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“You are never too old to set another goal or to dream a new dream.”

C. S. Lewis

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MINDFUL TEACHER COLLABORATION:
STRATEGIES TO ADDRESS THE
CALL FOR SCHOOL REFORM

Abstract
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Over the past two decades public schools have faced an unrelenting demand for reform. In response to this call for change, researchers have identified two strategies that hold great promise – organizational mindfulness and teacher collaboration. Despite the volume of work that has focused on these areas, little has been done to investigate their overlap. This study discusses development of the Teacher Instructional Practice and Sentiments (TIPS), an 18-item survey to measure teacher practices and beliefs that reflect mindful collaboration for improving instruction. Teacher responses to the TIPS were gathered and analyzed from a representative statewide sample of elementary school teachers in Washington State. Findings examined survey items which were aligned to the five cognitive processes of HRO theory: preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise. An exploratory factor analysis was complete using Principal Components Analysis with varimax rotation which revealed three factors underlying mindfulness in schools. The first factor, Mindful Focus on Students, includes items such as understanding a student’s home situation, as well as making accommodations for struggling learners. The second factor, Mindful Focus on Relationships, deals with interactions between teachers, students, parents, and
the community. Finally, Mindful Focus on Instruction includes “checks for understanding” and brainstorming with colleagues on strategies to get students to standard. As an alternative to forcing the current labels of HRO theory on education, consideration should be given to application of these school-specific categories. They simplify the process of evaluating mindfulness in schools and the variables requiring investigation. Use of the TIPS survey to understand the extent to which mindfulness and teacher collaboration are evident in schools is recommended.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>x</td>
</tr>
<tr>
<td>CHAPTER 1 – INTRODUCTION TO THE STUDY</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to Literature</td>
<td>1</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>2</td>
</tr>
<tr>
<td>Teacher Collaboration</td>
<td>4</td>
</tr>
<tr>
<td>Problem</td>
<td>5</td>
</tr>
<tr>
<td>Purpose</td>
<td>6</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>6</td>
</tr>
<tr>
<td>Methods</td>
<td>11</td>
</tr>
<tr>
<td>Phase 1: Survey Development</td>
<td>12</td>
</tr>
<tr>
<td>Phase 2: Field Test</td>
<td>14</td>
</tr>
<tr>
<td>Phase 3: Stratified Random Sample</td>
<td>15</td>
</tr>
<tr>
<td>Phase 4: Analysis</td>
<td>15</td>
</tr>
<tr>
<td>Summary</td>
<td>16</td>
</tr>
<tr>
<td>CHAPTER 2 – REVIEW OF LITERATURE</td>
<td>17</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>18</td>
</tr>
<tr>
<td>Preoccupation with Failure</td>
<td>20</td>
</tr>
<tr>
<td>Reluctance to Simplify</td>
<td>21</td>
</tr>
</tbody>
</table>
Sensitivity to Operations ........................................... 62
Commitment to Resilience ......................................... 62
Deference to Expertise ............................................. 63
Exploratory Factor Analysis ....................................... 64
Summary ................................................................. 67
CHAPTER 5 – CONCLUSION ............................................. 68
Overview ................................................................ 68
Summary of Study Findings ......................................... 71
Implications ............................................................... 75
  Applicability to Practice ........................................... 75
  Future Research ...................................................... 77
REFERENCES ............................................................. 78
APPENDICES

A. Teacher Improvement Practices and Sentiments (TIPS) First Invitation ........ 100
B. TIPS Second Invitation ................................................................. 103
C. TIPS Third Invitation ................................................................. 105
D. TIPS Final Invitation ................................................................. 107
LIST OF TABLES

1. Alignment of TIPS Items ......................................................... 40
2. School Level Variables – A Comparison of Sample to State ................. 57
3. TIPS – Preoccupation with Failure ............................................. 60
4. TIPS – Reluctance to Simplify .................................................. 61
5. TIPS – Sensitivity to Operations ............................................... 62
6. TIPS - Commitment to Resilience .............................................. 63
7. TIPS – Deference to Expertise .................................................. 64
8. Exploratory Factor Analysis of TIPS Items .................................. 66
CHAPTER ONE

Introduction to the Study

Over the past two decades public schools have faced an unrelenting demand for change. Parents, as well as politicians at the local, state and federal government levels, have joined the cacophony of voices calling for improved student outcomes. In response, teachers have worked to increase student performance on mandated tests and other measures of achievement, including graduation and work readiness. Scholars, in an attempt to understand and validate reform efforts, have investigated schools’ interventions, programs, and practices that promise to improve student outcomes. This study examines two of these improvement strategies: organizational mindfulness and teacher collaboration.

