DUTIES AS ASSIGNED:

HOW PRINCIPALS’ LEADERSHIP PRACTICES INFLUENCE THEIR VICE-PRINCIPALS’
LEADERSHIP SELF-EFFICACY

By

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This study examines the potentially critical role elementary school principals play in the leadership development of their vice-principals. A growing body of research supports the important role principals might assume in the leadership development of vice-principals. Reports from the field, however, indicate that the vice-principalship does not adequately prepare vice-principals to become school principals. This research attempts to resolve this apparent tension by asking: “How do principals’ leadership practices influence the leadership self-efficacy of elementary vice-principals?” Using self-efficacy as an indicator of vice-principals’ leadership development, this research examines the effects of specific leadership practices by elementary school principals (aligned with the four sources of self-efficacy: enactive mastery, vicarious experience, verbal feedback, and physiological states) on vice-principals’ leadership development in three domains: management, instructional leadership, and moral leadership.

This study adopts a mixed methods, sequential explanatory, approach. An online survey of vice-principals in English school districts in Ontario was conducted. Then, 15 interviews of
purposively selected participants (from the online survey) were completed based on the results of
the initial phase of the research. The findings of the study illustrate a small but significant effect
of principals’ leadership practices on vice-principals’ leadership self-efficacy. A strong
relationship between principals’ leadership practices and vice-principals’ opportunities to lead
within their schools suggests that principals’ leadership practices may also capture a certain style
of leadership that is conducive to vice-principals’ leadership development. The qualitative phase
of this research suggests that these elements are: autonomy, trust, collaboration, and respect.

How these elements influence the working environment and relationship of vice-
principals should be considered in future research. This research supports the importance of self-
efficacy when considering leadership development in Ontario schools, both as a potential
measure of leadership effectiveness and as a means of improving leadership performance in
schools, particularly as formal school leadership influences school performance and student
achievement.
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No one or no other experience can really prepare you for the demanding work of completing a doctoral dissertation. This being my “second-kick-at-the-can” after not completing a doctoral program I started at OISE in early 2000’s, I know how easy it can be to oh-so gradually fall away from the work, especially when working on the dissertation. Writing a dissertation with a focus on self-efficacy has a way of promoting some very interesting self-reflection as you journey through the joys, frustrations, and disappointments inevitably associated with the process. In those ironic moments when the guy writing on self-efficacy possessed none whatsoever, only the guidance from some very special people allowed me to regain the persistence and confidence to continue.

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Chapter 1
Introduction

*A vice-principal shall perform such duties as are assigned to the vice-principal by the principal.*

*R.R.O. 1990, Reg. 298, s. 12 (2)*

The regulation above from the Education Act defines in one short sentence the role of vice-principals in Ontario. While not providing specifics regarding the duties of elementary school vice-principals, the regulation does capture the potentially crucial role that school principals might play in the daily activities assigned vice-principals and, relatedly, the context in which their duties are performed. This study investigates the influential role of principals in the leadership development of vice-principals (Barnett, Shoho & Oleszewski, 2012a; Barnett, Shoho & Oleszewski, 2012b; Calabrese & Tucker-Ladd, 1991; Kaplan & Owings, 1999; Paskey, 1989) and specific ways principals might enhance the leadership development of their vice-principals. This line of research is particularly important given the strong evidence indicating that the current work of vice-principals in schools is not preparing them to take on the challenging role of school principal (Barnett et al., 2012a; Harvey, 1994; Hausman, Nebeker, McCreary & Donaldson, 2002; Koru, 1993; Kwan, 2009a). The research suggests that too few principals are providing the rich types of leadership experiences and relational supports that vice-principals require to be effective in their current roles and, in turn, in their future roles as elementary school principals.

In order to investigate the leadership development of vice-principals attributable to principals’ leadership practices, this study uses self-efficacy (Bandura, 1977, 1989, 1997), a core mechanism situated within the broader context of social cognitive theory (Bandura, 1991, 2001). A substantial body of research in leadership across organizational domains exists that supports
the value of self-efficacy in predicting leadership performance (McCormick, 2001; Paglis, 2010; Paglis & Green, 2002). This research supports self-efficacy as an important predictor of a number of core leadership traits that promote organizational success. Recently, educational researchers have begun to more thoroughly assess the effects of self-efficacy beliefs on the leadership performance of school principals and vice Principals and their potential indirect effects on student achievement (Leithwood & Jantzi, 2008; Leithwood, Strauss, & Anderson, 2007; McCullers & Bozeman, 2010; Seashore Louis, Leithwood, Anderson, & Wahlstrom, 2004; Smith, Guarino, Strom, & Reed, 2003). This recent and ongoing direction in educational leadership research suggests that self-efficacy is an important indicator for measuring the potential of school leaders to promote school effectiveness and student achievement. Furthermore, the most recent iteration of the Ontario Leadership Framework (Leithwood, 2012) positions self-efficacy as an important psychological dimension in effective school leadership.

The argument for focusing on self-efficacy in this study is founded on two research based findings: first, the predictive power of self-efficacy in determining performance (Bandura, 1982; Sadri & Robertson, 1993; Stajkovic, Eisenberg & Luthans, 1998) and, second, the identified practices for increasing an individual’s sense of efficacy within diverse domains of human functioning (Bandura, 1997; Gist & Mitchell, 1992). In this study, the first finding is examined through the literature and research on self-efficacy. The research is specific in detailing the positive personal and professional outcomes of high efficacy beliefs on organizational leaders and, relatedly, the positive influence of their self-efficacy on the organizations they lead (Hannah, Avolio, Luthans, & Harms, 2008; Paglis, 2010). The more original work in the research seeks to identify those principals’ leadership practices that might influence the development of vice-Principals’ leadership self-efficacy. The four sources of self-efficacy
(enactive mastery, vicarious experience, verbal persuasion, and physiological states) are first defined through the literature on social cognitive theory and then related to potential leadership practices principals may employ in their daily work with vice-principals.

**Purpose of the Study**

The purpose of this research is to investigate how the leadership practices of principals might influence vice-principals’ leadership self-efficacy in their work within elementary schools. As noted above, these leadership influences are operationalized with specific principals’ leadership practices that might support the development of vice-principals’ leadership self-efficacy. It is hypothesized that principals’ leadership practices do positively influence the self-efficacy and, relatedly, the leadership performance of vice-principals. In this study, the quality of leadership performance by elementary school vice-principals is not directly assessed; rather, vice-principals’ self-reports of leadership self-efficacy are investigated in relationship to principals’ practices, both specific leadership practices on the part of elementary school principals and various leadership duties assigned vice-principals by their principal. Although research supports the positive role principals can play in the leadership development of their vice-principals (Barnett et al, 2012a, 2012b; Calabrese & Tucker-Ladd, 1991; Kaplan & Owings, 1999; Paskey, 1989), there is little provided in terms of specific practices that might support vice-principals’ leadership development. This contention is briefly explored below and in the literature review that follows.

Vice-principals in elementary schools are the focus of this study due to the unique nature of elementary school leadership. Leithwood (2012), for example, notes the differing organizational, cultural, and managerial structures between elementary and secondary schools.
This suggests that the role of an elementary school vice-principal is different in practice and context when compared to the work of secondary school vice-principals. Although there may be transferable or generative leadership practices that serve both elementary and secondary contexts, there are a number of differences between the two that warrant studying them separately (Leithwood & Azah, 2014). Research also suggests that elementary principals are more involved in instructional leadership within their schools, providing a unique emphasis when investigating the type of work that elementary vice-principals are assigned in their schools (Seashore Louis et al., 2010; Robinson, Lloyd, & Rowe, 2008).

In order to investigate principals’ practices that might influence elementary vice-principals’ leadership efficacy beliefs, a stage-like process proposed by Bandura (2000), *mastery learning*, is used to operationalize and measure the effect of principals’ leadership practices on vice-principals’ self-efficacy in three core leadership areas within elementary schools. The four elements from this developmental process are identified and then operationalized as practices principals might implicitly or explicitly use in cultivating leadership self-efficacy in their vice-principals. These practices are identified as they influence the four sources of self-efficacy identified by Bandura (1997, 2000): enactive mastery, vicarious experience, verbal persuasion, and physiological states. The information from each of these sources provides individual school leaders multi-layered feedback – through experience, preparation, feedback, and emotional and affective states – on their leadership performance. A particular concern in this research is the effect of principals’ leadership practices (as they are aligned with the four sources of self-efficacy) on vice-principals’ leadership self-efficacy, that is, at least, as perceived by the elementary school vice-principals in the study.
Need for the Study

Given the evidence from the studies noted above (for example, Barnett et al., 2012a; Harvey, 1994; Hausman et al., 2002) that the vice-principalship does not adequately prepare vice-principals for the principalship, this research potentially offers a more explicit list of practices that might support the development of vice-principals’ self-efficacy and, as a result, vice-principals’ leadership performance. Identifying such influential practices may serve to support a richer pool of candidates ready to assume the elementary principalship. Furthermore, enhancements in leadership self-efficacy with related improvements in leadership practice should promote greater school effectiveness and, consequently, greater student achievement.

Although there is evidence that what principals do with and for their vice-principals does influence vice-principals’ efficacy in the role (Barnett et al., 2012, 2012b; Calabrese & Tucker-Ladd, 1991; Kaplan & Owings, 1999; Paskey, 1989), specific leadership practices that promote leadership self-efficacy have not been identified. Rather, more anecdotal or intuitive claims about the nature of the working relationship between principals and vice-principals have been asserted. The problem, and subsequently the need for this type of study, is the wide-ranging nature of such claims, and perhaps more importantly, the fact that such claims have not been thoroughly scrutinized through empirical research. This mixed methods research seeks to remedy this problem by proposing specific leadership practices on the part of elementary school principals that might enhance the leadership self-efficacy of vice-principals.

Research Question

The work in this study focuses on one primary question:
How do principals’ leadership practices and vice-principals’ leadership opportunities, as perceived by vice-principals, affect the leadership self-efficacy of vice-principals?

This question is supported by three related sub-questions:

1. How do the leadership practices of principals affect the leadership self-efficacy of their vice-principal?

2. How do the leadership opportunities of vice-principals affect their sense of leadership self-efficacy?

3. To what extent do principals’ leadership practices and/or vice-principals’ leadership opportunities affect vice-principals’ sense of leadership self-efficacy?

In terms of the design of this mixed methods research, the first two sub-questions are posed to focus the two initial phases within this study: first, the quantitative phase that gathers data through an online survey, and secondly, the qualitative phase that seeks to add depth by employing follow up interviews with several purposively selected participants from the quantitative phase. Initially, potential influences of principals’ practices and leadership opportunities on vice-principals’ leadership self-efficacy are studied separately. The third sub-question guides the final integrative step in the research where both quantitative and qualitative data and the possible combined influences of principals’ leadership practices and a vice-principal’s opportunities for leadership on leadership self-efficacy are integrated to address the overall research question.
Significance of the Study

The relationship between principals and vice-principals is important in the leadership development of elementary school vice-principals. Calabrese and Tucker-Ladd (1991) insist that the principal’s role in the leadership growth of the vice-principal is both personal and professional:

In a personal sense, the principal must be committed to the growth of a human being. In a professional sense, the principal must be committed to the welfare of the school and the profession. (p. 68)

Additionally, Kwan (2009a) argues that the principal’s responsibility to support the leadership development of the vice-principal has implications in the vice-principal’s current role and for their future role as principals. The principal’s leadership approach to her or his vice-principal bears on the pool of potentially talented and motivated leaders ready to assume the principalship, and improves the possible influence a vice-principal might have in the school in which they currently lead and serve.

Although high self-efficacy beliefs do affect leadership and organizational outcomes (Hannah, Avolio, Luthans, & Harms, 2008; Paglis, 2010), current research does not provide specific leadership practices that might enable principals to influence their vice-principals’ leadership self-efficacy. Given the recent focus in educational research on self-efficacy and its perceived influence on students’ learning (Leithwood & Jantzi, 2008; Leithwood, Strauss, & Anderson, 2007; McCullers & Bozeman, 2010; Seashore Louis et al., 2010), research into possible leadership strategies that support the development of leadership self-efficacy in formal
school leaders seems warranted. Investigating those practices that principals may use to support the leadership development of their vice-principals appears timely and important. It is hoped that this work may offer some insight into the relationship between principals and vice-principals and identify practices that influence the leadership self-efficacy of vice-principals. By investigating how principals currently support their vice-principal’s leadership development (as measured through the vice-principal’s perceived sense of leadership efficacy), specific practices might be identified that allow principals to fulfill their personal and professional commitments to vice-principals’ leadership development. Given the key role that those in formal school leadership play in school and student success, policy makers at the Provincial level, district leadership teams, and principal associations might find the results of this study informative as they create policy directions, promote initiatives, and create programs to support the leadership development of principals and vice-principals.
Chapter 2

Review of the Literature

Introduction

This section of the dissertation provides a review of the pertinent literature. Theoretical literatures as well as various forms of qualitative and quantitative research were reviewed. In the first section, the ever changing and challenging role of the principalship is explored in the context of new evaluations of what constitutes the necessary work of school principals and how principals (and vice-principals) might learn to do the work of school improvement. It is proposed that the complex work of principals and vice-principals has been aided but not necessarily simplified through the formation of evidenced-based leadership practices that affect school effectiveness and student achievement. An emphasis on doing and reflecting on the work of school leadership in specific school contexts is proposed as integral to leadership development generally.

In the next section, self-efficacy is reviewed and its implications for personal and organizational performance discussed. Within the context of social cognitive theory, personal agency is explored as a core contributor to self-efficacy beliefs. The factors contributing to self-efficacy, as well as the social and psychical terrain in which self-efficacy is acquired, are discussed and some specific practices outlined for supporting the growth of self-efficacy in individuals are detailed. The four sources of self-efficacy are discussed and specific practices aligned with each source are developed from the research. These practices form the basis for principals’ leadership practices that might potentially influence vice-principals’ leadership self-efficacy.
In the following section, the role of the principal is described in relation to the leadership development of vice-principals. Both the importance of self-efficacy to leadership development and how principals might better support the growth of leadership self-efficacy on the part of their vice-principals are explored. Finally, the positive outcomes of leadership self-efficacy are reviewed and the specific role of self-efficacy beliefs in increasing school effectiveness and student achievement are discussed. The underlying assumption of this review is the preparatory or apprentice-like role the vice-principalship plays in the creation of effective school principals and the crucial role principals may assume in the leadership development of their vice-principals. In the concluding section to this review, the conceptual framework for the study is presented to both summarize the preceding review and address the research questions critical to this investigation.

Increasing Demands and Doing the Work

The work of school principals is increasingly complex and challenging, demanding new knowledge, skills and abilities and, relatedly, new forms of preparation for school leadership (Brown, 2006; Portin, 2004; Sanzo, Sherman, & Clayton, 2004). Whitaker (2003) suggests the complexity of principals’ work has been fueled on a global scale by several common challenges, including increased managerial and leadership demands, accountability to improve student achievement, and transparency of results to both local and broader community stakeholders. Hauseman and Pollock (2015) confirm the growing complexity of principals’ work and suggest such causes as the current focus on school reform, including the effect of high-stake assessments and their concomitant effect on principals’ autonomy and leadership practices; the growing need to respond to issues of diversity and inclusion; the effect of technology on communication; and
the changing realities of workplace labour relations. Finally, Trail (2000) illustrates the on-the-ground complexity of principals’ work through a series of possible roles elementary school principals enact in their work days, for example, as psychologist, philosopher, facilities manager, coach, diplomat, mentor, police officer, etc. Each role corresponds with series of leadership tasks, including such core practices as leading professional development, creating a safe school environment, facilitating connections between the school and external stakeholders, or fostering a vision or school identity. She argues that principals need to build capacity in a shared culture of collaboration with staff, students and community where “principals not only share the lead, but share the load” (Trail, 2000, p. 2).

The complexities of organizational/relational structures in schools demand a set of dynamic intrapersonal and interpersonal skills on the part of principals (Stock & Duncan, 2010). Principals are called to develop comprehensive and shared visions for their schools while concurrently building the commitment, motivation, and capacity of school staff in order to improve student achievement (Leithwood, Day, Sammons, Harris et al., 2006). Wise and Jacobo (2010) comment:

The principal of today is now charged with creating and leading an organization where principals and teachers must interact continually with new ideas about their practice and collaborate to internalise these ideas into practices and policies that fit within the context of their own school culture. (pp. 159-160)

Principals must also prove themselves adept at re-visioning, restructuring, and redesigning schools within communities that have their own unique and potentially challenging circumstances, all while persisting in the larger purpose of improving school performance and
student achievement (Sanzo et al., 2004). Leithwood and Azah (2014) contend that the effective implementation of these priorities requires the honing of soft, or emotional, skills in addition to hard, or behavioural, practices. They claim that specific leadership strategies (i.e., those behavioural practices) linked to school effectiveness are frequently the sole focus for improving school leadership to the detriment of the soft skills of leadership. Goodwin (2013) notes the importance that “people skills” play in the success of school principals. He argues that “successful school leadership is often less about giving orders than about leading through social persuasion, personal connections, and shared leadership”. (Goodwin, 2013, p. 79) It is not just about doing the work (i.e., implementing the strategies) but how the work is done that often bears on the effectiveness of formal school leaders like principals and vice-principals.

The distinction (and interplay) between “leadership” and “management” provides another lens for understanding the complexity of the role of formal leaders in elementary schools. When viewed distinctively or as separate components of the same job, management and leadership are portrayed as contrasting in practice. Reynolds and Warfield (2014), for example, offer competing and divergent estimates of the manager and leader. Managers “focus on the system, have short-term perspective, accept the status-quo, imitate and copy”; conversely, leaders “focus on people, develop, inspire trust, have long term perspective, challenge the status quo, originate, and show originality” (Reynolds & Warfield, 2014, p. 62). Rather than the case of overcoming the limitations of management through effective leadership, McGowan and Miller (2001) assume more of an interplay between the two:

While management skills are necessary aspects of the school leader's job and some time must be devoted to managing resources and people, management skills
and time are no longer sufficient to meet the escalating challenges and demands.

Regardless, school leaders are expected to be good managers; however, the more difficult work frequently relates to the softer, less technical skills, of leadership. How principals integrate the managerial and leadership tasks in practice frequently speaks to their ability to improve schools and student achievement.

The influence of principals’ work on student achievement has a long history in the literature on school leadership (Hallinger & Heck, 1998). In their research, Hallinger and Heck (1998) assess the effect of principals’ leadership on student learning through the latter decades of the 20th century. Although their research discounts a direct link between student achievement and principals’ leadership, it does begin to identify important forms of principals’ leadership that indirectly affect student achievement, mainly through effects on school goals, organization, people, and culture. They note, “these variables represent both a reasonable focus for principal practice and also for future research into school effectiveness and improvement” (p. 187).

These broad factors in principals’ practice have become in recent times the focus of research and the basis for related recommendations promoting specific leadership practice that indirectly affect students’ learning. In the early decades of the 21st century, the indirect influence of principals’ leadership on student achievement is now overwhelming accepted among educational researchers (Jacobson, 2011; Hull, 2012; Leithwood & Levin, 2005). Leithwood, Day, Sammons, Hopkins et al. (2010) identify principals’ leadership as secondary only to classroom teaching in its effect on student achievement (earlier confirmed in their 2007 review of similar, quantitative studies). Leithwood, Day, Sammons, Harris et al. (2006) attribute as
much as one quarter of all effects on school improvement to the formal leadership of school principals. They note that “there are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader” (p. 5). For these powerful leaders knowing what to do is only the beginning; understanding how to implement specific strategies to make specific schools more effective is equally important.

The core or basic domains of effective school leadership have remained consistent over the past years, including setting direction and vision, developing the core capacity of staff for teaching and learning, and developing more cohesive, collaborative, and supportive organizations focused on teaching and learning (Leithwood, Day, Sammons, Harris et al., 2006; Leithwood & Riehl, 2003; Seashore Louis et al., 2010). Waters, Marzano, and McNulty (2003) propose a comparable list of 21 effective principals’ practices aligned with these categories (Seashore Louis et al., 2010) that demonstrate positive effects on student learning. From their research they discovered that a one standard deviation improvement in principals’ leadership translates into a 10 percentile improvement in student learning, a statistically significant change in student achievement (Water et al., p. 3). Further, Robinson, Lloyd, and Rowe (2008) identify a similar list of categories and more specific practices on the part of school principals that indirectly support student achievement and other positive effects of schooling, such as student engagement, positive self-concept as a learner, and attendance.

Recent research highlights the need to link leadership practices with student learning and achievement. Robinson (2006), for example, proposes a form of backward mapping of leadership practices that support effective classroom instruction and, consequently, student achievement. Robinson, Lloyd, and Rowe (2008) argue for a greater focus on the effects of teaching and
learning as a guide in determining effective leadership practices on the part of school principals, rather than connecting practices to specific leadership theories. In their meta-analysis of leadership’s influence on student achievement Robinson, Hohepa, and Lloyd (2009) do not eschew leadership theories entirely; rather they draw on five “dimensions” of leadership supported in the research as affecting student achievement. Of the five dimensions, two related to transformational forms of leadership (goal setting and planning/evaluating teaching) produced moderate and significant effect sizes on overall student performance. Promoting and participating in teacher learning, strongly connected to pedagogical (or instructional) leadership, produced even higher effect sizes. Despite the fact that instructional leadership demonstrated overall a stronger indirect influence on student achievement, practices associated with transformational leadership still had significant and moderate influence on student learning. For Robinson, Hohepa et al. (2009) the effect of a leadership strategy trumps mere association with a leadership theory, although a line to a particular leadership theory can still be drawn for a specific strategy.

Seashore Louis et al. (2010) and Leithwood et al (2004) insist on the same sort of practical focus in identifying domains and related practices for school leadership when conducting leadership effectiveness research. Basing decisions on results seems the better option, rather than a narrow reliance on theories of leadership which too often and unnecessarily limit the blending of effective practices which appear (from the perspective of specific leadership theories at least) unamendable in practice. This seems a reasonable plan of attack in limiting (in number) and identifying (in terms of influence) the key practices that shape effective school leadership, particularly when student achievement is broadened to include more long term and socially relevant goals. Levin and Leithwood (2005) include these broader goals as
“participation in higher education, employment, and other measures of social participation” (p. 18).

Although evidence related to the practices that positively affect school success and improve both schools and students has developed and grown in recent times, the implementation of specific practices appears as more art than science for school principals (Leithwood, Day, Sammons, Harris et al., 2006; Seashore Louis et al., 2010). Waters et al. (2003) assert that “effective leadership means more than simply knowing what to do – it’s knowing when, how, and why to do it” (p. 2). There is no one size fits all plan for school improvement. Leithwood, Day, Sammons, Harris et al. (2006) and Leithwood, Day, Sammons, Hopkins et al. (2010), for example, stress the common core traits that effective principals possess as one of their strong claims of school leadership. However, they qualify this strong claim with the fact that successful school leaders apply the basic leadership practices in context specific ways. These contextual factors include but are not limited to: the developmental phase of school improvement (Leithwood, Day, Sammons, Hopkins et al., 2010); demographic factors such as race, poverty, and school size (Seashore Louis et al., 2010); and/or whether the school is an elementary or secondary school (Seashore Louis et al., 2010).

Principals’ work has a broad constellation of factors contributing to its complexity. External factors as well as internal ones challenge the working context and decision making processes of formal school leaders. There is increasingly a growing agreement around the core leadership practices that influence school effectiveness and increased student achievement. When a constructive course of action is established, however, principals and vice-principals must apply specific practices in such a way as to harness the passion and commitment of staff and
parents, demonstrating both the hard and soft skills noted above. This sort of leadership is intelligent and inspirational. Leadership is in the moment, enacting proven strategies for particular school contexts and focused on the individual strengths of principals and vice-principals (Leithwood, Day, Sammons, Harris et al., 2006; Leithwood, Day, Sammons, Hopkins et al., 2010). Doing the work of school improvement is a necessary, but not necessarily sufficient, variable in improving school leaders. How individual leaders experience, understand, evaluate, and react to their performances will dictate levels of leadership confidence and, relatedly, self-efficacy.

In Ontario, the evidenced-based practices for school leaders are collected in the Ontario Leadership Framework (Leithwood, 2012). These key practices in the OLF offer a measurable way to assess the effect of school principals on school effectiveness and student outcomes. Five domains or categories form the pillars of OLF: 1) Setting Directions; 2) Building Relationships and Developing People; 3) Developing the Organization to Support Desired Practices; 4) Improving the Instructional Program; and 5) Securing Accountability. Within each of the domains, more specific practices are outlined that develop these broad categories of effective school leadership. Leithwood (2012) notes, however, that these shorter term goals leave “considerable room for adaptation to local circumstances and assume considerable problem solving skill on the part of those exercising leadership” (p. 6). Once again, the practices are only as good as those knowing how and when to adopt a particular practice in the right situation and context, and at the right time.

The Ontario Leadership Framework (Leithwood, 2012) is now in its second edition. Leithwood (2012) offers several sound reasons for the recent changes to the framework,
including the need for greater integration of management and leadership tasks, the
acknowledgement of school context as integral to successful leadership, and the effect of the
leader’s interpersonal and intrapersonal skills on school success and student achievement. He
argues that the older notion of “competencies” provided in earlier iterations of the OLF
suggested a fragmented, decontextualized, past-focused, conformist, and less than empirically-

based approach to school leadership. The current focus on “practices” acknowledges the social
context of leadership, importance of relationships, flexibility in leading, and a focus on the
shared nature of leadership (Leithwood, 2012, p. 5). Although the OLF acknowledges specific,
evidenced based practices for school leaders, the concept of practice provides a much more
contingent understanding of how successful strategies are enacted. Still further, the framework
also considers the contingencies attributable to “who” enacts the practice.

The elements of the “who” in practice are captured in the OLFs newly crafted Personal
Leadership Resources (PLR) under cognitive, social, and psychological categories. Cognitive
resources include both professional knowledge and expertise in problem solving; social
resources are related to perceiving and managing emotions as well as acting in emotionally
appropriate ways; and, finally, the psychological resources include resiliency, self-efficacy, and
optimism. Of all the PLRs, the psychological resource, self-efficacy, plays a central role in
promoting the overall personal capabilities of leaders. McCormick (2001) contends that self-
efficacy provides a rich theoretical and research-based framework for exploring effective, self-
confident leadership. He suggests a reciprocal interaction among leadership behaviors, leaders’
cognitive and personal resources, and the leadership environment. These three factors align with
the three elements discussed in self-efficacy theory as triadic reciprocal causation (Bandura,
1997; McCormick, 2001). McCormick (2001) argues that self-efficacy is a core cognitive factor
contributing to effective leadership; one that influences many of the PLRs listed in the OLF, including persistence, effectively managing emotions, and the quality of cognitive processing and problem solving:

*Leadership self-efficacy*, which is proposed as the central cognitive variable…, is defined as one’s self-perceived capability to perform the cognitive and behavioral functions necessary to regulate group process in relations to goal achievement (McCormick, 2001, p. 30).

McCormick (2001) contends that leadership self-efficacy is similar to leadership self-confidence, although the latter lacks the theoretical and empirically validated structure of self-efficacy to create exploratory models of leadership. His contentions borrow extensively from social cognitive theory and he posits self-efficacy as “the central integrative variable” in leadership performance (McCormick, 2001, p. 24). Self-efficacy influences cognitive resources, including strategizing and problem solving, the effective management of affective dimensions in complex performance domains (like schools), and on the persistence and motivation to follow through on challenging tasks. Therefore, self-efficacy beliefs have potential positive effects on the various other PLRs described in the OLF. Its effects on problem solving, the management of emotions, motivation, and persistence are explored below.

