is through collaborative group interactions where teachers with strong feelings of self-efficacy share their work practices and professional ideals with their peers.

2.3.5.4.4 Self-Efficacy. Teachers' self-efficacy is their belief in their own instructional competence and higher teacher self-efficacy makes it more likely that they will try new teaching practices (Harper-Hill et al., 2022). Thoonen et al. (2011) emphasized the importance of self-efficacy:

> Most of the variance in teachers' engagement in professional learning activities is explained by the expectancy component of teacher motivation: teachers' sense of self-efficacy. Teachers' sense of self-efficacy appears to be the most important motivational factor for explaining teacher learning and teaching practice. (p. 517)

Zhang et al. (2021) confirmed this notion, finding that teachers' self-efficacy is positively related to their motivation for learning and that more self-efficacious teachers are more motivated for professional learning. They also found that teachers' views about their own ability are only positively related to their motivation. Durksen et al. (2017) had comparable results and observed that the relationship between self-efficacy and teacher engagement was not surprising as teachers with higher self-efficacy are likely more emotionally engaged in their teaching. Ng (2019) proposed that reinforcing a sense of self-efficacy will encourage teachers to see their role in creating their future. He found both qualitative and quantitative evidence that teachers' view of their professional selves influences their motivation and how they respond to challenging learning opportunities. To support teachers' self-efficacy they should focus on providing teachers agency in their professional learning (Proudfoot & Boyd, 2022).

2.3.5.4.5 Collective Efficacy. Collective efficacy is the collective influence that teachers believe that they have on the educational experience of their students beyond what they learn in their homes and communities (Tschannen-Moran & Barr, 2004). Teacher collective efficacy has a significant positive relation to student achievement (Tschannen-Moran & Barr, 2004). The presence of collective efficacy in teachers enhances their efforts and improves the frequency that teachers implement high-yield strategies in their classrooms (Donohoo et al., 2018). Donohoo (2018) suggested that this was caused by an increase in the success teachers had while working through difficulties they encountered in implementing new strategies. She added that teachers with high collective efficacy also showed greater persistence in finding new strategies to meet the unique learning needs of their students.

Meyer et al. (2022) found a significant direct relationship between school leadership and the collective efficacy of teachers. They suggested that when school leaders are involved in teacher professional learning, teachers are more likely to collaborate and will have higher collective efficacy. School leaders create stronger teacher collective efficacy by displaying strong leadership, listening to teachers, and promoting innovative teaching methods (Tschannen-Moran & Barr, 2004). Additionally, they can encourage teachers to use data to inform their decision making, help them set reasonable goals, and provide access to high quality professional learning experiences. Rauf et al. (2012) suggested that teacher collective efficacy positively influenced teachers' attitude toward professional learning and planning and Donohoo (2018) added that high collective efficacy led to teachers having more positive attitudes toward teaching students with higher educational needs. Transformational leadership has been linked to improved collective efficacy through goal setting, creating a culture of collaboration, and school leaders valuing the opinions of their staff (Leithwood et al., 2010).

2.4 Instructional Leadership

In Alberta, the LQS requires that school leaders provide instructional leadership to teachers (Alberta Education, 2018a). According to the LQS, instructional leadership is intended to ensure that all students have access to quality teaching and learning experiences. Among the ways that school leaders can show they are meeting this competency are such things as building teacher capacity (through professional learning), facilitating mentorship support of teachers (collaboration), and implementing the professional growth, supervision, and evaluation processes to ensure all teachers meet the

TQS (Alberta Education, 2018a). The TGSE defines the procedures that make up this process in Alberta. This policy outlines the requirements for professional growth and growth plans, what supervision of teachers involves, and the process of evaluating a teacher (Alberta Education, 2015).

2.4.1 Purpose of Instructional Leadership

The TQS states that the purpose of instructional leadership is to ensure "that every student has access to quality teaching and optimum learning experiences" (Alberta Education, 2018a, p. 4). Neumerski (2013) suggested that one of the key challenges to effective instructional leadership is a poor definition of what quality instruction is, resulting from a lack of understanding of what students should learn, how teachers should teach, and, as a result, what instructional leaders can do to facilitate improvement in teaching. A possible solution to this problem is proposed by Lezotte (1991), who contended that instructional leadership is most effective when it is distributed through the organization. Cole (2012) stated that the goal for teachers should be for students to engage in thinking activities as often as possible through deliberate planning of lessons. Adams (2016) proposed that increasing reflection and, ultimately, improving student learning were important outcomes of the instructional leadership process. Hallinger et al. (2014) concluded that school leaders are likely to have more success in improving the quality of instruction through activities other than evaluation. They suggested that providing actionable feedback to teachers, building learning communities, giving teachers support, and creating a culture of learning are all more effective.

2.4.2 Professional Growth

In Alberta teachers are required to create an annual professional growth plan that relates to the learning needs of the teacher, to the competencies of the TQS, and to the education plans of the school (Alberta Education, 2015). Brandon, Friesen, et al. (2018) stated that "professional growth plans should be explicitly anchored in teachers' daily work and measured by student learning, the Teacher Quality Standard, and site-embedded collaborative, sustained professional learning experiences that are clearly focused on building and supporting quality professional practice" (p. 192). Brandon, Friesen, et al. (2018) found six themes that characterized teacher professional growth.

1. Student learning should be clearly identified as the focal point of teacher professional growth and of all associated policy documents and plans.
2. The foundation for professional growth should arise from agreed upon teacher standards that are embedded and enacted in practice.
3. A hallmark of the shift from the paradigm of professional development to professional growth is the extent to which teachers engage in reflection on, during, and for practice.
4. A second hallmark is the extent to which teachers are provided opportunities to engage in frequent iterative cycles of inquiry.
5. Teacher growth should be viewed through the lens of daily practice. This implies that opportunities for learning and growth should be embedded at the school site during regular school hours.

6. Exemplars and rubrics should be used to provide clarity of expectations and consistent understanding of key vocabulary and terms that can support and enhance teacher professional growth (pp. 26-27).

Brandon, Friesen, et al. (2018) found that despite the majority of teachers believing that they were provided with the resources to understand the purpose of their growth plans, the majority also reported that their principals did not use their growth plans to inform their planning of professional development activities. They also found that two thirds of teachers found reflection to have a large impact on their professional growth. These findings suggest that teachers desire a greater connection between their learning goals and the professional learning opportunities provided by their school leaders while demonstrating the value of reflection in that learning.

2.4.3 Supervision

According to Alberta Education (2015), supervision includes supporting teachers, observing teachers, gathering information about the quality of their teaching, and identifying when a teacher may require evaluation. Adams et al. (2018) suggested that there is a close connection between professional learning and supervision that encourages teachers to engage in lifelong learning. Supervision helps teachers learn, encourages them to adjust teaching pedagogy, and incites them to seek information to inform their practice (Setia & Nasrudin, 2020).

Brandon, Friesen, et al. (2018) found the contrary, with teachers reporting that supervision was disconnected from the content of their growth plans and thus did not provide an opportunity for them to improve. Despite this, they also found that principals believed that teachers' instructional practices had improved as a result of supervision.

These different perceptions may be rooted in a perception of supervision as part of the evaluation process and not as a way to support professional learning, which is often part of teacher collective agreements. The differing perceptions of teachers and school leaders also suggests that the way that school leaders go about the supervision process has a noticeable influence on the value teachers find in the process.

Brandon, Friesen, et al. (2018) identified five approaches school leaders may use when conducting teacher supervision. First was developmental supervision, where school leaders match their supervisory approach with the teacher's developmental level, expertise, and commitment. School leaders choose an approach, directive control, directive informational, collaborative, or nondirective, and apply that approach. As the supervisory process progresses, the school leader should slowly increase teacher choice and decision-making responsibility. Second, differentiated supervision allows teachers to choose, within limits, how their supervision should be carried out. They may opt for clinical supervision, collaboration with a colleague, self-directed professional growth, or direct supervision by a school leader. Third was clinical supervision, which requires school leaders to make a deliberate effort to honour the perspectives and practices that differ from their own. This approach consists of five stages: pre-observation conference, classroom observation, data analysis and strategy, conference, and post-conference analysis. Fourth, constructivist supervision is intended to allow teachers to construct a deeper understanding of their own practices and requires recognizing the differing learning needs of novices and veterans. Five features characterize this approach: differentiated supervision, dialogue, teacher autonomy, reflection, and self-analysis of practice. Finally, informal supervision is primarily characterized by frequent, informal

classroom visits or walkthroughs by school leaders. To avoid being seen as surveillance, these visits should be included in a larger program of trust, reflection, and professional growth.

Adams et al. (2018); Brandon, Friesen, et al. (2018); and Brandon, Hollweck, et al. (2018) described four key aspects that define effective supervision.

1. Supervision should be differentiated according to pedagogical approach, developmental stage, and learning needs of the teacher to engage the teacher in the supervisory process.
2. The focus of supervision should be on instructional support to improve student learning, teaching practice, and shared instructional leadership.
3. Supervision should be informed by evidence gathered from a variety of sources such as classroom observations, pedagogic dialogue, artefacts of student work, action research, collaborative inquiry, and pedagogical reflection.
4. School leaders should use a variety of approaches to supervision.

2.4.4 Evaluation

Evaluation is a process that formally assesses a teacher's ability, whether for contract purposes, at the request of the teacher, or as a result of the supervision process (Alberta Education, 2015). School leaders are required to inform the teacher of the reason for the evaluation, the process, criteria, and standards that will be used, the timeline, and the possible outcomes of the evaluation process. Hallinger et al. (2014) contended that there is little support in existing literature that teacher evaluation is a high impact improvement strategy. In recent years, the focus of evaluation has transitioned from

accountability to professional growth, a change that has been hampered by lack of trust required for meaningful conversations about instruction to occur (Kraft & Gilmour, 2016). Evaluation conducted for the purpose of external reward does not impact teachers' learning; in fact, evidence suggests that it reduces teacher growth and development due to teachers' fear of punishment or impacts on their salary or career advancement when discussing weaknesses (Adams et al., 2018; Brandon, Friesen, et al., 2018). However, if improvement is the focus of evaluation, teachers are more likely to apply the feedback they receive (Brandon, Friesen, et al., 2018)

In Alberta, evaluation is primarily used for employment and certification reasons and is conducted by LQS certified school leaders. One of the challenges of this model is associated with the lack of experience some school leaders have with some subjects and grades and is compounded by constraints on their time (Kraft & Gilmour, 2016). In response to this challenge, many jurisdictions have developed sets of professional standards to guide evaluators (Brandon, Friesen, et al., 2018). Brandon, Friesen, et al. (2018) suggested that for evaluation to be meaningful to teachers and effective in its purpose, evaluators should gather data from multiple sources and that teacher evaluation should be more than a checklist. Additionally, they proposed four elements that contribute to the effectiveness of evaluation:

1. An emphasis on teacher growth and improvement measured by student learning outcomes.
2. Clear standards that define excellent teaching.
3. A culture of continuous learning and improvement.

4. Differentiation based on teacher experience, subject, grade level, and class composition. (pp. 56-57)

When considering the evaluation of experienced teachers, there does not seem to be a consensus about who to evaluate (Brandon, Friesen, et al., 2018). Brandon, Hollweck, et al. (2018) proposed that evidence-based judgement may help address this challenge and should be combined with mentoring programs. They stated that evidence-based judgement "involves transparent, clearly understood processes conducted in a constructive, professional, and sensitive manner within recognized ethical, legal, and contractual guidelines" (p. 269). They also observed that some jurisdictions schedule regular evaluations for all experienced teachers, while others place emphasis on consistent supervision rather than evaluation.