Chapter one provides an introduction to the study, including literature on mindfulness and teacher collaboration; an overview of current research that frames the problem addressed by the study, the research questions explored through the dissertation, key concepts and definition of terms used within this chapter and those that follow, and a concise explanation of the procedures employed for gathering and analyzing data given the study’s research questions. This chapter then concludes with a summary and overview of the remaining chapters.

Introduction to Literature

Mindfulness and the tenets of HRO theory, including the five cognitive processes (Weick & Sutcliffe, 2007), have much to offer public schools as they respond to demands for reform. The practice of teacher collaboration offers the same promise. This section gives a brief overview of the literature on mindfulness, HRO theory, and teacher collaboration, while chapter two provides a deeper examination of mindfulness in schools and teacher collaboration.
**Mindfulness**

In 2004, Bishop et al. related there has been a “substantial interest in mindfulness as an approach to reduce cognitive vulnerability to stress and emotional distress in recent years” (p. 230). This increased interest is echoed by Davidson (2010) who stated, “Research on mindfulness is entering a new era and coming into the mainstream” (p. 10). The benefits of mindfulness are multifaceted. As noted by Bishop et al. (2004), mindfulness is useful as individuals deal with emotions. Kabat-Zinn (2013) affirmed this application, stressing attention to experience in the moment. Mindfulness is also useful in expanding creativity and the ability to draw novel connections (Langer, 2000). Additionally, mindfulness has been credited with strengthening attention, broadening perception, and increasing our ability to make sense of information (Langer, 2000; Lutz, Dunne, & Davidson, 2007).

Given the value of mindfulness for the individual, the question arises concerning its applicability at the organizational level. Is there a positive impact on the organization when mindful characteristics are the norm among its members?

Weick and Sutcliffe (2007) explored organizational attention through the lens of mindfulness and found it had a positive impact. Weick and Putnam (2006) also examined mindfulness in organizations, focusing on the quality of experience. Their work went on to examine mindfulness in organizations, known as High Reliability Organizations (HRO), that have critical missions. Operating with the knowledge that a single mistake may have severe consequences (Christianson, Sutcliffe, Miller, & Iwashyna, 2011), these organizations have developed a system of management that recognizes risk and aggressively seeks to minimize errors. There are five tenets of HRO theory: preoccupation with failure, reluctance to simplify,
sensitivity to operations, commitment to resilience, and deference to expertise (Aven & Krohn, 2014; Christianson et al., 2011; Eck, 2011; Khorsandi & Aven, 2013; Weick & Sutcliffe, 2007).

Finding that HROs are preoccupied with failure, Weick (1996) explained the value of vigilance in recognizing the smallest clues that might foreshadow a future catastrophic failure. Similarly, members of an HRO resist the urge to simplify their response to a situation, remaining open to various strategies and solutions as they seek to identify the root of any given problem (Eck, 2011). HROs are also characterized by open communication, with an emphasis on the personnel closest to any given issue (Eck, 2011; Weick, Sutcliffe, & Obstfeld, 1999). In an effort to foster resilience and prevent failure, they empower members of the organization with the ability to respond quickly to change (van Fenema, 2005). HROs have clear lines of authority; however, these hierarchies become flexible in times of crisis, yielding to those with the greatest expertise regardless of their position in the hierarchy (Hoy, 2002; Somech, 2005).