**Social Cognitive Theory and Self-efficacy**

Social cognitive theory offers a conceptual model of human agency (Bandura 1999, 2001) that confirms both the reality of individuals as purposeful actors in the world and the influence of social/environmental influences on human growth and development. Bandura
(1999) contends that “persons are neither autonomous agents nor simply mechanical conveyers of animating environmental influences” (p. 22). Human thought proactively proposes goals that respond to environmental conditions, creates actions to alter that environment, and reacts and reevaluates actions and goals in order to meet desired outcomes. He notes that “people are producers as well as products of social systems” (Bandura, 1999, p. 24). Through a reciprocal and self-reflective process of assessing goals, conditions, and behaviors, individuals can react and refine their motivations and actions to meet challenges in their environment. Bandura (2001) theorizes that neither mechanistic, cognitive processes nor deterministic sociostructural influences fully capture what makes us human. He proposes a convergence of these two necessary but insufficient theories of human becoming through human agency. Social cognitive theory poses the generative, creative, proactive, and reflective human mind as the mediator between cognitive processes and the social world (Bandura 1999, 2001).

Human agency is a psychical mechanism influenced by several core functions. Bandura (2001) identifies these interrelated functions as intentionality, forethought, self-reactiveness, and self-reflectiveness. Intentionality is key to the practice of agency. People need not simply react to events and stimuli in their environments in a deterministic fashion; rather they can adjust, modify, or create behaviors in new ways for novel purposes. Forethought formulates the intention or commitment to act in a certain way for a perceived future outcome, made real and motivational in the present through cognitive representation. In turn, people develop courses of action to reach desired and valued outcomes that may accommodate or seek to alter the current social environment. The self-reactive function allows individuals to sustain efforts to attain identified goals through observation, evaluation, and redirection of efforts to meet those outcomes (Bandura, 1991). Bandura (1999, 2001) suggest that if humans were merely reactive
to their environments, shifting their actions based on “external rewards and punishments, they would behave like weather vanes, constantly shifting direction to whatever influence happened to impinge on them at the time” (Bandura, 2001, p. 7). Self-reactive processes allow people to harness different and potentially more appropriate strategies for reaching their goals in complex and challenging environments that might seem at times to undermine their efforts. Finally, self-reflectiveness is the metacognitive function of human agency that allows for the evaluation of the meaning and purpose of action. Motivation (and the construction of purpose), from either internal or external reward or value systems, is enacted through this process in order to sustain the effort to meet desired goals or outcomes (Bandura, 1991).

These core functions of human agency occur in the social and psychical terrain bounded by triadic reciprocal causation. Social cognitive theory postulates three interdependent factors that influence human action or performance: first, personal factors in the form of cognitive, affective and biological events; secondly, behaviors; and, finally, environmental events (Bandura, 1999). Each of the three factors influences the other in varying degrees depending on the particular concrete situation. Although the social environment might pose impediments to a particular sought goal, people can muster the affective, motivational resources and acquire the necessary skills to alter the reality of a social environment in order to meet specific outcomes. Within schools, for example, school leaders possess certain skills, knowledge, and motivations to determine what specific leadership practices (or behaviors) might act upon the social environment of a particular school in order to produce effective change and meet challenging organizational goals.
A central function in the complementary processes of proactive, reactive thought and self-reflection occurring within the interactive triad of reciprocal causation is self-efficacy (Bandura 1977, 1982, 1999, 2001). Self-efficacy is the belief that one has the capabilities to meet aspired goals within a given domain of human activity (Bandura, 1982, 1997). This domain-specific mechanism is the most influential within cognition as it influences the goals individuals set, the efforts individuals exercise in reaching these goals, the persistence an individual employs in the face of failure and setbacks, as well as the anxiety people feel when attempting new and challenging tasks (Bandura, 1999). Perceptions of efficacy also have direct influence on the quality of analytical problem solving, anticipations of success or failure, levels of motivation and persistence, and monitoring and controlling anxieties under demanding and complex situations (Bandura, 1982). The mastery of sub-skills alone to complete a task is insufficient as an indicator of success in attaining aspired outcomes. Bandura (1999) insists:

There is a marked difference between possessing knowledge and skills and being able to use them under taxing conditions. Personal accomplishments require not only skills but self-beliefs of efficacy to use them well. (p. 119)

Self-efficacy beliefs bear on the manner in which sub-skills are exercised within specific performance domains. Further, self-efficacy mediates the cognitive, motivational, and affective abilities that individuals muster to complete complex tasks (Bandura, 1997).

This is not to say that knowledge, skill and ability are not essential to effective performance; they are in fact more fully developed and confirmed through the iterative process of experience, self-reflection and evaluation, and reflective enactment of new and potentially more effective behaviors, all with commensurate influence on one’s personal sense of efficacy.
Through the practice of particular skills in a given environment, efficacy beliefs are either enhanced or potentially diminished. How one selects and evaluates the data provided by a performance in a specific domain or context of performance are key (Bandura, 1997). He writes:

The cognitive processing of efficacy information involves two inseparable functions. The first pertains to the types of information people attend to and use as indicators of personal efficacy… The second function relates to the combination rules or heuristics that people use to weight and integrate efficacy information from different sources in constructing beliefs about personal efficacy. (Bandura, 1997, p. 19)

Individuals acquire negative or positive perceptions of self-efficacy through their selection and evaluation of pertinent information from their experiences within given contexts. The selection, interpretation, and appraisal of performance data from four sources determines an individual’s level of self-efficacy. Bandura (1977, 1982, 1997, 2000) identifies these sources as: enactive mastery, vicarious experience, verbal persuasion, and physiological and affective states.

Of the four sources of self-efficacy, enactive mastery is the most influential (Bandura, 1997, 2000). Enactive mastery is learning by doing. Efficacy beliefs fostered through enactive mastery are not simply confirmations of ability but are mediated through the interplay among various factors, including one’s pre-existing values and beliefs, the effort exerted to attain success (or failure), the selective biases in determining what does or does not constitute success, and evaluations of the complexity of the task itself. Mere success does not necessarily promote a healthy sense of efficacy. Other factors might affect the construction of efficacy beliefs through enactive mastery. Bandura (1997) notes that altering efficacy beliefs “results from cognitive
processing of the diagnostic information that performances convey about capability rather than the performances per se” (p. 80). As noted, such factors as expected performance levels, existing forms of self-efficacy, the difficulty of the tasks or performance, or the amount of effort expended to complete a task might affect perceptions of success. Still further, given extremely complex tasks, like organizational management and leadership, the trajectory of competence levels from novice to expert will also bear on performance evaluation (Machida & Schaubroeck, 2011). Finally, the process of enactive mastery is most effective when complex tasks are broken down into their component parts hierarchically with smaller, more proximal goals pursued, particularly when mastering complex tasks.

Vicarious experience is a second source of self-efficacy. By seeing similar others succeed at given tasks, individuals can be convinced of their own abilities to perform successfully on comparable tasks (Bandura, 1997). Effective models are able to demonstrate both the predictability of events and that some control (over one’s self and actions as well as the environment) is possible. An even stronger influence on efficacy beliefs can occur when models provide detailed verbal play-by-play scripts during their performance or following their performance of complex tasks (Bandura, 1997). Cognitive replays and rehearsals offer a means of self-modeling where the performed action is replayed and appraised with an eye to those things done effectively, rather than focusing exclusively on errors in performance. Individuals can then cognitively envision and rehearse success. Visualizing and verbalizing success is demonstrated to increase self-efficacy (Bandura, 1997). Competent models can play an integral role in this process of self-modeling by focusing attention on the positive aspects of the performance and providing specific recommendations to improve future performances.
Verbal persuasion is a third source of self-efficacy, of particular use when individuals are struggling in developing the necessary skills and, consequently, the self-efficacy to perform tasks. Bandura (2000) contends, “if people are persuaded to believe in themselves they will exert more effort” (p. 185). Efficacy beliefs are more resilient when significant others convey trust in another’s abilities, as opposed to expressing doubts (Bandura, 1997). Feedback from a credible model on performance is most influential when it is directed at incremental achievements rather than focused on the end, distal goal that requires the performance of multiple sub-tasks. There must exist, as well, a reasonable level of capability in order for verbal persuasion to be effective. Raising the motivation and persistence of those without the requisite ability to perform a given task will only “discredit the persuaders and further undermine the recipients’ beliefs in the capabilities” (Bandura, 1997, p. 101). A more constructive strategy for those demonstrating skill deficits is to provide a carefully strategized plan to acquire the needed skills, provide gradual opportunities to practice the skills, and offer immediate and specific feedback on the performance. This suggests that a multi-step approach, engaging both enactive mastery and vicarious experiences, is more apt to develop the necessary skills in those whose performance levels and efficacy beliefs are low.

The final source of self-efficacy is a person’s physiological states. Physiological and affective responses to experience can influence feelings of efficacy. The level of affective response to a given situation can in one person create a constructive form of arousal and in another a debilitating fog that undermines effective thought and control. Those with low efficacy beliefs “read their tension, anxiety, and weariness as signs of personal deficiencies” (Bandura, 2000, p. 185). Positive moods and feelings of self-worth and self-satisfaction, conversely, improve one’s personal sense of efficacy. By understanding what situational factors arouse
emotions and monitoring the levels of activated emotional and physiological states, either good or bad, individuals can become more adept at appraising and controlling their physiological and affective states in new and complex tasks. In the most negative of cases, the mere possibility of being in a particular situation can arouse feelings and emotions that make success virtually impossible. The negative effect from such experiences produces related reductions in beliefs of efficacy. Monitoring, understanding, and controlling physical and emotional responses to situations are important in developing efficacious beliefs to perform within social and organizational contexts. When unable to gain mastery over situational factors ongoing stress can lead to aversion, disappointment, and/or depression (Bandura, 1997).

There is a high degree of integration of the four efficacy sources both during the actual experience of a task or performance and in judging, amending and reflecting on one’s performance in order to inform an efficacy evaluation. How people come to select, determine, value, and integrate the information provided from experience is a complex task. Bandura (1997) suggest that our abilities to make better informed efficacy decisions increases as our cognitive abilities – as well as attentional, inferential and metacognitive capacities – mature and improve. However, what ultimately appraises the trustworthiness of these same skills is the adequacy of efficacy judgements as played out in real tasks and real performances in the real world. The ultimate “reality check” of self-efficacy beliefs maintained over time is effective practice. Claims of efficacy while not meeting the challenges of tasks consistently are forms of self-delusion and not a healthy and constructive sense of efficacy in a given domain.

Social cognitive theory and self-efficacy do not merely provide a theoretical structure for understanding the triadic relationship between person, actions, and the environment; more
practically, they offer a constructive lens for evaluating and improving human performance in a systematic fashion. The practical worth of self-efficacy theory (and social cognitive theory generally) is not merely its explanatory power but its capacity to provide specific practices to enhance self-efficacy. Bandura (2000) proposes a program of guided mastery, or *mastery modeling* (Bandura, 1997), in order to increase self-efficacy beliefs and performance within organizational settings. Mastery modeling contains three phases: instructive (or enabled) modeling, guided skill perfection, and self-directed success (Bandura, 1997, 2000). Throughout these three phases of gradual and focused learning, a competent practitioner provides modeling, motivation, and feedback to the trainee. By setting reasonable and attainable goals; modeling and narrating competent practice; providing timely and constructive feedback; and replaying and rehearsing trainee role experiences from the work context, trainees receive a far superior form of training in organizational practices than through lecture or explanation (Bandura, 1997).

Mastery modeling assumes certain environmental conditions that may not exist in the work context of principals and their vice-principals, the subject of this study. For example, vice-principals are traditionally immersed into formal leadership positions without the careful planning, delineations of sub-skills, and preparatory practice required under mastery modeling. Armstrong (2009) in her longitudinal study of the transition of new vice-principals notes the lack of role clarity and sink-or-swim approach to leadership development often experienced by new formal leaders. This does not, however, preclude the potential of various components of mastery modeling to contribute to the improvement of leadership self-efficacy for elementary school vice-principals. It is assumed in assessing the leadership practices principals enact with their vice-principals that such practices are done simply because they are seen by the principal as the right and effective things to do. Social cognitive theory merely provides a framework for
operationalizing and assessing the influence of principals’ leadership practices on vice-principals’ leadership self-efficacy.

For the purposes of this study, the relationship between the four sources of self-efficacy and those pertinent components of mastery modeling are proposed in Table 1.

Table 1

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<tr>
<th>Source of self-efficacy</th>
<th>Mastery modeling components (as suggested by Bandura 1997, 2000)</th>
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| Enactive Mastery             | • Setting attainable but challenging task  
• Breaking down tasks into component parts  
• Clearly articulating task goals  
• Making responsibilities clear  |
| Vicarious experience         | • Modeling of task by competent practitioner  
• Narrating or reviewing task completion by model during or after task  
• Self-modeling through cognitive replay and rehearsal  
• Narrating of the cognitive self-modeling experience by trainee |
| Verbal persuasion            | • Providing timely feedback  
• Focusing feedback on accomplishments rather than errors  
• Offering accurate feedback on performance  
• Perceiving Feedback as coming from competent practitioner |
| Physiological states         | • Discussing feelings/anxieties associated with task completion  
• Model disclosing feelings/anxieties associated with similar performances from their own experiences  
• Discussing potential difficulties in performing tasks  
• Modeling suggested strategies for dealing with stressors/anxiety |

The mastery modeling components are, for the time being, broadly outlined. The way each may be enacted within the work environment of principals and vice-principals is explored and contextualized more specifically in the conceptual framework of this study.
Before the important role the principal plays in the work life of vice-principals is explored, it is worth noting two criticisms concerning self-efficacy theory. The first centers on the assumed primacy granted cognitive functioning to the detriment of environmental factors (understood within the parameters of a stimuli-response paradigm), and how reinforcements from the environment affect goal expectancy (see Biglan, 1987; Marzillier & Eastman, 1984; Vancouver & Thompson, 2001). In this argument, goal expectancy is not simply a result of self-efficacy (as a one way causal influence). Rather, goal or outcome expectancy influences other possible behaviours, such as motivation and persistence, which in social cognitive theory are predicted by self-efficacy alone. A second, methodological issue, outlined by Kirsch (1980) and Vancouver and Thompson (2001), questions the strength of the relationship between self-efficacy and commonly predicted effects of self-efficacy. It is argued that the “hierarchical” ordering of tasks in self-efficacy studies (especially those within a controlled experimental model) produce inflated ratings for the predictive power of self-efficacy. More simply, this critique presumes that people will do what they say they will do and that self-efficacy conflates both presumed and actual expectations for a given performance.

The criticisms noted above do not limit self-efficacy as a practical, empirical tool in psychology. Marzillier and Eastman (1984) note, for example, “there is no doubt that people’s assessments of their personal competency can be a very powerful and accurate determinant of their future behavior” (p. 257). Likewise, Biglan (1987) writes he does not deny “any of the empirical relationship presented in support of self-efficacy theory” (p. 1). The issue, then, is a more a theoretical conflict between behaviorist-leaning and social cognitive theorists. Bandura (1986) claims that social cognitive theory offers a more comprehensive view of human action than the simple stimuli-response paradigm suggested by analytical behaviorists. Further, he
contends that experimental models used in exploring self-efficacy, its determinants, and ability to predict human performance, include a wide variety of investigatory models. In terms of this project, it is accepted that there is significant evidence cited in a wide variety of research fields to support the practical and theoretical assumptions underlying the work outlined in this study.

**Vice-Principals’ Realities and Principals’ Influence**

There is broad agreement in reviewing the work experience of vice-principals over the past 30 years that a transition has occurred in the scope of responsibilities assigned the vice-principal (Barnett et al., 2012; Hausman et al., 2002; Kwan, 2009a; Lee et al., 2012). Earlier metaphors for the work of vice-principals such as “policeman on the beat” or “disciplinarian” (Koru, 1993) and “daily operations chief” (Porter, 1996) capture the frequently described clerical, custodial, disciplinary nature of the job. Koru (1992) notes, “assistant principals are seldom charged with instructional improvement activities” (p. 71). In hopes of identifying a more engaging role, there has been a push to include a greater leadership and instructionally driven focus to the work of vice-principals (Harvey, 1994; Kwan, 2009a; Oliver, 2005). A recent study by Petrides, Jimes, and Karaglani (2014) concludes that vice-principals are increasingly viewing their roles within schools as more concerned with instructional leadership. Lee et al. (2012) conclude in their research of vice-principals in Hong Kong that leadership domains associated with curricular leadership positively influences a vice-principal’s desire to become a principal. Finally, Hausman et al. (2002) conclude that involvement in instructional leadership tasks elicited the strongest feelings of self-efficacy and job satisfaction on the part of vice-principals.
Despite the perceived expansion of the role of vice-principals, the same research suggests dissonance between the expected practices within the role and the work of vice-principals. The positive conclusions noted above come with some related concerns. Despite their perception of the importance of instructional leadership in schools, vice-principals in the study by Petrides et al. (2014) report feelings of ineffectiveness in practicing the role of instructional leader in a way that engaged classroom teachers. They report that vice-principals tended to act in autocratic rather than collaborative ways when interacting with classroom teachers. While vice-principals may desire to be more involved in instructionally driven leadership, they are apparently ill-prepared to do the work effectively and cooperatively. Despite the positive effects of curriculum leadership on Hong Kong vice-principals and their aspirations to become school principals, Lee et al. (2012) report a gap between the priority and practice of instructional leadership in Hong Kong schools. Their study confirms that a vice-principal’s desire to be more involved in instructional leadership does not necessarily result in greater participation. Finally, despite the high levels of efficacy and job satisfaction associated with instructional leadership, Hausman et al. (2002) report (similarly to Kwan, 2012) that instructional leadership was ranked lowest by vice-principals in terms of the time allocated to specific leadership tasks.

The gap between aspired and actual work emerges in part from a lack of role clarity for vice-principals. Relatedly, a conflation of duties, merging traditional clerical and custodial and newly ascribed responsibilities for school leadership intensifies both role conflict and task complexity (Barnett et al., 2012a; Lee et al., 2012). Role clarity and expectations are often cited difficulties for new as well as experienced vice-principals (Armstrong, 2011; Barnett et al. 2012a, Cantwell, 1993). Vice-principals often feel that their work demands are unpredictable and delegated at the whim of the school principal rather than strategically assigned in order to
support their leadership development. Barnett et al. (2012a) note that the practice of school principals assigning tasks to vice-principals on an ad hoc basis results in drastic variations in a vice-principal’s daily work experiences and “leads to feelings of frustration and decreased job performance” (p. 274). Kwan (2009a) and Cantwell (1993) report that the types of work that vice-principals perform in schools are often not the rich, complex leadership tasks that principals are expected to enact to improve schools. Although principals may desire to have their vice-principals engaged in instructionally rich leadership roles, in practice vice-principals spend more of their time involved in student discipline and distinctively managerial/administrative tasks (Cantwell, 1993). Given the seeming lack of appropriate on-the-job training that vice-principals receive, many researchers argue that the vice-principalship does not offer effective preparation for the principalship (Barnett et al., 2012a; Harvey, 1994; Hausman et al., 2002; Koru, 1993; Kwan, 2009b).

As a means of leadership formation, however, there is promise in the role of vice-principal, especially if the school principal acts in ways that promotes the leadership development of their vice-principal. Barnett et al. (2012a, 2012b) place emphasis on the principal’s delegation of tasks to the vice-principal as one key element in the vice-principal’s growth and development. By assigning tasks, setting priorities and supporting the vice-principal by conferring a power-base from which to work with other stakeholders within the school (Barnett et al., 2012a), principals prove themselves integral to the leadership success of their vice-principals. Calabrese and Tucker-Ladd (1991) suggest a positive working environment for the vice-principal is created by the principal who: models and encourages; instills self-confidence, sets high goals, shares their own reflective practice; describes their decision making processes; and shares their own personal awareness as a leader. Paskey (1989) views principals
as role models, sharing ideas, encouraging, and advocating for their vice-principals. Kaplan and Owings (1999) report that a positive working environment for vice-principals offers them control over their work, flexibility in managing their time (rather than simply reacting to events), opportunities to take initiative, occasions to support staff, and creates the conditions to see their work as visible and valued.

Additionally, both autonomy and breadth of experience positively bear on a vice-principal’s development as a leader. Kwan (2013) indicates that beyond a supportive relationship, the types of tasks assigned a vice-principal by the school principal has a positive effect on the vice-principal’s sense of leadership self-confidence. She notes that it is “the actual responsibilities undertaken as a vice-principal and not the years of experience in the vice-principalship that strengthens the incumbents’ confidence of meeting the demands of school leadership” (Kwan, 2013, p. 335). The autonomy provided to vice-principals, particularly in a stand-in role in the absence of the school principal, provided similar increases in leadership self-confidence and their desire to become school principals (Kwan, 2013). In his work, Ribbins (1997) relates the experiences of head teachers (or principals) when they were deputy heads (or vice-principals) in the UK. A common theme in the observations of current heads who fondly recalled their working experience as deputies was the autonomy granted to them by the heads. Further, they appreciated that their heads allowed them to make mistakes without retribution.

Principals who have positive experiences as vice-principals cite the working relationship with their principal as the most important factor in building their capacity as school leaders (Cranston, Tromans, & Reugebrink, 2004; Soho & Barnett, 2010). That is, the principal creates the type of working environment where many of the aspects noted as beneficial in the creation of
a positive sense of efficacy for leadership are enacted. By influencing self-efficacy beliefs of their vice-principals, principals may enhance the vice-principal’s leadership abilities, and, in turn, create more effective school leaders in their current roles and as future school principals. As noted, the provision of a supportive working environment, however, is merely a first step. Providing rich leadership tasks and autonomy to do the work of school leadership are equally important. Schermuly, Schermuly, and Meyer (2011) argue that in order for vice-principals to feel competent (or efficacious) in their work they must experience autonomy and inclusion in the decision making processes in their schools.

The influence of school principals on their vice-principal’s leadership development and sense of leadership efficacy as formal school leaders is important for several reasons. Self-efficacy is the strongest indicator of job satisfaction for vice-principals, and a strong indicator of a vice-principal’s confidence and willingness to assume the job of school principal (Beycioglu, Ozer & Ugurlu, 2012; Kwan, 2009b; Kwan, 2013; Schermuly et al., 2011). Further, Beycioglu et al. (2012) found that vice-principals with lesser degrees of self-efficacy were less capable of coping with work stress as well as finding balance within their personal relationships. Those with such dispositions have little motivation to assume the complex work of the school principal. Schermuly et al. (2011) contend, “If VPs believe in their self-efficacy, they are more satisfied in their job and less emotionally exhausted” (p. 259). Not surprisingly, these feelings of exhaustion and frustration are most often caused by role ambiguity and experiences of overload.

Although the idea of principals’ leadership practices supporting the leadership development of vice-principals is a promising one, there is little empirical research that specifically looks at principals’ leadership practices and their effect on vice-principals’
leadership development. For example, although there is evidence to support that the environment created by the principal affects the leadership confidence of vice-principals (see Cranston et al., 2004; Soho & Barnett, 2010, for example), what principals specifically do is never fully explored or measured. Likewise, autonomy and breadth of experience are argued to support leadership development (Kwan, 2013; Ribbins, 1997; Schermuly et al., 2011), but in what context and to what extent these supports affect leadership development are never fully explored or measured. Through the use of self-efficacy theory, this study hopes to propose evidenced-based practices that might be used by school principals to support the leadership self-efficacy of their vice-principals.

Self-efficacy and Formal School Leadership

In terms of organizational performance, it is now widely accepted in the self-efficacy literature that high self-efficacy produces better work performance. The often cited meta-analysis of Stajkovic and Luthans (1998) of work performance and self-efficacy found a significant correlation between the two accounting for almost 28% of variation in work performance. Rather than disputing the relationship between self-efficacy and organizational performance, the focus has turned to strengthening self-efficacy beliefs in order to increase and improve work performance and overall organizational effectiveness (Gist, 1987; Gist and Mitchell, 1992). The promise of self-efficacy in the leadership and management context has been similar.

As early as 1989, Bandura and Wood identified self-efficacy as a powerful influence on the performance of managers in problem solving to allocate personnel and resources in organizational settings (Bandura & Wood, 1989). More recently, McCormick, Tanguma, and
Lopez-Forment (2002) and Paglis and Green (2002) identified leadership self-efficacy as a crucial determinant in whether leaders in organizational contexts initiated change, determined by the frequency of their involvement in leadership tasks within their respective organizations. Their research indicates that leaders with greater self-efficacy are more involved and effective in organizational change. Paglis (2010) notes that research regarding the link between leadership self-efficacy and leadership performance “has been supportive” (p. 774). Although Hannah et al. (2008) argue that leadership self-efficacy has only been under empirical investigations for a short time, they contend “there is growing evidence demonstrating its capacity to predict relevant work outcomes” (p. 674).

Anderson et al. (2008) attempt in their research to more clearly define a common core or taxonomic structure to leadership self-efficacy usable across organizational domains, in governmental, military, business, or educational sectors, for example. Their research data, however, is primarily drawn from the business sector. The orientation in this study assumes a more specific conceptualization of leadership self-efficacy linked to the unique context of schools. Paglis (2010) argues that “Bandura’s conceptualization of self-efficacy [is] inherently a task specific judgement capability” (p. 773). She contends that evaluations of performance require the researcher to take full account of the context of the performance. Given the growth of school leadership models (like the OLF, 2012) focused on improving student achievement, a better fit for evaluating the performance of formal school leaders are these context-based frameworks for leadership practice in schools.

Using similar frameworks drawn from the literature of school improvement, researchers have begun to assess self-efficacy as an important indicator in the leadership performance of
school principals (Dimmock & Hattie, 1996; Federici, 2013; Smith, Guarino, Reed, & Adams, 2006; Smith, Guarino, Strom, & Reed, 2003; Tschannen-Moran & Gareis, 2004; Tschannen-Moran & Gareis, 2005). These studies have covered a wide breadth of concerns related to the mediators of self-efficacy and the influence of self-efficacy on principals’ leadership, including preparation and interpersonal supports for cultivating school leaders’ self-efficacy (Tschannen-Moran & Gareis, 2005); a lack of work alienation as well as trust in teachers, students and parents (Tschannen-Moran & Gareis, 2004); successful school restructuring and shared leadership, (Dimmock & Hattie, 1996); outcome expectations for school improvement (McCullers & Bozeman, 2010; Smith et al., 2003); and a positive relationship between self-efficacy beliefs and principals’ autonomy, job satisfaction, as well as a principal’s capacity to deal with external constraints to their work (Federici, 2013).

Dimmock and Hattie (1996) note that “if the principal is not generating high levels of personal efficacy the effect on teachers and students can be cumulative and dramatic” (p. 65). Tschannen-Moran and Gareis (2005) argue that principals with high efficacy are persistent and flexible, view change as a slow process requiring steadfastness in order to achieve their goals, view failures as opportunities to learn, and maintain a positive attitude as well as a good sense of humor (p. 5). Lyon and Murphy’s (1994) study of principals’ leadership styles (as perceived by teachers) indicated that principals with high self-efficacy were more prone to use expert, referent leadership approaches as opposed to institutionally-based forms of reward or coercive power as their primary sources of leadership. In terms of judging the effect of school leadership self-efficacy on student achievement, Leithwood and Jantzi (2008) suggest a moderate, indirect and significant influence of leadership self-efficacy on student achievement.
In complex organizations, like schools, self-efficacy beliefs also influence how vice-principals might approach their own leadership development in the face of adversity. Bandura (1991) contends that those with high self-efficacy beliefs possess an “acquirable skill” rather than an “inherent skill” approach to learning. Those who view skills as acquirable seek challenges to expand their capabilities, acknowledging that learning often necessitates missteps and errors. Conversely, those who view skills as inherent see ability as aptitude and errors as attributable to insufficient ability rather than effort. This particular mindset avoids challenges in order to by-pass mistakes and avoid negative assessments of their current abilities. Highly efficacious leaders not only trust in their own personal skills and abilities but also acknowledge the malleability of organizational environments (Bandura, 1991). Highly efficacious leaders believe in themselves and their abilities to alter organizational environments, even the most difficult. By all accounts, schools constitute the type of complex and difficult organizational environments to practice leadership.