2.5 Summary

In many jurisdictions throughout the western world there is a clearly established expectation that school leaders ensure that teachers engage in effective professional learning. Based on the literature cited above, there are important themes that suggest answers to the question of what school leaders can do to engage teachers in effective professional learning. Leadership style is an important consideration because it influences teacher job satisfaction, self-efficacy, growth, and the ability of all school staff to sustain improvement. Research suggests that a variety of leadership styles need to be used in different situations depending on the outcome desired by the school leader.

Beyond leadership style, the literature identifies four activities and actions that school leaders can do to encourage teachers to engage in effective professional learning. First, school leaders should make a deliberate effort to build trust-based relationships

with and between teachers. This can be done primarily through key actions and behaviours of the school leader; when school leaders build trust-based relationships with teachers, studies have shown how trust spreads to the other relationships in the school. Next, school leaders ensure that teachers are given opportunities to engage in effective professional learning that is sustained, collaborative, differentiated, practice-based, and inquiry-oriented. These characteristics not only provide optimum learning opportunities for teachers but also improve teachers' motivation to engage in those learning opportunities. Third, creating a shared vision provides teachers guidance to help direct their professional learning and creates collective responsibility for translating that vision into reality. Lastly, school leaders should work to create a culture of professional learning that emphasizes collaboration, inquiry, and reflection to help motivate teachers learning and create self and collective efficacy in the school staff.

In Alberta, school leaders are required to provide instructional leadership to the teachers in their school. When done according to the aforementioned four strategies, professional growth plans, supervision, and evaluation of teachers can provide school leaders with essential information to guide teachers' professional learning and provide essential feedback to teachers so they can engage in an ongoing, iterative learning process. The lived experiences of teachers and school leaders as well as their personalities and learning needs may influence how they perceive the effectiveness of these elements.

The experiences and perceptions of teachers were the focus of this study. The next chapter describes the methodology and methods that have guided this investigation. It

begins with the ontology and epistemology that established the framework for research assumptions made when gathering the data to answer the primary research question.

CHAPTER 3: RESEARCH METHODS

Engaging in instructional leadership is one of the high yield strategies through which school leaders are able to have an impact on student learning (Leithwood et al., 2004). In Alberta, teachers are required to engage in professional learning throughout their careers, while school leaders are expected to facilitate that learning (Alberta Education, 2018a, 2018b). Research indicates that there are many factors and actions school leaders can take that can improve the quality of teachers' professional learning (see, for example Hattie (2015) and Leithwood et al. (2020)). The leadership style a school leader adopts, their relationships with teachers, especially trusting relationships, and the type of professional learning that they encourage all influence the quality of the learning teachers experience and how they can translate such learning into effective instruction.

However, even with the same leader not all teachers experience professional learning with the same outcome. This study has explored these differing experiences and attempt to identify them by answering the question *What are the elements of school leadership that teachers and school leaders identify as contributing to teacher engagement in effective professional learning?* To answer this question, a quantitative methodology was used to gather data from school leaders and teachers in a non-urban central Alberta school division via voluntary response to a questionnaire. This chapter outlines the methods that were used to gather and analyze this data and discusses the ethical considerations of this research.

3.1 Methodology

This study used a quantitative research methodology to compare the elements of school leadership that teachers and school leaders identify as contributing to teacher engagement in professional learning. Mertler (2020) outlined characteristics of studies that lend themselves to a quantitative data gathering approach. He suggested that studies that have a large body of supporting literature, are conducted over a short period of time, and employ a specific, confirmatory, or predictive research question lend themselves to a quantitative approach. According to Creswell and Creswell (2018), quantitative approaches focus on carefully measuring a narrowly defined set of variables to answer the research question. The goal of quantitative measurement is to capture details and express the findings in numbers (Neuman, 2011). This is accomplished by deductively moving from abstract ideas, in this case educational leadership, to specific data collection techniques, as outlined later in this chapter, to generate precise numerical information to represent the abstract idea. Quantifying the results allows the outcomes, in this study those from teachers and school leaders, to be compared to determine if there is a correlation between the results (Mertler, 2020).

3.1.1 Data Gathering

The data gathered in this study represents a one-time cross-sectional snapshot of the perceptions of teachers and school leaders. To gather the data, a questionnaire was used employing a series of statements that participants responded to on a Likert-like scale. Developed in the 1930's, Likert scales provide an ordinal measure of a person's attitude (Neuman, 2011). This is accomplished by providing a range of responses across a scale, usually seeking agreement or disagreement with a statement. These scales allow for

the opportunity for a flexible response, have a degree of sensitivity and differentiation while still generating numbers, and allow the researcher to determine frequencies and correlations using quantitative data analysis methods (Cohen et al., 2018).

Both Cohen et al. (2018) and Neuman (2011) stress the importance of having an equal number of responses available on both sides of the scale to avoid bias in the question design. While the number of choices available depends on the design of the question, Cohen et al. (2018) cautioned against using two- or three-point scales as they do not provide the sensitivity necessary, and against using more than seven points on the scale as nuances in respondents' interpretation of what each item means may impact the validity of results. More specifically, Freidman and Amoo (1999) suggested that a scale with between five and eleven points would be most useful, while Krosnick and Presser (2010), Nunnally (1978), and Schwartz et al. (1991) all stated that seven item scales seem to be the most reliable, allowing respondents to best discriminate between values in the scale while increasing the number of items beyond seven does not increase reliability.

While there seems to be agreement that the number of choices presented in a survey should be between 4 and 10, there is disagreement about the inclusion of a neutral option. Cohen et al. (2018) suggested that the exclusion of a category such as "no opinion" or "don't know" may force respondents to have an opinion on something they have no opinion about. However, they also stated that if the researcher genuinely believes that the respondents should have an opinion, then omitting that option could be justified. Krosnick and Presser (2010) cautioned that including a neutral option might compromise the quality of the data particularly if sensitive questions are asked with socially undesirable response categories included. For this study, the legislated requirement that

teachers engage in professional learning has been established, as has the expectation that school leaders must actively facilitate this learning, thereby arriving at the reasonable conclusion that all respondents should have an opinion about the topic of each question. As a result, no neutral option was provided in the scales.

The data gathering instrument, outlined in detail below, employed a six-item scale with no neutral option. As appropriate for the question, these items were chosen from the following list:

- Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective
- Very accurate/accurate/somewhat accurate/somewhat inaccurate/inaccurate/very inaccurate
- Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree
- Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently
- Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

3.1.2 Ontology/Epistemology

"Ontology … grasps at truths that transcend the experience or history of particular human groups" (Paleček & Risjord, 2013, p. 3). According to Moon and Blackman (2014), relativists believe that reality exists as multiple, intangible mental constructs that do not exist beyond the subjects. No point of view is better than the others and all are equally valid for those who hold them (Neuman, 2011). Thus, everything exists for each

of us relative to something and any information gathered is also strictly relative to the perceptions of the person gathering the information (Rassokha, 2022). I believe that each of the people that were included in this study has a unique point of view that is influenced by their experiences and in turn influenced their answers to the survey questions. This study intended to collect data on the perceptions of teachers and school leaders that are inherently dependent on their point of view and this point of view may be different for each respondent. Due to the highly individualized nature of professional learning and the relationships that exist between teachers and school leaders, a relativist stance has been adopted for this study.

Epistemology determines the ways research into the nature of reality and the nature of things is conducted (Cohen et al., 2018). Positivism was originally developed in the late eighteenth and early nineteenth centuries by philosophers such as August Comte, Immanuel Kant, and John Stuart Mill (Mertens, 2015; Neuman, 2011). It is underpinned by the belief that the social world can be studied in the same way as the natural world (Mertens, 2015). Positivists seek rigorous, exact measures and prefer precise quantitative data acquired using experiments, surveys, and statistics (Neuman, 2011). More precisely, Neuman (2011) provides a definition of positivism:

> Positivist social science is an *organized method for combining deductive logic with precise empirical observations of individual behavior in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity.* (p. 95, emphasis in original)

Critics of positivism contend that positivism in the social sciences excludes notions of choice, freedom, individuality, and moral responsibility and treats research

subjects more as machines than as individuals (Cohen et al., 2018). Additional criticism comes from the objective nature of the positivist stance, with critics claiming that researchers construct objective reality subjectively (Kettley, 2012). For this study, the basis of the definition of reality is outlined in chapter two and is founded in established research on the topic being examined. Additionally, choice and freedom are somewhat limited by established legislation that requires teachers to engage in professional learning and for school leaders to assist with that learning.

3.1.3 Limitations and Researcher Bias

I have worked my entire career in the school division where I gathered data and as a result the stance of the division toward professional learning has influenced my beliefs about what it is and is not. Moreover, for a sizable portion of that time I have worked in one school with a particular learning culture that will further influence my beliefs. I have engaged in leading professional learning as a teacher-leader and this experience has shaped what I believe a learning leader should and should not do. To minimize the potential bias these beliefs introduce, I relied heavily on the published research discussed in chapter 2 in the design of the questionnaire, asking questions about the topics discussed without using my experience to guide whether or not a topic should be included. My co-workers have been invited to participate in the study but due to the anonymous nature of the questionnaire, I did not know which responses belong to them or if they chose to respond.

The data gathered in this study was limited to the perceptions of teachers and school leaders. The relativist stance taken for conducting this study introduced some limitations to the conclusions that may be drawn, as the data will not necessarily

represent the full breadth of the points of view that exist in all teachers. Additionally, the choice to conduct the study in a single school division has limited the conclusions that may be drawn, as they are influenced by the learning culture of the school division. No attempt has been made to determine the effectiveness of the professional learning that teachers engage in, nor was there differentiation between professional learning activities. No data was gathered about which school a teacher or school leader works in. Data was gathered to determine the overall level of engagement in professional learning as a partial measure of the effectiveness of school leaders' activities in encouraging the teachers in their schools. The study was conducted in a non-urban school division in central Alberta with a wide variety of school sizes and grade configurations. All teachers and school leaders were invited to participate, regardless of teaching assignment, experience, or years of service.

3.2 Method

Participants were asked to complete a questionnaire consisting of a series of statements and were asked to rate each using a Likert-like scale. This data has been converted into numerical representations of the responses allowing statistical analysis, as detailed below.

3.2.1 Validity

According to Mertler (2020), validity has to do with whether the study is measuring what was intended. Cohen et al. (2018) added that part of validity is the extent to which the interpretation of the data is warranted by theory and the existence of a logical link between data and conclusions. They suggested that validity in quantitative research attempts to have as many of these features as possible: controllability,

replicability, consistency, predictability, the derivation of generalizable statements of behaviours, randomization of samples, neutrality/objectivity, and observability.

Neuman (2011) described content validity as the measure representing the full content of the definition of the topic. Achieving content validity requires a clear definition of the content in the construct to be studied and sampling from all areas of this definition. The challenge in questionnaire design is achieving comprehensive coverage of the definition without creating a questionnaire that is too long (Cohen et al., 2018). Thus, the researcher must ensure the main ideas in the definition are given fair representation and carefully choose items to include, ensuring the manageable length of the questionnaire. For this study, the content of chapter two provided this definition and the conceptual parameters that constituted each item in the questionnaire.

Cohen et al. (2018) identified construct validity as a fundamental type of reliability, because it concerns the construct rather than the methodological factors. It requires a construct's definition to be clearly defined with specific conceptual boundaries (Neuman, 2011). According to Cohen et al. (2018) this definition must include the key elements of the construct and be based on a review of research in the field, which was been done in chapter two. They also contended that the construct must be applied to the data collection instruments in a way that fairly covers the construct and rules out the effects of other possible constructs. The former is achieved through convergent validity which is demonstrated when factors of the construct that should be related to each other are shown to be related. The latter is addressed by discriminant validity, which shows that unrelated items are unrelated. Both are achieved through data analysis, which will be detailed later in this chapter.

Statistical conclusion validity refers to the use of appropriate statistics to determine correlation (Cohen et al., 2018). It can be lost through low statistical power, sample size, measurement error, and false assumptions of causality. Methods of maintaining statistical conclusion validity will be discussed later in this chapter.