Since collective mindfulness has been found to improve the function of organizations, scholars in education have sought to apply HRO strategies and principles to schools (Bellamy, Crawford, Marshall, & Coulter, 2005). In a literature review of mindfulness in schools, Hoy, Sweetland, & Smith (2002) found that a mindful school empowers teachers to make decisions in a cooperative and collaborative manner. Resar (2006) found that mindfulness encourages teachers to identify learning problems, and collaborate with colleagues to develop strategies to address these problems at the earliest opportunity. Mindful schools also empower teachers to seek and apply various solutions to problems in the classroom (Hoy, 2002). These teachers recognize that trust and open communication with colleagues helps ensure student success (Hoy, Gage, & Tarter, 2006). Resilience is a particularly important characteristic of mindful schools. Since errors are inevitable, the resilient school develops scenarios to avoid recurrences (Blatt,
Christianson, Sutcliffe, & Rosenthal, 2006). Finally, mindful schools are characterized by the practice of seeking those with the greatest expertise when addressing issues (Hernes & Irgen, 2012).

Research has also focused on the collective efforts of teachers to improve schools through professional learning communities and teacher collaboration. When implemented, the tenets of organizational mindfulness nurture improvement in collaboration, encourage shared responsibility, and create a positive climate of interdependence.

**Teacher Collaboration**

Teacher collaboration is an important component of effective schools (Marks & Louis, 1999). Collaboration allows teachers to establish a common set of goals, share work responsibility, and develop effective classroom practices (Lavie, 2006; Richmond & Manokore, 2010). Louis and Kruse (1995) discussed five key characteristics of successful teacher communities: shared values, reflective dialogue, deprivitization of practice, focus on student learning, and collaboration. Scribner, Cockrell K., Cockrell D., and Valentine, (1999) affirmed these characteristics, and went on to add shared leadership and mutual dependence to the list.

Collaboration reduces teacher isolation through creation of a team of professionals (Bryk, Camburn, & Louis, 1997; Garrett, 2010), and allows teachers to create shared understanding, beliefs, and values (Abbate-Vaughn, 2005; Doolittle, Sudeck, & Rattigan, 2008). The success of collaboration is predicated on effective teacher interaction (Wood, 2007b), and the implementation of reflective dialogue (Abbate-Vaughn, 2005).

Shared decision making is also necessary for high performing schools (Marks & Louis, 1999). The practice of shared decision making empowers teachers by giving them the authority to both make and implement their decisions. Collaboration and empowerment of teacher teams
allows professional development based on student needs (Garrett, 2010; Harris & Jones, 2010), and allows decisions to be made using formative, summative, and standardized testing data (Wohlstetter, Datnow, & Park, 2008).

Teacher leadership and school improvement are strongly correlated (Harris, 2003). Because teachers have a wealth of information concerning their students and what is and isn’t working in the classroom, allowing them to participate in decision making helps focus the school’s teaching and learning (Bryk et al., 1997; Harris, 2003; Little, 2002).

**Problem**

Mindfulness has gained increasing attention in research literature. One facet of the literature investigates mindfulness through a traditional Eastern lens, including the study of mediation (Kabat-Zin, 1990). There is, however, a body of work that focuses on a Western view of mindfulness which emphasizes thoughtful attention and sense-making (Bishop et al., 2004; Langer, 2000). Though the increased interest in mindfulness has been embraced by educational scholars focusing on its application in schools, little work has been done to investigate its influence on the collective work of educators. This relative paucity of attention despite a multitude of studies that reveal teacher collaboration is critical to improving instructional practices, strengthening school performance, and responding successfully to the call for school reform (Mulford, 2005; Mulford & Silins, 2003).

Much of the work that has been completed on organizational mindfulness in schools has utilized the HRO framework (Bellamy et al., 2005; Weick & Sutcliffe, 2007). As Bellamy et al. (2005) stated, “The stakes for failure have been raised so high – both for schools and for students – that high reliability has become an important aspect of school success” (p. 383). Hoy et al. (2006) completed a study of 75 non-random middle schools, and though their 20-item scale was
aligned with the five cognitive processes of HRO theory, they failed to investigate strategies known to improve teaching and learning. For example, items on the scale such as “Teachers often jump to conclusions,” or “In my building, teachers hide mistakes,” give little insight into the work of teachers and students. At the conclusion of their study, Hoy et al. (2006) stated, “The conceptualization and measure of mindfulness of schools is in its early stage. We invite other researchers to use and refine the concept” (p. 253).