McCormick (2001) argues that self-efficacy has a “theoretical utility” to improve leadership capabilities. Tschannen-Moran and Gareis (2005) concur:

Social cognitive theory provides practical guidance for the preparation and professional development of school principals in order to equip them with the capabilities and a resilient sense of efficacy that will enable them to enhance both their well-being and their accomplishments. (p. 24)

More research is required, however, in order to determine the “relative weight” the four sources of self-efficacy play in the formation of effective school leaders (Tschannen-Moran & Gareis, 2005, p. 26). This study proposes that principals can play an integral role in developing the self-
efficacy beliefs of their vice-principals. The four sources of self-efficacy might provide an appropriate perspective for exploring the specific practices enacted in the work life of the principal and vice-principal that can enhance the self-efficacy of vice-principals.

Other Factors Influencing Leadership Self-efficacy

Prior to exploring and integrating the various components discussed in this review, several other factors potentially influencing self-efficacy deserve mentioning. Several of these factors are related to previous leadership self-efficacy research while others are more directly related to self-efficacy research generally. First, Tschannen-Moran and Gareis (2005) discovered a significant difference between leadership self-efficacy scores for male and female principals in their study, attributable, they contend, to female principals seeking greater interpersonal supports both inside and outside the school which garner greater supports and, as a consequence, increased leadership self-efficacy for female principals. Additionally, Tschannen-Moran and Gareis (2004) identified previous and ongoing training and support as a factor impacting the leadership self-efficacy of principals. Finally, as noted above, leadership self-efficacy on the part of principals positively affects the levels of job satisfaction associated with the principalship (Federici, 2013). Therefore, it would seem reasonable, as Kwan (2009a, 2013) confirms, that self-efficacy should be a strong indicator of a vice-principal’s job satisfaction, and, as a result, a vice-principal’s desire to take on the demanding work of the principalship.

Self-efficacy also supports several factors that might potentially influence high levels of leadership self-efficacy besides the supports, leadership practices, and leadership opportunities provided vice-principals. For example, previous leadership experience in a school setting might provide the sorts of experiences and skills for vice-principals that positively affect their
leadership self-efficacy. Despite the domain specific nature of self-efficacy beliefs, such experiences and skills might be of the generative variety (Bandura, 1997, 2000) that cross, in this case, informal and formal lines of leadership within schools. Finally, although self-efficacy beliefs are generally quickly attained (Bandura, 1997), the unique position of the vice-principal and challenging, complex nature of the work of school leadership might be impacted by the length of time on the job, despite Tschannen-Moran and Gareis’s (2004, 2005) discovery of no link between years of experience and principals’ leadership self-efficacy.

**Conceptual Framework**

As a means of understanding the ways elementary school principals might support the leadership development of their vice-principals, the conceptual framework for this study is illustrated in Figure 1. The framework highlights the important role a principal can play in assigning rich leadership tasks and supporting the vice-principal in reflecting on, evaluating and improving their leadership practice within the school. As noted above, the role of the school principal is a difficult one. If vice-principals are to become capable leaders, their current school principal must provide the sorts of experiences and influences necessary to produce effective, future leaders. To this end, the large rectangular area in grey in Figure 1 approximates where the actions of the principal (either directly through principals’ leadership practices or as duties are assigned) influencing vice-principals’ self-efficacy might be enacted. Principals’ Leadership Practices are in the foreground with VP Leadership Opportunity as well as the Reflective Experience of the vice-principal, that is, his or her evaluations of the information provided by the various sources of self-efficacy. In terms of timing, the various actions associated with Principals’ Leadership Practices may occur before, during, or after the assignment/completion of
tasks denoted in VP Leadership Opportunities. The thin single headed arrow at the bottom of the figure indicates that the process is iterative. Once leadership self-efficacy beliefs are formed they then affect subsequent leadership tasks performed by vice-principals and also influence the evaluative processes for judging the information from these same performances: in each case, successes increasing self-efficacy beliefs and missteps potentially diminishing a vice-principal’s beliefs in their abilities to succeed.

Figure 1. The development of VP Leadership Self-efficacy combining aspects of Principals’ Leadership Experience, VP Leadership Opportunities and the reflective experience of the VP.

Social cognitive theory suggests that agency is an individual human construction. The process of selecting and judging specific pieces of data from experience to form perceptions of efficacy in a given domain is highly subjective in selection and evaluation. It is therefore vice-principals’ evaluations of various supports and how they cognitively process the information from the sources of self-efficacy that will ultimately form the basis of their self-evaluations of
personal efficacy within the leadership domains investigated. Therefore, the study investigates whether principals’ practices influence vice-principals’ sense of efficacy. High support of the school principal and high self-efficacy would suggest the positive influence principals’ practices have on vice-principals’ leadership efficacy. Ultimately, the construction of positive or negative assessments of self-efficacy is an individual cognitive process associated with individual vice-principals.

The principal potentially plays a critical role in the work life and leadership development of his or her vice-principal (Barnett el al., 2012a, 2012b; Mertz, 2000). In this study, two specific dimensions of support are explored: first, the types of assignments that principals delegate to their assistants and, secondly, the practices exercised by principals aligned with the four sources of self-efficacy. The types of assignments and leadership practices are assumed to influence the preparatory and self-reflective processes of vice-principals and, in turn, influence their developing sense of self-efficacy. Several additional contextual variables in the working environment of vice-principals were also investigated, including vice-principals’ perceptions of pre-service and ongoing training supplied by their respective districts, their years of experience as a vice-principal, and the percentage of administrative time and teaching time that is allocated within vice-principals’ work day. Additionally, the vice-principal’s previous work experience and their desire to become an elementary school principal were considered as potential contributors to self-efficacy. The specific survey items for duties, self-efficacy, contextual features, and principals’ leadership practices are explored below.

The various domains of leadership are taken from Tschannen-Moran and Gareis’s Principal Self-efficacy Survey (PSES) developed and validated in their 2004 research. These domains (Management, Instructional Leadership, and Moral Leadership) provide a reasonably
comprehensive presentation of practices related to the complex work of principals and vice-
principals that map back to three keys areas of principals’ work: administrative/management;
instructional, and transformational forms of leadership briefly described in this review. The
discussion below provides a more detailed account of this process, particularly in aligning the
items outlined by Tschannen-Moran and Gareis (2004) with the specific leadership practices
outlined in the OLF (Leithwood, 2012).

The domains of leadership investigated in this study (Management, Instructional
Leadership, and Moral Leadership) provide a range of practices associated with the work of
elementary principals and vice-principals. Robinson et al. (2008) note that both instructional and
transformational forms of leadership “dominate empirical research on educational leadership” (p.
638). They define instructional leadership as focusing on clear objectives for learning and high
expectations for student learning, as well as shared instructional practice, collaborative oversight
of programs, and creating a positive culture for learning. Transformational leadership is
associated with such item as moral purpose, inspiration and engagement of staff, and the creation
of an inclusive school environment committed to overcoming challenges through the
collaborative efforts of all (Robinson, Lloyd et al., 2008). Although it is difficult to delineate
management from leadership (Leithwood, 2012), in practical terms, administrative or
management tasks are a formidable part of the work of school principals and vice-principals,
confirmed by both Leithwood and Azah (2014) and Armstrong (2014) in their respective studies
of principals and vice-principals in Ontario.

In mapping back the various practices discussed above to the three domains constructed
in the Tschannen-Moran and Gareis (2004) survey, there was a clear theoretical and practical
link between the domains of management and instructional leadership. A less clear association
existed between moral and transformational leadership. Given the specific practices assigned the domain of moral leadership by Tschannen-Moran and Gareis (2004), the most obvious link to the domain of moral leadership (it was deemed) existed with transformational leadership; that is, those items associated with building energy, commitment to a common vision and collaboratively meeting these challenging goals (Robinson, 2008). In balancing the demands of providing representative items for currently practicing vice-principals in Ontario and maintaining the emphases in the original domain and associated items from the Tschannen-Moran and Gareis (2004) survey, moral leadership was assumed to encompass practices associated with transformational leadership.

Research in educational leadership supports the indirect effect of principals’ leadership on school effectiveness and student achievement (Leithwood, Day, Sammons, Hopkins et al., 2010; Seashore Louis et al., 2010, Water et al., 2003). The development of evidenced-based leadership practices has provided school principals with a repertoire of effective strategies to improve their schools. The most recent iteration of the Ontario Leadership Framework (Leithwood, 2012) notes not only the specific behavioral practices to enhance school performance but also personal leadership resources that influence how leadership practices are used. One of the psychological resources, self-efficacy, is an important contributor to effective school leadership and affects many of the personal leadership resources noted in the framework. This study seeks to contribute to the research in educational leadership by investigating how leadership self-efficacy for elementary school vice-principals might be enhanced through the actions of the school principal, notably through specific leadership practices identified through self-efficacy theory.
Given research that suggests that the vice-principalship is not an effective training ground in the development of leadership skills required for today’s school principals (Barnett et al., 2012a; Harvey, 1994; Hausman et al., 2002), this study also investigates the perceptions of elementary school vice-principals in Ontario concerning their roles, and the sense of leadership efficacy they feel in their daily work. A key relationship in the daily work life of the vice-principal is with the school principal (Cranston et al., 2004; Soho & Barnett, 2010). This study seeks to investigate and provide further empirical verification for many of the claims made concerning the importance of this relationship. By identifying specific practices that principals can implement in their daily encounters with their vice-principals, it is hoped that principals will positively influence the levels of leadership efficacy experienced by elementary school vice-principal.
Chapter 3

Methods

This section outlines the methods incorporated in this research project. First, a brief description of a mixed methods approach in the social sciences is provided. Next, the rationale for a mixed methods approach is explored as it relates to this study. Following this discussion, the elements of the mixed method design, more specifically, those of a sequential, explanatory design, are explored. Then, the research plan in each of the two phases, the initial quantitative and subsequent qualitative phase, of this investigation is presented.

A Mixed Methods Approach

Several metaphors attempt to capture the nature and purpose of mixed methods research. Johnson and Onwuegbuzie (2006) conceive the mixed methods design as the middle point on a continuum between quantitative and qualitative methods, neither replacing nor overstepping these approaches but able to “draw on the strengths and minimize the weaknesses of both in single research studies and across studies” (p. 15). Creswell and Plano Clark (2011) compare the process of conducting a mixed methods study with the interplay between the television play-by-play and “color” commentators covering sporting events, the first describing the linear events of the play and the second capturing the more personal, individual and group contexts of the game. Finally, Cameron (2009) suggests that mixed methods is a research paradigm arising (like the mythological phoenix) from the philosophical “war” between purists in both quantitative and qualitative camps.

In the early developments of mixed method research much of the debate concerning the approach focused on philosophical positioning around methods that were deemed to be allied
exclusively with either quantitative or qualitative approaches to research design (Cameron, 2009; Creswell, 2003; Creswell & Plano Clark, 2011). Although philosophical disputes concerning the logic of mixed methods in relation to the stance of the researcher to the subject under investigation, the nature of claims to truth, and the value context of inquiry defined earlier phases of mixed methods research design, Cameron (2009) argues that pragmatism has become a “philosophical partner” for mixed methods approaches. Similarly, Creswell and Plano Clark (2011) put forward pragmatism as an embracing “world view” capable of accommodating the various world views associated with the quantitative and qualitative approaches.

Pragmatism’s focus on results and empirical validation as well as its roots in constructivism positions it uniquely as a tool for finding convergence between quantitative and qualitative stances to research design (Feilzer, 2010). Johnson and Onwuegbuzie (2006) write:

We agree with others in the mixed methods research movement that consideration and discussion of pragmatism by research methodologists and empirical researchers will be productive because it offers an immediate and useful middle position philosophically and methodologically. (p. 17)

Methodological theorists (like Creswell, 2003 and Creswell & Plano Clark, 2011) support the practical import of pragmatism, especially as it bridges the seeming gap between the quantitative and qualitative approaches. Rather than constructing singular lenses for investigating phenomena in the real world, these theorists conceive of multiple and varied perspectives for conducting empirical research. Rather than re-defining the foundational constructs of quantitative or qualitative research methods, pragmatism offers a philosophical means for each approach to serve the other in a complementary way, utilizing the strengths while potentially minimizing the
blind spots attributable to them separately (Cameron, 2009; Feilzer, 2006). The strengths and potential blind spots related to this study are more fully addressed below.

Mixed methods has been presented in the literature as a potentially more comprehensive, complete and/or holistic way of addressing a number of questions in empirical research in various settings, although this does not discount either quantitative or qualitative perspectives used singly (Creswell, 2003, Creswell & Plano Clark, 2011). Johnson and Onwuegbuzie (2006) note that the research question itself should inform the choice of method. When differing “strategies, approaches, and methods” are “likely to result in complementary strengths and non-overlapping weaknesses… this principle is a major source of justification for mixed methods research” (p. 18). Creswell and Plano Clark (2011) specifically identify a problem for mixed method research as one where: 1) one source of data is insufficient; 2) results need further explanation; 3) enhancement of a first method is required; 4) a theoretical stance is employed; or 5) a research question is better addressed in more than one phase of research (p. 8).

Numerous typologies of mixed method design exist. These typologies differ in design in several ways, including implementation, priority, and integration (Creswell, 2003). The first considers when the data are collected. Data may be collected either concurrently or sequentially depending on the intent of the researcher (Creswell, 2012). Priority refers to the relative weight assigned the quantitative or qualitative phase or component of the research, once again dependent on the interests of the researcher and the nature of the research question. Integration denotes when the various pieces of quantitative and qualitative data are mixed. Creswell (2003) notes that integration is largely determined by implementation, that is, whether the study has one, two or more phases. From these practical concerns about methods, Creswell and Plano Clark (2011) construct six types of mixed method research: including convergent, explanatory,
exploratory, embedded, transformative, and multiphase designs. The methodological model for this study, explanatory design, is discussed in more detail below.

**Overall Research Design – Sequential Explanatory Design**

This mixed method research project investigates the perceived ways elementary school principals’ leadership practices support the leadership development of their vice-principals. A sequential explanatory design was used in this research. In this mixed method design quantitative and qualitative methods were used. The explanatory design begins with a quantitative component which informs directions for the secondary, qualitative investigation (Creswell & Plano Clark, 2011). Creswell and Plano Clark (2011) note that in an explanatory design typically “an emphasis is placed on the initial, substantial quantitative data collection with a smaller emphasis on the qualitative follow-up” (p. 185). Such is the case in this research.

In keeping with the arguments put forward by Ivankova, Creswell, and Stick (2006), the use of a mixed method design, and specifically a sequential explanatory one, is considered to provide a richer and more in-depth investigation regarding the link between principals’ practice (both in the term of leadership practices and assigned duties) and vice-principals’ leadership self-efficacy. While the quantitative phase of the study provides a “general understanding of the research problem… the qualitative data and their analysis refine and explain statistical results by exploring participants’ views in more depth” (Ivankova, Creswell, & Stick, 2006, p. 5). The goal of the quantitative phase was to investigate the relationship among principals’ leadership practices and vice-principals’ leadership self-efficacy through an online survey designed to explore the relationship among principals’ leadership practices, opportunities for vice-principals’ leadership, and vice-principals’ leadership self-efficacy. The qualitative portion of the study
attempted to add greater understanding to the initial findings by purposefully sampling a number of participants from the earlier quantitative phase, each reporting varying degrees of principals’ leadership support and perceived leadership self-efficacy. Although the quantitative phase was given priority in the inception of this study, the qualitative phase proved invaluable in terms of supporting or triangulating data from the earlier phase as well as providing complementarity, defined by Cameron (2009) as the less dominant (or lower priority) phase providing clarity to the dominant phase of the research.

The focus of this study, vice-principals’ leadership self-efficacy, and its real world complexity suggested a mixed methods approach for theoretical reasons as well. Self-efficacy beliefs are either improved or diminished through real performances and the information selected, judged, and re-evaluated by individuals to form those beliefs. This information is taken from experience and the four sources of self-efficacy identified above. The complexity of forming self-efficacy beliefs is uniquely individual and particular to context and the complexities of the environments in which individual’s perform (Bandura, 2007, 2010). The formation of efficacy beliefs is no less complicated in multi-faceted work done by vice-principals in elementary schools. These contingent aspects suggest that one method of investigation is inadequate to a fuller understanding of the relationship between principals’ practice and vice-principals’ leadership self-efficacy. Qualitative methods allow for an in-depth exploration of the individual and organizational processes that either confirm or limit leadership efficacy beliefs.

Given these considerations, this sequential study began with a quantitative survey instrument exploring perceptions of vice-principals regarding the type of work they do in their schools, their perceptions of principals’ practices that might influence their work, and their perception of self-efficacy around three key leadership components addressed in the Principal
Self-efficacy Survey (PSES), designed by Tschannen-Moran and Gareis (2004). Following the analysis of the quantitative data, a protocol was designed for follow up interviews based on findings from the quantitative portion of the study. The quantitative survey is included in Appendix A and will be furthered discussed below. The semi-structured interview questions were drafted at the beginning of the study and revised after the quantitative survey results were available. The complete protocol for the semi-structured interviews used in this research is included in Appendix B.

The overall design of the study follows the steps outlined by Creswell and Plano-Clark (2011): 1) collecting the quantitative data; 2) analyzing the quantitative data using the best suited analytical approaches; 3) designing the qualitative strand based on results from the quantitative component; 4) collecting the qualitative data; 5) analyzing the qualitative data using the best suited qualitative approaches; and 6) interpreting the connected results in relation to the study’s research questions (pp. 217-218). Below, the procedures for the first five steps of the research are more fully developed. The final (sixth) integrative step is discussed in the final chapter.

**Phase 1: The Quantitative Approach**

In this part of the methodology, the quantitative design of the study is discussed. First, the survey design of the investigation is detailed along with various other factors measured in the survey instrument. Concerns about the validity and reliability of the instrument are also addressed and specific steps taken to address both these concerns are explained. Next, the sampling procedures and the sample obtained from the population of elementary vice-principal in Ontario are presented. Finally, the steps involved in analyzing that data are described.
**Survey Design.** A survey design was selected for the initial quantitative design of this study. This design allowed for a broad assessment of elementary vice-principals in Ontario concerning their perceptions of principals’ leadership practices and their own perceived sense of leadership self-efficacy. It was determined that a web-based design using Survey Monkey would provide the most efficient and convenient means for making contact with vice-principals across the Province. The cross-sectional, one time data collection procedure of the self-administered survey instrument was deemed sufficient for the purposes of measuring and comparing the various factors assessing the working relationship between principals and vice-principals and vice-principals’ feelings of efficacy in formal school leadership. Various theorists (see Creswell, 2003; Field, 2013; Warner, 2008) note issues concerning convenience sampling, particularly the non-randomized nature of the approach, which affects the representative quality of the sample. Given that a complete list of vice-principals in Ontario was not accessible, convenience sampling was used in order to access an adequately large sample for analysis.

**Constructs in this Study and Survey Instrument.** Three main constructs are considered in this study: Principals’ Leadership Practices (PLP), VP Leadership Opportunities (OPP), and VP Leadership Self-efficacy (VPLSE). Each is defined in greater detail below.

**Principals’ Leadership Practices.** One substantive piece of the survey instrument is items related to principals’ leadership practices. Table 1, presented in Chapter 2, was used as a guide in developing a list of specific practices principals might employ in their work with their vice-principals. Table 2 provides the survey items (for each of the four subscales) under the four sources of self-efficacy. Unlike the common items adapted for VP Leadership Opportunities and
VP Leadership Self-Efficacy, these items are original. Each item in this construct is based on Bandura’s (1997, 2000) research on mastery modelling to enhance self-efficacy.

Table 2

**Self-efficacy Sources and Survey Responses**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Enactive Mastery</td>
<td>• Setting attainable but challenging task</td>
<td>• Provides demanding leadership task for me to perform</td>
</tr>
<tr>
<td></td>
<td>• Breaking down tasks into component parts</td>
<td>• Provides me with the necessary supports and resources to complete leadership tasks</td>
</tr>
<tr>
<td></td>
<td>• Clearly articulating task goals</td>
<td>• Discusses with me his or her expectations of my work</td>
</tr>
<tr>
<td></td>
<td>• Making responsibilities clear</td>
<td>• Makes my responsibilities in the school clear</td>
</tr>
<tr>
<td>Vicarious experience</td>
<td>• Modeling of task by competent practitioner</td>
<td>• Models effective school leadership</td>
</tr>
<tr>
<td></td>
<td>• Narrating or reviewing task completion by model during or after task.</td>
<td>• Talks about his or her perspective on completing leadership tasks</td>
</tr>
<tr>
<td></td>
<td>• Self-modeling through cognitive replay and rehearsal</td>
<td>• Suggests ways for me to be more effective in my role</td>
</tr>
<tr>
<td></td>
<td>• Narrating of the cognitive self-modeling experience by trainee</td>
<td>• Discusses with me my experiences while completing assigned duties</td>
</tr>
<tr>
<td>Verbal persuasion</td>
<td>• Providing timely feedback</td>
<td>• Offers constructive feedback to me</td>
</tr>
<tr>
<td></td>
<td>• Focusing feedback on accomplishments rather than errors</td>
<td>• Provides feedback that reinforces the things I do well</td>
</tr>
<tr>
<td></td>
<td>• Offering accurate feedback on performance</td>
<td>• Provides feedback that is accurate with my performance</td>
</tr>
<tr>
<td></td>
<td>• Perceiving Feedback as coming from competent practitioner</td>
<td>• Offers feedback I value</td>
</tr>
<tr>
<td>Physiological states</td>
<td>• Discussing feelings/anxieties associated with task completion.</td>
<td>• Takes time to talk with me about how I feel in my work</td>
</tr>
<tr>
<td></td>
<td>• Disclosing feelings/anxieties associated with similar performances from their own experiences</td>
<td>• Discusses his or her own personal difficulties in being a school principal</td>
</tr>
<tr>
<td></td>
<td>• Discussing potential difficulties in performing tasks</td>
<td>• Offers suggestions about dealing with stressful situations in the school</td>
</tr>
<tr>
<td></td>
<td>• Suggesting strategies for dealing with stressors/anxiety</td>
<td>• Models a healthy work-life balance</td>
</tr>
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</table>
Opportunity and Self-Efficacy Items. Various surveys exist that attempt to measure the perceived efficacy of principals and vice-principals (Dimmock & Hattie, 1996; Federici, 2013; Tschannen-Moran & Gareis, 2004). In their research, Tschannen-Moran and Gareis (2004) constructed an instrument for measuring principals’ self-efficacy. Tschannen-Moran and Gareis (2004) provide evidence that their instrument offered greater internal consistency and stronger correlations with other constructs theorized to be related to self-efficacy than previous surveys, notably Dimmock and Hattie (1996) and Goodard et al. (2000). Additionally, the measure provided greater accuracy in measuring the context specific dimensions of self-efficacy and the relative strength of self-efficacy beliefs. Tschannen-Moran and Gareis (2004) accomplished this by embedding “the context specific nature” in each question with the directions, “please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your current position” (p. 582). The strength of the efficacy belief was rated using a nine-point Likert-type scale.

Tschannen-Moran and Gareis (2004) found three broad categories that correlated significantly to principals’ self-efficacy beliefs: efficacy for management (5 items); efficacy for instructional leadership (6 items); and efficacy for moral leadership (6 items). Using this established measure for principals’ and vice-principals’ self-efficacy is both practical and useful in this study. Given the earlier discussions surrounding the complexities of formal school leadership, the three categories provide a wide breadth of principal (in both senses of the word) practices to assess both ability and opportunities for effective leadership in schools. The first identifies effective managerial practices, the second, instructional leadership and the last, transformational forms of leadership.
Additionally, it was determined that aligning the wording among the items in the Tschannen-Moran and Gareis scale and those practices identified in the OLF was a necessary step. Although the work of principals is frequently generic across local and national conditions, the OLF expresses the work of principals in a manner unique to the Ontario context. Practicing vice-principals in Ontario would find the language of the OLF much more familiar than the wording used in the Tschannen-Moran and Gareis (2004) survey (something confirmed in the initial pre-test of the instrument). Table 3 was developed to describe the similarities and contrasts (in focus and wording) between the PSES and the practices specified in the OLF. In adapting the items, items from the PSES were first aligned with broad practices outlined in the OLF under the five leadership domains. A specific practice listed in the broad practice was then aligned with the PSES item statement. For example, it was determined that “motivating teachers” fit under the broad practice of “building a shared vision” in the OLF. A more specific sub-practice listed under this broad practice, “provide constructive feedback to teachers on their instructional practice”, was then adopted in place of the original PSES item. In identifying items to adopt from the OLF, agreement between the PSES and OLF practices was not always exact. The goal, however, was to group practices that reflected the focus of three main constructs of leadership examined in this study: management, instructional leadership, and moral (or transformational) leadership.

Table 3

Comparison of Self-efficacy Factor and OLF Practices

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Efficacy of management</td>
<td>Efficacy for instructional leadership</td>
<td>Efficacy for moral leadership</td>
<td></td>
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<tr>
<td>------------------------</td>
<td>--------------------------------------</td>
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</tr>
<tr>
<td>• Handle the time demands of the job</td>
<td>• Handle the time demands of the job</td>
<td>• Promote acceptable behavior among students</td>
<td></td>
</tr>
<tr>
<td>• Handle the paperwork required to do the job</td>
<td>• Handle the paperwork required to do the job</td>
<td>• Promote school spirit with a large majority of the student population</td>
<td></td>
</tr>
<tr>
<td>• Maintain control of your daily schedule</td>
<td>• Maintain control of your daily schedule</td>
<td>• Handle effectively the discipline of student in your school</td>
<td></td>
</tr>
<tr>
<td>• Prioritize among competing demands of the job</td>
<td>• Prioritize among competing demands of the job</td>
<td>• Promote a positive image of your school in the media</td>
<td></td>
</tr>
<tr>
<td>• Shape the operational policies and procedures that are necessary to manage the school</td>
<td>• Shape the operational policies and procedures that are necessary to manage the school</td>
<td>• Promote the prevailing values of the community in your school</td>
<td></td>
</tr>
<tr>
<td>• Allocating resources in support of the school’s vision and goals</td>
<td>• Allocating resources in support of the school’s vision and goals</td>
<td>• Promote ethical behavior among school personnel</td>
<td></td>
</tr>
<tr>
<td>• Buffering staff from distractions to their work</td>
<td>• Buffering staff from distractions to their work</td>
<td>• Create consistent school-wide discipline policies</td>
<td></td>
</tr>
<tr>
<td>• Meeting the demands for external accountability</td>
<td>• Meeting the demands for external accountability</td>
<td>• Foster a culture of high expectations for students</td>
<td></td>
</tr>
<tr>
<td>• Identifying specific, shared short-term goals</td>
<td>• Identifying specific, shared short-term goals</td>
<td>• Handle effectively the discipline of students in your school</td>
<td></td>
</tr>
<tr>
<td>• Provide constructive feedback to teachers on their instructional practice.</td>
<td>• Provide constructive feedback to teachers on their instructional practice.</td>
<td>• Establish a school environment in which parents are welcome</td>
<td></td>
</tr>
<tr>
<td>• Encourage a school culture open to change and innovation</td>
<td>• Encourage a school culture open to change and innovation</td>
<td>• Promote the prevailing values of the community in your school</td>
<td></td>
</tr>
<tr>
<td>• Generate motivation for a shared vision for the school</td>
<td>• Generate motivation for a shared vision for the school</td>
<td>• Promote ethical behavior among school personnel</td>
<td></td>
</tr>
<tr>
<td>• Manage change in the school</td>
<td>• Manage change in the school</td>
<td>• Build a shared vision</td>
<td></td>
</tr>
<tr>
<td>• Create a positive learning environment in your school</td>
<td>• Create a positive learning environment in your school</td>
<td>• Providing support and demonstrating consideration for individual staff members</td>
<td></td>
</tr>
<tr>
<td>• Facilitate student learning in your school</td>
<td>• Facilitate student learning in your school</td>
<td>• Stimulating growth in the professional capacities of staff</td>
<td></td>
</tr>
<tr>
<td>• Raise student achievement on standardized tests</td>
<td>• Raise student achievement on standardized tests</td>
<td>• Providing instructional support</td>
<td></td>
</tr>
<tr>
<td>• Building a shared vision</td>
<td>• Building a shared vision</td>
<td>• Monitoring progress in student learning and school improvement</td>
<td></td>
</tr>
<tr>
<td>• Providing support and demonstrating consideration for individual staff members</td>
<td>• Providing support and demonstrating consideration for individual staff members</td>
<td>• Create a positive learning environment in your school</td>
<td></td>
</tr>
<tr>
<td>• Stimulating growth in the professional capacities of staff</td>
<td>• Stimulating growth in the professional capacities of staff</td>
<td>• Participate with staff in their instructional improvement work</td>
<td></td>
</tr>
<tr>
<td>• Providing instructional support</td>
<td>• Providing instructional support</td>
<td>• Create a positive learning environment in your school</td>
<td></td>
</tr>
<tr>
<td>• Monitoring progress in student learning and school improvement</td>
<td>• Monitoring progress in student learning and school improvement</td>
<td>• Generate motivation for a shared vision for the school</td>
<td></td>
</tr>
<tr>
<td>• Provide constructive feedback to teachers on their instructional practice.</td>
<td>• Provide constructive feedback to teachers on their instructional practice.</td>
<td>• Participate with staff in their instructional improvement work</td>
<td></td>
</tr>
</tbody>
</table>

Note. The bold text shows the verbatim agreement with Tschannen-Moran and Gareis (2005). All other text in the Adapted Items column is from the OLF. For each of the non-bolded statements attempts were made to align the PSES item with like (but not identical) statements from the OLF.