Cohen et al. (2018) identified threats to validity in four stages of the study: the design stage, the data gathering stage, the data analysis stage, and the data reporting stage. In the design stage, selecting an appropriate methodology and instrument for gathering the data, ensuring an appropriate sample size, and acknowledging researcher bias can avoid invalidity. Threats to validity in the data gathering stage can be averted by taking steps to prevent the non-return of questionnaires, ensuring standardized procedures for gathering data, and tailoring the data gathering instruments to the respondents. Invalidity can be minimized in the data analysis stage by avoiding subjective interpretation of the data, using an appropriate statistical method for analyzing the data, not making inferences and generalizations that the data do not support, ensuring differentiation between correlation and causation, and abstaining from the selective use of data. When reporting the data, presenting the data without misrepresentation, making claims that the data supports, and ensuring that the research questions are answered can minimize the risk of invalidity.

3.2.2 Reliability

Reliability refers to the consistency of collected data (Mertler, 2020), and to the dependability, consistency, and replicability of results over time, instruments, and groups of respondents (Cohen et al., 2018). Neuman (2011) identified three types of reliability: stability reliability, the consistency of results over time; representative reliability, the

consistency of results when applied to separate groups; and equivalence reliability, the consistency of results across different indicators.

According to Neuman (2011), reliability can be improved in four ways:

1. Clearly conceptualizing all constructs using unambiguous definitions that isolate the construct being studied from other constructs.
2. Increasing the precision of the measurement used, using the highest level possible while avoiding the creation of too fine of differentiation between levels.
3. Using multiple indicators of the same construct using a method to ensure that the entire picture is captured and increasing the stability of the results.
4. Using pilot studies and replication to ensure that the results are replicable.

This study used, to varying degrees, the first three of these ways. Chapter two is intended to clearly define the construct being studied. The design of the Likert-like scale is intended to provide choice to differentiate viewpoints without becoming cumbersome. The questionnaire addresses each of the aspects of the construct discussed in chapter two in multiple ways to ensure that an accurate picture is captured.

3.2.3 Participant Selection

Participants for this study were divided into two groups: school leaders and teachers. Both groups were sorted based on the definitions provided in chapter one and given different surveys as detailed below. To ensure the greatest breadth possible, all teachers and school leaders in the school division were invited to participate on a voluntary basis.

3.2.3.1 Contacting Participants

Once the superintendent granted approval for the study to proceed,[2] the superintendent's administrative assistant sent links to the two questionnaires to prospective participants via an email distribution. Invitational emails were sent separately to school leaders and teachers using mailing lists that exist in the division for those groups. Reminder emails were sent using the same method with one week remaining in the data collection period. See Appendices A-D for the text of these emails.

3.2.4 Data Collection

To gather data from the population of teachers and school leaders in a non-urban school division in central Alberta, a convenience sample resulting from voluntary responses to emailed survey requests was used. The online survey website Qualtrics was used to gather the data. According to Mertens (2015), in a convenience sample participants are chosen because they are easy to access. Cohen et al. (2018) suggested that when accessing participants is difficult, the use of volunteers may be inevitable. They caution that while "volunteers may be well intentioned, … they do not necessarily represent the wider population" (p. 222). The chance of misrepresenting the population comes from the variety of motivations participants may have in responding (Mertens, 2015). Further, the misrepresentation of the population may not be fixed by increasing the sample size (Neuman, 2011). Due to the potential misrepresentation of the population, the results of this study have been interpreted with allowances made for this. Potential volunteers were contacted via email. Prospective participants were given four weeks to complete their questionnaire, with a reminder being sent three weeks after the initial

[2] This occurred after permission was granted to proceed with the study by the Ethics Review Board.

invitation. To ensure that the survey was working as intended and to gather feedback on the questions, a pilot study with a small number of participants was conducted prior to the full survey being released.

3.2.4.1 School Leader Questionnaire

The purpose of this study is to compare the perceptions of teachers as they engage in professional learning with the perceptions of school leaders in their position as leaders of learning. There is no intention to rate school leaders' abilities to do this nor to evaluate teachers' professional learning; only to examine perceptions of the effectiveness of the strategies used as a leader of learning.

The following questions ask about experiences and perceptions as a leader of learning in accordance with the Leadership Quality Standard over the last two years. Responses will be kept confidential, raw data will not be shared with anyone other than the researcher, and no identifying information will be collected.

The phrase "meaningful professional learning" is used repeatedly in the questions that follow. The term is intended to bring to mind any professional learning practice that teachers engage in in accordance with the Teaching Quality Standard that is useful in improving the learning of students in their classroom.

1. Leadership Style

    Indicate ***to what extent*** each statement describes your leadership with respect to teacher professional learning.

    a. I encourage teachers to make independent decisions with respect to their professional learning.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

b. My foundational role as leader of learning is to provide support for teachers to engage in professional learning.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

c. I believe that teacher professional learning is essential to improving student learning.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

d. I am able to identify a need for changes in teaching practice and collaborate with teachers to create the desired change.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

2. Leadership Practices

Indicate ***how effective*** the following leadership practices are to engage teachers in meaningful professional learning.

a. Building trusting relationships with teachers.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

b. Being consistent and reliable.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

c. Developing mutual respect with teachers.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

d. Being open and honest with teachers.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

e. Demonstrating vulnerability in my own professional learning.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

Indicate ***how often you use*** these strategies to encourage teachers to engage in meaningful professional learning.

f. Building trusting relationships with teachers.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

g. Being consistent and reliable.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

h. Developing mutual respect with teachers.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

i. Being open and honest with teachers.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

j. Demonstrating vulnerability in my own professional learning.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

3. Professional Learning

Indicate ***how effective*** you find each practice to be in engaging teachers in meaningful professional learning.

a. Allowing teachers to build on previous learning over multiple years.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

b. Encouraging teachers to collaborate on their professional learning.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

c. Ensuring that the teacher's learning is tailored to their specific needs.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

d. Guiding teachers to participate in learning that has a direct application in their classrooms.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

e. Facilitating the use of inquiry in the learning process.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

f. Encouraging teachers to reflect on their learning.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

Indicate ***how often you use*** each strategy to encourage teachers to engage in meaningful professional learning.

g. Allowing teachers to build on previous learning over multiple years.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

h. Encouraging teachers to collaborate on their professional learning.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

i. Ensuring that the teacher's learning is tailored to their specific needs.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

j. Guiding teachers to participate in learning that has a direct application in their classrooms.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

k. Facilitating the use of inquiry in the learning process.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

l. Encouraging teachers to reflect on their learning.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

4. Teacher Motivation

Indicate ***how motivating*** you find each strategy to be for teachers as they engage in meaningful professional learning.

a. Allowing teachers freedom to direct their own professional learning.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

b. Encouraging teachers to collaborate in their professional learning.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

c. The teacher's belief that they are strong teachers.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

d. The collective belief among all teachers that they can have a positive influence on student learning.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

5. Supervision

Indicate the ***frequency*** with which you engage in the following activities to inform discussions about professional practice.

a. I make short visits to teachers' classrooms.

Every day/multiple times per week/a few times per week/a few times per month/a few times per school year/once per school year/never

b. I observe teachers' entire lessons for the purpose of growth.

Every day/multiple times per week/a few times per week/a few times per month/a few times per school year/once per school year/never

6. Thank you for completing the survey. To record your responses, click submit below. To delete your responses and withdraw from the study, click withdraw.

3.2.4.3 Teacher Questionnaire

The purpose of this study is to compare the experiences of teachers as they engage in professional learning with the experiences of school leaders in their position as leaders of learning. There is no intention to rate school leaders' abilities to do this nor to evaluate teachers' professional learning; only to examine perceptions of the effectiveness of the strategies used by school leaders.

The following questions ask about experiences and perceptions as a teacher engaging in professional learning over the last two years. Responses will be kept confidential, raw data will not be shared with anyone other than the researcher, and no identifying information will be collected.

The phrase "meaningful professional learning" is used repeatedly in the questions that follow. It is intended to bring to mind any professional learning practice that teachers engage in in accordance with the Teaching Quality Standard that is useful in improving the learning of students in their classroom.

1. Leadership Style

Indicate ***to what extent*** each statement describes the leaders in your school with respect to your professional learning.

a. I am encouraged to make decisions with respect to my professional learning.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

b. My school leaders' foundational role in my professional learning is to provide support as I engage in professional learning.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

c. My school leaders believe that teacher professional learning is essential to improving student learning.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

d. My school leaders collaborate with me one on one to help me with my professional learning.

Strongly agree/agree/somewhat agree/somewhat disagree/disagree/strongly disagree

2. Leadership Practices

Indicate ***how effective*** the following leadership practices are in engaging you in meaningful professional learning.

a. Having a trusting relationship with my school leaders.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

b. Having consistent and reliable school leaders.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

c. Having mutual respect between my school leaders and myself.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

d. School leaders being open and honest with me.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

e. School leaders being vulnerable in their own professional learning.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

Indicate ***how often*** your school leaders use these strategies to encourage you to engage in meaningful professional learning.

f. Having a trusting relationship with my school leaders.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

g. Having consistent and reliable school leaders.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

h. Having mutual respect between my school leaders and myself.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

i. School leaders being open and honest with me.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

e. School leaders being vulnerable in their own professional learning.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

3. Professional Learning

Indicate ***how effective*** you find each practice to be in engaging you in meaningful professional learning.

a. Building on previous learning over multiple years.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

b. Collaborating with my peers on our professional learning.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

c. Ensuring that learning is tailored to my specific needs.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

d. Participating in learning that has a direct application in my classroom.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

e. Using inquiry in the learning process.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

f. Reflecting on my learning.

Extremely effective/effective/somewhat effective/somewhat ineffective/ineffective/extremely ineffective

Indicate ***how often*** your school leaders use each strategy to encourage you to engage in meaningful professional learning.

g. Building on previous learning over multiple years.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

h. Collaborating with my peers on our professional learning.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

i. Ensuring that learning is tailored to my specific needs.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

j. Participating in learning that has a direct application in my classroom.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

k. Using inquiry in the learning process.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

l. Reflecting on my learning.

Very often/often/somewhat often/somewhat infrequently/infrequently/very infrequently

4. Teacher Motivation

Indicate ***how motivating*** you find each strategy to be as you engage in meaningful professional learning.

a. Having the freedom to direct my professional learning.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

b. Collaborating with my peers in my professional learning.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

c. My belief that I am a strong teacher.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

d. The collective belief among all teachers that they can have a positive influence on student learning.

Highly motivating/motivating/somewhat motivating/somewhat discouraging/discouraging/very discouraging

5. Supervision

Indicate the ***frequency*** with which your school leaders engage in the following activities to inform discussions about professional practice.

a. They make short visits to my classroom.

Every day/multiple times per week/a few times per week/a few times per month/a few times per school year/once per school year/never

b. They observe my entire lesson for the purpose of growth.

Every day/multiple times per week/a few times per week/a few times per month/a few times per school year/once per school year/never

6. Thank you for completing the survey. To record your responses, click submit below. To delete your responses and withdraw from the study, click withdraw.

3.2.5 Data Analysis

Once the data was collected, each option was assigned a numerical value from one to six, with higher numbers being associated with the first option listed and lower numbers associated with the last option listed. Using these values the mean response for each question was calculated separately for teachers and school leaders and the data subjected to analysis in two ways. First, the standard deviation has been used to infer how much disagreement there is between members of the group, with a larger standard deviation indicating that respondents have a higher disagreement (Cohen et al., 2018). Second, a t-test was used to determine the significance of any differences between the responses given by teachers and school leaders and has been conducted on each question. Results are presented in tables including mean and standard deviation for each group. Discussion focuses on areas of high similarity or disparity between the two groups on questions that are statistically significant differences above the 95% confidence level. The data gathered and the resulting analysis will only represent the respondents' point of view as influenced by their experiences.