**Purpose**

When reviewing educational research, a meaningful overlap between collective mindfulness and teacher collaboration became evident. Both collective mindfulness and teacher collaboration seek improved educator practice and student learning, and both focus on cooperation and teamwork. Currently, researchers interested in collective mindfulness and teacher collaboration lack an investigative tool with specificity, therefore, the purpose of this dissertation was to develop an instrument that would examine this specific relationship in schools. To this end, the TIPS survey was developed and disseminated to a sample of Washington schools to measure teacher collaboration and collective mindfulness. The following research questions were explored:

1) How mindful are teachers about their collaborative efforts to improve instruction?

2) What constructs or factors are present in teacher responses regarding organizational mindfulness for improving instruction?

**Definition of Terms**

Achievement Gap – the disparity in academic performance between groups of students (e.g. African-American, Hispanic and White; high, middle and low-income; male and female). Examples of the measurement of academic performance include grades, test scores, graduation

Ambiguity – a vague or unclear organizational component resulting in confusion from varied, individual interpretations. Examples include the mission of the organization, goals, and employee roles and responsibilities (Chun, & Rainey, 2005; Epstein & Hundert, 2002; Luthar, Cicchetti, & Becker, 2000; Rizzo, House, & Lirtzman, 1970)

Belief – a personally held trust, faith or confidence in someone or something (Bandura, 2000; Edmondson, 1999). For example, in a mindful school, teacher have confidence in the abilities of colleagues.

Bureaucratic – a type of administrative system comprised of rules and procedures that organize the functions of an organization. Research by Meier and Polinard (2000) explored the relationship between student performance and bureaucracy by asking if an increase in bureaucracy creates low student performance, or whether low performance creates increased bureaucracy aimed at solving systemic problems.

Data-driven Decision-making – a district response to reform using student achievement test data to address state and federal accountability requirements. Results from evaluation of data are used to make instructional decisions (Wohlstetter, Detnow, & Park, 1998).

Distributed Leadership – (sometimes labeled team or shared leadership), a type of leadership held, not by one individual, but shared among a team. It recognizes the varied skills and expertise of individuals and capitalizes on this range of strengths and abilities (Fausing, Joensson, Lewandowski & Bligh, 2015; Karadag, Bektas, Cogaltay & Yalcin, 2015; Sergiovanni, 2006).
Educational Accountability – a multi-level (local, state, federal), formalized system establishing minimum performance targets for schools, most often measured by student metrics such as standardized testing results and on-time graduation rates. Failure to produce specific results or meet established targets is often linked to punitive monetary or organizational consequences (Ehren, & Hatch, 2013; McDonnell, 2013).

Effective Schools – characterized by quality instruction that results in improved outcomes for students. Hiring, training, and retaining quality teachers are steps toward an effective school (Loeb, Kalogrides, & Beteilie, 2012; Taylor, Pearson, Clark & Walpole, 2000).

Error – a wrong action or judgement that is the result of a lack of knowledge or training; or an oversight or failure to do what one has the training and/or knowledge to accomplish (Reason, 1994). For example, a teacher might believe student achievement is limited by the socio-economic level of the family.

Formative Assessment – a type of evaluation that takes forms such as observation, strategic questioning, and evaluation of assignments and provides feedback to determine if students need remediation, further practice, or enrichments activities (Duckor, 2014; Dunn, Ariola, Lo & Garrison, 2012; Hattie, 2008; Marlow, 2010; McLeod, 2009; Roskos & Neuman, 2012). Bell and Cowie (2001) define formative assessment as “the process used by teachers and students to recognize and respond to student learning in order to enhance that learning during the learning” (p. 536).

Instruction – a way to impart knowledge; a way to guide students in the acquisition and development of understanding (Greenwood, Carta, Hall, 1988; Kirschner, Sweller, & Clark, 2006).
Instructional Leadership – a mode of direction that, vested in principals and teachers, includes support for teacher growth, as well as design and implementation of an instructional vision. The goal of instructional leadership is to improve teaching and learning, increase student achievement, and contribute to overall school improvement (Camburn, Rowan & Taylor, 2003; Spillane, Halverson, & Diamond, 2004; York-Barr & Duke, 2004).