The adapted items in column three form two related components of the survey, determining both the frequency of tasks assigned the vice-principal (VP Leadership Opportunity) as well as their perceptions of personal efficacy (VP Leadership Self-efficacy) when completing these assigned tasks. Ability is most clearly connected with feelings of efficacy, particularly when ability is understood not as given capacity but an individual’s belief or confidence (McCormick, 2001,
McCormick et al., 2002) that they can effectively complete a given task. The importance of experiencing and doing the work is also key in the development of positive perceptions of leadership efficacy. Unlike the Tschannen-Moran and Gareis (2004) survey, this study separates ability and opportunity and investigates their effect on self-efficacy separately. Due to the separation of “ability” and “opportunity” to complete specific tasks as outlined in the survey items above, the item stems for each part of the survey were altered to read: for VP leadership Self-efficacy – “please respond to each of the questions by considering your current ability to do each of the following in your current position”; and for the delegation of duties by the school principal, or VP Leadership Opportunity, “please respond to each of the questions by considering your opportunity to do each of the following in your current position”.

**Additional Variables in the Study.** Additional variables related to vice-principals were explored in this research that might influence the relationship between principals’ supports and vice-principals’ self-efficacy. These other variables are: the gender of the vice-principal; the quality and utility of training and preparation of the vice-principal; the years of experience of the vice-principal; the percentage of teaching and administrative duties for the vice-principal; informal leadership roles prior to becoming a vice-principal; and the vice-principal’s desire to become an elementary school principal. Regarding the first factor, while some research has not demonstrated a significant difference in leadership self-efficacy and gender (Dimmock & Hattie, 1996), other research has discovered variance between men and women (Tschannen-Moran & Gareis, 2004). The unique experience of the vice-principalship in elementary schools and the inclusive nature of the claim seems to warrants its inclusion. Next, the preparatory training and ongoing support for vice-principals may play a role in promoting a greater sense of self-efficacy (Tschannen-Moran & Gareis, 2005). Although learning and acquiring skills does not necessarily
translate into feelings of self-efficacy (Bandura, 2007), addressing skill deficits can enhance perceptions of self-efficacy (Gist & Mitchell, 1992). Two aspects of training were investigated in this study: first, vice-principals’ perceptions of the quality and utility of the Principal Qualification Program (a necessary requirement for formal school leadership in Ontario schools) to vice-principals’ work in schools and, additionally, the ongoing professional development/training offered by school districts. The “utility” and “quality” of training are measures employed by Tschannen-Moran and Gareis (2005) in their research.

Regarding the vice-principal’s years of experience, self-efficacy beliefs are believed to grow or diminish over time (Bandura, 1997). Exploring the influence of time-on-the-job on vice-principals’ efficacy seems reasonable given this finding, despite evidence from several studies (Hattie & Dimmock, 1996; Tschannen-Moran & Gareis, 2005) suggesting years of experience having no influence on leadership self-efficacy. Finally, in many Ontario school boards, vice-principals are assigned to schools on a percentage basis determined by school enrolment. Vice-principals are frequently required to assume teaching responsibilities which affects their abilities to attend to duties that may be assigned by the principal. Teaching duties may affect the vice-principal’s sense of efficacy, particularly when time constraints are perceived as having a negative influence on their ability to exercise both teaching and administrative/leadership responsibilities (Armstrong, 2014). Finally, although Barnett et al. (2012b) identify years of teaching experience as non-significant in terms of preparation for the vice-principalship, this study investigates the number of informal leadership opportunities reported by respondents prior to becoming a vice-principal to determine their potential effect on vice-principals’ leadership self-efficacy.
**Issues of Validity and Reliability.** Colten and Covert (2007) note that “validity describes the extent to which we measure what we purport to measure” (p. 64). They go on to assert that validity exists “along a continuum from high to low” using the practical and applicable assessments available to the researcher. To this end, the various scales used in this study demonstrate varying degrees of validity, explored in greater depth below.

As noted above, the survey instrument adapted (with permission of the primary author, Tschannen-Moran) in this study to measure both VP Leadership Opportunity and VP Leadership Self-efficacy has substantial evidence of validity, that is, the degree to which the instrument actually measures the constructs under investigation (Colton & Covert, 2007), in this case leadership self-efficacy and opportunities for leadership with schools. From an initial set of 50 items, Tschannen-Moran and Gareis (2004) discovered three subscales (management, moral and instructional leadership), with five items for management and six items within each additional subscale that measured overall principals’ self-efficacy. The correlation of the subscales with other constructs known to be influenced by self-efficacy, including work alienation (a negative and significant correlation) as well as a positive correlation with trust in teachers and trust in student and parents (Tschannen-Moran & Gareis, 2004) provided further evidence regarding the validity of the scales and subscales. Despite previous evidence of validity, adapting the items within the subscales does pose an additional issue to the instrument used in this study regarding validity and reliability. Creswell (2003) notes that “when one modifies an instrument or combines instruments in a study, the original validity and reliability may not hold” (p. 158).

To account for issues related to the validity of the scales adopted from the Tschannen-Moran and Gareis (2004) survey instrument, and for the original scale adopted to operationalize
and measure Principals’ Leadership Practices (PLP), several steps were taken. First, a thorough review of the literature was undertaken in order to create a “table of specifications” for each of the subscales within the three scales measured (Colten & Covert, 2007). Secondly, a focus group of currently practicing vice-principals was held, in part, to discuss the construct validity of items used within each of the subscales. In this review, vice-principals were provided with the online survey as well as the table of specifications to review. The vice-principals reported that the items within each of the subscales were representative of their practice and reflected distinct but related areas of their daily work. Similarly for the Principals’ Leadership Practices subscales, vice-principals reported that the items reflected ways in which their school principal could support them in their daily work.

Finally, the data were analyzed for internal consistency reliability. Cronbach’s alpha, a measure of correlation among items on a given scale (Colten & Covert, 2007), was high for all scales and subscales (results presented in the following chapter). Additionally, the correlations among various scales and total subscales were universally high and significant indicating that items within a scale were measuring the same construct (Warner, 2008). This analysis is more thoroughly discussed below.

**Survey and Participants.** After creation of the survey and completion of the ethical review by the University of Toronto Ethics Board, the survey instrument was sent out to fifteen vice-principals who volunteered to review the survey and be part of a one time, one hour focus group. The participants were recruited through a general email invitation forwarded to all elementary vice-principals working in the researcher’s urban school board. Participants were asked first to review the survey for length, format, and clarity. Further, they were asked to
review the items within each section of the survey and consider to what extent the items reflected and described their experiences in elementary schools. Participants were asked to note their observations and be ready to discuss them with other participants and the researcher during a face-to-face round table discussion. All 15 participants completed the survey instrument and nine sent the researcher feedback on the general framework of the survey, including the overall length, format, and clarity. Although some minor grammatical errors were noted, all indicated the survey was clear, easy to work through, and short in terms of time requirement to complete, usually 20 to 25 minutes.

From the initial volunteers, it was possible to bring together seven participants to participate in the face-to-face focus group. Informed consent was received from each participant (see Appendix C). Although much of the initial conversation centered on grammatical and wording issues, there was discussion about the appropriateness of scales and subscales. The participants agreed that the scales, subscales, and items within each were reflective of their work experience as well as their working relationship with their current principal. The Likert-type scale with nine numeric choices for all subscales was viewed by many as being somewhat unmanageable and unnecessary. Several changes were made to the survey based on the focus group including the Likert-type scale (reduced from 9 to 7 options); several additions under the teacher leadership construct; as well as the addition of an open response question at the end of the survey: “Having completed the survey, are there any other comments you would like to share concerning your work, the support you receive, and/or your perceived sense of efficacy to do the work of an elementary school vice-principal?”
Permission was sought from the Ontario Principals’ Council (OPC) and Catholic Principals’ Council of Ontario (CPCO) to forward the link of the online survey to their members (see Appendix D). Both Councils agreed to send the link through their web-based newsletters (the survey is included in Appendix A). A brief explanation of the research and the link to the online survey were included on three occasions in the OPC electronic newsletter and twice through the CPCO electronic newsletter (see Appendix E). Participants were asked to read the informed consent on the first page of the online survey. They indicated their consent by selecting the “yes” button on the same page. Next, several qualification pages ensured that participants were vice-principals currently working in an English elementary school in Ontario. After completing these pages, participants could respond to the items on the survey. All data was downloaded from the secure Survey Monkey site following a three week window to complete the instrument. The data was entered into SPSS software, version 22 on a secure laptop computer.

One hundred seventy-nine response sets were downloaded. Two of the respondents did not provide consent and were deleted from the set. An additional 40 respondents with significant non-responses were deleted. Of these, in most cases more than 50% of the data was missing. Respondents in these cases normally began the survey but skipped major portions or gave-in half way through the instrument. For each of the remaining participants included in the study, no respondent had more than 1.6 percent of responses missing, or, in practical terms, two missed responses for a given scale often within differing subscales of that same scale. Those missing data greater than this threshold of 1.6 percent were not included in the final data set. The “missing data function” was used in SPSS which inputs the series mean per item for each missing piece of data within an item. Green and Salkind (2014) warn against using the imputation functions in SPSS unless there are minimally missing data and the data missing are
omitted randomly rather than intentionally. Given the overall complete response sets for participants where data were imputed, the function was used with negligible effect on statistical results while retaining a total sample size of 122.

Data Analysis. The analysis of the survey data focused on vice-principals’ perceptions in three areas: the types of tasks they are assigned by their school principals (VP Leadership Opportunity, or OPP), the leadership supports provided by their school principal (Principals’ Leadership Practices, or PLP), and, finally, their perceptions of their own leadership efficacy (VP Leadership Self-efficacy, or VPLSE). To create an overall VP Leadership Self-efficacy rating, the ratings from each item within the three subscales (with the number of items presented parenthetically) were combined: including, Management (5), Instructional Leadership (6) and Moral Leadership (6). The same procedure was used to create an overall score for VP Leadership Opportunities. Recall that these scales and subscales are differentiated by opportunity as opposed to ability to perform each leadership task operationalized with specific items. Finally, the Principals’ Leadership Practices (PLP) scale was determined by combining subscale scores in four areas: Enactive Mastery (4), Vicarious Experience (4), Verbal Feedback (4), and Physiological States (4). Internal consistency of these scales and subscales was analyzed with Cronbach’s alpha. These coefficient alphas “assess consistency in scores among equivalent items” (Green & Salkind, 2014). A high alpha (usually above .7, as reported by Field, 2013) indicates that items within a specific subscale are measuring the same construct.

Following this analysis, the means and standard deviations were determined for each of the scales and subscales. Additionally, categorical groupings related to low, moderate, or high levels within each scale were established. Converting the scales and subscales to categories,
essentially changing interval data to categorical data, offered a first, provisional evaluation of the
data related to the research questions. Further, cross tabulation of these categories provided data
for participant selection in the next qualitative phase of the study. Reliance on more statistically
powerful measures for determining the relationship between various factors in the research is
now elaborated.

One-way analyses of variance (or one-way ANOVA’s) were conducted to compare
groups defined by demographics and other variables on their responses to the scales for VP
Leadership Self-efficacy, VP Leadership Opportunities, and Principals’ Leadership Practices.
The one-way ANOVA assesses the mean difference among two or more groupings within one
factor (referred to as levels within the factor) on another single, continuous (or interval) measure,
like the three scales in this study (Green & Salkind, 2014). The one-way ANOVA is robust to
the violation of many of the assumptions associated with the test, including normality and
homogeneity of variance, particularly when the sample size is large (n > 30) and the group sizes
within the factor are generally equal (Field, 2013). As a generalization of the t-test, the one-way
ANOVA produces the same results as the independent t-test with two groups or more, whereas
the t-test is limited to the comparison of means with two levels within a given factor (Warner,
2008). The one-way ANOVA was used for all comparisons in this study in order to provide
consistent reporting of variance in mean ratings for each of the three scales. SPSS allows for the
easy computation of effect sizes. Effect sizes are reported with eta squared (\(\eta^2\)), .01, .06, and
.14 respectively denoting cut-off points for small, medium, and large effects (Green & Salkind,
2014).
Next, potential bivariate correlations were analyzed in order to assess the first two sub-questions:

1. How do principals’ leadership practices affect vice-principals’ leadership self-efficacy?

2. How do opportunities for leadership affect the leadership self-efficacy of vice-principals?

Figure 2. The investigated relationships among Principals’ Leadership Practices, VP Leadership Opportunities and VP Leadership Self-efficacy.

Although not a specific sub-question of the study, the relationship between VP Leadership Opportunities and Principals’ Leadership Practices was also explored. Figure 2 illustrates the proposed areas for investigation in terms of the three factors. It is hypothesized that positive relationships will exist between Principals’ Leadership Practices and VP Leadership
Self-efficacy, as well as VP Leadership Opportunity with VP leadership Self-efficacy. Further, it was hypothesized that principals who demonstrate positive leadership practices in their work with their vice-principals will more frequently provide opportunities for leadership-type tasks to their vice-principals. Both scales and subscales were used in the analysis. The analysis of both scales and subscales, and their relationships, were determined using Pearson correlation coefficients $r$.

The Pearson correlation coefficient measures the degree of relationship, if any, between two quantitative variables (Green & Salkind, 2014). The $r$ value produced in the calculation produces a standardized value of the covariance between two potentially related factors. Values from -1 to +1 indicate the degree and direction of the relationship, +1 indicates a perfect and positive relationship, and -1 indicates a perfect, negative relationship (Field, 2013). Values of Pearson’s $r$ of .10, .30 and .50 are conventionally understood to represent small, medium, and large effects, respectively (Green & Salkind, 2014). Values for Pearson’s $r$ are sensitive to violations of linearity and normality, particularly in small sample sizes (Field, 2013). Tests for linearity (graphing two factors in a scatter plot to visually inspect for a linear relationship) were performed. Visual inspection of the data (using histograms) suggested the normal distribution of all measures (with some, moderate positive skew for some of the subscales). However, the full scales for each of three factors investigated in this analysis were less skewed and more normally distributed.

Lastly, bivariate regression analysis was conducted to assess the linear relationship between variables. In non-experimental or quasi-experimental designs (such as this one) “predictor” denotes what would be the independent variable in an experimental design while
“criterion” describes, equivalently, the dependent variable (Green & Salkind, 2014). Therefore, the sub-questions were reformulated:

1. How do principals’ leadership practices (predictor) predict the levels of vice-principals’ leadership self-efficacy (criterion)?

2. How do opportunities for leadership (predictor) predict the levels of vice-principals’ leadership self-efficacy (criterion)?

Correlation and regression analysis differ in two substantive ways. First, regression analysis seeks to define a directional relationship between two factors, where one factor predicts a change (with a specific magnitude) in another. Second, regression provides unstandardized descriptors of variability that can be used to predict the variation in a given criterion as the result of a change in a certain predictor (Field, 2013). All assumptions were tested in conducting this analysis (as indicated by Green & Salkind, 2013), including normality, homogeneity of variance, independence, normally distributed residuals, and linearity.

**Phase II - The Qualitative Approach**

The second, qualitative phase of the research develops and potentially provides greater depth to the initial findings drawn from the analysis of the quantitative data. In this section, the unique stance of the qualitative approach is briefly explored. Further, sample and data collection procedures are outlined. Finally, analytical procedures are discussed.

**The Qualitative Stance.** Creswell and Plano-Clark (2011) note the strength of the sequential explanatory design is that it allows for the possibility of focusing in more depth on a group or groups of participants formed through the initial quantitative analysis. The study
theorizes that greater principals’ supports (via the four sources of self-efficacy) will enhance the
vice-principal’s personal efficacy in doing the work of school leadership. Being able to
investigate the relationship in this more direct, personal, contextual manner is the fundamental
strength of qualitative methods:

Qualitative researchers are interested in understanding how people interpret their
experience, how they construct their worlds, and what meaning they attribute to
their experiences. (Merriam, 2009, p. 5)

The characteristics of qualitative research include such concerns as the natural setting or context
of human experience, an openness to emergent methods and processes of theory/knowledge
creation, a view of the holistic nature of experience, the positioning of the researcher in the
study, and the iterative nature of the relationship between data analysis and the reformulation of
between quantitative and qualitative approaches in terms of methods, this contrast in the mixed
methods paradigm provides a credible second lens to assess a research question.

Creswell and Plano-Clark (2011) note the provisional nature of the qualitative work in an
explanatory mixed method design. The structure of the qualitative analysis is based on the
results of the quantitative phase of the research project. In this study, the semi-structured
interviews delve more deeply into the relational link between work opportunities assigned vice-
principals, principals’ leadership practices, and vice-principals’ self-efficacy as outlined in the
conceptual framework.
Selection of Participants. Participants in the web-based survey indicated their willingness to participate in an in-depth, telephone interview by providing an email address to the researcher. Initially, it was planned to interview twelve volunteers, three from each of four possible quadrants related to Principals’ Leadership Practices (PLP) and VP Leadership Self-efficacy (VPLSE), in two quadrants where PLP and VPLSE were equally high or low, in another where PLP was high but VPLSE was low, or a final where PLP was low and VPLSE was high. Given the data retrieved from the survey instrument, however, this was not possible. Rather, three groups with five participants within each were initially selected based on PLP. Each of these participants rated themselves as having high VPLSE, but rated PLP differently, that is, as high, moderate, or low. Further, each of the participants indicated high vice-principals’ leadership opportunities, or OPP. This process allowed the PLP construct to have a certain degree of primacy in this second phase of the research, a reasonable direction it was determined given the results of the initial, quantitative phase. These results and the process for selecting participants for inclusion in the second phase of the study, and the construction of the semi-structured questionnaire, are more thoroughly addressed below.

For convenience, all interviews were conducted via Skype. Participants were contacted on their preferred phone line. No visual images of the participants were used or recorded by the researcher. All participants were forwarded informed consent forms prior to the interviews by email (see Appendix D). A request was made for each participant to sign and return the consent form. The interviewer reviewed the informed consent forms with the participants before each interview. Participants were also informed verbally (and in writing) that the conversations were being digitally recorded. Within a two week period, the researcher transcribed the interview and sent the full transcription to the participant for editing and revising. Each participant was asked
to review the transcription and send back the edited version within a two week window. All participants either edited and returned the transcription or provided email confirmation to use the transcription without revisions.

**Data Analysis and Interpretation.** A key process in the analysis of qualitative data is “coding”. Codes are simply notations (usually in the margins of transcripts) that label a “segment of data that *might* be useful” to answering a research question (Merriam, 2009, p. 178). The “usefulness” of the label and the data itself is evaluated in an intuitive way, through iterations of comparisons with other pieces of data (and codes) within the transcript and contrasted with transcripts from other participants, to construct categories, themes, and, eventually, theory.

Saldaña (2013) outlines a series of three possible methodological moves, along with related forms or styles of coding, available to the qualitative researcher, including “first cycle”, a transitional process, and, finally, forms of “second cycle” coding. Rather than an end in itself, coding is meant to link data and ideas. Through the process of coding, and recoding, the researcher begins to construct meaning (through categories and themes) and, in fact, becomes *the link* between data and meaning. Saldaña notes:

> In qualitative data analysis, a code is a researcher-generated construct that symbolizes and thus attributes interpreted meaning to each individual datum for later purposes of pattern detection, categorization, theory building, and analytical processes. (p. 4)
The centrality of the researcher in qualitative design (Merriam, 2000) explains in part why the process of coding – and the selection of methods of coding – are so crucial. Specific methods of coding and related techniques, such as “analytical memos” (a researcher’s self-reflection of observations and thinking during the process of coding) offer a means of allowing the participant’s voice (within the text) to be heard (perhaps, more authentically), and relatedly, the researcher to bracket or acknowledge their own assumptions and biases. Codes are filters for the data, but the selection of particular types of filters (or coding styles) – argues Saldaña (2013) – are indicators of a research stance.

This study follows the various stages outlined by Saldaña (2013). In the first stage, an initial review of the data was conducted following the transcription (completed by the researcher) of each interview, noting possible developing themes. Interviews were then imported into Microsoft Excel and tabulated according to the low, medium, and high PLP as indicated by participants in the electronic survey. Each of the four initial questions from the semi-structured interview (asked verbatim for all participants) formed natural break points for analyzing the data. Two methods of coding the interview data were adopted in the first cycle of coding, In Vivo and Process coding. In Vivo coding uses verbatim wording from the transcription to form codes. This form of coding is particularly good at capturing the actual voice of participants but does limit the researcher’s ability to “contribute to more conceptual or theoretical views about the phenomenon or process” (Saldaña, 2013, p. 94). To address this, Process coding, using gerunds or action words, was concurrently applied to the data. Process coding is particularly useful when studying a phenomenon that happens over time (Saldaña, 2013) like leadership development.

Each of the coding forms was used first within transcripts and groups. In the transition phase of analysis, codes from each of the three groups were extracted and listed in columns with a row
break for each of the four questions from the original interview. In the second cycle, Pattern
coding, which attempts to find broad explanatory codes to identify emerging themes (Saldaña,
2013) was utilized to pull together codes within groups and then across groups where applicable.
These codes where then used to label the data again. Themes were developed based on this
analysis.

Although validity is distinctively different in qualitative approaches (Creswell, 2003;
Creswell & Plano Clark, 2011), various steps were taken to address validity. First, the addition of
an open-ended question in the survey instrument (as suggested by the focus group) did pose a
methodological issue concerning implementation (mixing concurrent and sequential collection of
data). Despite the concern about method, including an open-ended question in the online survey
provided a means of validating the qualitative methods through triangulation, a frequently used
method to compare and confirm the validity of data from different sources in a qualitative study
(Creswell, 2003). In order to follow the sequential method adopted, the responses to the open-
ended question were not analyzed until after the analysis of data from the qualitative stage of the
research. Next, Merriam (2009) notes that the “transferability” of results is a greater concern in
qualitative studies, rather than generalizing results to a whole population (the concern in
quantitative work). As such, providing rich context to the qualitative work provides the reader
with a clearer sense of the applicability of findings or, as Creswell (2003) argues, “an element of
shared experience” (p. 196). Additionally, such rich reports not only confirm the validity of the
work but provide richer context and understanding to the quantitative analysis.

In the next chapter, the results of both the quantitative and qualitative phase of the
research are discussed in relation to the first sub-questions of this investigation.
Chapter 4

Results

This chapter reports the results from both the qualitative and quantitative analyses of data. First, an overview of respondents is provided. Following this, item analysis and reliability results are presented. Next, a reconfiguration of the data into categories of high, moderate and low for each scale is presented and discussed. Then, the results of the analyses of variance (ANOVA), bivariate correlations, and bivariate regression analysis are presented. Some initial conclusions from the quantitative phase of the study are then presented as foci for the second, qualitative phase of the investigation. Selection of participants for the second phase is also explained. Finally, the themes emerging from the qualitative analysis are explored.

Respondents

Table 4 provides a detailed breakdown of the demographic and other variables potentially influencing leadership self-efficacy taken from the survey instrument. Some categories within each variables were combined from the original survey in order to create more balanced sample sizes for statistical analysis. For example, the percentage time as a vice-principal within the school setting was altered from four options in the original survey to two. Categories such as “100% but in two schools” had only eleven respondents. Groups were combined to form “100%” or “50% or below” in terms of administrative responsibilities. In terms of specific information, Table 4 indicates that a large percentage of participants are female. This sample, however, is comparable with the percentage split between males and females reported by Armstrong (2014) in her study on the transition experience of new vice-principals in Ontario. In terms of experience in the role of vice-principal, prior leadership experience, and years of
teaching experience, the respondents are, for the most part, equally distributed among categories. An overwhelming 90.1% of vice-principals in the sample report that they are either somewhat or very interested in becoming school principals. Finally, vice-principals judged the quality and utility of their preparatory training for the vice-principalship in their Principal Qualification Program (PQP) as good (85.1% and 71.9%, respectively). Although somewhat lower in terms of percentages, they also evaluated their ongoing professional development in their school districts as good (68.6% for quality and 67.8% for utility).

Table 4

Demographic Characteristics of Participating Vice- Principals

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>32</td>
<td>26.4%</td>
</tr>
<tr>
<td>Female</td>
<td>89</td>
<td>73.6%</td>
</tr>
<tr>
<td>Years of Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Year or Less</td>
<td>40</td>
<td>32.8%</td>
</tr>
<tr>
<td>2 to 3 Years</td>
<td>45</td>
<td>36.9%</td>
</tr>
<tr>
<td>More Than 4 Years</td>
<td>37</td>
<td>30.3%</td>
</tr>
<tr>
<td>Percentage Time as VP in School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>69</td>
<td>57.0%</td>
</tr>
<tr>
<td>50% or Less</td>
<td>52</td>
<td>47.0%</td>
</tr>
<tr>
<td>Prior Leadership Opportunity in Schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 or Less</td>
<td>42</td>
<td>34.4%</td>
</tr>
<tr>
<td>4</td>
<td>34</td>
<td>27.9%</td>
</tr>
<tr>
<td>More than 5</td>
<td>46</td>
<td>37.7%</td>
</tr>
<tr>
<td>Years of Teaching Experience</td>
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<td></td>
</tr>
<tr>
<td>Prior to Becoming VP</td>
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<td></td>
</tr>
<tr>
<td>10 or Less</td>
<td>27</td>
<td>22.3%</td>
</tr>
<tr>
<td>11 to 15</td>
<td>40</td>
<td>33.1%</td>
</tr>
<tr>
<td>More than 15</td>
<td>54</td>
<td>44.6%</td>
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<tr>
<td>Interest in Becoming a Principal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Interested</td>
<td>12</td>
<td>9.9%</td>
</tr>
<tr>
<td>Somewhat Interested</td>
<td>14</td>
<td>11.6%</td>
</tr>
<tr>
<td>Very Interested</td>
<td>95</td>
<td>78.5%</td>
</tr>
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</table>

Principal Qualification Program
<table>
<thead>
<tr>
<th></th>
<th>Quality of Program</th>
<th>Utility of Program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Good</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>14.9%</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>103</td>
<td>85.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Not Good</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34</td>
<td>28.1%</td>
</tr>
<tr>
<td></td>
<td>87</td>
<td>71.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Quality of Program</th>
<th>Utility of Program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Good</td>
<td></td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>31.4%</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>68.6%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Not Good</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>39</td>
<td>32.2%</td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>67.8%</td>
</tr>
</tbody>
</table>

*Note.* In all cases N=122.