3.3 Ethical Considerations

"Ethical research depends on the integrity and values of individual researchers" (Neuman, 2011, p. 143). Thus, it is my responsibility to adhere to the ethical standards of the Tri-Council Guidelines and the Freedom of Information and Protection of Privacy Act

(Government of Canada, 2022; Province of Alberta, 2023). An ethics application for this study was completed through the University of Alberta's system, The Alberta Research Information Services System (ARISE). The Government of Canada (2022) identified three core principles to be followed when conducting research on human participants: respect for persons, concern for welfare, and justice.

Respect for persons incorporates the treatment of participants as well as respecting their autonomy. This is primarily achieved through seeking the free and ongoing consent of participants by allowing them to make an informed choice to participate without coercion (Government of Canada, 2022). Cohen et al. (2018) proposed guidelines for reasonably informed consent:

1. A fair explanation of the procedures to be followed and their purposes.
2. A description of the attendant discomforts and risks reasonably to be expected.
3. A description of the benefits reasonably to be expected.
4. A disclosure of appropriate alternative procedures that might be advantageous to the participants.
5. An offer to answer any inquiries concerning the procedures.
6. An instruction that the person is free to withdraw consent and to discontinue participation in the project at any time without prejudice to the participant (p. 122).

For this study, this information was provided to participants, along with the choice to participate or not on the first page of the questionnaire. See Appendices E and F for the letters of consent that were used in this study.

Concern for welfare involves protecting the physical, mental, and spiritual health of participants as well as their physical, economic, and social circumstances (Government of Canada, 2022). This process includes fully disclosing any risks and potential benefits associated with participating, while minimizing exposure to those risks. In addition to the information provided on the first page of the questionnaire, this study protected participants by collecting information anonymously, not collecting any identifying information, and not providing individualized codes to potential participants to track respondents (Neuman, 2011). Additionally, data is stored only on an encrypted hard drive.

Justice refers to the fair and equitable treatment of participants, with special attention to those who are vulnerable or marginalized to ensure they are treated justly in research (Government of Canada, 2022). More specifically,

> "[r]esearchers shall not exclude individuals from the opportunity to participate in research on the basis of attributes such as culture, language, religion, race, disability, sexual orientation, ethnicity, linguistic proficiency, gender or age, unless there is a valid reason for the exclusion." (Government of Canada, 2022, p. 75)

Participant selection should be based on criteria that match the research question, with no participants arbitrarily excluded from the results. This study selected participants voluntarily from the pool of teachers and school leaders in a non-urban central Alberta school division. In the process of data analysis, special attention has been paid to not giving undue weight to some data, ensuring appropriate analysis methods are chosen, and including outliers in the analysis of the data (Cohen et al., 2018).

3.4 Summary

To provide students with the best possible opportunities to learn, teachers in Alberta are expected to engage in ongoing professional learning to improve their teaching practice. School leaders are given the task of facilitating this learning. Research suggests that school leaders can use a variety of strategies to accomplish this task. This study seeks to answer the question *What are the elements of school leadership that teachers and school leaders identify as contributing to teacher engagement in effective professional learning?* Using a quantitative research methodology employing a questionnaire, data was gathered from a non-urban central Alberta school division. In the next chapter, descriptive statistics and t-tests were used to determine the differences and similarities (if any) that existed between teachers' and school leaders' responses to the questions and key findings will be highlighted.

CHAPTER 4: RESULTS/FINDINGS

Chapter 4 presents the findings of this study, which have been divided into two major sections. The raw data is presented first, summarized by respondent group. Analysis of the data follows and is accompanied by a summary of any significant or notable results. Tables are used in both sections to organize data and are divided based on section of the questionnaire and respondent group.

In Alberta, there is a legislated requirement for teachers to engage in professional learning and for school leaders to facilitate that learning. A large body of research exists detailing how school leaders can provide this support but very little research has been done comparing the perceptions of teachers and school leaders on the effectiveness of these actions. Having data to compare these perceptions would provide school leaders with information to better inform their activities in facilitating professional learning. Answering the question *What are differences in the elements of school leadership that teachers and school leaders identify as contributing to teacher engagement in effective professional learning?* has provided some insight.

The data gathered in this study represents a one time cross sectional snapshot of the perceptions of teachers and school leaders with respect to teacher professional learning. To gather this data, potential respondents were asked to reply to a series of statements using a Likert-like scale with six response options. As detailed in Chapter 3, no neutral option was given. To gather data, all teachers and school leaders in a non-urban school division serving just over 11 000 students were invited to participate. The sample that provided responses was gathered on a voluntary basis and represents members of both groups from across the school division. All responses came from the

same school division, but no information was gathered about which school respondents worked in. As a result of some respondents not answering all questions, the *n* varies for some questions and the sample size was reduced for questions that appeared later in the questionnaire. All prospective participants were contacted through the Associate Superintendent of Learning Services and asked to complete an online questionnaire, as detailed in the previous chapter. Both questionnaires were available for five weeks beginning at the end of May 2024 through to the end of June 2024. A reminder email was sent to all prospective participants with one week remaining in this time period. The school division made no direct expectation for participation.

4.1 Findings

Both questionnaires were divided into subsections based on themes established in the literature review. As the goal of data analysis is to compare the results, data is presented for both questionnaires divided by these subsections. For each section, a table will present the raw data of responses. Teacher responses are presented in the first table in each section. The *n* of this group varies between 12 and 11, depending on the question. School leader responses are presented second, with the *n* varying between 4 and 2, depending on the question. While this is unusual, the changing *n* values are a result of a deliberate attempt to keep as much data as possible in an already small data set and, due to the way that data was collected, an inability to remove responses that correspond to incomplete surveys.

4.1.1 Leadership Style

In this section of the questionnaire, teachers were asked to what extent each statement describes the leaders in their school with respect to their professional learning. Teacher responses are summarized in Table 1.

Table 1

To what extent does each statement describe the leaders in your school with respect to your professional learning?

Prompt	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
I am encouraged to make decisions with respect to my professional learning.	7	1	3	0	1	0
My school leaders' foundational role in my professional learning is to provide support as I engage in professional learning.	4	6	1	0	1	0
My school leaders believe that teacher professional learning is essential to improving student learning.	5	5	2	0	0	0
My school leaders collaborate with me one on one to help me with my professional learning.	1	5	4	0	0	2

Of note, 100% of teachers who responded perceived that their school leaders believe professional learning is essential to improving student learning. Additionally, 92% of teachers believed they had the autonomy to make decisions about their learning and that it was essential that their school leaders provided support for this learning.

School leaders were asked to what extent each statement describes their leadership with respect to professional learning. These responses are summarized in Table 2.

Table 2

To what extent does each statement describe your leadership with respect to professional learning?

Prompt	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
I encourage teachers to make independent decisions with respect to their professional learning.	2	2	0	0	0	0
My foundational role as leader of learning is to provide support for teachers to engage in professional learning.	3	1	0	0	0	0
I believe that teacher professional learning is essential to improving student learning.	4	0	0	0	0	0

I am able to identify a need for changes in teaching practice and collaborate with teachers to create the desired change.	4	0	0	0	0	0

In their responses to the statements in this section, school leaders showed overwhelming agreement. 100% of participants believed that teacher professional learning was essential to improving student learning and that their role as leaders was to provide support for teachers as they make decisions about their professional learning and make changes to their instructional practices that will result in improvement.

4.1.2 Leadership Practices

Participants were asked two separate questions about leadership practices: first about the effectiveness of the practice and second about the frequency of use of each practice. Teacher responses are summarized in Table 3 and Table 4, while school leader responses are summarized in Table 5 and Table 6.

Table 3

How effective are the following leadership practices in engaging you in meaningful professional learning?

Prompt	Extremely Effective	Effective	Somewhat Effective	Somewhat Ineffective	Ineffective	Extremely Ineffective
Having a trusting relationship with my school leaders.	10	1	1	0	0	0
Having consistent and reliable school leaders.	9	3	0	0	0	0

Having mutual respect between my school leaders and myself.	12	0	0	0	0	0
School leaders being open and honest with me.	10	2	0	0	0	0
School leaders being vulnerable in their own professional learning.	8	4	0	0	0	0

Teacher responses to this section showed they found all leadership practices to be effective in their engagement in professional learning. Of the teachers who responded, 100% found that having trust and mutual respect with their school leaders, having consistent, reliable, and honest school leaders, and school leaders showing vulnerability in their own learning were effective tools in increasing their own engagement in their professional learning.

Table 4

How often do your school leaders use these strategies to encourage you to engage in meaningful professional learning?

Prompt	Very Often	Often	Somewhat Often	Somewhat Infrequently	Infrequently	Very Infrequently
Having a trusting relationship with my school leaders.	3	6	1	0	0	2
Having consistent and reliable school leaders.	3	5	1	1	1	1

Having mutual respect between my school leaders and myself.	3	6	1	0	0	2
School leaders being open and honest with me.	2	6	2	0	1	1
School leaders being vulnerable in their own professional learning.	2	5	1	3	0	1

Despite the agreement shown in the effectiveness of the strategies included in this section, 83% reported that their school leaders worked to build trusting relationships based on mutual respect with them, and were open and honest with teachers. 75% of teachers who responded perceived their school leaders to be frequently consistent and reliable and only 67% reported that their school leaders showed vulnerability in their own professional learning.

Table 5

How effective are the following leadership practices in engaging teachers in meaningful professional learning?

Prompt	Extremely Effective	Effective	Somewhat Effective	Somewhat Ineffective	Ineffective	Extremely Ineffective
Building trusting relationships with teachers.	3	1	0	0	0	0
Being consistent and reliable.	4	0	0	0	0	0
Developing mutual respect with teachers.	3	1	0	0	0	0

Being open and honest with teachers.	4	0	0	0	0	0
Demonstrating vulnerability in my own professional learning.	3	1	0	0	0	0

Similar to teacher responses, school leaders who responded consistently found the leadership practices included in this section to be effective. 100% reported that building trusting relationships with mutual respect, being consistent, reliable, and honest with teachers, and demonstrating vulnerability in their own professional learning were effective in engaging teachers in their professional learning.

Table 6

How often do you use these strategies to encourage teachers to engage in meaningful professional learning?

Prompt	Very Often	Often	Somewhat Often	Somewhat Infrequently	Infrequently	Very Infrequently
Building trusting relationships with teachers.	4	0	0	0	0	0
Being consistent and reliable.	4	0	0	0	0	0
Developing mutual respect with teachers.	4	0	0	0	0	0
Being open and honest with teachers.	3	0	0	0	0	0

Demonstrating vulnerability in my own professional learning.	3	1	0	0	0	0

In contrast to teacher responses about frequency of use, school leaders reported that they frequently engaged in the leadership practices presented. 100% of participants reported that they often worked to develop mutual respect and trust with teachers, that they worked to be honest, consistent, and reliable in their interactions with teachers, and that they demonstrated vulnerability in their professional learning.

4.1.3 Professional Learning

With respect to professional learning, both groups were asked about the effectiveness of strategies school leaders can employ and the frequency of their use. Teacher responses are summarized in Table 7 and Table 8, and School leader responses are summarized in Table 9 and Table 10.

Table 7

How effective do you find each practice to be in engaging you in meaningful professional learning?

Prompt	Extremely Effective	Effective	Somewhat Effective	Somewhat Ineffective	Ineffective	Extremely Ineffective
Building on previous learning over multiple years.	2	8	1	0	0	0
Collaborating with my peers on our professional learning.	6	3	2	0	0	0

Ensuring that learning is tailored to my specific needs.	7	2	2	0	0	0
Participating in learning that has a direct application in my classroom.	8	2	1	0	0	0
Using inquiry in the learning process.	2	7	0	0	1	1
Reflecting on my learning.	6	5	0	0	0	0

In general, teachers reported that the practices presented were effective in engaging them in professional learning. Of those who responded, 100% reported that reflecting on their learning, engaging in learning that was directly applicable to their classrooms and tailored to their needs increased their engagement. Similarly, increased engagement was reported by 100% of respondents when their professional learning including peer collaboration. Meanwhile, 82% found that using inquiry in the learning process was effective.