Loose Coupling – a means of describing the technical and authoritative aspects of an organization in which components have minimal reliance on each other. This form of organization resists systemic change (Astuto & Clark, 1985; Weick, 1976).

Mindfulness – an experience of consciousness characterized by meditation. The mindful individual acknowledges and accepts thoughts and feelings through a present-centered awareness, while developing an ability to see and understand clearly (Bishop, 2004; Khong, 2009; Weick & Putnam, 2006).

Organizational Mindfulness – a strategy for utilizing past learning to create order in the present, organizational mindfulness is characterized by purposeful attention, open-mindedness, novel relationships, varied perspectives, and the discovery of connections among information (Langer & Moldoveanu, 2000; Levinthal & Rerup, 2006).

Practice – In a classroom setting, practice refers to the instructional actions taken by teachers and school personnel in response to learning goals and student needs (Harris & Jones, 2010; Lavie, 2006; Little, 1993, 2002; Richmond & Manokore, 2010; Scribner & Bradley-Levine, 2010).

Prevention - measures taken to avoid errors of omission or commission. Prevention is directly related to the HRO attributes of preoccupation with failure and reliability (Bellamy et al., 2005; Blatt et al., 2006; Stringfield, 2011; Weick, 1996).
Reflective – referring to a type of dialogue among colleagues, being reflective is the ability to consider and discuss openly and honestly with colleagues choices made and actions taken in the classroom. The reflective process requires clear articulation of views and attitudes as well as active listening on the part of team members (Dooner, Mandzuk, & Clifton, 2007; Harris & Jones, 2010).

Reliability – consistently producing the same results; dependable in accuracy. A system that performs consistently is reliable. Reliability is achieved through organizational relationships and practices (Blatt et al., 2006; Butler & Gray, 2006; Vogus & Welbourne, 2003).

Resilience – the ability to respond and adapt to change and to examine and learn from failure. Resilience is characterized by acceptance of the situation, finding meaning in the occurrence, and improvising a response strategy (Bellamy et al., 2005; Coutu, 2002; Kantur & Iseri-Say; 2012).

Routine – standard strategy or pattern of response to a situation; the skill set of an organization (Becker & Zirpoli, 2008; Cohen, 1991). In a school setting, there may be a routine to evaluate student learning issues.

School Climate – Organizational patterns (e.g. safety, teaching and learning, relationships) which have an impact, either positive or negative, on students’ academic achievement; the quality and character of the physical, social, and academic components of the school environment as they relate to students (Anderson, 1982; Cohen, McCabe, Michelli & Pickeral, 2009; Gottfredson G, Gottfredson D, Payne, & Gottfredson N, 2005).

School Culture – the norms, values, beliefs, perceptions, relationships and attitudes that are characteristic of the school as they relate to staff and teachers (Friedman, 1991; Hargreaves,
1995; Vescio, Ross, & Adams, 2008). For example, a school may have a culture of respect for others.

Summative Assessment – an evaluation of the final learning outcome. The intent of summative assessment is to measure student achievement or retention at the end of a unit or course (Bernhardt, 2009; Dirksen, 2011; Marlow, 2010).


Teacher Efficacy – Hoy (2002) defines efficacy as “teachers’ judgements about their ability to promote students’ learning” (p. 343). It is a measure of personally-held belief in the ability to positively impact students.

Tight Coupling – a system of strict management wherein supervisors tightly control employees creating dense, tight linkages. Tightly coupled organizations are characterized by mutually understood rules enforced by inspection and regular feedback (Astuto & Clark, 1985; Weick, 1976).

**Methods**

This study was developed to explore the nature of organizational mindfulness and teacher collaboration as it impacts instruction. The relationship in elementary schools is examined to further the goals of educational reform. This section will introduce the procedures for sampling and design, the development and implementation of the survey instrument, the statistical
procedures, and the ethical considerations of the study. Further development of these methods will be presented in chapter three.