**Item Analysis and Reliability**

First, item analysis was conducted in order to evaluate the internal consistency of the subscales within the study. Item analysis correlates each item within a subscale to the sum of all other items within the same subscale. The result is referred to as the “corrected item-total correlation”. “Corrected” merely indicates that the item compared to the sum total of all items in the subscale is not included the total score. A strong correlation with the sum of all items in a subscale suggests that the item is a good measure of the construct under investigation (Green & Salkind, 2004). For each of the three scales (VPLSE, OPP, and PLP) all items within each subscale were analyzed to determine the corrected item correlation as well as the correlation among items and other subscales within the scale. A stronger correlation between an item and another scale may indicate the item is not measuring the given construct (Salkind & Green, 2014). In the analysis of each subscale no such relationship was discovered and virtually all corrected item-total correlations were strong (that is, above $r = .5$).
Using the ratings of respondents (from 1 to 7) from items on the online survey, each of the overall scores from subscales (per respondent) were then combined to create three overall ratings for each construct. Both subscales and scales were analyzed for internal consistency reliability using Cronbach’s Alpha. The results of this analysis are presented in Table 5.

Table 5

*Internal Reliability of Scales and Subscales*

<table>
<thead>
<tr>
<th>Scale and Subscales</th>
<th>Cronbach’s Alpha (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Scale Vice-principals’ Leadership Self-efficacy (VPLSE)</td>
<td>.97</td>
</tr>
<tr>
<td>Subscale – Management (5 items)</td>
<td>.94</td>
</tr>
<tr>
<td>Subscale – Instructional Leadership (6 items)</td>
<td>.94</td>
</tr>
<tr>
<td>Subscale – Moral Leadership (6 items)</td>
<td>.94</td>
</tr>
<tr>
<td>Full Scale Vice-principals’ Leadership Opportunity (OPP)</td>
<td>.94</td>
</tr>
<tr>
<td>Subscale – Management (5 items)</td>
<td>.84</td>
</tr>
<tr>
<td>Subscale – Instructional Leadership (6 items)</td>
<td>.92</td>
</tr>
<tr>
<td>Subscale – Moral Leadership (6 items)</td>
<td>.89</td>
</tr>
<tr>
<td>Full Scale Principals’ Leadership Practices (PLP)</td>
<td>.97</td>
</tr>
<tr>
<td>Subscale – Enactive Mastery (4 items)</td>
<td>.88</td>
</tr>
<tr>
<td>Subscale – Vicarious Experience(4 items)</td>
<td>.89</td>
</tr>
<tr>
<td>Subscale – Verbal Feedback (4 items)</td>
<td>.96</td>
</tr>
<tr>
<td>Subscale – Physiological States (4 items)</td>
<td>.92</td>
</tr>
</tbody>
</table>

All Cronbach’s alphas for scales and subscales were high, Green and Salkind (2014) noting that α = .70 as acceptable. Table 6 was constructed to display the mean for each of the scales and subscale full scores. For easier comparisons, each full score (i.e., sum of all responses from the survey ratings) scale and subscale scores were converted back to the original rating scale of 1 to 7 (from the Likert-type scale adopted for the survey). Standard deviations for each of the rating scores were also calculated.
Descriptive Analysis

Table 6

*Summative Scores for Subscales Converted to 7 point Likert-type Scale*

<table>
<thead>
<tr>
<th>Scale (Items)</th>
<th>Subscales (Items)</th>
<th>Mean/Total Score</th>
<th>Items</th>
<th>Mean/Average Scale 1-7</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals’ Leadership Practices Overall</td>
<td>PLP Mastery Experience</td>
<td>20.57</td>
<td>4</td>
<td>5.14</td>
<td>1.31</td>
</tr>
<tr>
<td></td>
<td>PLP Vicarious Experience</td>
<td>20.89</td>
<td>4</td>
<td>5.22</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td>PLP Verbal Persuasion</td>
<td>20.23</td>
<td>4</td>
<td>5.06</td>
<td>1.63</td>
</tr>
<tr>
<td></td>
<td>PLP Physiological States</td>
<td>20.68</td>
<td>4</td>
<td>5.17</td>
<td>1.65</td>
</tr>
<tr>
<td>Vice-principals’ LSE Overall</td>
<td>VPLSE Management</td>
<td>26.12</td>
<td>5</td>
<td>5.22</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>VPLSE Instructional leadership</td>
<td>31.30</td>
<td>6</td>
<td>5.21</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>VPLSE Moral Leadership</td>
<td>33.80</td>
<td>6</td>
<td>5.63</td>
<td>0.95</td>
</tr>
<tr>
<td>VP Leadership Opportunities Overall</td>
<td>VP OPP Management</td>
<td>25.53</td>
<td>5</td>
<td>5.11</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>VP OPP Instructional Leadership</td>
<td>31.07</td>
<td>6</td>
<td>5.18</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>VP OPP Moral Leadership</td>
<td>34.29</td>
<td>6</td>
<td>5.72</td>
<td>0.95</td>
</tr>
</tbody>
</table>

*Note.* Average, Scale 1-7 was calculated by dividing Mean on scales and subscales by the number of items in each scale. OPP and PLP scores of 1 to 7 from *never* to *always*; VPLSE scores of 1 to 7 from *none at all* to *excellent.*

The average scores for each full scale suggest that both VPLSE and OPP are rated similarly high (and highest) by vice-principals (VPLSE – $M = 5.36$, $SD = 0.87$ and OPP – $M = 5.35$, $SD = 0.88$) when compared to PLP. PLP subscale ratings offer very similar means for average scores indicating vice-principal perceive comparable levels of leadership support from their principals in all areas investigated within this scale. Standard deviations for scales and subscales were greatest for PLP, showing greater variance than reported on the OPP and VPLSE scales and subscales. Of the four constructs, PLP verbal feedback and PLP physiological states
indicate the greatest variance when compared to all other subscales. The highest ratings for individual subscale items were for VPLSE Moral Leadership \( (M = 5.63, SD = 0.95) \) and OPP Moral Leadership \( (M = 5.72, SD = 0.95) \).

The data for each of the scales and subscales were categorized as high, moderate, or low. The tabulating of the data in this way not only offered a more meaningful comparison of scores among the three scales and their subscales but offered a method for determining participants in the second qualitative stage of the study (more fully detailed below). Low, moderate, and high categories were created by constructing equal intervals for the range of possible scores for respondents within each scale and subscale. These calculations were completed for each scale and subscale producing Table 7, reported below. For this table, full scores (and not averages) are reported. As full scores were used in correlation and regression analysis, these intervals (creating low, moderate, and high categories) allowed for more concise analysis of results using non-standard units (as reported in the regression equations below). These intervals are reported parenthetically in Table 7 in the first column for each scale and subscale.

Table 7

Low, Moderate, and High Categories – Principals’ Leadership Practices (PLP), VP Leadership Self-efficacy (VPLSE), and Opportunity for Leadership Experiences (OPP)

<table>
<thead>
<tr>
<th>Scales/Subscales – with intervals</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>PLP Overall (16-47; 48-81; 82-112)</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>PLP Enactive Mastery (4-12; 13-20; 21-28)</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td>PLP Vicarious Experience (4-12; 13-20; 21-28)</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td>PLP Verbal Persuasion (4-12; 13-20; 21-28)</td>
<td>14</td>
<td>46</td>
</tr>
<tr>
<td>PLP Physiological States (4-12; 13-20; 21-28)</td>
<td>19</td>
<td>29</td>
</tr>
<tr>
<td>VPLSE Overall (17-50; 52-84; 85-119)</td>
<td>2</td>
<td>44</td>
</tr>
<tr>
<td>VPLSE Management (5-14; 15-24; 25-35)</td>
<td>4</td>
<td>59</td>
</tr>
</tbody>
</table>
VPLSE Instructional Leadership (6-19;18-29; 30-42) | 3 | 58 | 61 | 2.5% | 47.5% | 50.0%
VPLSE Moral Leadership (6-19;18-29; 30-42) | 2 | 35 | 85 | 1.6% | 28.7% | 69.7%

OPP Overall (17-50;52-84;85-119) | 3 | 24 | 95 | 2.5% | 19.7% | 77.9%
OPP Management (5-14; 15-24; 25-35) | 2 | 15 | 105 | 1.6% | 12.3% | 86.1%
OPP Instructional Leadership (6-19;18-29; 30-42) | 6 | 51 | 65 | 4.9% | 41.8% | 53.3%
OPP Moral Leadership (6-19;18-29; 30-42) | 3 | 30 | 89 | 2.5% | 24.6% | 73.0%

The low, moderate, and high levels for each subscale provide not only a means of determining the frequency of each level (i.e., the number of respondents indicating low, moderate, or high ratings for each scale or subscale) but permit a more meaningful context for understanding overall mean scores reported in Table 6. The overall summative rating means for VPLSE and OPP are all within the high category, with only the Management subscale within each scale differing, that is, on the lower as opposed to mid-point of the high category. Table 7 indicates that the vast majority of vice-principals perceive both their leadership self-efficacy as well as their opportunities for leadership within their schools to be either moderate or high.

A few notable differences in moderate or high ratings, however, require further discussion. First, there is a noteworthy percentage difference between VPLSE for Instructional Leadership (50.0%) and Management (48.4%) when compared to VPLSE for Moral Leadership (69.7%), suggesting vice-principal are more confident in their abilities to perform on the latter. Secondly, in terms of leadership opportunities in their schools, vice-principals indicate less involvement in instructional leadership-type tasks when compared to managerial or moral leadership-type assignments. Further OPP Management is comparatively higher than the other two subscales measured (at 86.1%), indicating that vice-principals are more involved in managerial tasks in their schools rather than instructional or moral forms of school leadership.
In order to proceed with an initial, descriptive analysis of the possible relationship between the OPP and VPLSE and PLP and VPLSE (the first two sub-question of this study), both PLP and OPP full scales categories (either low, moderate, or high) were cross-tabulated with the varying levels of VPLSE reported by vice-principals. Tables 8 and 9 below provide both the frequency and percentages for each of these comparisons.

Table 8
Crosstabs Comparison for Principals’ Leadership Practice (Low, Moderate, High) and VP Leadership Self-efficacy (Low, Moderate, High)

<table>
<thead>
<tr>
<th>VPLSE Overall</th>
<th>Low VPLSE</th>
<th>Moderate VPLSE</th>
<th>High VPLSE</th>
<th>PLP Totals (rows)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low PLP</td>
<td>Frequency</td>
<td>2</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>1.6%</td>
<td>2.5%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Moderate PLP</td>
<td>Frequency</td>
<td>0</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>0.0%</td>
<td>12.3%</td>
<td>14.8%</td>
</tr>
<tr>
<td>High PLP</td>
<td>Frequency</td>
<td>0</td>
<td>26</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>1.6%</td>
<td>36.1%</td>
<td>41.0%</td>
</tr>
<tr>
<td></td>
<td>VPLSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>2</td>
<td>44</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>1.6%</td>
<td>36.1%</td>
<td>62.3%</td>
</tr>
</tbody>
</table>

A large percentage of vice-principals (55.8%) report high self-efficacy in their work and moderate or high ratings for PLP. More specifically, fifty respondents with high PLP also report high levels of VPLSE, and 26 participating vice-principals who report moderate PLP demonstrate high levels of VPLSE. Only two participants reported low PLP and low VPLSE. A particularly interesting group for possible inclusion in the next phase of the research are those who report low levels of PLP and high VPLSE (eight in number). Overwhelming, however, of
those vice-principals reporting high self-efficacy, most report either moderate or high levels of PLP, suggesting that principals’ leadership practices (as outlined from the four sources of self-efficacy) may significantly affect vice-principals’ leadership self-efficacy.

Table 9
*Crosstabs Comparison for VP Opportunities for Leadership (Low, Moderate, High) and VP Leadership Self-efficacy (Low, Moderate, High)*

<table>
<thead>
<tr>
<th>OPP Overall</th>
<th>VPLSE Overall</th>
<th>OPP Totals (rows)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low VPLSE</td>
<td>Moderate VPLSE</td>
</tr>
<tr>
<td>Low OPP</td>
<td>Frequency</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>0.8%</td>
</tr>
<tr>
<td>Moderate OPP</td>
<td>Frequency</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>0.8%</td>
</tr>
<tr>
<td>High OPP</td>
<td>Frequency</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>1.6%</td>
</tr>
<tr>
<td>VPLSE Totals (column)</td>
<td>VPLSE</td>
<td>2</td>
</tr>
<tr>
<td>Frequency</td>
<td>Percent</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

Similar to Table 8 results, 59.8% of participants report high levels of opportunity to participate in various facets of leadership within their schools. A large number of respondents \( n = 60 \) of 73 indicating high OPP report both high levels of involvement in leadership tasks within their schools and high levels of leadership self-efficacy. The remaining thirteen participants indicate moderate OPP and high levels of VPLSE. A shift in results from Table 8 to Table 9 is seen most clearly in the frequency and percentages of those reporting low OPP (as compared to low PLP) and moderate to high levels of VPLSE. Only one participant reported low OPP and low VPLSE. This descriptive analysis appears to suggest that opportunities for leadership in schools may have an even greater influence on reported levels of leadership self-efficacy than
PLP. Before proceeding with bivariate correlations and regression analysis to test these initial claims, the various demographic and contextual variables associated with this study are analyzed in relation to their responses regarding the three factors investigated in this study.

**Analysis of Variance (ANOVA)**

Analyses of variance (ANOVA) were done to compare principals’ leadership practices (including PLP and OPP) and vice-principals’ leadership self-efficacy (VPLSE) and various demographic and contextual variables identified in this study, including gender; years of experience as a vice-principal; the percentage of time allotted for vice-principals’ work and other teaching duties, leadership experiences prior to becoming a vice-principal, years of teaching experience prior to becoming a vice-principal; and the quality and utility of pre-service (i.e., Principal Qualification Program, or PQP) and in-service training offered by the participant’s school district. Only statistically significant variations in mean scores among these various groupings are reported below.

**Gender.** The overall $F$ for the one way ANOVA assessing differences in means between male and female respondents and perceived leadership self-efficacy was statistically significant, $F(1, 119) = 3.95, p = .004$. The corresponding effect size of $\eta^2 = .067$ or 6.7% of the variation of scores was attributable to gender. This is a medium effect size (Green & Salkind, 2014). The mean VPLSE score for women ($M = 93.59, SD = 13.00$) was significantly higher than the mean VPLSE score for men ($M = 84.92, SD = 12.78$).

**Years of Experience as VP and PLP.** The overall $F$ for the one way ANOVA assessing differences in means among years of experience and vice-principals’ overall PLP showed statistical significance, $F(2, 118) = 3.779, p = .026$. The corresponding effect size was $\eta^2 =$
0.066. As recommended by Field (2013), both Tukey’s method and the Games-Howell procedure were utilized for post hoc pairwise comparisons due to the difficulty of assessing population variances. Both tests confirmed the statistically significant difference between those with less than one year of experience ($M = 90.15, SD = 19.34$) and those with 2 to 3 years of experience ($M = 76.51, SD = 24.06$). There was no significant difference between these groups and the group with more than 3 years of experience ($M = 81.10, SD = 22.49$).

**Bivariate Correlation Analysis**

Correlation analysis using Pearson’s Product Correlations was completed in order to assess:

1. How principals’ leadership practices (PLP, subscales and subscales) were related to vice-principals’ perceived leadership self-efficacy (VPLSE, subscales and scales); and
2. How vice-principals’ opportunities for leadership within the school (OPP, subscales and scales) were related to vice-principals’ perceived self-efficacy (VPLSE, subscales and scales).

**PLP and VPLSE (Scales and Subscale Analysis).** Pearson correlations between principals’ leadership practices and vice-principals’ perceived leadership self-efficacy were performed to determine a relationship among these constructs. The various subscales (Enactive Mastery, Vicarious Experience, Verbal Persuasion, and Physiological States) were estimated to have a positive relationship with Vice-principals’ Leadership Self-efficacy as a whole and within the three subscales: Management, Instructional Leadership, and Moral Leadership. Although the predictive, linear relations cannot be assumed in such non-experimental design (Warner, 2008),
the results can define a reciprocal relationship between leadership practice and self-efficacy. The correlative relationships among the scales are first presented in Figure 3.

Figure 3. The correlations among the three scales: Principals’ Leadership Practices, VP Leadership opportunities, and VP Leadership Self-efficacy.

Converting the Pearson $r$'s to $R^2$ (by simply squaring the correlations) produces a value that predicts the percentage of variation attributable to the relationship among the three factors. Given the correlations reported in Figure 3, OPP would describe approximately 40% in the variation of VPLSE, while PLP could only explain 5% of the variation in VPLSE. Finally, PLP seems to predict close to 20% variation in the opportunities for leadership as rated by the vice-principal respondents. The complete results among scales and subscales for each of the three relationships described in Figure 3 are presented in Tables 10, 11, and 12.
**Pearson Correlations between PLP Subscales and VPLSE Scale and Subscales**

<table>
<thead>
<tr>
<th></th>
<th>VPLSE Management</th>
<th>VPLSE Instructional Leadership</th>
<th>VPLSE Moral Leadership</th>
<th>VPLSE Overall Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLP Enactive Mastery</td>
<td>.236**</td>
<td>.271**</td>
<td>.256**</td>
<td>.279**</td>
</tr>
<tr>
<td>PLP Vicarious Experience</td>
<td>.189*</td>
<td>.234**</td>
<td>.244**</td>
<td>.245**</td>
</tr>
<tr>
<td>PLP Verbal Persuasion</td>
<td>.139</td>
<td>.158</td>
<td>.165</td>
<td>.169</td>
</tr>
<tr>
<td>PLP Physiological States</td>
<td>.190*</td>
<td>.142</td>
<td>.142</td>
<td>.170</td>
</tr>
</tbody>
</table>

*Note. VPLSE = Vice-Principals’ Self-efficacy and PLP = Principals’ Leadership Practices. ** indicates p < .01 and * = p < .05.*

Based on the 122 respondents on the self-administered survey, there is a small, but significant relationship between overall PLP and overall VPLSE, \( r(122) = .224, p = .013 \). Table 10 reports the relationship between the various dimensions and overall summative scores for PLP and overall VPLSE as reported by vice-principals in Ontario. The correlations contained in the furthest right hand column of Table 10 show a small but highly significant relationship among overall VPLSE and two subscales of PLP, Enactive Mastery and Vicarious Experience. Interestingly, there is no significant relationship demonstrated among PLP Verbal Persuasion and PLP Physiological states for either the overall scale or subscales of VPLSE with the exception of PLP Physiological States and VPLSE Management \( r = .198 \) The least strong relationship for those that are significant (for all scales and subscales) is the relationship between PLP Vicarious Experience and vice-principals’ perceived efficacy on management tasks within their schools.

**OPP and VPLSE (Scales and Subscales).** Next, Pearson correlations between vice-principals’ reported opportunities to take on leadership tasks within their schools and their
perceived sense of efficacy were performed. Once again both scales and subscales were entered into the analysis, comparing the overall scales of OPP and the three subscales, Management, Instructional Leadership, and Moral Leadership. The overall self-efficacy scale is reported with an overall correlation, as well as correlations among the corresponding subscales: Management, Instructional Leadership, and Moral Leadership. The results of the analysis are reported in Table 11.

Table 11

Pearson Correlations between OPP Subscales and VPLSE Scale and Subscales

<table>
<thead>
<tr>
<th>OPP Subscale</th>
<th>VPLSE Management</th>
<th>VPLSE Instructional Leadership</th>
<th>VPLSE Moral Leadership</th>
<th>VPLSE Overall Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>.530**</td>
<td>.405**</td>
<td>.368**</td>
<td>.466**</td>
</tr>
<tr>
<td>Instructional Leadership</td>
<td>.432**</td>
<td>.586**</td>
<td>.501**</td>
<td>.558**</td>
</tr>
<tr>
<td>Moral Leadership</td>
<td>.436**</td>
<td>.570**</td>
<td>.652**</td>
<td>.642**</td>
</tr>
</tbody>
</table>

Note. VPLSE = Vice- Principals’ Self-efficacy and OPP = Opportunities for Leadership Experiences. ** indicates p < .01 (2-tailed). Bold shows correlation between Management, Instructional Leadership and Moral Leadership from both OPP and VPLSE.

The overall scales of OPP and VPLSE showed a large and significant correlation, \( r(122) = .631, p < .001 \). Significant correlations ranging from medium to strong (.368 to .652) exist between each scale as well as subscales. Within subscales the largest correlations are between like scales, VPLSE Instructional Leadership and OPP Instructional Leadership, for example. These relationships are bolded in Table 11. Of the three subscales, Moral Leadership (\( r = .642 \)) presents as having the greatest relationship with overall VPLSE. Conversely, Management (\( r = .466 \)) has the least.
**PLP and OPP (Scales and Subscales).** Although the relationship between principals’ leadership practices as derived from the four sources of self-efficacy and the opportunities for vice-principals to perform leadership tasks within their schools is not specifically part of the research questions addressed in this investigation, the correlations between scales and subscales from these two factors are actually more highly correlated then PLP and VPLSE. The results for scales and subscales are presented below. As noted in Figure 3, correlation between overall scales for these two items is \( r = .428 \).

Table 12

*Pearson Correlations between OPP Subscales and VPLSE Scale and Subscales*

<table>
<thead>
<tr>
<th></th>
<th>OPP Management</th>
<th>OPP Instructional Leadership</th>
<th>OPP Moral Leadership</th>
<th>OPP Overall Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLP Enactive Mastery</td>
<td>.473**</td>
<td>.447**</td>
<td>.409**</td>
<td>.498**</td>
</tr>
<tr>
<td>PLP Vicarious Experience</td>
<td>.354**</td>
<td>.369**</td>
<td>.329**</td>
<td>.396**</td>
</tr>
<tr>
<td>PLP Verbal Persuasion</td>
<td>.416**</td>
<td>.372**</td>
<td>.299**</td>
<td>.407**</td>
</tr>
<tr>
<td>PLP Physiological States</td>
<td>.395**</td>
<td>.251**</td>
<td>.242**</td>
<td>.327**</td>
</tr>
</tbody>
</table>

Note. PLP = Principals’ Leadership Practices and OPP = Opportunities for Leadership Experiences. ** indicates \( p < .01 \) (2-tailed).

**Bivariate Regression Analysis**

Bivariate regression analyses were performed to assess the relative, direct effect of PLP on VPLSE, the influence of OPP on VPLSE and finally, the effect of PLP on OPP. Only the total scale scores for each dimension were used in the first stage of analysis. Subsequently, given the high correlations among like subscales in OPP and VPLSE, regression equations were constructed to more specifically address the effect of leadership opportunities on self-efficacy within each of the areas of leadership addressed in this study (i.e., management, instructional, and moral leadership).
**PLP and VPLSE – Overall Scales.** A bivariate regression analysis was done to determine if vice-principals’ leadership self-efficacy could be predicted by the various principals’ leadership practices (associated with the four source of self-efficacy) enacted by an elementary school principal.

Table 13

*Change in VPLSE Score Based on Regression Equation with PLP*

<table>
<thead>
<tr>
<th>PLP Mid-range from Table 7</th>
<th>Regression Equation B CI [0.032, 0.264]</th>
<th>Approximated Overall VPLSE (Level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No PLP</td>
<td>0</td>
<td>79 (M)</td>
</tr>
<tr>
<td>PLP Low</td>
<td>32</td>
<td>VPLSE = 79.032 + 0.148 x (PLP overall)</td>
</tr>
<tr>
<td>PLP Moderate</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>PLP High</td>
<td>96</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* High (H), moderate (M), and low (L), categories and accompanying intervals for each scale are reported in table 7.

Regression established a statistically significant link between PLP (overall) and VPLSE (overall), $F(1,120) = 6.537, p = .013$. The regression equation to find VPLSE based on the effect of PLP was determined to be VPLSE (overall)’ = 79.032 + 0.148 x PLP (overall). Given a mid-range rating of 64 for a moderately total score for PLP (as indicated in Table 7), the equation predicts an overall VPLSE score of 89 based on the effect of principals’ leadership practices. A mid-range, low rating for PLP of 32 predicts an overall VPLSE score of 84. Finally, as shown in Table 13, there is 9 point shift upward in scores for VPLSE as predicted from a mid-range low to mid-range high rating in overall PLP. The benefits of PLP, in this case, are indeed small but
statistically significant; even no PLP (i.e., PLP = 0) predicts a moderate level of VPLSE (on the high end of the moderate range).

**OPP and VPLSE – Overall Scales.** Next, regression analysis was performed to evaluate how opportunities for leadership might predict vice-principals’ leadership self-efficacy. Regression established that opportunities for leadership experiences significantly predict vice-principals’ self-efficacy, \( F(1, 120), = 79.205, p < .01 \). The regression equation to predict overall VPLSE based on overall OPP was found to be, \( \text{VPLSE (overall)}' = 34.636 + 0.623 \times \text{OPP (overall)} \).

Table 14

**Change in VPLSE Score Based on Regression Equation with OPP**

<table>
<thead>
<tr>
<th>OPP Mid-range from Table 7</th>
<th>Regression Equation ( B ) CI [.484, .761]</th>
<th>Overall VPLSE Score (Level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPP (0)</td>
<td>0</td>
<td>35 (L)</td>
</tr>
<tr>
<td>OPP Low</td>
<td>32</td>
<td>55 (M)</td>
</tr>
<tr>
<td>OPP Moderate</td>
<td>68 ( \text{VPLSE'} = 34.636 + 0.623 \times \text{PLP} )</td>
<td>77 (M)</td>
</tr>
<tr>
<td>OPP High</td>
<td>102</td>
<td>98 (H)</td>
</tr>
</tbody>
</table>

As indicated in Table 14, even low opportunities for undertaking leadership tasks within the school, provides a moderate level of VPLSE. Further, both moderate and low levels of opportunities to lead predict moderate levels of vice-principals’ self-efficacy. A mid-range level of high opportunity for school leadership predicts a high level of VPLSE.
**OPP Subscales and VPLSE Subscales.** Bivariate regression analyses were performed for all like subscales within OPP and VPLSE to determine how each OPP subscale predicts VPLSE for the same subscale. All relationships were significant, $p < .01$ for each analysis. Table 15 provides the regression equations.

Table 15

*Regression Equations for OPP Subscales and VPLSE Subscales*

<table>
<thead>
<tr>
<th>OPP Subscale</th>
<th>VPLSE Management (M)</th>
<th>VPLSE Instructional Leadership (IL)</th>
<th>VPLSE Moral Leadership (ML)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPP Management</td>
<td>$VPLSE \ M = 13.56 + .492 \times OPP \ M$</td>
<td>$VPLSE \ IL = 14.39 + .544 \times OPP \ IL$</td>
<td>$VPLSE \ ML = 11.38 + .654 \times OPP \ ML$</td>
</tr>
<tr>
<td>OPP Instructional Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPP Moral Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

While OPP Management explains 28.1% of the variance in VPLSE Management, OPP Instructional Leadership predicts 33.8% of the variation in VPLSE Instructional Leadership. Finally, OPP Moral Leadership explains a large 42.1% variation in the VPLSE Moral Leadership. When a moderate mid-level indicator of OPP (i.e., 19) is included in each of the equations the resulting VPLSE scores (approximately) for Management, Instructional Leadership, and Moral Leadership are 23, 25, and 24, all in the high end of the moderate range. Likewise, higher scores in each of the OPP subscales predict similarly high scores in VPLSE. When OPP is assumed to be “0”, all resulting VPLSE ratings are within the low range.

**PLP and OPP – Overall Scales.** Bivariate regression was completed to determine how principals’ leadership practices might influence overall opportunities for vice-principals to do the work of leadership within their schools. Regression analysis confirmed that overall PLP
significantly predicts 17.6% of the variation in OPP ratings of vice-principals, $F(1,120) = 26.916, p < 0.01$. The regression equation for predicting overall OPP from PLP was found to be, OPP (overall)' = 67.337 + .286 x PLP (overall).

**Transitioning to the Qualitative Phase**

In the sequential design of this explanatory mixed methods study, the next qualitative phase of the work is meant to address in greater depth the initial results from the quantitative phase of the research. The quantitative analysis confirmed that both aspects of principals’ leadership practices (i.e., practices aligned with the four sources of self-efficacy and leadership opportunities offered) had a statistically significant effect on the levels of self-efficacy reported by vice-principals (related to sub-questions 1 and 2). However, where PLP provided only a small overall effect on VPLSE, OPP improved VPLSE much more powerfully. In short, having opportunities to be involved in the work of school leadership had a greater influence on overall leadership self-efficacy than the leadership practices of the school principal. Further, vice-principals reported greater opportunity to lead in schools when PLP ratings for their principals were higher. Analysis of variance also indicated a significant difference in VPLSE between men and women.