Table 8

How often do your school leaders use each strategy to encourage you to engage in meaningful professional learning?

Prompt	Very Often	Often	Somewhat Often	Somewhat Infrequently	Infrequently	Very Infrequently
Building on previous learning over multiple years.	1	5	1	2	1	1

Collaborating with my peers on our professional learning.	5	1	2	1	1	1
Ensuring that learning is tailored to my specific needs.	1	4	2	2	2	0
Participating in learning that has a direct application in my classroom.	1	5	3	1	1	0
Using inquiry in the learning process.	0	3	5	1	0	2
Reflecting on my learning.	1	3	4	2	0	1

Despite the reported effectiveness of the strategies included in this section, teachers' responses indicated that they were not consistently used. 82% reported that their school leaders encouraged them to engage in learning that was directly applicable to their classroom. Additionally, 73% reported that school leaders encouraged reflection on learning, used inquiry in the learning process, and encouraged peer collaboration. Finally, 64% of teacher responses indicated that their school leaders frequently ensured that teacher professional learning was tailored to the specific needs of the teacher and encouraged teachers to build on learning over multiple years.

Table 9

How effective do you find each practice to be in engaging teachers in meaningful professional learning?

Prompt	Extremely Effective	Effective	Somewhat Effective	Somewhat Ineffective	Ineffective	Extremely Ineffective
Allowing teachers to build on previous learning over multiple years.	2	1	0	0	0	0
Encouraging teachers to collaborate on their professional learning.	3	0	0	0	0	0
Ensuring that the teacher's learning is tailored to their specific needs.	3	0	0	0	0	0
Guiding teachers to participate in learning that has a direct application in their classrooms.	2	0	0	0	0	0
Facilitating the use of inquiry in the learning process.	2	1	0	0	0	0
Encouraging teachers to reflect on their learning.	3	0	0	0	0	0

School leaders who responded indicated that all strategies presented were effective in engaging teachers in professional learning. 100% of responses indicated that school leaders found teacher focused, classroom applicable, and collaborative learning developed over multiple years was effective in engaging teachers in professional

learning, as was encouraging teachers to reflect on their learning and the use of inquiry in the learning process.

Table 10

How often do you use each strategy to encourage teachers to engage in meaningful professional learning?

Prompt	Very Often	Often	Somewhat Often	Somewhat Infrequently	Infrequently	Very Infrequently
Allowing teachers to build on previous learning over multiple years.	1	2	0	0	0	0
Encouraging teachers to collaborate on their professional learning.	3	0	0	0	0	0
Ensuring that the teacher's learning is tailored to their specific needs.	2	1	0	0	0	0
Guiding teachers to participate in learning that has a direct application in their classrooms.	3	0	0	0	0	0
Facilitating the use of inquiry in the learning process.	2	1	0	0	0	0
Encouraging teachers to reflect on their learning.	2	1	0	0	0	0

The school leaders who responded reported that 100% of them frequently encouraged teachers to engage in learning applicable to their classroom and their specific needs and over multiple years, to collaborate with their peers, and to reflect on their learning while encouraging the use of inquiry in the learning process.

4.1.4 Teacher Motivation

Both groups were asked how motivating teachers found a variety of strategies school leaders can use in engaging teachers in meaningful professional learning. Teacher responses are summarized in Table 11 and school leader responses are summarized in Table 12.

Table 11

How motivating do you find each strategy to be as you engage in meaningful professional learning?

Prompt	Highly Motivating	Motivating	Somewhat Motivating	Somewhat Discouraging	Discouraging	Very Discouraging
Having the freedom to direct my professional learning.	8	3	0	0	0	0
Collaborating with my peers in my professional learning.	7	2	2	0	0	0
My belief that I am a strong teacher.	7	3	1	0	0	0

The collective belief among all teachers that they can have a positive influence on student learning.	7	3	1	0	0	0

Of the teachers who responded, 100% reported that peer collaboration, autonomy to direct their learning, and both self and collective efficacy were motivating to their engagement in professional learning.

Table 12

How motivating do you find each strategy to be for teachers as they engage in meaningful professional learning?

Prompt	Highly Motivating	Motivating	Somewhat Motivating	Somewhat Discouraging	Discouraging	Very Discouraging
Allowing teachers freedom to direct their own professional learning.	2	1	0	0	0	0
Encouraging teachers to collaborate in their professional learning.	2	0	1	0	0	0
The teacher's belief that they are strong teachers.	2	1	0	0	0	0

The collective belief among all teachers that they can have a positive influence on student learning.	2	1	0	0	0	0

School leaders' responses showed that 100% of participants felt that teacher self and collective efficacy, teacher collaboration, and teacher autonomy were motivating for teachers as they engaged in professional learning.

4.1.5 Supervision

Supervision of teachers is a mandatory part school leaders role in schools in Alberta. Both groups were asked about the frequency that school leaders engage in supervision activities. Teacher responses are summarized in Table 13 and school leader responses are summarized in Table 14.

Table 13

How frequently do your school leaders engage in the following activities to inform discussions about professional practice?

Prompt	Every Day	Multiple Times Per Week	A Few Times Per Week	A Few Times Per Month	A Few Times Per Year	Never
They make short visits to my classroom.	0	0	2	2	5	2
They observe my entire lesson for the purpose of growth.	0	0	0	1	4	6

Teacher responses in this section indicated that school leaders did not frequently engage in classroom visits, with 18% reporting school leaders making short visits to their classrooms on at least a weekly basis, and 100% reporting that school leaders observed entire lessons on at most a monthly basis, with 55% of those reporting that school leaders never observed their entire lessons as part of their professional learning.

Table 14

How frequently do you engage in the following activities to inform discussions about professional practice?

Prompt	Every Day	Multiple Times Per Week	A Few Times Per Week	A Few Times Per Month	A Few Times Per Year	Never
I make short visits to teachers' classrooms.	2	1	0	0	0	0
I observe teachers' entire lessons for the purpose of growth.	2	1	0	0	0	0

School leaders' responses indicated that they frequently visit classrooms and observe entire lessons, with 100% reporting that they did this on at least a few times per week.

4.2 Analysis and Findings

To allow statistical analysis of this data, answers were assigned numerical values with 6 denoting strong agreement and 1 denoting strong disagreement. Two statistical measures were used in the analysis of this data. The standard deviation of the data was used to draw conclusions about the level of agreement in the responses. A two-sample t-test was used to determine if there is a significant difference between the responses of the

two groups. To conduct this test, the assumption has been made that the data is normally distributed and that the variance of the two samples is the same. As a two-tailed test will be used, a p value of less than 0.05 corresponding to a 95% confidence level, will be used as the threshold for statistically significant difference. The null hypothesis for all t-tests conducted is that the mean of the two groups is equal. All questions will be presented paired with the corresponding question from the other questionnaire to allow this analysis. Questions from the teacher questionnaire are listed first, prefaced with (T), and questions from the school leader questionnaire are listed second, prefaced with (SL).

4.2.1 Leadership Style

In this section, 100% of school leaders responded that they strongly agreed with two statements: I believe teacher professional learning is essential to improving student learning and I am able to identify a need for changes in teaching practice and collaborate with teachers to create the desired change. Teachers did not show a similar level of consistency in their responses, though in only one case was their inconsistency notable, and contrasted with the responses of school leaders. When asked about collaboration with school leaders, teacher responses showed a wide spread, indicated by a standard deviation of 1.56 over a range of 1-6. The final statement about school leader collaboration with teachers on professional learning returned responses from the two groups that were significantly different, with teachers agreeing with the statement significantly less than school leaders. Details of this analysis can be found in Table 15.

Table 15

To what extent does each statement describe the leaders in your school/your leadership with respect to your/teachers' professional learning?

Prompt	n	Mean	Standard Deviation	p-value
(T) I am encouraged to make decisions with respect to my professional learning.	12	5.08	1.31	
(SL) I encourage teachers to make independent decisions with respect to their professional learning.	4	5.5	0.58	0.5548
(T) My school leaders' foundational role in my professional learning is to provide support as I engage in professional learning.	12	5	1.13	
(SL) My foundational role as leader of learning is to provide support for teachers to engage in professional learning.	4	5.75	0.5	0.2263
(T) My school leaders believe that teacher professional learning is essential to improving student learning.	12	5.25	0.75	
(SL) I believe that teacher professional learning is essential to improving student learning.	4	6	0	0.0722
(T) My school leaders collaborate with me one on one to help me with my professional learning.	12	4.08	1.56	
(SL) I am able to identify a need for changes in teaching practice and collaborate with teachers to create the desired change.	4	6	0	0.0312

4.2.2 Leadership Practices

With respect to the effectiveness of leadership practices in engaging teachers in meaningful professional learning, there were some notable results. The mean response

from teachers and school leaders was identical when they were asked about the importance of having trusting relationships between teachers and school leaders. 100% of respondents to the school leader survey reported that they found being consistent, reliable, open, and honest with teachers to be an extremely effective strategy. Meanwhile, of teacher respondents, 100% responded that they found relationships with their school leaders built on mutual respect were extremely effective in engaging them in meaningful professional learning. None of the question pairings returned results that were significantly different, nor was there a notable spread in the responses to any statement by either group. The analysis is summarized in Table 16.

Table 16

How effective are the following leadership practices in engaging you/teachers in meaningful professional learning?

Prompt	n	Mean	Standard Deviation	p-value
(T) Having a trusting relationship with my school leaders.	12	5.75	0.62	1.0000
(SL) Building trusting relationships with teachers.	4	5.75	0.5	
(T) Having consistent and reliable school leaders.	12	5.75	0.45	0.2983
(SL) Being consistent and reliable.	4	6	0	
(T) Having mutual respect between by school leaders and myself.	12	6	0	0.0824
(SL) Developing mutual respect with teachers.	4	5.75	0.5	

(T) School leaders being open and honest with me.	12	5.83	0.39	0.4168
(SL) Being open and honest with teachers.	4	6	0	
(T) School leaders being vulnerable in their own professional learning.	12	5.67	0.49	0.7744
(SL) Demonstrating vulnerability in my own professional learning.	4	5.75	0.5	

While the t-tests did not return any significant differences between the two groups, there are still some notable results about the frequency that school leaders use strategies to encourage teachers to engage in meaningful professional learning. School leader responses were remarkably consistent, with all respondents reporting that they used the listed strategies very often on all but one of the statements presented. That consistency is contrasted by the responses from teachers who disagreed about the frequency that school leaders use these strategies, with standard deviations of results ranging from 1.48 to 1.73. These details are presented in Table 17.

Table 17

How often do your school leaders/you use these strategies to encourage you/teachers to engage in meaningful professional learning?

Prompt	n	Mean	Standard Deviation	p-value
(T) Having a trusting relationship with my school leaders.	12	4.5	1.73	0.1127
(SL) Building trusting relationships with teachers.	4	6	0	
(T) Having consistent and reliable school leaders.	12	4.42	1.62	0.0771

(SL) Being consistent and reliable.	4	6	0	
(T) Having mutual respect between by school leaders and myself.	12	4.5	1.73	
				0.1849
(SL) Developing mutual respect with teachers.	4	6	0	
(T) School leaders being open and honest with me.	12	4.42	1.51	
				0.0590
(SL) Being open and honest with teachers.	3	6	0	
(T) School leaders being vulnerable in their own professional learning.	12	4.25	1.48	
				0.0722
(SL) Demonstrating vulnerability in my own professional learning.	4	5.75	0.5	

4.2.3 Professional Learning

In this section, the t-tests did not return any statistically significant results, but some of the results are noteworthy. On four items (teacher collaboration, teacher specific learning, application to classrooms, and the use of reflection) 100% of school leader responses were that they found the strategy to be extremely effective. Teachers' responses showed much less consistency about the effectiveness of using the inquiry process in their professional learning with a standard deviation of 1.57. The statistical analysis is summarized on Table 18.