**Phase 1: Survey Development:** An instrument to gauge the collective mindfulness of teachers in improving instructional practices was not available; in response, a team of six researchers developed two surveys; the Teacher Improvement Practices and Sentiments (TIPS) survey used in this study, as well as the survey of Principal Resilience for Educator and Student Success (PRESS). Members of the team included a central-office administrator, an active and a retired elementary principal, two secondary school principals, and a university faculty member. A literature review examining the scholarship on mindfulness, instructional leadership, and teacher collaboration was completed. Drawing on findings offered in education literature on teacher collaboration in support of shared understanding and instructional practice, the TIPS instrument was created as a teacher survey to examine the tenets of organizational mindfulness. Questions on the survey focus on the ways preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise are perceived by classroom teachers in their work with others to improve teaching and learning (Feuer, Towne, & Shavelson, 2002).

Questions on the TIPS survey were aligned with the Association of Washington School Principals (AWSP) Leadership Framework (AWSP, 2010). This framework was created to define the skills evident in effective school leadership. As noted in the framework’s statement of accountability, “Student achievement in a performance-based school is a shared responsibility involving the student, family, educators and the community” (AWSP, 2010, p. 2). Criterion 2, which deals with school safety, and Criterion 6, which deals with the management of resources, were focused on the management of schools and were not included in the survey. Criterion 1
deals with a culture that promotes the ongoing improvement of learning and teaching for students and staff. Descriptors of this criterion speak of trust, relationship building, and a commitment to the work of the school (Cotton, 2003; Sergiovanni, 2000; Shannon & Bylsma, 2004). This criterion emphasizes conversation among teachers, the principal and students toward a culture of improvement (Blankstein, 2004; Boreen, Johnson, Niday, & Potts, 2000; Gordon, 2004; Mezirow, 2003; Price, 2012; Zmuda, Kuklis & Klein, 2004). In addition, collaboration and empowerment of teachers through shared leadership are noted as important elements to school improvement (Harris & Muijs, 2005; Lambert, 2003; Servage, 2008).

Criterion 3 speaks to the use of data in the teaching and learning process, including a data-driven plan for increasing student achievement, and the use of multiple types and times of measurement. Systematic collection and interpretation of data provides a window into student understanding and informs effective classroom instruction (City, Kagle, & Teoh, 2005; Frisbie, 2005; Goldberg & Roswell, 2001; Halverson, Grigg, Prichett, & Thomas, 2006; Hodge & Willett, 2005; Love, Stiles, Mindry, DiRanna, & Mundry, 2008; Mintz, Fiarman, Buffett, 2005; Protheroe, 2002).

Criterion 4 deals with curriculum alignment to state, district, and local learning goals with a focus on implementation of best instructional practices (D’Agostino, Welsh, & Corson, 2007; Hallinger, 2007).

Criterion 5, which is also related to the use of data, speaks to “monitoring, assisting and evaluating effective instruction and assessment practices” (AWSP, 2012, p. 25). From an instructional standpoint, this criterion develops the use of formative and summative assessment practices to inform instruction (Ayala et al., 2008; Protheroe, 2002). The utilization of teams and a collaborative process to identify reliable evidence-gathering strategies is emphasized.
Criterion 7 focuses on communicating with and engaging students, parents, and other community members as well as partnering with families and the school community to promote learning (Epstein et al., 2002; Senge et al., 2000).

Criterion 8, “demonstrating a commitment to closing the achievement gap” (AWSP, 2012, p. 39), is also addressed by the TIPS survey. This criterion speaks to the gap between proficient and non-proficient students, and examines whether student attributes, such as culture or gender, are at play (Riehl, 2000; Rusch, 2005). To this end, formative and summative evidence needs to be evaluated with the goal of improving achievement for groups of students that have not traditionally met their learning potential (Ayala et al., 2008).

A bank of questions was developed that explored each of the tenets of organizational mindfulness, including preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise as perceived by classroom teachers. This bank of questions was narrowed to eighteen, which provided direct investigation of each of the tenets of HRO theory, as well as six of the eight criteria from the AWSP Leadership Framework (Feuer, Towne, & Shavelson, 2002).