In determining the selection of participants and the focus of the semi-structured interviews, considerations concerning the pool of possible respondents were necessary. A review of the final list of volunteers suggested that a reasonable course of action for the next stage of research was to investigate the nature of principals’ leadership practices more thoroughly, holding constant for the effect of leadership opportunities and leadership self-efficacy. To this end, participants were selected who perceived their leadership self-efficacy and their leadership
opportunities within their schools to be high but reported varying levels of principals’ leadership support (either low, moderate, or high). Using the criteria, five vice-principals with high principals’ support, four with moderate, and five who perceived low levels of support were selected. Because all of the participants fitting this profile were female, a potential list of participants including five males scoring moderate levels of leadership self-efficacy and moderate to high ratings for OPP and PLP was constructed. This would allow for a more in-depth study of possible difference attributable to gender for overall self-efficacy ratings.

A semi-structured interview protocol (see Appendix B) was developed in order to gain a deeper understanding of the relationship between the principal and vice-principal; how the daily work of vice-principals influenced their sense of leadership efficacy; how work was assigned in the school; and other potential sources of leadership self-efficacy for vice-principals. Four questions were asked verbatim in these interviews:

1. From the perspective of the vice-principal, what actions of the principal supported their leadership self-efficacy?

2. How the daily work of the vice-principal impacted their sense of leadership self-efficacy?

3. How leadership tasks within the school were assigned?

4. What “other” sources of leadership self-efficacy (besides the support of their principal) impact the vice-principal’s sense of confidence as a school leader?

From the list of participants selected, all five female participants with high levels of principals’ leadership support, two females with moderate, and 4 females with low ratings of support participated in the phone interview. Of the five males, only four responded to the initial email
invitation and participated in the interview. The results of the interviews are reported in the next section.

**Developing Qualitative Themes**

For analysis, interviews were initially reviewed in groupings. Four groups were constructed including those with high, moderate, or low perceived levels of ongoing principals’ leadership support in their schools (all female respondents) and one group of male participants, all with moderate or high ratings related to their leadership self-efficacy. Each group was initially coded separately using both In Vivo and Process coding. In the transition phase (as noted), all codes were listed and (second cycle) Pattern coding was used to group codes and reassess the data more holistically. In the initial phases of coding, it was discovered that responses from participants in the moderate group paralleled emphases from either the low group or those in the high group for Principals’ Leadership Support (or PLP). It is important to mention that the varying degrees of self-efficacy “support” (from principals, others in the school environment, and the self) are more richly described and contextualized with the individual responses from interview participants. The self-report scales for respondents on the electronic survey rely on evaluations of efficacy on a scale where the intensity of a given capability are scored relative to the participant’s self-understanding of a numeric scale. Simply, what is a 7 for one respondent may be a 5 for another. The limitations of quantitative categories like low, moderate and high are heightened when contextualized with personal responses. This was particularly difficult when discerning substantive differences in principals’ leadership practices in the group of participants indicating moderate support. Given this, those reporting moderate principals’ leadership practices were either grouped with the low group (only one case) or
included in a moderate/high group, creating two groups for analysis, either those with moderate
to high principals’ support or those with low principals’ support. All participants within the three
initial groups (all female) reported high levels of leadership self-efficacy. All male participants
reported moderate or high principals’ support and moderate to high VPLSE. In terms of group
comparisons, then, the high/moderate group (for PLP) consisted of 10 participants (including all
the male participants) and the low group consisted of 5 respondents, all female.

Three overarching themes developed through the iterative processes of analysis:

1. The school principal as a source of leadership self-efficacy;

2. The work as a source of leadership self-efficacy; and

3. The vice-principal’s resources for leadership self-efficacy.

In the first theme, several sub-themes emerged related to contrasting levels of support provided
within the working relationship between the vice-principal and principal. These sub-themes
were related to four complementary aspects: autonomy, trust, collaboration, and respect.
Likewise, the second theme, work relationships as a source of efficacy, centered on two sub-
themes: relationship with staff and parents and relationships with students. Finally, sub-themes
related to the vice-principal’s personal resources for leadership self-efficacy included their sense
of being an effective leader, their previous experience, and the personal “resources” they brought
to their work. Each of these themes is now more thoroughly explored.

**Principal as a Source of Leadership Self-efficacy.** The effect of the principal on the
leadership self-efficacy of vice-principals was most apparent in the contrast between those who
rated their principal’s leadership support as low and those who reported moderate to high levels of principals’ leadership support.

Vice-principals with moderate to high levels of PLP describe the importance of knowing that they can go it alone, with a degree of autonomy, when practicing their leadership within the school. One vice-principal with high PLP reports: “we discuss what her expectations are for me and she has kind of let me run with things”. Another with high PLP notes that “he encourages me to sort of take ownership…and take responsibility….” Additionally, vice-principals value being able to make their own unique contributions to the school, being able to take the initiative, and being perceived as valued leaders within the school. A vice-principal with high PLP discussed the personal importance of initiating a breakfast program at her school, and another how her principal is “supportive” of the unique contributions she brings to the school. Infusing these notions of “doing it alone” and “taking the initiative”, vice-principals with moderate to high principals’ leadership supports also report a sense that they can make mistakes without retribution or without losing the support of their principal. “If I make a mistake, he’ll guide me to get through it”, notes one vice-principal with high PLP. Summating the positive influence of autonomy on building efficacy and confidence in the work, a participant with high PLP reports:

If I was hand held for everything little thing throughout the year, I think that would definitely impact me in a negative way. Even though I have made errors and had to learn the hard way, I think that has helped me to grow quicker and definitely helped me grow in my confidence to perform and to meet the needs of the different persons in the school, staff, students, parents and so on.
Vice-principals are seemingly more willing to take the initiative and make decisions (i.e., practice autonomy) when they feel that mistakes are valued as avenues for learning.

These same vice-principals also report a rapport with their principal that is founded on trust, collaboration, and mutual respect. Despite that fact that they value the autonomy granted by the principal, they acknowledge the need to keep in mind that the principal is ultimately in charge. Trust denotes a sense of recognizing the principal has final say, that principal and vice-principal back each other up with staff and the community, and that the vice-principal keeps the principal informed. Rather than limiting, vice-principals with moderate to high levels of PLP view supporting their principals and their initiatives and directions as key to their role. One vice-principal notes: “whatever she is doing, although it is no my responsibility because I am not the principal, she still shares”. This deference, then, is tempered with the sense that the vice-principal has some collaborative participation in decision making. Participants in the high to moderate PLP groupings consistently describe the need for a collaborative “partnership”. Although vice-principals honor being “kept in the loop” (as one vice-principal reported), collaboration also includes discussing assigned task and being involved in decision making. Vice-principals with moderate to high PLP feel like they are part of team:

She [referring to his principal] makes me feel like it is our school and not just her school. Just by sharing and by always considering me as someone to bounce ideas off of and not making unilateral types of decisions, it has really helped me along because she values anything that I have to say or do. (A male vice-principal with high PLP)
Finally, vice-principals with high PLP talk about the respect that is generated through the actions of their principals. They discuss getting good (both positive and constructive) feedback, being appreciated and thanked, as well as their unique job skills being used on the job. Each vice-principal in these groupings portrayed (either implicitly or very explicitly) admiration for their principal. “She definitely knows how to bring out the best in me,” as one vice-principal comments. More explicitly, a vice-principals reports, “he is just a wonderful role model.”

Conversely, those who report low levels of PLP present a less “legitimated” sense of autonomy within their schools and a lack of trust, collaboration, and mutual respect. Rather than the positive sense of independence noted by some of their vice-principal colleagues, those with low PLP tell about being micro-managed, on one extreme, to being left to fend for themselves, on the other; without constructive support and autonomy from the principal. Where one high PLP participant reported: “my principal has given a good balance of support and autonomy”, those within the low PLP feel much less supported or valued for their leadership potential within the school. One low PLP participant laments: “sometimes I’m not really sure what my role is”; and another, “this is not my school”. In contrast to those with high PLP support who consistently report taking the initiative and feeling safe making mistakes, one vice-principal participant with low PLP describes a situation where she led a teacher professional meeting at the first of the school year with some difficulties. “After that”, she says, “it [referring to his support] has dropped off”, without feedback or explanation.

In the case of participants with low PLP, there is little opportunity to build the trust, collaboration and respect characteristic of the moderate to high PLP groupings. For high PLP interviewees, assignments were delegated at first in a rather prescriptive, delineated fashion.
With time, however, assignments began to grow out of an organic need to get things done, resulting in an expanded and richer breadth of experience for the vice-principal and greater collaboration, trust, and respect between principal and vice-principal. In the low PLP grouping, however, all the vice-principals referred to some paper or electronic version of a duties list that they were told to consult for their responsibilities. These duties, further, were only hurriedly discussed between the principal and vice-principal. In reading the interview transcripts there is a palpable tone of frustration with the principal, vice-principal relationship in the form it has taken in the experience of the vice-principals reporting low PLP. In particular, vice-principals are concerned about their lack of inclusion in clarifying their roles, their lack of involvement in school decision making, and, above all, the feeling that their leadership “skill set” is not being effectively used by the principal. A vice-principal with several years of experience in the role comments:

I come in with my own skill set and some of those things I do, but I can do more because I am more capable then somebody that is just being trained as a VP. I guess the issue is communication. She would rather I go and look on the computer and find out what my roles are.

Powerfully, the same vice-principal ends, “I just want to be treated with respect”. In stark contrast to the high to moderate PLP groups, vice-principals with perceived low PLP present a dark picture of the relationship between principal and vice-principal; one that displays none of the effective sources of self-efficacy identified by the moderate/high groupings: autonomy, trust, collaboration, and respect. Why, then, do these same vice-principals indicate such a high sense of leadership self-efficacy? Part of the explanation may lie with the next themes explored.
The Work as a Source of Efficacy. Contrasts in the types of supports provided by principals were evident in those groups indicating high, moderate, or low levels of principals’ leadership practices (and this was most notable between low and moderate/high groups).

Conversely, when considering the effect of the work on vice-principals’ leadership self-efficacy, participants reported very similar experiences that affected their sense of efficacy on the job. These experiences clustered around two sub-themes: the working relationship with staff and parents and working with students.

The first of these sub-themes related to working with school staff (primarily teachers) was the most pronounced in terms of participant responses. Virtually all respondents, from all groupings, discussed the importance of staff in developing their sense of confidence and capability as a school leader. One low PLP vice-principal noted that she “prided herself on being visible for the buses, for recesses; getting to know all the students’ names, the parents’ names”. Another low PLP respondent indicated her sense of being effective in building solid relationship noting: “I think they trust me because I am visible to them”. This notion of visibility, noted across groupings, meant more to vice-principals than merely being present in a given situation; rather, vice-principals seemed to indicate that they were immersed and trusted within their communities by staff, parents and students. Despite the varying levels of perceived principals’ practices that supported their self-efficacy, vice-principals consistently identified specific leadership roles they had taken on to support a collaborative working culture in their schools. Further, they identified establishing productive and mutually beneficial relationships with staff and parents to improve instructional practices and providing parents with input within their schools, either by working with individual parents or with the school’s parent council.
One low PLP vice-principal indicated how her keen abilities in fostering positive relationships with staff paid positive dividends in mustering assistance when needed: “they are pounding down the doors to help me out”. One high PLP vice-principal noted how involving parents in a recess initiative forged positive relationships and enhanced her sense of leadership self-efficacy. Finally, several respondents pointed to the importance of being involved with staff in learning teams and building instructional capacities. One vice-principal commented, despite her feelings of low support from her principal:

I am pretty much leading the curriculum development of the staff, organizing the [Professional Learning Communities, or PLCs], kind of putting together our theory of action based on what they were doing at the school last year, and based on this year's data, getting all the resources for the teachers, engaging them, and collaborating to develop diagnostic assessments.

A respondent reporting high PLP reported:

We have three different PLCs groups and I'm driving at the table two of three of those groups. One group I drive specifically, she drives another one, and the third one we run together, but I take the leadership role on that one as well.

Although the focus is similar in each of the quotes, the latter respondent’s focus on the collaborative nature of the work suggests an important distinction.

All vice-principals in some way described how being available and approachable to students created a fuller sense of confidence in their abilities to do the work of school leadership. A vice-principal with moderate PLP spoke about his commitment to enhancing the school...
experience for students as central to his sense of efficacy: “I get the most reward and I feel that I’ve been competent if I’m been able to improve student success”. A low PLP vice-principal noted her sense of “effectiveness” when she is able to deal with a student having difficulty at school, particularly when she is able to get at the “underlying reason” for the problem. Yet another describes how receiving a positive letter from a parent after dealing with a student’s long term issues with anxiety was affirming for her in her work. She noted: “just someone putting that in writing is huge.” When dealing with disciplinary issues, a participant reporting high PLP spoke about the influence of her work with students on the entire staff: “I deal with student discipline. I don't consider that managerial, I consider it to be leadership and developing the leadership of the other people on my staff”. Finally, just being approachable to students was viewed by this vice-principal as positive feedback: “when they see out in yard and they want to tell you about their weekend or their night or what they are doing with their families, or it is their birthday.”

Although being involved in the work of school leadership and building positive relationships with all members of school community appears as a common theme for all vice-principals, their previous experiences as well as their perceived personal resources proved equally important for vice-principals in building and sustaining a positive sense of their work in schools.

**Vice-Principals’ Personal Resources of Self-efficacy.** Vice-principals across groupings once again cited very common components in their personal experiences that supported their high sense of leadership efficacy. Particularly when relating reflective data that confirmed their sense of efficacy, vice-principals reported consistently that having a sense that people are
following their lead (especially teachers) confirmed their sense of competence. Although a minority of respondents indicated direct affirmation from staff in terms of verbal confirmations of a job well done, many more vice-principals referred to their intuitive sense that they were having an effect on teachers’ classroom practices. This was most consistently affirmed by experiences of teacher’s cooperating during professional development or following through on initiatives led by the vice-principal. One low PLP vice-principal summed it up succinctly: “when I see the staff engaged in activities that I've asked them to do and I see them cooperating, doing the expected practices, I know that I'm being effective.” Similarly, a respondent with high PLP referred to the implicit indicators of making an impression on staff:

People [referring to teachers] are very keen to work together. There is no reluctance, there is no eye rolling, no sense of being forced into things. I really get the feeling that people are there because they want to be and we are all working together for the best of the students.

A complementary aspect of this sense of accomplishment was the notion that the vice-principal was having an effect on staff and students. One high PLP respondent referred to her ability to include “even the teachers who are hard to reach”. Finally, a low PLP vice-principal talked about her own sense of empowerment when working with teachers:

The teacher… that is feeling unsure about their practice or is being, maybe, not harassed... having difficulties with a parent. I feel like I'm most effective instilling confidence in that teacher and empowering them to feel good about the work that they are doing.
Additionally, key personal resources for leadership efficacy articulated by vice-principals were their prior experiences as a vice-principal, in teaching (before becoming a vice-principal), and with former principals (both as teachers and vice-principals). In particular, vice-principals noted the efficacy gained through successful forms of work experience. A low PLP vice-principal acknowledged:

I believe I have a lot of experiences that come from the building I am in. And once you've experienced it, you know you can put that in your back pack and know that you can accomplish something similar the next time.

A high PLP vice-principal discussed his “taking over” of the school when his principal was off on sick leave as confirming his ability to do the job: “In that period of time, just being put in the position of being almost like a principal, that really added to my self-efficacy”. Vice-principals also noted skills sets that they brought from their teaching experience that aided in their work, especially in overseeing Special Education responsibilities in their school (noted by five participants as a duty frequently assigned vice-principals). One vice-principal noted her experience in literacy coaching as an asset in doing her job, and one male vice-principal discussed the importance of his background in technology in gaining credibility as a leader within his community.

Especially for those reporting low levels of PLP, vice-principals noted the resilience and persistence their past successes in doing the work of school leadership provided them, despite their perceptions of a lack of support and constructive, collaborative relationship with their school principal. One low PLP vice-principal reported:
I guess there's a certain level of confidence of who I am at this point in life. So, it's kind of hard to take away from that if it is established. A person [referring to her current principal] may come in and out of my life, but I know who I am and I know what I can do.

Another Low PLP vice-principal spoke about using the Ontario Leadership Framework as a guide in evaluating her effectiveness in the role of vice-principal: “I look and ask… how have I worked on those skills today in the OLF?” Although two participants in the high PLP grouping referred to past principals and their influence on their growth as a school leader, all but one of the low PLP respondents talked extensively about a previous working relationship with a principal and detailed their effect on their professional lives. In one case, the vice-principal described an ongoing friendship with her first principal (when she became a vice-principal) and talked about how the relationship allowed her to sustain her sense of competence. The principal even offered her suggestions on how to work with her current principal given the rift in the relationship.

Vice-principals in the low PLP grouping seemed to be searching for reasons for the difficult working relationship with their principal. One indicated that it was simply a “personality thing”; another explaining the poor relationship reflected:

I don't think it's me. I think there is something I can do to make her more comfortable or have more confidence in me, but I've never looked at it like I'm an idiot, or I don't know what I am doing, or I don't deserve to have this job. I don't think that way at all.
Overall, the vice-principals in this category felt intuitively that they were not the root cause for the ineffective working relationship. More importantly, they portrayed a sense that they would persist in their work and find alternative ways of being involved and finding value in the work they did on a daily basis in their schools.

Part of this process of compensating for a lack of perceived support from their principal was to devalue the feedback they received from their principal. A vice-principal commented: “I do get occasionally, good job. In my head, my response is, that is no big deal because I know how to do that so I don't need that.” A second vice-principal first referred to the rich and affirming feedback from her previous principal and then commented concerning her current principal: “from my current experience I get little to no feedback, even if I'm asking. If I do get some feedback it is minimal like ya, it's good, or thanks for doing that.” Another vice-principal reported how she wasn’t supported through the interview process for principal but how she was accepted for the principal hiring pool despite the lack of support from her current principal. She then articulated that she credited her success to the fact that her previous principal had faith in her ability to be successful as a school principal.

Comparisons between male and female responses in the study offered no new findings. All males (noted above) were in the high/moderate PLP group and there was great deal of commonality (with female vice-principals) in their descriptions of their work life as an elementary vice-principal. Two male respondents were quite adamant about work load issues, especially in completing “downloaded” paperwork from the central office. They did not, however, attribute this directly to the principal in their school; rather it was a district issue. A number of females did discuss workload issues (mainly in a leadership vs. management context)
but they did not cast blame on the board’s central office. In the interviews, as well, both males (indicating a lack of board support) identified that they were within the same school board and had been discussing the issue recently at their family of schools meetings. Based on this evidence, it is not reasonable to conclude that such a difference (support from central office) is unique to males nor does it seem to offer an explanation for the statistically significant difference in VPLSE ratings between men and women.

Overall, the data from the second phase of this study offers a much more in-depth understanding of the on-the-ground experience of leadership development and growth of vice-principals in their role. The story for those not receiving support in the form of effective leadership practices on the part of their principal (as contrasted against those who are) imports a rich context for understanding the overall effect of principals’ leadership practices and vice-principals’ leadership opportunities on the development of beliefs of self-efficacy in the leadership role of vice-principal. Before moving into this integrative and interpretive analysis, however, in the final chapter of this study, the data from the open response question from the online survey are reviewed in relation to the qualitative results presented.

Open Response and Triangulation

From the 122 respondents to the electronic survey, exactly half of the vice-principals \((n = 61)\) provided written responses to the open ended question, ranging from a single sentence to a substantive paragraph of 5 to 7 sentences. Similar to the process for grouping responses for the telephone interviews, respondents were initially combined in a low PLP grouping as well as a grouping for those indicating moderate or high support in terms of principal leadership practices. Upon initial review of the comments provided, 8 respondents with moderate PLP were grouped
with the low PLP group. This move was determined based on the tone of the response that suggested a less than positive working relationship with the principal. The overall PLP scores for these eight participants were reviewed from the quantitative data. For seven of the eight respondents, the overall PLP score was in the low to mid-range of moderate (their ratings ranging from 61 to 73 out a possible high score of 112). Note that 81 is the top of the moderate range. Only one participants who was moved to the low PLP grouping rated their principal high in terms of PLP (with a score of 103). The first cases are probably most easily explained based on an inflated gauging of the rating scale. The final case is more problematic.

The responses from vice-principals confirmed the importance of the working relationship between principal and vice-principal in the development of leadership self-efficacy. Those within the moderate/high grouping consistently reported how autonomy, trust, collaboration and respect predicated their relationship with their school principal. They focused on such things as “freedom to make choices”, “feedback”, “an excellent principal to work with”, “a principal who is very good at what she does”, and “a healthy professional partnership”. Summarizing, one vice-principal wrote: “The on-going support, timely and effective feedback, encouragement to pursue challenging tasks and the knowledge/professionalism of my principal has assisted with my own self-worth and self-efficacy.” As in the interviews, those within the low PLP grouping focused on the negative side of those positive aspects emphasized by the latter group. These vice-principals wrote about “dictatorial” forms of leadership that lacked collaboration. One vice-principal noted the difficulties of being “instructed” to act in ways that opposed what constituted for her effective and caring school leadership. A respondent wrote: “Many times, the vice-principal is given a backseat in the planning and execution of decision making. Suggestions are not recognized nor appreciated unless the principal will directly ask for it.” A unique claim
broadly supported by the low PLP group was a mechanism to address the shortfall of support provided by the school principal. A vice-principal reflected: “If a principal is not fulfilling his or her obligations and taking advantage of the vice-principal, the vice-principal has no recourse or vehicle for alerting upper management to their concerns.” Further, another vice-principal advocated for principals receiving greater training in order to support the professional leadership growth of their vice-principals.

Vice-principals’ responses were less associated with the other two themes emerging (i.e., the work or personal resources as sources of leadership self-efficacy) from the more in-depth interviews conducted. This is most likely due to the focus of the online survey on the principal/vice-principal relationship. However, several vice-principals, exclusively in the moderate/high group, reported satisfaction coming from their relationships with staff and students. A theme that emerged much more frequently from all groups responding to the open ended question was the demands of the work and the need to find balance on the job. Although there was some comment on the demanding nature of the work in the interviews, the open ended respondents consistently reported stress related to job challenges. This was particularly evident with those respondents either twinning (vice-principals at two schools) or those sharing “administrative” and teaching responsibilities within the same school. A teaching vice-principal wrote: “The job is very demanding. Being a 50% VP and 50% teacher I sometimes feel that my teaching duties are being handled ineffectively and I can spend very little time to prepare for them if any.” Relating job commitments to her sense of confidence, a vice-principal argued: “Most of the limitations on efficacy in the role involve time constraints. Too much to do in the time that is reasonably spent on work each day.” Time challenges were also related to getting the paper work done and then doing the work of instructional leadership.
Integrating the Quantitative and Qualitative Data

Both the in-depth interviews and the responses to the open ended question on the electronic survey provide a unique and rich lens to review the quantitative data and to make some conclusions and recommendations based on the evidence provided. Where the presentation of the results, both quantitative and qualitative, have attempted to capture “how” principals’ leadership practices and opportunities for leadership influence vice-principals’ leadership self-efficacy, the following discussion endeavors to answer, “To what extent do principals’ leadership practices and vice-principals’ opportunities for leadership effect vice-principals’ leadership self-efficacy?” This final stage of the project integrates both phases of the investigation and seeks to identify how the qualitative phase of the study might inform or lend depth to the initial quantitative analysis. In fact, there appears to be a nuanced relationship among principals’ leadership practices, vice-principals’ opportunities for leadership, and vice-principals’ leadership self-efficacy.
Chapter 5

Discussion and Recommendations

The work life and the quality of work opportunities elementary vice-principals experience on the job are influenced by the leadership approach of the school principal (Barnett et al., 2012a, 2012b; Calabrese & Tucker-Ladd, 1991; Kaplan & Owings, 1999; Paskey, 1989). One significant measure of the leadership effectiveness of principals and vice-principals is the confidence they have in their abilities to lead under demanding organizational conditions. Self-efficacy, a key psychological resource for successful school leadership noted in the latest iteration of the Ontario Leadership Framework (Leithwood, 2012), offers a practical construct for determining the degree of confidence leaders have in their abilities to effect the organizations they lead (McCormick, 2001). Given the responsibilities that principals have to prepare their vice-principals for both their current role and as potential school principals (Kwan, 2009a), how principals assign tasks within schools and how they engage their vice-principals in the practice of school leadership bears on the leadership self-efficacy experienced by vice-principals. Increases in self-efficacy have been found to have a significant influence on student achievement (Leithwood & Jantzi, 2008).

The research question and sub-questions in this study sought to address the role that elementary principals play in the leadership development of their vice-principals, specifically how principals’ leadership practices (constructed from the four sources of self-efficacy [Bandura, 1997, 2000]) and the assignment of leadership tasks within the school effect vice-principals’ sense of efficacy within three domains: management, instructional leadership, and moral leadership. In drawing conclusions regarding the influence of principals’ practices and vice-
principals’ opportunities for leadership on vice-principals’ self-efficacy, evidence from both phases of the mixed method study are integrated in this chapter. Following discussion of the conclusions related to the first two “how” sub-questions, a final integrative step assesses the relationship among all three constructs, including principals’ leadership practices, vice-principals’ leadership opportunities, and vice-principals’ leadership self-efficacy. Prior to this discussion, however, some of the descriptive statistics and comparisons of group means (using analyses of variance) are discussed in relation to several of the assumptions discussed in Chapter Two regarding the work life of vice-principals.

Conclusions and Discussion

From the Descriptive Statistics. Despite the claims from previous research that the vice-principalship does not adequately prepare vice-principals to take on the role of the principal (Barnett et al., 2012a; Harvey, 1994; Hausman et al., 2002; Koru, 1993; Kwan, 2009a), the descriptive data from this study indicates that vice-principals overwhelming have moderate to high levels of self-efficacy within all three leadership areas investigated, including school management and both instructional and moral leadership. Over 60% of respondents in the study reported high levels of leadership self-efficacy in their summative scores in all three domains. Although no research exists that directly links vice-principals’ leadership self-efficacy to their leadership self-efficacy as school principals, high leadership self-efficacy has been positively linked to vice-principals’ desires to become principals (Kwan 2000b, 2013; Schermuly et al., 2011). Further, reason would suggest better highly efficacious vice-principals, rather than vice-principals with low leadership self-efficacy, becoming school principals.
Despite the high overall perceptions of leadership self-efficacy indicated by vice-principals, a 20% difference between those expressing high self-efficacy in moral leadership and instructional leadership seems to suggest that vice-principals have less preparation and opportunity to participate in instructional leadership tasks. This is in keeping with the research conducted by Lee et al. (2012) and Hausman et al. (2002). While over 70% of vice-principals in the study indicated high opportunity to lead in practices connected to moral leadership, just slightly over 50% indicated the same degree of involvement in instructional leadership. Given that opportunities to practice leadership in specific leadership domains enhances leadership self-efficacy within that domain, providing vice-principals with more opportunities in instructional leadership appears warranted. It is not surprising, consequently, that in this study vice-principals reported being most efficacious in leading transformational-type tasks, the same domain (not coincidentally) in which they reported having the greatest opportunity to lead. This study linked transformational leadership (or moral leadership) with such tasks as creating high expectations for student performance, maintaining a welcoming environment for parents, as well as effectively communicating the vision and goals of the school.

Additionally, the descriptive data suggest that principals in Ontario are very supportive of their vice-principals in terms of the types of leadership supports they offer. Overwhelming, vice-principals indicate principals’ leadership supports in task allocation, modeling, verbal feedback, and in the emotional, work life care they receive from their school principals. Vice-principals also reported that they were provided with lots of opportunities for involvement in all domains of leadership, although further analysis showed that those principals with higher levels of perceived support (as indicated by reports of higher levels of principals’ leadership practices by respondents) provided greater opportunities for vice-principals to practice their leadership skills.
within their schools. Finally, the average summative scores for leadership self-efficacy were lowest for management-type tasks, suggesting that vice-principals feel less confident in their abilities to handle the demands of administrative tasks. Other studies have noted the stress for both principals and vice-principals in completing distinctively managerial tasks (Armstrong, 2014; Leithwood & Ahaz, 2014).