Table 18

How effective do you find each practice to be in engaging you/teachers in meaningful professional learning?

Prompt	n	Mean	Standard Deviation	p-value
(T) Building on previous learning over multiple years.	11	5.09	0.53	
(SL) Allowing teachers to build on previous learning over multiple years.	3	5.67	0.58	0.1313
(T) Collaborating with my peers on our professional learning.	11	5.36	0.81	
(SL) Encouraging teachers to collaborate on their professional learning.	3	6	0	0.2105
(T) Ensuring that learning is tailored to my specific needs.	11	5.45	0.82	
(SL) Ensuring that the teacher's learning is tailored to their specific needs.	3	6	0	0.2825
(T) Participating in learning that has a direct application in my classroom.	11	5.63	0.67	
(SL) Guiding teachers to participate in learning that has a direct application in their classroom.	2	6	0	0.4772
(T) Using inquiry in the learning process.	11	4.55	1.57	
(SL) Facilitating the use of inquiry in the learning process.	3	5.67	0.58	0.2596
(T) Reflecting on my learning.	11	5.55	0.52	
(SL) Encouraging teachers to reflect on their learning.	3	6	0	0.1689

When asked about the frequency strategies that were used to engage teachers in meaningful professional learning, the t-tests returned two statistically significant results.

Teachers reported a significantly lower frequency of classroom applicable learning than school leaders. The other significant difference can be found in the use of inquiry for professional learning, with teachers again reporting a lower frequency. In general, teacher means were noticeably lower in this section than through most of the rest of the questionnaire, with inconsistency in the use of year-to-year learning (standard deviation of 1.55) and collaborating with peers about their professional learning (standard deviation of 1.81). School leaders again showed consistency in their responses about encouraging teachers to collaborate in their professional learning and encouraging learning that has a direct application to their classroom, with 100% of respondents reporting that they did this very often. Details are illustrated in Table 19.

Table 19

How often do your school leaders/you use each strategy to encourage you/teachers to engage in meaningful professional learning?

Prompt	n	Mean	Standard Deviation	p-value
(T) Building on previous learning over multiple years.	11	4	1.55	
(SL) Allowing teachers to build on previous learning over multiple years.	3	5.33	0.58	0.1788
(T) Collaborating with my peers on our professional learning.	11	4.45	1.81	
(SL) Encouraging teachers to collaborate on their professional learning.	3	6	0	0.1763

(T) Ensuring that learning is tailored to my specific needs.	11	4	1.34	
(SL) Ensuring that the teacher's learning is tailored to their specific needs.	3	5.67	0.58	0.0627
(T) Participating in learning that has a direct application in my classroom.	11	4.36	1.12	
(SL) Guiding teachers to participate in learning that has a direct application in their classroom.	3	6	0	0.0302
(T) Using inquiry in the learning process.	11	3.64	1.43	
(SL) Facilitating the use of inquiry in the learning process.	3	5.67	0.58	0.0371
(T) Reflecting on my learning.	11	4	1.43	
(SL) Encouraging teachers to reflect on their learning.	3	5.67	0.58	0.0627

4.2.4 Teacher Motivation

In this section, none of the t-tests returned a result that is statistically significant and there were no results that showed a remarkable spread in the responses within the groups. This indicates that the two groups broadly agreed on the effectiveness of the strategies in motivating teachers to engage in meaningful professional learning, and that the responses within the groups was relatively consistent. Analysis can be found in Table 20.

Table 20

How motivating do you/teachers find each strategy to be as you/they engage in meaningful professional learning?

Prompt	n	Mean	Standard Deviation	p-value
(T) Having the freedom to direct my professional learning.	11	5.72	0.47	0.8517
(SL) Allowing teachers freedom to direct their own professional learning.	3	5.67	0.58	
(T) Collaborating with my peers on our professional learning.	11	5.45	0.82	0.8369
(SL) Encouraging teachers to collaborate on their professional learning.	3	5.33	1.15	
(T) My belief that I am a strong teacher.	11	5.55	0.69	0.7861
(SL) The teacher's belief that they are strong teachers.	3	5.67	0.58	
(T) The collective belief among all teachers that they can have a positive influence on student learning.	11	5.55	0.69	0.7861
(SL) The collective belief among all teachers that they can have a positive influence on student learning.	3	5.67	0.58	

4.2.5 Supervision

The responses for this section did not show any notable consistency or inconsistency within respondent groups. However, both t-tests returned significant differences between the responses of teachers and school leaders when asked about the frequency of short visits to classrooms and the observation of entire lessons for the purpose of growth. This implies that while school leaders perceive that they engage in these activities on a frequent basis, individual teachers do not perceive that their school

leaders engage in supervisory activities with them as frequently. Details can be found in Table 21.

Table 21

How frequently do your school leaders/you engage in the following activities to inform discussions about professional practice?

Prompt	n	Mean	Standard Deviation	p-value
(T) They make short visits to my classroom.	11	2.36	1.02	0.000206
(SL) I make short visits to teachers' classrooms.	3	5.67	0.58	
(T) They observe my entire lesson for the purpose of growth.	11	1.55	0.68	0.000000667
(SL) I observe teachers' entire lessons for the purpose of growth.	3	5.67	0.58	

4.3 Summary

After gathering data from the teachers and school leaders in a non-urban school division in Alberta, Canada, analysis of the responses yielded some noteworthy results. There were statistically significant differences in the responses from teachers and school leaders on five questions: how often school leaders and teachers collaborate on teacher professional learning; how often professional learning is applicable to teachers' classrooms; how often the inquiry process is used in professional learning; how often school leaders make short visits to classrooms to inform discussions about professional learning; and how often school leaders observe entire lessons to inform discussions about professional learning. In contrast, the two groups agreed on the importance of having

trusting relationships between teachers and school leaders when it comes to engaging in professional learning. Additionally, there were several statements where the responses were either notably similar or dissimilar which warrant further discussion.

In the next chapter, these results are discussed in greater depth, accompanied by the implications and limitations of these results. The focus of this discussion is on the results that were statistically significant. However, some discussion of results that lacked agreement within the respondent groups has been included. There is also a notable trend in the data toward different responses for teachers and school leaders with respect to how school leaders are visible in classrooms and participating in collaboration with teachers as they engage in professional learning that warrants further examination. The limitations of the data gathered are addressed, as are any questions that arise as a result of the data that warrant further investigation.

CHAPTER 5: DISCUSSIONS AND CONCLUSIONS

The purpose of this chapter is to frame the results summarized in chapter 4 in the larger context of the body of literature in chapter 2. Significant findings are discussed along with the larger trends evident in the data set. These conclusions are limited by some factors, which are also discussed. Finally, areas that would benefit from further investigation are considered and recommendations made to answer further questions that have arisen as a result of the data gathered.

5.1 Discussion

Based on the TQS (Alberta Education, 2018b) and LQS (Alberta Education, 2018a), teachers in Alberta are required to engage in professional learning and school leaders must facilitate that learning. Existing research was used to determine what leadership practices were believed to be the most effective. This study sought to compare the lived experiences of teachers and school leaders with that research to determine if the methods school leaders are using to engage teachers in meaningful professional learning are effective and are consistently being used.

5.1.1 Findings Consistent with Existing Literature

The responses from this study showed that when school leaders share a belief that professional learning will improve student learning, teachers find this to be effective in engaging them in their professional learning. This result is consistent with the work of Thoonen et al. (2011), who stated that teachers are more likely to engage in professional learning when they believe it will have a positive impact on the quality of their instruction.

Bryk and Schneider (2003) discussed the importance of trusting relationships based on mutual respect between teachers and school leaders. The participants of this study confirmed this importance, with all respondents finding this to be effective in encouraging teacher professional learning, and 100% of teachers finding mutual respect to be extremely effective. Both teachers and school leaders found that having consistent and reliable school leaders was effective, which is consistent with the work of Handford and Leithwood (2013) and Tschannen-Moran and Gareis (2015b). These authors stated that consistent and reliable school leaders provide certainty about the future and inspire confidence in teachers. Meyer et al. (2017) suggested that when school leaders see their vulnerability as a chance for growth, teachers are more likely to do the same. In this study, there was a similar result, with all responses from both teachers and school leaders indicated that they found that school leaders showing vulnerability in their learning was effective at engaging teachers in their own learning.

Cole (2012) asserted that professional learning should be relevant to teachers and have a clear use in their classroom, while Knight (2011) described the importance of teachers being able to apply their learning to their classroom as they learn. The teachers and school leaders who responded to this study confirm the importance of professional learning being classroom applicable, with all responses agreeing that it was effective in engaging teachers in their learning. Existing literature suggests that there are many benefits that come from teachers collaborating on their learning, from increasing experimentation with new teaching methods, how much teachers reflect on their learning, and the culture of the school (Thoonen et al., 2011), to a positive effect on teacher motivation and professionalism (Nguyen & Ng, 2020). The responses to this study were

consistent with the work of these authors as all teachers and school leaders found collaboration to be effective in engaging teachers in professional learning. Adams et al. (2019) asserted that reflection played a critical role in professional growth, an assertion that is confirmed by the results of this study. All teachers and school leaders who responded indicated that reflection on learning was an effective tool in engaging teachers in their learning.

The responses to this study indicated that teacher autonomy in their learning was effective at motivating teachers to participate in professional learning, with all teachers and school leaders reporting some positive level of motivation. This result is in line with the work of Schnellert and Butler (2014) who suggested that teachers feelings of autonomy were necessary to maximize their engagement in their learning. Existing research identifies many motivating factors associated with collaboration, such as emotional support from peers (Nguyen & Ng, 2020), shared commitment to learning and accountability for problem solving (Fullan, 2006), and increased self-efficacy (Ng, 2019). In this study, both teachers and school leaders reported the motivating effects of peer collaboration with respect to the professional learning of teachers. Thoonen et al. (2011) asserted that teachers' sense of self-efficacy seems to be the most important motivational factor in teacher learning. The responses to this study are consistent with this assertion, as both teachers and school leaders found self-efficacy to be a motivating factor in teacher engagement in professional learning. A similar result was reported with respect to the collective efficacy of teachers which is consistent with the work of Rauf et al. (2012) who suggested that teacher collective efficacy had a positive influence on teachers' attitude toward professional learning.

5.1.2 Findings Inconsistent with Existing Literature

Much has been written about the impacts collaboration between teachers and school leaders on teacher professional learning. Tschannen-Moran (2001) found that when school leaders collaborate with teachers, teachers are more likely to collaborate with each other, and that the more teachers collaborate with school leaders, the more they trust them. Teacher collaboration with school leaders also strengthens their learning relationships (Planche & Donohoo, 2018) and gives school leaders a chance to explore new teaching methods alongside teachers (Harris & Jones, 2022). Despite this, the teachers who responded to this study reported a wide spread in their perceptions of the frequency they collaborate with school leaders, which was significantly different (p = 0.0312) from school leader responses, which aligned much more with existing research. This disagreement on the frequency of collaboration with school leaders could be due to several factors which may include the definition of collaboration used by the two groups, or the sample of teachers who responded. It is possible that the teachers who responded did not collaborate with their school leaders because the school leaders did not believe they needed the support while school leaders were collaborating with other teachers on their staff.

Teachers also showed a wide spread (standard deviation = 1.57) in their perceptions about the effectiveness of the inquiry process in engaging them in professional learning, with some responses appearing on both ends of the scale provided. Campbell et al. (2016) stated that the cycles of the inquiry process encourage teachers to think deeply about their practice, a process that Adams et al. (2019) contend needs to be modeled by school leaders to ensure is part of teachers' own professional learning.