**Phase 2: Field Test:** The TIPS survey was field tested with 40 teachers. An Exemption Determination Application was submitted by the team of researchers to the Institutional Review Board (IRB) of Washington State University’s Office of Research Assurances prior to administration of the test. The official title of the study was “Mindful Instruction and Leadership Practice: A Survey of Teachers and Administrators in Washington State.” It was determined by the IRB that the study qualified as exempt from full review. IRB approval of the study indicates issues of human rights and informed consent have been addressed. Subjects were also notified
that the survey was voluntary, and that names and individual responses would be kept confidential.

After completing the field test of the TIPS survey, teachers provided feedback on their perception of potential problems, including question order, comprehensiveness, and items that were confusing or poorly written. The research team examined this information, and made adjustments to provide greater clarity to the survey instrument.

**Phase 3: Stratified Random Sample:** A sampling frame, consisting of elementary schools in Washington State, was developed (Babbie, 1990; Nesbary, 2000). An elementary school was defined as any configuration of classes kindergarten through sixth grade (e.g. K – 6 or Pre-K – 2). Non-traditional sites, such as correctional schools and hospitals, were eliminated from the frame. McNamara’s (1994) formula for determining sample size was used to identify the number of schools to be included in the sample. Specifically, a stratified random sample of 1,465 teachers in 293 elementary schools in Washington State were to be included in the study. Schools were randomly selected from the registry of schools provided by the Office of Superintendent for Public Instruction (OSPI). Five teachers from each building were identified, and these teachers were contacted by email and given online access to the TIPS survey. In an effort to encourage completion of the survey, partial and non-respondents were contacted two additional times after the initial contact with assurances of confidentiality and the value of their participation.

**Phase 4: Analysis:** Missing scores on surveys were replaced using the median value for the item provided by the sample. Teacher responses were then averaged by building in order to create a collective teacher score for each school. Descriptive analysis of variables was performed to determine distribution of scores on each TIPS item. The item analysis of central
tendency and variability sought to address the first research question: “How mindful are teachers about their collaborative efforts to improve instruction?” Further, a factor analysis was conducted to address the second research question: “What constructs or factors are present in teacher responses regarding organizational mindfulness for improving instruction?”

**Summary**

This chapter provided an overview of the literature review on organizational mindfulness and teacher collaboration, and identified the potential of these practices in supporting school reform efforts. The problem, purpose, and research questions to be explored in a survey of elementary schools were presented, as were the procedures used to identify the population to be studied and the survey instrument to be used. The information received from this survey will provide insight on the extent to which mindfulness has had an impact on public schools. In this day of reform pressure, it is important to understand how to improve student learning, meet state and federal requirements for student achievement, and best support reform in the public school classroom.

Chapter two provides an extensive review of the literature on both organizational mindfulness and teacher collaboration. Chapter three will present the study’s methodology, including its design and sampling procedures, the development and implementation of the survey instrument, the statistical procedures to be used, and the ethical considerations and study limitations. Chapter four presents an analysis of the TIPS survey data. Finally, Chapter five will review the study, report on findings, and provide implications of applicability of findings to current practice and future research.
CHAPTER TWO

Review of Literature

Since the advent of No Child Left Behind (NCLB) legislation in 2001, the pressure to reform public education has been relentless. The original law affected the work of educators by establishing minimum skill and knowledge levels for all students (Duran, 2005; Linn, Baker, & Betebenner, 2002); these levels were first measured in Washington State by the Washington Assessment of Student Learning (WASL).

Washington’s Office of the Superintendent of Public Instruction (OSPI) has recently adopted Smarter Balanced (SBA) as the state-level assessment for English/language arts (ELA) and mathematics. This test is more rigorous than the WASL or Measurement of Student Progress (MSP). SBA is computer based, implements Common Core standards, and requires students to respond to written passages as well as audio recordings, paintings, and video clips. Third through eighth grade students will be tested using the SBA. Fifth grade students will still be tested in science with the MSP. Students with Individual Education Plans (IEP) will be tested using the Washington Access to Instruction and Measurement test (WA AIM) designed for students with significant cognitive challenges.