Only gender and years of experience as a vice-principal were related to statistically significant differences in levels of leadership self-efficacy and principals’ leadership practices, respectively. Although some studies related to principals’ leadership self-efficacy have not found a similar statistically significant difference between gender and ratings of leadership self-efficacy (Dimmock & Hattie, 1996), Tschannen Moran and Gareis (2004) did find a significant difference in principals’ leadership self-efficacy and gender. The higher self-efficacy scores for females in this sample may provide insight unique to the experience of elementary vice-principals in terms of their involvement as formal school leaders in instructional leadership (Seashore et al., 2010). Hausman et al. (2002) report that female vice-principals spend more of their work day involved in instructional leadership tasks. Furthermore, they were more involved in professional development activities. Given the high correlation between opportunities to practice specific leadership tasks and feelings of leadership self-efficacy noted in the present study, the evidence might suggest that female vice-principals more readily seek out occasions for instructional leadership and, as such, demonstrate higher overall ratings of self-efficacy. Tschannen-Moran and Gareis (2004) argued that relational supports, like those developed in working with teachers more frequently, might have explained their findings. The combination of greater efforts at instructional leadership and gaining more supportive relationship through this work may explain variations in vice-principals’ self-efficacy related to gender.
Perceived differences in principals’ leadership practices existed only between those with less than one year of experience and vice-principals with two to three years of experience. No significant differences were found among these two groups and those with more than three years of experience (the third of three factors in this category). These vice-principals in the middle (with two to three years of experience) may be seen by their principals as requiring less support due to their previous experience as a vice-principal, substantiated by only slight (and non-significant) variation in levels of perceived support for those with more than three years of experience when compared with those with two to three years of experience.

How Principals’ Leadership Supports Affects Leadership Self-efficacy. What principals do to support the leadership development of their vice-principals is confirmed by this study as important. Principals' leadership practices overall have a small but significant effect on the overall leadership self-efficacy of their vice-principals. The complex work of educational leadership, not only implementing evidenced-based strategies but practicing them in unique contexts and phases of school effectiveness (Leithwood, Day, Sammons, Harris et al., 2006, Leithwood, Day, Sammons, Hopkins et al., 2010), necessitates the highest levels of leadership self-efficacy (Dimmock & Hattie, 1996). High self-efficacy allows formal school leaders to more effectively solve complex organizational issues and persist in leading in complex situations marked by emotional and psychical challenges. Water et al. (2003) note small improvements in school leadership can promote significant differences in student achievement. Promoting the highest possible levels of leadership self-efficacy for vice-principals seems a reasonable course of action even if the relative, indirect effect of those leadership practices is small.
Interestingly, correlations for enactive mastery and vicarious experience in principals’ leadership practices produced the only significant correlations within subscale measures of principals’ leadership practices. These results might describe the unique work of principals and vice-principals in elementary schools where the leadership work is most often practiced alone. Providing immediate support in terms of delegating and conferring authority for vice-principals to act in a supportive work environment are essential (Barnett et al., 2012a. 2012b), but vice-principals ultimately act individually in the performance of their duties. Self-efficacy theory suggests a performance itself (and how it is perceived) provides the richest information for the assessment of a performance, and subsequently, evaluations of self-efficacy within specific domains of practice (Bandura, 1997). Although this research indicates that principals support their vice-principals overwhelmingly across the four sources of self-efficacy, what has the greatest and statistically significant influence on a vice-principal’s sense of efficacy are those practices associated with enactive mastery (e.g., delegating duties and supplying adequate resources) and vicarious experience (e.g., modeling and providing guidance for success). Bandura (1997, 2000) maintains that both these sources of self-efficacy have the most immediate and powerful effect on self-efficacy beliefs. Because of their heavy workloads (as reported by Armstrong, 2014 and Leithwood & Ahaz, 2014), those leadership practices related to verbal feedback and physiological states may have little effect due to the lack of time available for principals and vice-principals to debrief in substantive ways on the vice-principal’s leadership experiences.

Analysis of the survey data alone, however, misses an important breakdown that might occur in the working relationship between principals and vice-principals when principals’ supports are low. Interviewees reporting low support from their principals indicated a breach in
the relationship with their principals that had noteworthy emotional effects on their experiences
in the role of vice-principal. They reported feeling: isolated, unable to contribute to key
decisions made within their schools, a lack of respect and trust, and that their abilities and talents
were not being fully used by the principal. A constructive, collaborative, and supportive
relationship so necessary for vice-principals’ leadership growth (Kaplan & Owings, 1999;
Paskey, 1989), simply did not exist for these interviewees. To compensate, vice-principals
consistently found support and affirmation in past relationships with previous principals.
Although this study found a clear and statistically significant relationship between principals’
leadership practices and vice-principals’ sense of leadership self-efficacy, suggesting that the
high leadership self-efficacy of those interviewees with low principals’ support was not the
norm, the qualitative research does point to the importance of the working relationship between
principal and vice-principal that goes beyond (or fosters the conditions the more fully support)
the leadership practices identified from the sources of self-efficacy. In a less direct way,
however, the quantitative data also confirm the relative importance of the relationship between
principal and vice-principal in enhancing vice-principals’ self-efficacy. This conclusion is
explored in more detail below.

How Opportunities for Leadership Affects Leadership Self-efficacy. Where
principals’ leadership practices explained only a 5% variation in vice-principals’ self-efficacy,
opportunities to practice leadership tasks accounted for 40% of the variation in the same.
Consistently, the more opportunities vice-principals received to perform leadership tasks, the
more their leadership self-efficacy increased. Not surprisingly, specific domains of practice (be
they managerial, instructional, or moral leadership) produced the highest effects on feelings of
self-efficacy within these domains, respectively. Self-efficacy theory postulates that beliefs in
one’s ability are highly domain specific (Bandura, 1982, 1997). Further, enactive mastery, or learning by doing, constitutes the most influential source of efficacy beliefs (Bandura, 1997, 2000).

Even those receiving little support in terms of principals’ leadership practices can potentially establish high levels of leadership self-efficacy. Vice-principals in the qualitative phase (including those rating low principals’ leadership practices) consistently reported multiple sources of efficacy within their school communities beyond the effect of principals’ leadership practices. A particularly strong influence on leadership confidence consistently reported by vice-principals was the teaching staff. Knowing that they were making a difference in teacher practice, supporting classroom and school initiatives, being present, and “seeing” teachers take part in their leadership work produced strong feelings of satisfaction and confidence in their capabilities as formal school leaders. Lee et al. (2012) cite how vice-principals value opportunities for instructional leadership and its related influences on their desire to become a principal, perhaps a further indicator of vice-principals’ feelings of efficacy in the role of formal school leadership, particularly in the area of instructional leadership. Vice-principals also found their work with students and parents to affect their sense of leadership self-efficacy. For those interviewees in this study experiencing low supports from their school principals, effective sources of efficacy were found elsewhere in their daily work. For those experiencing high support, these others sources complemented their firm sense that their principals trusted and valued them in their work.

**Principals’ Practices, Opportunity to Lead, and Leadership Self-efficacy.** Both the quantitative and the qualitative data point to a more comprehensive picture regarding the ways in
which principals influence the leadership development of their vice-principals. This more complete assessment is related to the relationship between principals’ leadership practices and opportunities given vice-principals to lead within their schools. Whereas leadership practices enacted by a principal explained only a small portion in differences related to overall vice-principals’ leadership self-efficacy (and only significantly for enactive mastery and vicarious experience), these same practices accounted for a greater effect on the opportunities for vice-principals to practice leadership in schools. Principals who were perceived by their vice-principals as providing greater supports via their leadership practices, offered their vice-principals greater opportunity for leadership. Interviewees (indicating high PLP) consistently stressed the good working relationship they had with their principals, how they were offered structured autonomy to do the work assigned them, and the trust that was placed in them by their school principals. Conversely, those who perceived limited support from their principals consistently reported the opposite. However, the quantitative data suggests (as noted above) that those interviewees reporting little support are not necessarily the norm.

In their attempts to account for a weak relationship between leadership self-efficacy and perceived leadership behaviors in their study, Leithwood and Jantzi (2008) note:

One plausible explanation is that our measure of leader behaviors or practices did not adequately capture the consequences of different levels of efficacy (or confidence) on what leaders do and how they are perceived. These consequences may have less to do with the practices themselves and more to do with the style of their enactment. (p. 522)
In the same way, principals’ leadership practices might indicate a different type of principal, one who acts in a “style” that is more supportive and, as a consequence, more influential in enhancing the levels of leadership self-efficacy on the part of vice-principals. Interviewees suggest this in their accounts of their positive relationships with their school principals; once again, focusing on such important characteristics as autonomy, trust, collaboration, and respect. Although it is possible for those describing low levels of support to find other avenues and sources for bolstering their self-efficacy, the quantitative data indicates that this is not the norm and that those principals who act in highly supportive ways (as described in practices aligned with the four sources of self-efficacy) provide a richer environment for vice-principals to practice their skills and build greater levels of leadership self-efficacy.

The supportive conditions potentially associated with principals who are perceived to provide high levels of support to their vice-principals foster a more constructive environment for leadership development. In social cognitive theory, triadic reciprocal causation refers to the three interactive components that are the psychical and physical grounds for the performance of human agency (Bandura, 1997). These three related factors are: behaviors; abilities, skills, and knowledge; and the social environment. In the context of leadership theory, McCormick (2001) describes these three interdependent components as leadership behaviors, leaders’ cognitive and personal resources, and the leadership environment. It is in the last of these, the leadership environment, that the principal may have the greatest influence in cultivating self-efficacy for school vice-principals. In practice, the principal can either create an environment that limits leadership growth for the vice-principal, or create an environment where the vice-principal and their sense of leadership self-efficacy flourish. This study suggest that principals whose leadership practices are in keeping with the four sources of self-efficacy provide a supportive
learning environment and ample opportunities for vice-principals to practice leadership. Additionally, it might be that principals who demonstrate a supportive style know how and when to best use the practices aligned with the four sources of self-efficacy. This is not unlike the arguments described earlier where principals must consider various contextual factors in implementing school improvement strategies. Principals with perceived high support seem to have learned how and when to implement practices that affect the leadership self-efficacy of their vice-principals. It is not just what they do, but how they do it that makes the biggest difference in the leadership abilities of their vice-principals.

**To What Extent Do Leadership Practices and Opportunities to Lead Influence VP Leadership Self-efficacy.** This research, supports many of the claims made by researchers regarding the working relationship between principals and vice-principals (Barnett et al., 2012a, 2012b; Calabrese & Tucker-Ladd, 1991; Kaplan & Owings, 1999; Kwan, 2013; Paskey, 1989). Supporting vice-principals with a wide breadth of leadership experiences, conferring the necessary “power” to perform these duties, and setting clear priorities (Barnett et al., 2012a, 2012b; Kwan, 2013) influences leadership self-efficacy. Similarly, allowing the vice-principal supportive autonomy (Kaplan and Owings, 1999) influences their levels of leadership self-efficacy. A principal that acts as a role model, shares ideas, and advocates for their vice-principal (Paskey, 1989) influences self-efficacy.

It is more difficult to claim, however, that the principals’ leadership practices identified in this study address fully the practices that support and influence the leadership development of vice-principals. Those practices associated with assigning, specifying, and modeling leadership tasks (enactive mastery and vicarious experience) do show significant yet small influences on
leadership self-efficacy. Firm beliefs of efficacy are more authentically established when the individual views himself or herself as the central actor in the successful completion of a given task (Bandura, 1997, 2000). Interviewees reported consistently that they valued autonomy in their leadership practice. The importance of opportunities to lead on self-efficacy is therefore confirmed in this study. Principals who adroitly balance direct supports and an environment conducive to leadership development are most effective at influencing the leadership self-efficacy of their vice-principals.

Principals who are perceived as supportive provide greater opportunities for their vice-principals to practice leadership in their schools. This conclusion, also supported extensively in the interviews conducted in this research, points to the importance of the relationship between principal and vice-principal in supporting the leadership development of vice-principals. Leader Member Exchange (LMX) theory identifies the presence of a positive dyadic relationship – defined by the level of loyalty, trust, and mutual obligation – as having a significant effects on job commitment, satisfaction, and performance (Graen & Uhl-Bien, 1991, 1995). Through phases in their relationship – from stranger, to acquaintance, and then partners – a supervisor and their subordinate reciprocally forge more trusting, collaborative and loyal relationships (Graen & Uhl-Bien, 1997). LMX theory might provide a lens to more fully understand the working relationship between principals and vice-principals and why principals with perceived high supports are more apt to offer greater opportunities for leadership to their vice-principals. It is not just the practices but more the style of the practice that influences the vice-principal’s leadership self-efficacy.
There is evidence to support that the leadership practices of principals do have an effect on the levels of leadership efficacy indicated by elementary school vice-principals. A principal forging a constructive and trusting working relationship with their vice-principals has a greater influence on the self-efficacy of a vice-principal, specifically as the relationship provides greater opportunities for the vice-principal to engage in many aspects of leadership in all domains with greater frequency. The research suggests that this effect is even greater for female vice-principals, particularly as they are more inclined to participate in instructional forms of school leadership, noted by Hausman et al. (2002). Reports from interviewees reporting low principals’ leadership practices seem to run contrary to the premise that a positive relationship between principal and vice-principal is necessary for high levels of leadership self-efficacy; however, these interviewees consistently communicated past relationships with supervisors that were more in keeping with those reporting high principals’ supports from their current principal. Rather than contravening the conclusion, these results may simply speak to the resiliency of leadership self-efficacy beliefs.

**Conceptual Framework Revised**

In Chapter 2, Figure 1 was offered as a conceptual framework for this study. Given the conclusions drawn above, a revised conceptual framework is proposed below (Figure 4)
Figure 4. The development of VP Leadership Self-efficacy combining aspects of Principals’ Leadership Experience, VP Leadership Opportunities and the reflective experience of the VP revised.

The revised conceptual framework provides a summary of the conclusions offered in this study. Among the contributing factors listed in Figure 1, only gender contributed to differences in perceived levels of leadership self-efficacy. Years of experience (between only first and second year vice-principals) produced mean differences in perceived leadership opportunities with schools. The first result (difference in self-efficacy attributable to gender) is supported in previous research (Tschannen-Moran & Gareis, 2005), while the second finding has not been confirmed in previous studies. Next, the summative score of principals’ leadership practices were shown to have a small but significant influence on vice-principals’ leadership self-efficacy, but only enactive mastery and vicarious experience presented statistically significant effects on leadership self-efficacy for vice-principals. Interestingly, principals who were perceived as providing high levels of support via their leadership practices conferred greater responsibilities on their vice-principals in terms of their daily leadership work, as revealed through the frequency
vice-principals reported participating in the various domains of leadership explored in this study (indicated by arrow in the new framework from principals’ leadership practices to VP leadership opportunity). Most striking, in terms of the quantitative phase of the study, was the significant influence of “doing the work” in enhancing vice-principals’ leadership self-efficacy. The most powerful relationships existed between the various domains of leadership, with assigned work in instructional leadership, for example, having the greatest statistical influence on leadership self–efficacy for instructional leadership.

The qualitative research confirmed a particular type of leadership style that offered relational-type supports in the form of greater autonomy, trust, collaboration, and respect that contributed to increases in vice-principals’ leadership self-efficacy. Although participants did not directly refer to the various sources of leadership self-efficacy in their responses, the style of leadership exemplified by principals perceived as offering higher levels of support seems to align with the two sources of self-efficacy demonstrated in this study to have a significant influence on leadership self-efficacy, i.e., enactive mastery and vicarious experience. In fact, it is appears to be a much more contextualized form of enactive mastery, offering clear instructions and parameters for assigned work with appropriate levels of autonomy and trust. Bandura (1997) notes that efficacy beliefs constructed through enactive mastery are in part formulated through attributions of success ascribed to personal skill and effort. These relational supports, particularly autonomy, apparently allow vice-principals more influence and control over their work and, as a result, promote greater leadership self-efficacy. Trust and collaboration among vice-principal and principal also appears to influence levels of perceived supports related to vicarious experience. In this case, the vice-principal comes to see the principal as a credible model to follow and consult. Mutual trust, collaboration, and respect affirm vice-principals and, as a result, increase
principals’ influence on vice-principals’ leadership self-efficacy. Finally, the study suggests that for those who perceived principals’ leadership supports as low (in the form of the practices outlined in this research) some were able to find interpersonal supports from teachers, students, parents, and previous principals with whom they had worked to sustain high levels of leadership self-efficacy. These “outside” influences (illustrated with the box outside the influence of the school principal) complemented self-efficacy beliefs for those rating their principals’ supportive practices as high.

**Implications and Recommendations**

Fusarelli, Militello, Alsbury, Price, and Warren (2010) note the work of formal school leaders has shifted dramatically, particularly given the fact that principals are now “expected to produce higher levels of learning for all students” (p. 1). They argue that an “apprentice” model for preparing for the work of school principal is no longer appropriate given the effect of such models to produce the *status quo*. Indeed, there is a need to avoid mere replication of ineffective leadership practices, but it can be convincingly argued that school systems, and Ontario’s in particular, have advanced to such an extent that a collaborative melding of research, policy, and practice – as seen in the Ontario Leadership Framework – provides a tremendously useful tool in re-envisioning apprenticeship within schools, at least as one key mechanism linked to ongoing professional development for elementary vice-principals.

An important element in furthering leadership development in Ontario is the inclusion of the Personal Leadership Resources (or PLRs) in the most recent iteration of the OLF. This promises a more thorough and integrative focus for improving school leadership. Rather than a narrow focus on the behaviors, or leadership practices, that have been proven effective in
promoting school effectiveness and student success, the OLF also focuses on the social, psychological, and cognitive factors that influence the performance of school leaders. The result is a more holistic conception of practice that integrates behavior, abilities, and context (aligned with triadic reciprocal causation) that potentially promotes the more effective employment of specific evidenced-based strategies by school leaders. This notable change to the framework focuses on the important role context and the personal abilities of the leader play in leading school improvement.

A prominent leadership resource in the newly minted PLRs is self-efficacy. This study has granted self-efficacy a degree of primacy among the PLRs, suggesting that a focus on improving school leader’s self-efficacy will have related effects on aspects within all three domains: social, psychological, and cognitive. The self-efficacy literature is clear that high self-efficacy produces positive effects on emotional states, problems solving ability, resilience, and well as optimism in the face of challenges (Bandura 1997, 2000). Further, high self-efficacy has been correlated positively with numerous work related benefits, including job satisfaction and ability to deal with work constraints (Federici, 2013); successful school restructuring (Dimmock & Hattie, 1996); and trust in teachers, parents, and students (Tschanneener-Moran & Gareis, 2005). Finally, early reports suggest a small but significant relationship between leadership self-efficacy and student outcomes (Leithwood & Jantzi, 2008).

This research does provide specific practices that principal can employ to have influence on the leadership self-efficacy of their vice-principals, particularly those practices linked to enactive mastery and vicarious experience. Such practices as “providing demanding leadership tasks” and “providing the necessary resources to complete these tasks” are demonstrated to have
a significant effect on a vice-principal’s leadership self-efficacy. Likewise, “making suggestions to improve practice” and “modeling effective school leadership” have a similar influence. Further, taking time to build trust, loyalty, and role clarity can establish the relationship necessary to bolster a vice-principals’ confidence in their abilities. An extension of these practices is ensuring vice-principals have the autonomy to practice leadership and learn from their own successes and missteps.

Implications for Policy. A first broad recommendation, in keeping with McCormick (2001), highlights the need to make self-efficacy a more critical consideration in leadership development. He notes that, “enhancing leadership self-efficacy should be an important objective for those responsible for improving the quality of leadership (McCormick, 2001, p. 31). Given the web of effects produced by self-efficacy, making the mechanism more transparent and workable for principals and vice-principals alike is warranted. A recent publication by the Ministry of Education in Ontario (2014), “Exploring the ‘Social’ Personal Leadership Resources” breaks ground on more thoroughly developing the social resources related to the PLRs. A similar document on the psychological resources (promised in this first document) would be a good first step. From the perspective of this study, granting self-efficacy a certain degree of primacy in this writing would be beneficial and offer a practical way for principals and vice-principals to assess their own leadership practices from a much deeper, metacognitive perspective, gaining tools to evaluate their own practice, their personal resources and skills, their physiological responses to their work, and, ultimately, how they might more effectively work within the schools they lead. Although the inclusion of the PLRs is positive step in the latest iteration of the OLF, connecting the social, cognitive, and psychological resources to the real experience of principals and vice-principals seems the next logical step. Focusing on self-
efficacy (as primary among the PLRs) grounds the reflective practice of leadership in the authentic work experience of principals and vice-principals and can help to identify the sources of leadership challenges, suggesting problems of practice are originating from one of the three features of triadic reciprocal causation: the leader’s behaviours, the school environment, or the leader’s personal resources (or a combination of these).

A relatively straight forward alteration in current policies regarding the preparation of vice-principals would set a structure in place for engaging principals and vice-principals within the same elementary school in this type of rich leadership discourse. Currently, vice-principals in Ontario complete the Principal’s Qualification Program (PQP), both Parts I and II, prior to assuming formal leadership in their schools. The program is accredited by the Ontario College of Teachers (OCT) and administered by various program providers, including both English principal associations, CPCO and OPC. An important feature of the PQP is a leadership practicum aspiring vice-principals must complete in their school districts in a school setting (OCT, 2009). This project aims at providing candidates with authentic leadership experiences and opportunities to reflect and learn through their school leadership projects. Each candidate must find a formal mentor, a practicing principal or vice-principal in Ontario to oversee their practicum. Structuring the program differently to allow vice-principals to take Part II of the program in their first year as a vice-principal would provide a formal mechanism to engage both school principal and vice-principal in a collaborative school improvement initiative led by the vice-principal. Further, the breadth of the practicum project could be broadened to include elements related to the management of schools as well as instructional and moral leadership. Principals adequately prepared by their school districts in the necessary practices and relational supports to enhance the leadership abilities and confidence of vice-principals would be
invaluable resources for vice-principals completing these projects. Additionally, pre and post measures of leadership self-efficacy (as outlined in the survey used in this study) could provide a measure of leadership development. Barring these changes, districts themselves might consider a variation of the PQP practicum and link it to their promotion criteria for the principalship.

**Implications for Practice.** Among the three constructs that form the integrative triad of reciprocal causation adapted from social cognitive theory for leadership development by McCormick (2001), this study suggests that principals can play an important part in providing a leadership environment that supports the growth of a vice-principal’s leadership self-efficacy. This emphasis is similar (in practice but not on scale) with the focus of Leithwood, Strauss et al., (2007) in their research on district conditions or supports that enhance the leadership self-efficacy of school principals. Shifting downward from district to school, this study suggests that the principal (like school districts) can create conditions that enhance the leadership self-efficacy of school leaders. Engaging principals in the specific practices that might form the constructive leadership environment seems most appropriate. For the time being, this research suggest that these practices are related to enactive mastery (e.g., clarifying roles and tasks and making expectations clear) and vicarious experience (e.g., modeling and providing guidance) Further, focusing on the style of leadership enacted by the school principal with an emphasis on the quality of the working relationship between principal and vice-principal is essential for improving vice-principal leadership self-efficacy. System leaders, particularly at the superintendent level, can be crucial in mediating and supporting these efforts, especially for those vice-principals who perceive their working relationship with the principals to be ineffective.
Additionally, districts and principals’ associations might consider (either jointly or separately) creating pools of highly effective elementary school principals who could provide critical coaching for both principals and vice-principals. The goal would be to work on the relationship between principal and vice-principal as a leverage point for increasing the leadership capabilities of vice-principals. A second, happy result would be improving the leadership capabilities of school principals themselves, as expert coaches guide both principal and vice-principal through a focused school improvement practicum as described above. Self-efficacy theory as well as the insights gained from this study should undergird this type of project.

Shoho, Barnett, and Martinez (2012) review of a job-embedded internship meant in part to support vice-principals in their first year of practice offers a model that could be deployed effectively in elementary schools in Ontario. This model focuses broadly on the relationship between principal and vice-principal and directly on vice-principal implementing effective leadership strategies within their schools. Shoho et al. (2012) argue that a strong coach is necessary given the complexity of leadership work within schools and the hectic work life of the school principal who would mentor the vice-principal. Additionally, principals too have much they could gain from the coach within the internship experience. As noted, items used in the online survey in this study, could be a starting point for developing inventories for measuring improvements in leadership self-efficacy and assessing the supports provided by mentor principals. In conjunction with feedback from mentor principals and coaches, such inventories could identify areas of growth as well as those requiring improvements. Coaches would also prove invaluable in explicitly connecting the various sources of self-efficacy with the actual experiences of vice-principals within their schools, enriching the vice-principal’s critical reflection on their own work and their leadership competencies.
Finally, this study indicates that elementary vice-principals in Ontario schools are more than passive recipients of feedback from their school principals. Vice-principals indicate they receive constructive information from a variety of sources within their school communities. The passion, commitment, and confidence respondents reported towards their leadership work within schools suggests that vice-principals can take steps to improve the quality of their working relationships with their principals. Given the importance of this relationship, vice-principals can be proactive in identifying the types of supports they might require from their principal and act in ways that produce the qualities of trust, loyalty, and mutual obligation so essential to their relationship with their school principal. This research suggests that vice-principals should begin by seeking clarification and role specificity from their principals and then watching, learning, and practicing their leadership skills with the principal’s modelling in mind. In the early stages of their relationship, vice-principals should not discount the need to support and further the leadership initiatives of the school’s principal. When a more trusting relationship is built, vice-principals then have the potential to be real partners in the formal leadership of the school.

**Further Research.** Given the insights from this study pertaining to the influence of the relationship between principals and vice-principals on leadership self-efficacy, further research focusing more specifically on this relational component in the development of leadership self-efficacy of vice-principals would be beneficial. Above, it was argued that LMX theory might provide a useful lens for identifying the levels of trust, loyalty and mutual obligation in this relationship. A next step would be assessing the relationship between LMX (from a simple 7 item survey developed by Graen & Uhl-Bien, 1991) and measures of self-efficacy designed for this study. An added feature of this research might be identifying more influential practices aligned with the four sources of self-efficacy discovered in interviews with vice-principals of
high performing relationships in order to improve the items used in this study to evaluate principals’ leadership practices. This is particularly true for the verbal feedback and physiological states subscales that did not demonstrate significant relationships with leadership self-efficacy.

A different tactic in going deeper into the specifics regarding common practices able to potentially influence leadership self-efficacy would be a sequential exploratory research project seeking to go beyond the minor qualitative focus in this project. By identifying from the lived experiences of vice-principals how various practices associated with self-efficacy theory are enacted in their relationships with their school principals, better items might be developed that reflect more accurately practices of principals in their daily dealings with their vice-principals. This would be a particularly important direction for those items (verbal feedback and physiological states) that did not present statistically significant correlations with vice-principals’ leadership self-efficacy but seem to capture elements important to the relationship between principal and vice-principal.

Finally, responses to the online, open response question, suggests that investigating the negative effects of excessive workload on leadership self-efficacy and the relationship between the principal and vice-principal might be warranted. The importance of environmental conditions on self-efficacy beliefs (Bandura, 1997, 2000) indicates that workload might have a significant influence on both these factors and the manner in which they interact in the working lives of principals and vice-principals.

**Limitations of the Study**
The premise of the mixed methods design is that it provides a richer and more in-depth analysis of a particular issue under investigation. Despite the strength of the approach, there are several features unique to this study that warrant discussion and limit the generalization and transferability of results. These include: the use of a cross-sectional survey design; relatedly, the non-experimental design of the quantitative phase of the study; the sampling design for the qualitative, interview phase; and, finally, the validity of the scales within the survey instrument.