According to Stoll (2020), it is these cycles of change and reflection that provide a powerful tool in professional learning. The variety in the responses given by teachers in this study may be as a result of poor modeling by their school leaders, or the vulnerability necessary for teachers to engage in the reflective step in the process. As York-Barr et al. (2005) asserted, as the number of people involved in the reflection increases, so does the personal risk of doing the reflection. If school leaders have not built a culture of trust to make it safe for teachers to engage in reflection, they may be unwilling to engage in the process or the discomfort of participating outweighs the benefits.

5.2 Conclusions

The purpose of this study was to answer the question *What are differences in the elements of school leadership that teachers and school leaders identify as contributing to teacher engagement in effective professional learning?* The data gathered to answer this question follows two broad themes: school leaders and teachers generally agree on the effectiveness of the various methods and leadership practices school leaders can use to engage teachers in professional learning, and often disagree on the frequency that these methods and leadership practices are used.

The methods and leadership practices that were included in the questionnaire were based on an extensive body of literature and have been extensively studied through the years. As a result, the consistency with which both teachers and school leaders agreed with the effectiveness of these strategies is to be expected. Moreover, there was not a single method or leadership practice where there was a statistically significant disagreement between teachers and school leaders about the effectiveness of that strategy. In one case, when asked about how effective having trusting relationships with school

leaders was in encouraging engagement in professional learning, the means of the two data sets were identical. It would seem that, within the group that provided responses, there is consensus on what school leaders should be doing to encourage teachers to engage in professional learning.

When asked about the frequency with which school leaders used these methods and engaged in these leadership practices, there is a notable, and often statistically significant, difference in what teachers and school leaders reported. Without exception, school leaders responded that they were using these methods and leadership practices frequently. Teachers reported a much different experience. Their responses showed noticeable inconsistency when asked about how often professional learning was extended over multiple years and the frequency of the use of collaboration in professional learning. The inconsistency in these responses suggests that teacher experiences with their professional learning vary greatly, likely depending on school leadership.

Teacher responses showed a lower frequency of the use of school leader/teacher collaboration on professional learning ($p = 0.0312$), professional learning that was directly applicable to teachers' classrooms ($p = 0.0302$), and the use of the inquiry process in professional learning ($p = 0.0371$) that was statistically significant. Despite the well-established efficacy of leader/teacher collaboration, classroom applicable learning, and the inquiry process, teachers did not report that they were being as frequently as school leaders did. These differences may be attributed to the difference in the breadth of experience of the two groups. School leaders may be using these strategies with some of their teachers but not all. However, given the established effectiveness of these strategies, this explanation does seem problematic. The other two statistically significant results

were with respect to the frequency that school leaders made short visits to teachers' classrooms ($p = 0.000206$), and how often they observed entire lessons for growth ($p = 0.000000667$). This difference could also be attributed to the scope of experience of the two groups. While an individual teacher may not have a school leader visit their classroom every week, the school leader may be visiting other classrooms in their school on a daily basis. Despite this, the number of respondents who reported never seeing a school leader visit their classroom (18% for short visits, 55% for observations of entire lessons) does warrant further investigation.

5.3 Implications

The results of this study showed that there is broad agreement upon the best practices for school leaders as they work to engage teachers in professional learning. However, there is an interesting disconnect between the perceptions of school leaders and teachers about the frequency with which school leaders use these best practices. With the assumption that all school leaders who responded are equipped with the knowledge and skills to perform their roles within their schools, this disconnect does suggest something about the nature of leadership and teaching. It suggests that there may be a misalignment of purpose with respect to school leaders' involvement in the professional learning of the teachers on their staff. Mombourquette (2017) stressed the importance of school leaders' ability to create shared vision as the driving force of the school. Perhaps the vision created by the school leaders who responded to this study had an insufficient focus on the growth and development of teachers, or their role in that growth and development. Robinson et al. (2008) found a significant impact on the lived experience of teachers

when goals are designed this way, which could help address the disconnection observed in this study.

School leaders have a wide range of responsibilities beyond those outlined in the LQS (Alberta Education, 2018a). However, in Alberta, the competencies outlined in the LQS are essential for guiding the work school leaders do in schools. Gruenert and Whitaker (2015) identified leadership as an important part of the effective functioning of schools. When school leaders focus on one aspect of their role while overlooking another, this speaks powerfully about their priorities. The teacher responses to this survey suggest that school leaders have been overlooking their roles as instructional leaders with some of their teachers, particularly their role in supporting the learning of the teachers in their school. The lack of emphasis on professional learning by school leaders can set a powerful cultural precedent for all teachers, and by extension, students. School leaders should exercise caution in the decision to walk by the door of a "strong" teacher on their way to the classroom of a teacher they deem needs more support. The danger is that the "strong" teacher will be given the impression that they do not need to constantly work to improve their teaching because their school leaders are not showing that they value the learning of that teacher.

5.4 Limitations

While the data gathered does suggest some interesting trends, caution should be used in expanding its implications too broadly. First, the sample size for both groups, but especially school leaders, is small enough to call into question whether it is representative of the population. Second, the timing of data gathering could have introduced inaccuracies to the results. Data were gathered at the end of the school year when school

staff members are not focused on their learning goals but instead on finishing the year. This shift of focus could have resulted in responses that do not represent the actual experience of teachers and school leaders. Third, the school division that data was gathered from is a relatively homogeneous population and may not accurately represent the experiences of teachers in other contexts. Additionally, the learning culture of the school division will have influenced the responses given as division leadership does have some influence on the way that professional learning is carried and this influence was not accounted for in the study. Finally, the design of the questionnaire may limit the results as respondents were not allowed to provide feedback on methods and leadership strategies that were not identified in the literature review but may be used by school leaders to engage teachers in effective professional learning.

5.5 Recommendations

To remedy some of these limitations, a few changes would benefit the reliability of the results. Expanding the scope of data gathering to a wider sample of teachers and school leaders across multiple school districts would likely provide a stronger sample size and reduce the influence that division culture and policies have in the results. Communication with participants could also be improved as the multiple layers of people invitations had to go through caused confusion about the purpose of the study and probably reduced the number of responses. Gathering data earlier in the school year when teachers and school leaders are more focused on professional learning would likely strengthen the correlation of the results gathered from the sample to the experiences of the population. Some adjustments could also be made to the questionnaire that allow for more open ended responses, allowing teachers and school leaders to give more feedback

on their experiences with respect to professional learning beyond the narrow scope that was addressed in this study.

5.6 Future Directions

Despite the limitations of this study, there are some interesting trends that warrant further investigation. The results support existing research about the effectiveness of the included methods and leadership practices in engaging teachers in professional learning, and encourage their use. The numerous significant differences in the reported frequency these methods and leadership practices are used warrants further investigation. While they could be an anomaly created by the limitations of this study, they could be representative of a larger disconnect between what school leaders perceive they are doing to encourage teacher professional learning and what teachers perceive they are doing. To what extent to school leader and teacher perceptions differ with respect to the frequency of school leader engagement in instructional leadership? Also in need of further investigation is the number of teachers who reported that school leaders do not visit their classrooms, both for quick visits and for observation of lessons. This difference could also be a result of the limitations of this study, but could also be a symptom of some teachers not receiving the support they need to improve their instruction practices. In what ways do school leaders use their presence in classrooms to help guide teachers' professional learning? The answers to these questions would provide valuable information to the school division in which the data was gathered and to the education community as a whole. It would also be interesting to conduct this study in another school division, or over multiple divisions, to see if the differences displayed in the

results gathered are unique to the professional learning culture of this division or are more widespread.

5.7 Summary

The results of this study suggest that there are not any significant differences in what teachers and school leaders identify as contributing to teacher engagement in professional learning. Best practices such as strong, trust based relationships, the use of collaboration and reflection in the learning process, and the importance of differentiating teacher learning to meet the needs of each teacher all showed similarly high perceptions of effectiveness in the results. Despite this agreement on the effectiveness of the best practices identified in this study, the results suggest that teachers do not see school leaders using these best practices. It would seem that school leaders are not universally applying the use of these best practices as they engage in instructional leadership despite the LQS stating that instructional leadership should be for all teachers. While differentiating the learning of teachers would necessitate the use of the practices that fit with the learning needs of each individual teacher, the disconnect between the frequencies reported by teachers and school leaders seems inconsistent with differentiation alone. This is especially true with respect to the differences in the frequency of classroom visits for the purpose of teacher growth reported by teachers and school leaders. The footprints of a school leader say a great deal about what they value.

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Appendix A: Teacher Invitation Email

Dear <First Name>:

I am writing to request your participation in a survey of teachers and school leaders in [school division].

This survey gathers information about teachers' perceptions of the effectiveness of school leaders' actions in encouraging them to engage in meaningful professional learning. A comparison will then be conducted with the perceptions of school leaders. This survey is being conducted as part of a Master of Education program at the University of Lethbridge and all data gathered will be used exclusively for this purpose. This study is not sponsored by [school division] and [school division] does not require you to participate.

Your participation in this survey is voluntary and all responses are anonymous. None of the responses will be connected to identifying information.

The survey will take 10-20 minutes to complete and will be available until [closing date]. A reminder email will be sent one week prior to the survey closing. If you do not wish to receive this email, please contact me.

To participate, please click on the following link:
[teacher survey link]

If you have any questions about this survey, or difficulty in accessing the site or completing the survey, please contact Brandon Good (brandon.good@uleth.ca), or one of my supervisors: Dr. Pam Adams (adams@uleth.ca) or Dr. Kevin Wood (k.wood@uleth.ca).

Thank you in advance for providing this important feedback.

Note: This survey has been approved in accordance with the University of Lethbridge human research ethics policy via the University of Alberta's Research Ethics Board. More information on the process can be found at https://www.ualberta.ca/research/services/research-ethics/index.html.

Sincerely,

Brandon Good
Graduate Student
School of Graduate Studies, Faculty of Education, University of Lethbridge
brandon.good@uleth.ca

Appendix B: School Leader Invitation Email

Dear <First Name>:

I am writing to request your participation in a survey of teachers and school leaders in [school division].

This survey is to gather information about school leaders' perceptions of their actions' effectiveness in encouraging teachers to engage in meaningful professional learning. A comparison will then be conducted with the perceptions of teachers. This survey is being conducted as part of a Master of Education program at the University of Lethbridge and all data gathered will be used exclusively for this purpose. This study is not sponsored by [school division] and [school division] does not require you to participate.

Your participation in this survey is voluntary and all responses are anonymous. None of the responses will be connected to identifying information.

The survey will take 10-20 minutes to complete and will be available until [closing date]. A reminder email will be sent one week prior to the survey closing. If you do not wish to receive this email, please contact me.

To participate, please click on the following link:
[school leader survey link]

If you have any questions about this survey, or difficulty in accessing the site or completing the survey, please contact Brandon Good (brandon.good@uleth.ca), or one of my supervisors: Dr. Pam Adams (adams@uleth.ca) or Dr. Kevin Wood (k.wood@uleth.ca).

Thank you in advance for providing this important feedback.

Note: This survey has been approved in accordance with the University of Lethbridge human research ethics policy via the University of Alberta's Research Ethics Board. More information on the process can be found at https://www.ualberta.ca/research/services/research-ethics/index.html.

Sincerely,

Brandon Good
Graduate Student
School of Graduate Studies, Faculty of Education, University of Lethbridge
brandon.good@uleth.ca

Appendix C: Teacher Reminder Email

Dear <First Name>:

I am writing to request your participation in a survey of teachers and school leaders in [school division]. If you have already completed this survey, please disregard this email.

This survey gathers information about teachers' perceptions of the effectiveness of school leaders' actions in encouraging them to engage in meaningful professional learning. A comparison will then be conducted with the perceptions of school leaders. This survey is being conducted as part of a Master of Education program at the University of Lethbridge and all data gathered will be used exclusively for this purpose. This study is not sponsored by [school division] and [school division] does not require you to participate.