The cross-sectional design of the survey offers only a one-time assessment of vice-principals’ leadership self-efficacy and relies solely on self-reports on all three factors. Inferring a relationship between principals’ leadership practices and vice-principals’ self-efficacy is problematic without a benchmark of self-efficacy from which to judge the effect of principals’ leadership practices. Conceivably, vice-principals’ self-efficacy was higher, lower, or the same prior to the influence of principals’ practices, although theoretically it is argued that over a short time such practices would have an effect on the level of leadership self-efficacy. Despite this, a longitudinal or case study approach – measuring self-efficacy at several points in time – would be a desirable line of research in the future. Further, the self-reporting nature of the survey poses two related issues: first, self-reports are prone to the limitations of human memory, the instability of respondent’s views, opinions, and beliefs, or the propensity of respondents to respond in ways that promote a positive view of themselves (Colten & Covert, 2007); secondly, there is no means to triangulate or substantiate the self-reports from survey data. Future studies should consider other sources, such as principals’ perceptions of vice-principals’ leadership confidence or abilities, for validation of vice-principals’ responses.
The non-experimental design of the study limits the extent to which generalizations can be extended to the full cohort of practicing elementary vice-principals in Ontario (Warner, 2008). Additionally, the non-random, convenience sampling procedure raises questions about how representative the sample might be to the population. Comparative statistics are not available from principal associations to assess the sample but it is not likely that the sample is representative in terms of gender, for example. Although, as noted, Armstrong (2014) received a similarly skewed response in terms of gender, neither study appears representative. A representative sample of a population, particularly one that is selected randomly, allows for greater generalization to the population as a whole in quantitative studies (Field, 2013; Warner, 2014). Convenience sampling in the qualitative phase of the study also questions how representative the sample might be and how transferable findings might be to similar contexts.

Finally, several issues related to the validity of the survey scales limit the power of generalizations that might be presented. As noted, the original survey items from Tschannen-Moran and Gareis, 2004 were adapted for the Ontario context. Creswell (2003) notes that adaptation of items in a survey may alter its validity as a measure of specific constructs. Additionally, the survey items and scales for PLP were original and not pre-tested for content validity using factor analysis, although they were thoroughly reviewed in the literature and vetted with practicing vice-principals. Still further, content validity with the leadership self-efficacy scale, as completed by Tschannen-Moran and Gareis (2004), was not established through comparisons with previously confirmed correlations with leadership self-efficacy, including job autonomy and job satisfaction (Federici, 2013). Future studies should consider including an established correlate to confirm construct validity.
Significance of the Study

This study increases our understanding of the dynamic relationship between principals and vice-principals and how principals can support the leadership development of their vice-principals. Research that establishes the importance of the school principal in preparing the school’s vice-principal for their current role as well as their future roles as school principals (e.g., see Barnett & Shoho, 2010; Cranston et al., 2004) was confirmed. Differing from the findings of previous research into the work life of the vice-principal that paints a pessimistic picture of the vice-principalship and its influence on leadership development for vice-principals (Barnett et al., 2012a; Harvey, 1994; Hausman et al., 2002), this research suggest that vice-principals in Ontario school experience, for the most part, moderate to high levels of leadership self-efficacy in the three important leadership domains investigated in this work. This study also indicates that elementary principals are perceived by their vice-principals as providing appropriate and frequent supports that influence the leadership self-efficacy of their vice-principals.

Where previous studies have indicated the importance of principals’ leadership practices in a less empirical and more theoretical manner, this research outlines specific practices that principals employ to further the leadership capabilities of their vice-principals. The study demonstrates, first, that frequently allocating rich and varied leadership experiences to vice-principals increases their sense of leadership efficacy. In keeping with contentions from social cognitive theory regarding the domain specific nature of self-efficacy beliefs (Bandura, 1982, 1989, 1997), this research confirms that providing experiences within a specific leadership domain (like moral or transformation leadership) increases leadership self-efficacy in the same domain. Secondly, the research illustrates the importance of principals’ leadership practices
(particularly in identifying and modeling specific duties or responsibilities) in improving vice-principals’ leadership self-efficacy. Finally, this study confirms empirically the importance of principals creating a work environment conducive to leadership development. It is suggested that the style of leadership that supports vice-principals’ leadership development most significantly is related to the manner in which a principal enacts that principals’ leadership practices outlined in this study.

Given the current focus in educational leadership on identifying key practices that affect student learning (Leithwood, 2012; Robinson, 2006; Robinson, Hoppea et al., 2009; Seashore Louis et al., 2010; Waters et al., 2003), this research provides practical tools for both measuring and improving the leadership capabilities of vice-principals and, consequently, improving the performance of schools and school systems. In the end, duties as assigned do influence vice-principals’ leadership development; that is, as they are assigned (in specific leadership domains and with what frequency) and as they are assigned and supported (with specific leadership practices by school principals) are important.

**Conclusions**

This study sought to investigate the influence of elementary school principals on the leadership efficacy beliefs of their vice-principals. It was hypothesized that principals’ leadership practices (as related to the four sources of self-efficacy) and the leadership opportunities assigned vice-principals would be related to vice-principals’ leadership self-efficacy. Given the research confirming the relationship between leadership self-efficacy and positive organization outcomes (Gist, 1987; Gist and Mitchell, 1992; McCormick et al., 2002; Paglis & Green, 2002), it was further theorized that increases in vice-principals’ leadership self-efficacy would have
positive outcomes for schools and students (Leithwood & Jantzi, 2008), both in terms of having more confident and effective vice-principals and developing better school principals for the future. The common lament in the research that the role of vice-principal is understudied (Lee et al., 2012) may in part be understood by the transitional and potentially short-lived nature of the job for most vice-principals. For example, 78.5% of elementary vice-principals in this study indicated they were very interested in becoming school principals. Despite the potential brevity of the work, the importance of providing the best possible learning environment and experiences for vice-principals is unquestionably essential to their leadership development.

This study confirms that the role of the principal in the leadership development of his or her vice-principal is essential, both in providing specific practices (e.g., linked to enactive mastery and vicarious experience) and in developing a relationship that creates a constructive environment for vice-principals to learn to lead and develop a positive and confident sense about their abilities for school leadership. Moving forward, self-efficacy should become a more talked about priority in leadership development in Ontario schools generally. Additionally, the practical work of more clearly defining policies, directions, and strategies to enhance leadership self-efficacy should be undertaken provincially and at the district level. The potentially short time elementary vice-principals spend in the role suggests a strategic approach to linking self-efficacy with the practical (and complex) day-to-day work of the vice-principal. The school principal can play an important role in overseeing the leadership development of their vice-principal. Some structural changes to the PQP linked to professional development for principals (aligned with insights from this research) could provide a quick and relatively easy way to build capacity to support the growth of leadership self-efficacy for vice-principals. The supports initiated now for
elementary vice-principals can have a lasting effect on the effectiveness of schools and school districts.
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Appendix A

Online Survey

Vice-Principal Leadership Self-Efficacy Survey

Informed Consent

Dear Participant,

Thank you for taking the time to participate in this study. This research constitutes my dissertation for a Doctor of Education at the Ontario Institute for Studies in Education at the University of Toronto. The study seeks to understand the working relationship between vice-principals and their principals and how that relationship might impact a vice-principal's sense of self-efficacy related to key leadership tasks within a school.

WHAT IS INVOLVED
The survey should take no longer than 20 minutes to complete. First, you will be asked a few questions regarding your current role and training. Then you will indicate the extent of your involvement in completing work-related tasks. Thirdly, you will be asked to assess various leadership practices of your school principal. Finally, you will assess your own sense of leadership efficacy.

POSSIBLE BENEFITS AND RISKS
Your responses do not evaluate your effectiveness as a school vice-principal or the effectiveness of your principal colleagues. Your participation in this study poses no risk to you and will not impact your professional standing. Your participation in this research will provide important information on how principal leadership practices may support the leadership self-efficacy of elementary vice-principals. You also have the opportunity to assess and share your leadership experiences as a vice-principal in an elementary school.

CONFIDENTIALITY
All responses will be held in strict confidence and kept in a secure location. Individual data from this survey will not be reported. All reported information will assess the data as an aggregate and be reported in such a way as not to identify individuals responding to this survey. Your name or identifying information will not be used in any written materials associated with this research. You may refuse to answer any question you wish and stop completing the survey at any time without penalty. All data will be kept on the encrypted computer of the researcher and will only be shared with the researcher's supervisor. All the data in this research will be destroyed after 5 years.

PARTICIPATION
Participation in this survey is strictly voluntary. You may decline to answer any question or questions, stop taking the survey at any time, or have your data removed from the study after completing the survey. At no time will you be judged, evaluated, or put at any risk for harm. No value judgment will be placed on your responses. All email addresses provided will be kept separately from the raw data in order to protect your anonymity.

At the end of the survey, you will be asked if you would like to participate in a follow-up phone interview with the researcher regarding your growth and development as a vice-principal and the impact of specific practices of your principal on your growth in the role. If you are willing to participate further in this research, please indicate "yes" and complete the form as requested. All email addresses will be kept separate from the raw data.

PUBLICATION OF RESULTS
Interested participants will be sent a summary of the research findings by email and may also request copies of published articles by contacting the researcher or leaving an email contact address at the end of the survey. A copy of the research findings will also be available at the University of Toronto library after the study is complete.

For any further details, please contact me at gary.swan@utoronto.ca or 416-283-3015. You may also contact my supervisor Dr. Carol Campbell at carol.campbell@utoronto.ca or 416-978-1200. If you have any questions related to your rights as a participant in this study or if you have any complaints or concerns about how you have been treated as a research participant, please contact the Office of Research Ethics, ethicsreview@utoronto.ca or 416-946-8614.
Vice-Principal Leadership Self-Efficacy Survey

A copy of the thesis will be available electronically at the University of Toronto Research Repository (TSpace) at https://pace.library.utoronto.ca/handle/18079944.

For any further information, you can contact me at Gary Swain, 14 Garnet Crescent, Toronto, ON, M6M 2Z6, or by phone at 416-200-3635. You may also contact my supervisor at Dr. Carol Campbell, Ontario Institute for Studies in Education, University of Toronto, 252 Bloor Street West, Toronto, Ontario, M5S 1V6, or by phone at 416-978-1296.

You are encouraged to save and/or print a copy of this consent page for your information. After clicking the "I agree" button and selecting "next" you will not be able to withdraw from this study unless you provide your email address at the end of the survey.

A copy of the thesis will be available electronically at the University of Toronto Research Repository (TSpace) at https://pace.library.utoronto.ca/handle/18079944.

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You are encouraged to save and/or print a copy of this consent page for your information. After clicking the "I agree" button and selecting "next" you will not be able to withdraw from this study unless you provide your email address at the end of the survey.

*1. I agree to participate in this study described above. I have made this decision based on the information I have read in the informed consent provided above. I acknowledge that I am able to withdraw from completing this survey at any time or refuse to answer any question without consequence or penalty. I provide my consent by selecting the "I agree" button below.

☐ I agree
☐ I do not agree

Qualification No. 1

*2. Are you currently employed as a vice-principal in an Ontario Elementary School?

☐ Yes
☐ No

Qualification No. 2

*3. Have you been working with your current principal for more than 3 consecutive months?

☐ Yes
☐ No

Your Background and Experience
Vice-Principal Leadership Self-Efficacy Survey

4. What is your gender?
   - Male
   - Female

5. What percentage best indicates your formal allocation as a vice-principal at your school?
   - Full time (100%)
   - Full time (100% with assignments in more than 1 school)
   - Half Time (50% with teaching duties)
   - Less than half time (<50% with teaching duties)

6. Please indicate your total number of years of experience as a vice-principal.
   - less than 1 year
   - 1
   - 2
   - 3
   - 4
   - 5
   - more than 5

7. Please indicate your years of teaching experience prior to becoming a vice-principal.
   - 5 or less years
   - 6 to 10 years
   - 11 to 15 years
   - 16 to 20 years
   - more than 20 years
Vice-Principal Leadership Self-Efficacy Survey

8. Please select as many of the roles listed below you may have assumed prior to becoming a vice-principal.

- [ ] Classroom teacher
- [ ] Special education teacher
- [ ] Teacher coach
- [ ] Teacher mentor
- [ ] Subject resource teacher
- [ ] School improvement team
- [ ] Teacher union representative
### Vice-Principal Leadership Self-Efficacy Survey

9. Please reflect on your training with the Principal Qualification Program (PQP).

<table>
<thead>
<tr>
<th>How would you rate the “quality” of the program in terms of your preparation for the vice-principalship?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How would you rate the practical “utility” of the program in terms of your work as a vice-principal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

10. Please reflect on your ongoing training and support provided by your School Board.

<table>
<thead>
<tr>
<th>How would you rate the “quality” of the ongoing training offered by your School Board?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How would you rate the practical “utility” of ongoing training offered by your School Board?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

11. How interested are you in becoming a school principal?

<table>
<thead>
<tr>
<th>Not Interested</th>
<th>Somewhat Interested</th>
<th>Definitely Interested</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Your Duties as a Vice-principal

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Page 5
**Vice-Principal Leadership Self-Efficacy Survey**

12. The statements below attempt to capture some aspects of the work of vice-principals. You are not being asked to assess your ability to do each task; rather, for each statement indicate the EXTENT TO WHICH YOU ARE INVOLVED in each of the following activities.

In your current role as vice-principal, to what extent are you involved in...

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
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**Vice-Principal Leadership Self-Efficacy Survey**

**Principal Leadership Practices**

13. Below are a list of principal leadership practices. Please indicate the extent to which your principal enacts these practices in your working relationship.

<table>
<thead>
<tr>
<th>My principal...</th>
<th>Never</th>
<th>Very Seldom</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
<th>Always</th>
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<tr>
<td>provides demanding leadership tasks for me to perform</td>
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<td>provides me with the necessary supports and resources to complete leadership tasks</td>
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<td>discusses with me his or her expectations of my work</td>
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<td>makes my responsibilities in the school clear</td>
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<td>is a capable school leader</td>
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<td>talks about his or her perspective on completing leadership tasks</td>
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<td>suggests ways for me to be more effective in my role</td>
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<td>discusses with me my experiences while completing assigned duties</td>
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<td>offers constructive feedback to me</td>
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<td>provides feedback that reinforces the things I do well</td>
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<td>provides feedback that is accurate with my performance</td>
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<td>offers feedback I value</td>
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<td>takes time to talk with me about how I feel in my work</td>
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<td>discusses his or her own personal difficulties in being a school principal</td>
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<td>offers suggestions about dealing with stressful situations in the school</td>
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<td>cares about me having a healthy work-life balance</td>
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**Your Feelings of Self-efficacy as a Vice-Principal**
**Vice-Principal Leadership Self-Efficacy Survey**

14. Please respond to each of the questions by considering your current ability to do each of the following tasks in your present position.

Given you current skills as a vice-principals, rate your ability to...

<table>
<thead>
<tr>
<th>Task</th>
<th>None at all</th>
<th>Very Poor</th>
<th>Poor</th>
<th>Moderate</th>
<th>Strong</th>
<th>Very Strong</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>handle the time demands of the job</td>
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Vice-Principal Leadership Self-Efficacy Survey

Additional Comments

15. Having completed the survey, are there any other comments you would like to share concerning your work, the support you receive, and/or your perceived sense of efficacy to do the work of an elementary school vice-principal?

Interested in Synopsis of Study

16. If you are interested in receiving a synopsis of the research from this study, please provide your email address. The report will be forwarded to you when the work is complete.

Interested in Additional Participation

17. Thank you for participating in this study. If you are interested in participating in a short follow up interview, please provide your contact email address in the text box below. If you are selected for a follow up interview you will be contacted by the researcher.

Disqualification Page

*Thank you for your interest in taking this survey. However, the participants in this survey are limited to those who are currently practicing, elementary vice-principals in Ontario and have been working with their principals for more than 3 months. If this DOES apply to you, please begin the survey again and re-enter your answers to the qualification questions.
### Vice-Principal Leadership Self-Efficacy Survey

#### Thank You

Thank you for taking the time to read the informed consent. If you decide at a later time you would like to complete the survey, please follow the same link. If you simply made an error, follow the same link to the introductory page and select "I agree" to complete the survey.

#### Final Thank You

Thank you for participating in this survey. The time you have taken to respond to each question is much appreciated.
Appendix B

Protocol for Qualitative Interviews

In this interview, I would like to explore with you more what sources provide you with this sense of self-efficacy. Now, considering you sense of efficacy as a vice-principal:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Checks/follow ups</th>
<th>Purpose</th>
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</table>
| 1. To what extent does your school principal act in ways that supports your sense of efficacy in your leadership role? | • Clear roles assigned  
• challenging, meaningful tasks  
• feedback on my work  
• encouragement or praise  
• trust in my ability listen, advise  
• how would you describe your working relationship  
• Autonomy | What effect does the principal have on VPLSE? Are their specifics things principals do to support self-efficacy – Sub-question 1 in proposal. |
| 2. To what extent does the work you do on a daily basis support your sense of leadership self-efficacy? | • Challenging, interesting  
• Able to solve problems  
• Helping staff and students  
• Contributing to the life/success of the school  
• Being able to get things done  
• Providing necessary resources  
• Co-learning with staff  
• Is the work diverse/different  
• Does it prepare you to become a principal | How do opportunities to engage in leadership tasks affect VPLSE – Sub-questions 2 in proposal |
| 3. a) How does your principal assign your leadership tasks in the school? | • Defined roles  
• On an ad hoc basis  
• Meeting and disperse jobs  
• Work together on most tasks  
• Not management mainly, but leadership  
• Contributes to organization  
• Builds teacher capacity, etc.  
• Improves student learning | Looking at the connection between principal assigning tasks, the types of tasks they assign, and how that influences VPLSE – related to results from quantitative work linking PLP with OPP – how does this work?  
What are the leadership tasks we are talking about? Do the tasks discussed actually |
| 4. What do you see as your sources of your self-efficacy? That is, what or who makes you feel capable and confident in the work you do? | • Being successful  
• Words of encouragement/praise  
• Know I did a good job  
• Seeing a problem solved or better  
• Being trusted to do more and more  
• Confidence of the principal in my work/abilities | With such high degrees of VPLSE, where do the VP’s see their perceptions of ability emanating from – school, parents, teachers, students, self, principal? What/who affirms their work and perceptions of capability in the job? |
Appendix C

Informed Consent for Focus Group

Dear Participant:

Thank you for taking the time to participate in this study and volunteering to be part of the focus group fielding testing the survey instrument for this research. This research constitutes my dissertation for a Doctor of Education at the Ontario Institute for Studies in Education at the University of Toronto. The study will be conducted under the supervision of Dr. Carol Campbell. The study seeks to understand the working relationship between vice-principals and their principals and how that relationship might impact a vice-principal's sense of self-efficacy related to key leadership tasks within a school.

WHAT IS INVOLVED
As a participant in this research, you are asked to complete the electronic survey after the link to the survey is sent to you by the researcher. You are asked to evaluate critically the content, layout, and wording of the survey. Please note any difficulties. We (4 to 6 participants) will then meet at a mutually convenient time and place to discuss your observations regarding the survey. The survey should take you no more than 20 minutes to complete and the meeting will take no more than one hour.

POTENTIAL BENEFITS AND RISKS
Your participation in this study poses no risk to you and will not impact your professional standing. Your participation in this research will provide important information on how principal leadership practices may support the leadership self-efficacy of elementary vice-principals. You also have the opportunity to assess and share your leadership experiences as a vice-principal in an elementary school.

CONFIDENTIALITY
All responses will be held in strict confidence and kept in a secure location. All reported information will be reported in such a way as not to identify individuals participating in this process. Your name of identifying information will not be used in any written materials associated with this research. You may refuse to answer any question you wish and stop the interview at any time without penalty. All the data in this research will be destroyed after 5 years. The data will be used only in making revisions to the survey and will not be included in the raw data for the study.

PARTICIPATION
Participation in this interview is strictly voluntary. The round table interview should take no longer than 1 hour. You may decline to answer any question or questions, stop participating in the interview at any time, or have your data removed from the study after completing the survey without any consequence or penalty. At no time will you be judged, evaluated or put at any risk for harm. No value judgments will be placed on your responses. Please note that should you want to withdraw it may be difficult to distinguish your responses from others in the notes taken by the researcher.
PUBLICATION OF RESULTS
Results of this study may be used in reports, conference presentations and publications. Interested participants will be sent a summary of the research findings by email and they may also request copies of published articles by contacting the researcher or leaving an email contact address at the end of the survey. A copy of the research findings will also be available at the University of Toronto library at https://tspace.library.utoronto.ca/handle/1807/9944 after the study is complete.

For any further details, please contact me at gary.swain@utoronto.ca. You may also contact my supervisor Dr. Carol Campbell at carol.campbell@utoronto.ca. If you have any questions related to your rights as a participant in this study please or if you have any complaints or concerns about how you have been treated as a research participant, please contact the Office of Research Ethics, ethics.review@utoronto.ca or 416-946-3273.

CONSENT FORM AND CONFIDENTIALITY AGREEMENT
I agree to participate in this study described above. I have made this decision based on the information I have read in the Informed Consent Letter. I have had the opportunity to receive any additional details I wanted about the study, and I understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

_____ Place an X here if you would like a summary of the findings

Name: ___________________________ (Please print)

Phone Number: _____________________ Email: ________________________________

Signature: _________________________________ Date: _______________________

I have fully explained the procedures of this study to the above participant.

Researcher: ___________________________ Date : __________________________

Thank you for your assistance in this project. Please keep a copy of this form for your records.
Appendix D

Letter to CPCO/OPC to Publish Online Survey
Dear Ms. Massey and Ms. Cardarelli:

My name is Gary Swain and I am a doctoral student at the Ontario Institute for Studies in Education at the University of Toronto. The supervisor of my thesis is Dr. Carol Campbell. I am currently in the process of collecting data from the first quantitative phase of my mixed methods research evaluating how elementary school principal leadership practices might support the leadership self-efficacy of their vice-principals. In order to begin the project, I require your written consent.

I am writing to request that the Ontario Principal Council/Catholic Principal Council support my research by sending out the attached advertisement and survey link to your members. Qualifying participants are any vice-principal working in a publically funded English-language elementary school in the province. The vice-principal must also have been working with their currently principal for more than 3 months.

This research study has been granted ethical approval by the University of Toronto. I have enclosed the approval letter from the University of Toronto. I have also enclosed the survey for your perusal. Following your approval, I will be conducting a field test with a small group of elementary vice-principals. Subjects will be well informed about the nature of the study and their participation, including the assurance that they may withdraw at any time. In addition, they may request that any information, whether in written form or audiotape, be eliminated from the project. Participants will at no time be judged or evaluated, and will at no time be at risk of harm.

The information gathered from both surveys and interviews will be kept in strict confidence and stored at a secure location on an encrypted, password protected computer. All information will be reported in such a way that individual persons, schools, school districts, and communities cannot be identified. All data collected will be used for the purposes of an Ed.D. thesis and perhaps for subsequent research articles. All raw data (i.e. transcripts, field notes) will be destroyed five years after the completion of the study.

If you agree, please sign the letter below and return it to me in the envelope provided. If you have any questions, please feel free to contact me at (416) 200-3635 or at gary.swain@utoronto.ca. You may also contact my supervisor, Dr. Campbell at (416) 978-1266 or email at: carol.campbell@utoronto.ca. Finally, you may also contact the U of T Office of Research Ethics for questions about your rights as a research participant at ethics.review@utoronto.ca or 416-946-3273.
Sincerely,

Gary Swain

Please sign to acknowledge your association’s approval. Please return to me at gary.swain@utoronto.ca

_____________________
Administrator’s signature

_____________________
Date
Appendix E

Blurb/Notice for CPCO/OPC E-newsletters

VP Leadership Self-efficacy Study

If you are an elementary school vice-principal in a publically funded, English-language school board in Ontario, consider being part of this exciting research. The survey is part of a doctoral dissertation of an elementary principal colleague, Gary Swain. The supervisor of this research project is Dr. Carol Campbell. The online survey will take a mere 20 minutes to complete. The study seeks to understand the working relationship between vice-principals and their principals and how that relationship might impact a vice-principal's sense of self-efficacy related to key leadership tasks within a school. There is also the option to take part in face-to-face or telephone interviews in the second phase of the study.

All those interested see this link: (link to be determined on Survey Monkey)
Appendix F

Informed Consent for Qualitative Interviews

Dear Participant:

Thank you for taking the time to participate in this study and volunteering to be part of the interviews in this mixed methods research. This research constitutes my dissertation for a Doctor of Education at the Ontario Institute for Studies in Education at the University of Toronto. The study will be conducted under the supervision of Dr. Carol Campbell. The study seeks to understand the working relationship between vice-principals and their principals and how that relationship might impact a vice-principal's sense of self-efficacy related to key leadership tasks within a school. Approximately 12 participants will participate interviews.

WHAT IS INVOLVED
As a participant in this research, you will be asked several questions related to many of the aspects of vice-principal work you responded to in the initial electronic survey. Particularly, I am interested in discussing the leadership practices your principal may enact in your working relationship, your role as a vice-principal, and your sense of leadership self-efficacy or confidence in performing specific leadership tasks. The interview should take no longer than 30 minutes.

POTENTIAL BENEFITS AND RISKS
Your responses do not evaluate your effectiveness as a school vice-principal or the effectiveness of your principal colleague. Your participation in this study poses no risk to you and will not impact your professional standing. Your participation in this research will provide important information on how principal leadership practices may support the leadership self-efficacy of elementary vice-principals. You also have the opportunity to assess and share your leadership experiences as a vice-principal in an elementary school.

CONFIDENTIALITY
All responses will be held in strict confidence and kept in a secure location. Individual data from this survey will not be reported. All reported information will assess the data as an aggregate and be reported in such a way as not to identify individuals responding to this survey. Your name of identifying information will not be used in any written materials associated with this research. You may refuse to answer any question you wish and stop the interview at any time without penalty. All data will be kept on the encrypted computer of the researcher and will only be shared with the researcher’s supervisor. All the data in this research will be destroyed after 5 years.

PARTICIPATION
Participation in this interview is strictly voluntary. You may decline to answer any question or questions, stop participating in the interview at any time, or have your data removed from the study after completing the survey without any consequence or penalty. At no time will you be judged, evaluated or put at any
risk for harm. No value judgment will be placed on your responses. With your permission (see below), the interview will be digitally recorded. Following the transcription of the interview, you will be provided with the transcript to review and edit your responses. The transcription will be emailed to you within 4 weeks of the interview. Please return the reviewed transcription within 2 weeks.

PUBLICATION OF RESULTS
Results of this study may be used in reports, conference presentations and publications. Interested participants will be sent a summary of the research findings by email and they may also request copies of published articles by contacting the researcher or leaving an email contact address at the end of the survey. A copy of the thesis will be available electronically in the University of Toronto Research Repository (T Space) at https://tspace.library.utoronto.ca/handle/1807/9944 after the study is complete.

For any further details, please contact me at gary.swain@utoronto.ca. You may also contact my supervisor Dr. Carol Campbell at carol.campbell@utoronto.ca. If you have any questions related to your rights as a participant in this study or if you have any complaints or concerns about how you have been treated as a research participant, please contact the Office of Research Ethics, ethics.review@utoronto.ca or 416-946-3273.

CONSENT FORM AND CONFIDENTIALITY AGREEMENT
I agree to participate in this study described above. I have made this decision based on the information I have read in the Informed Consent Letter. I have had the opportunity to receive any additional details I wanted about the study, and I understand that I may ask questions in the future. I understand that I may withdraw this consent at any time. I further understand that this interview will be digitally recorded and transcribed by the researcher. I will receive a transcription within 4 weeks of the interview to review. All transcriptions will be kept separately and coded. No identifying information will be held with the transcription.

_____ Place an X here if you would like a summary of the findings

Name: ___________________________ (Please print)

Phone Number: _____________________ Email: ________________________________

Signature: __________________________ Date: ___________________________

I have fully explained the procedures of this study to the above participant.

Researcher: _______________________ Date: _______________________

Thank you for your assistance in this project. Please keep a copy of this form for your records.