Your participation in this survey is voluntary and all responses are anonymous. None of the responses will be connected to identifying information.

The survey will take 10-20 minutes to complete and will be available until [closing date].

To participate, please click on the following link:
[teacher survey link]

If you have any questions about this survey, or difficulty in accessing the site or completing the survey, please contact Brandon Good (brandon.good@uleth.ca), or one of my supervisors: Dr. Pam Adams (adams@uleth.ca) or Dr. Kevin Wood (k.wood@uleth.ca).

Thank you in advance for providing this important feedback.

Note: This survey has been approved in accordance with the University of Lethbridge human research ethics policy via the University of Alberta's Research Ethics Board. More information on the process can be found at https://www.ualberta.ca/research/services/research-ethics/index.html.

Sincerely,

Brandon Good
Graduate Student
School of Graduate Studies, Faculty of Education, University of Lethbridge
brandon.good@uleth.ca

Appendix D: School Leader Reminder Email

Dear <First Name>:

I am writing to request your participation in a survey of teachers and school leaders in [school division]. If you have already completed this survey, please disregard this email.

This survey is to gather information about school leaders' perceptions of their actions' effectiveness in encouraging teachers to engage in meaningful professional learning. A comparison will then be conducted with the perceptions of teachers. This survey is being conducted as part of a Master of Education program at the University of Lethbridge and all data gathered will be used exclusively for this purpose. This study is not sponsored by [school division] and [school division] does not require you to participate.

Your participation in this survey is voluntary and all responses are anonymous. None of the responses will be connected to identifying information.

The survey will take 10-20 minutes to complete and will be available until [closing date].

To participate, please click on the following link:
[school leader survey link]

If you have any questions about this survey, or difficulty in accessing the site or completing the survey, please contact Brandon Good (brandon.good@uleth.ca), or one of my supervisors: Dr. Pam Adams (adams@uleth.ca) or Dr. Kevin Wood (k.wood@uleth.ca).

Thank you in advance for providing this important feedback.

Note: This survey has been approved in accordance with the University of Lethbridge human research ethics policy via the University of Alberta's Research Ethics Board. More information on the process can be found at https://www.ualberta.ca/research/services/research-ethics/index.html.

Sincerely,

Brandon Good
Graduate Student
School of Graduate Studies, Faculty of Education, University of Lethbridge
brandon.good@uleth.ca

Appendix F: Teacher Letter of Consent

University of Lethbridge

Informed Consent Form

Title of Project: Facilitating Improvement in Instruction

Principal Investigator: Brandon Good
Graduate Student
Faculty of Education
Email: brandon.good@uleth.ca

4401 University Drive
University of Lethbridge
Lethbridge, Alberta
T1K 3M4

Co-supervisors:

Dr. Kevin Wood
Assistant Professor
Faculty of Education/School of Graduate Studies
University of Lethbridge
Email: k.wood@uleth.ca

Dr. Pamela Adams
Associate Professor
Faculty of Education/School of Graduate Studies
University of Lethbridge
Email: adams@uleth.ca

This consent form is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Invitation to Participate*:* You are invited to participate in this research study because you are a certified teacher in [school division].

General Information:

This study is being conducted through the University of Lethbridge as part of the degree requirements for the Master of Education program. [School division] has not sponsored this research, and does not require you to participate. Completing this survey should take 10-20 minutes.

Why am I being asked to take part in this research study?

As a teacher, you are required to participate in professional learning. This study seeks to better understand the role that school leaders play in encouraging teachers to participate in their professional learning

What is the reason for doing the study?

In Alberta, teachers are obliged by the Teacher Quality Standard (Alberta Education, 2018) to participate in career long professional learning to improve teaching and learning in their classroom. The Leadership Quality Standard (Alberta Education, 2018) includes the expectation that school leaders ensure all students have access to optimum learning experiences by facilitating the professional learning of the teachers in their school. This study aims to better understand the interplay between school leaders and teachers in this dynamic, specifically with respect to the strategies that school leaders use to facilitate teacher engagement in meaningful professional learning.

What will I be asked to do?

As a voluntary participant in this study, you will be asked to complete an online survey about your perceptions of the effectiveness of the strategies you use to encourage teachers to engage in meaningful professional learning.

What type of personal information will be collected?

All participants shall remain anonymous for data analysis purposes and no identifying information will be collected.

What are the risks and discomforts?

There may be the perception that answers provided to this study will be seen by your school leadership. To prevent this, all data will be collected anonymously, with no information gathered about who your school leaders are or which school you work at. Additionally, it will not be possible for your school leaders to find out if you chose to participate or not. It is impossible to know all the risks that may happen in a study, but the researchers have taken all reasonable safeguards to minimize known risks to a study participant.

What are the benefits to me?

There will be no material benefit and there may be no direct benefit. However you may benefit by reflecting upon your experience engaging in professional learning and the effectiveness of your school leaders' efforts to support that learning.

Do I have to take part in this study?

Participation is completely voluntary and confidential. Your responses will be completely anonymous. To protect your privacy, your data will be assigned a number not connected in any way to your personal identity. Only the investigator will have access to the data collected for this study. For all data collected, only group information will be summarized for any presentation or publication of results.

The data will be stored on an encrypted secure server under password protection and retained for at least 5 years. If you withdraw from the study, all data collected from you will be anonymous and unable to be retrieved.

Will my information be kept private?

During this study we will do everything we can to make sure that all information you provide is kept private. No identifying information will be collected as part of this study so connecting your responses with you will be effectively impossible. The results of this study are expected to be included in academic presentations and papers. Summarized, aggregate data may be provided to [school division].

Below you will be asked whether you consent to participate in this study. By selecting "agree," you are indicating 1) you understand to your satisfaction the information provided to you about your participation in this research project, and 2) you agree to submit your anonymous data for inclusion in this study.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research study at any time before you submit your responses. If you stop prior to completing the survey, or do not submit your responses, any data collected will be deleted. You should feel free to ask for clarification or additional information throughout your participation.

Below you will be asked if you consent to participating in this study. To indicate consent it is necessary to both 1) indicate your understanding to your satisfaction the information provided to you about your participation in this research project in this Informed Consent Form by selecting Accept below and 2) submitting your anonymous data for inclusion in this study after completing the survey. If you choose to withdraw before submitting your responses, close your browser window or click withdraw on the final question. Once your data is submitted, it will no longer be possible to withdraw your data.

What if I Have Questions?

If you have any questions regarding your rights as a research participant, you may contact the University of Alberta Research Ethics Office at reoffice@ualberta.ca or 780-492-

2615 and quote Ethics ID Pro00139365. This office is independent of the study investigators.

If you have any further questions or want clarification regarding this research and/or your participation, please contact:

Brandon Good
Graduate Student, Faculty of Education, University of Lethbridge
brandon.good@uleth.ca

I consent to participate in this study facilitating improvement in instruction.

How do I indicate my agreement to be in this study?

By selecting accept below and selecting submit upon completion of the survey, you understand:

- That you have read the above information and have had anything that you do not understand explained to you to your satisfaction.
- That you will be taking part in a research study.
- That you may freely leave the research study at any time.
- That you do not waive your legal rights by being in the study
- That the legal and professional obligations of the investigators and involved institutions are not changed by your taking part in this study.

Appendix F: School Leader Letter of Consent

University of Lethbridge

Informed Consent Form

Title of Project: Facilitating Improvement in Instruction

Principal Investigator: Brandon Good
Graduate Student
Faculty of Education
Email: brandon.good@uleth.ca

4401 University Drive
University of Lethbridge
Lethbridge, Alberta
T1K 3M4

Co-supervisors:

Dr. Kevin Wood
Assistant Professor
Faculty of Education/School of Graduate Studies
University of Lethbridge
Email: k.wood@uleth.ca

Dr. Pamela Adams
Associate Professor
Faculty of Education/School of Graduate Studies
University of Lethbridge
Email: adams@uleth.ca

This consent form is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Invitation to Participate*:* You are invited to participate in this research study because you are a school leader in [school division].

General Information:

This study is being conducted through the University of Lethbridge as part of the degree requirements for the Master of Education program. [School division] has not sponsored this research, and does not require you to participate. Completing this survey should take 10-20 minutes.

Why am I being asked to take part in this research study?

As a school leader, you are required to facilitate teachers' engagement in professional learning. This study seeks to better understand the role that school leaders play in encouraging teachers to participate in that professional learning.

What is the reason for doing the study?

In Alberta, teachers are obliged by the Teacher Quality Standard (Alberta Education, 2018) to participate in career long professional learning to improve teaching and learning in their classroom. The Leadership Quality Standard (Alberta Education, 2018) includes the expectation that school leaders ensure all students have access to optimum learning experiences by facilitating the professional learning of the teachers in their school. This study aims to better understand the interplay between school leaders and teachers in this dynamic, specifically with respect to the strategies that school leaders use to facilitate teacher engagement in meaningful professional learning.

What will I be asked to do?

As a voluntary participant in this study, you will be asked to complete an online survey about your perceptions of the effectiveness of the strategies you use to encourage teachers to engage in meaningful professional learning.

What type of personal information will be collected?

All participants shall remain anonymous for data analysis purposes and no identifying information will be collected.

What are the risks and discomforts?

There are no known risks associated with participation in this study. It is impossible to know all the risks that may happen in a study, but the researchers have taken all reasonable safeguards to minimize known risks to a study participant.

What are the benefits to me?

There will be no material benefit and there may not be any direct benefit. However you may benefit by reflecting upon your experience as a leader of learning and the effectiveness of what you have done in the past to facilitate teacher professional learning.

Do I have to take part in this study?

Participation is completely voluntary and confidential. Your responses will be completely anonymous. To protect your privacy, your data will be assigned a number not connected in any way to your personal identity. Only the investigator will have access to the data

collected for this study. For all data collected, only group information will be summarized for any presentation or publication of results.

The data will be stored on an encrypted secure server under password protection and retained for at least 5 years. If you withdraw from the study, all data collected from you will be anonymous and unable to be retrieved.

Will my information be kept private?

During this study we will do everything we can to make sure that all information you provide is kept private. No identifying information will be collected as part of this study so connecting your responses with you will be effectively impossible. The results of this study are expected to be included in academic presentations and papers. Summarized, aggregate data may be provided to [school division].

Below you will be asked whether you consent to participate in this study. By selecting "agree," you are indicating 1) you understand to your satisfaction the information provided to you about your participation in this research project, and 2) you agree to submit your anonymous data for inclusion in this study.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research study at any time before you submit your responses. If you stop prior to completing the survey, or do not submit your responses, any data collected will be deleted. You should feel free to ask for clarification or additional information throughout your participation.

Below you will be asked if you consent to participating in this study. To indicate consent it is necessary to both 1) indicate your understanding to your satisfaction the information provided to you about your participation in this research project in this Informed Consent Form by selecting Accept below and 2) submitting your anonymous data for inclusion in this study after completing the survey. If you choose to withdraw before submitting your responses, close your browser window or click withdraw on the final question. Once your data is submitted, it will no longer be possible to withdraw your data.

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If you have any questions regarding your rights as a research participant, you may contact the University of Alberta Research Ethics Office at reoffice@ualberta.ca or 780-492-2615 and quote Ethics ID Pro00139365. This office is independent of the study investigators.

If you have any further questions or want clarification regarding this research and/or your participation, please contact:

Brandon Good
Graduate Student, Faculty of Education, University of Lethbridge
brandon.good@uleth.ca

I consent to participate in this study facilitating improvement in instruction.

How do I indicate my agreement to be in this study?

By selecting accept below and selecting submit upon completion of the survey, you understand:

- That you have read the above information and have had anything that you do not understand explained to you to your satisfaction.
- That you will be taking part in a research study.
- That you may freely leave the research study at any time.
- That you do not waive your legal rights by being in the study
- That the legal and professional obligations of the investigators and involved institutions are not changed by your taking part in this study.