In response to these changes in required standards, policies, and procedures over subsequent years, schools have continued to seek and implement strategies to increase student performance on mandated tests and other measures of achievement, including graduation, college, and career readiness, as demonstrated in college persistence rates as well as the level of remediation required at the collegiate level.

As pressure for reform on public schools has increased, research has examined several strategies to meet the demand for change (Bellamy et al., 2005; Duran, 2005; Linn, Baker, &
Betebenner, 2002). Schools, however, operate with significant autonomy (Bellamy et al., 2005), and the relative independence of the classroom teacher and loose coupling of the system have created resistance to reform efforts (Gates & Watkins, 2010; Stringfield, 2011). Public schools have traditionally operated as error-tolerant, often placing the responsibility for failure on the student, the family, or society in general. However, governmental and societal pressures for student success and accountability have shifted their focus to “reliability seeking” (Vogus &Welbourne, 2003). As a result, strategies have been identified that are characteristic of successful schools. Two of these strategies, mindfulness and teacher collaboration, will be examined in this literature review.

This chapter is organized into two parts. Part one provides a review of the literature on mindfulness. Each of the five cognitive processes posited by Weick and Sutcliffe (2007) (i.e., preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise) will be explored, with an emphasis on their applicability or manifestation in a public school setting. Part two covers educational literature concerned with teacher collaboration. Particular attention is given to deprivatization of instructional practice, shared decision making, focus on student learning and improvement of assessment, and shared leadership. The chapter concludes with a review of Chapter 2 and an overview of Chapter 3.

**Mindfulness**

Mindfulness grew out of Buddhist Eastern philosophy’s emphasis that each thought and feeling should be acknowledged and accepted, an idea most notably found in the practice of meditation (Bishop et al., 2004; Weick & Putnam, 2006). Ultimately, this acknowledgement and acceptance leads to the ability to see and understand clearly (Khong, 2009). Mindfulness is defined by Bishop et al., (2004) as “a kind of non-elaborative, nonjudgmental, present centered
awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is” (p 232).

In an organizational application, a Western view of mindfulness has emerged which focuses on being present in the moment. This view uses past learning to make sense of and create order in the present, as well as develop understanding through open-mindedness, novel relationships, and varied perspectives (Langer & Moldoveanu, 2000; Levinthal & Rerup, 2006). This view of mindfulness is characterized by purposeful attention and an ability to discover connections among information.

In 2002, Hoy et al. conducted a literature review of mindfulness in schools and found that a mindful school empowers teachers to make decisions in a cooperative manner. This organizational mindfulness is an underlying attribute of High Reliability Organization (HRO) theory. HROs, such as nuclear submarines or air traffic control stations, operate with the knowledge that a single mistake or error in judgement may have severe consequences (Christianson et al., 2011). Subsequently, a system of operation and management has evolved which recognizes this risk and seeks to minimize the potential for mistakes.

HRO theory postulates five tenets of operation: preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise (Aven & Krohn, 2014; Christianson et al., 2011; Eck, 2011; Khorsandi & Aven, 2013; Weick & Sutcliffe, 2007). The literature on mindfulness and the five characteristics of HRO theory indicate these organizational attributes help schools respond effectively to reform pressures.

The work of Bellamy et al. (2005) compared schools with High Reliability Organizations (HRO) and identified areas of similarity as well as key differences. These researchers proposed a fail-safe framework that addresses HRO strategies to minimize the challenges that hinder
teacher collaboration, since mindful collaboration has been identified as a promising strategy for school reform. Hernes & Irgens (2012) note that when manifested in public schools, organizational mindfulness encourages teachers to engage collaboratively, search for understanding, create meaning, and work for student success. Thus, HRO principles and mindfulness in schools must be evaluated based on how these attributes are operationalized. The following is an examination of the five tenets of HRO theory and their application in a public school setting.

*Preoccupation with Failure*

In HROs, preoccupation with failure is represented by mindful vigilance. Members of the organization are ever watchful for clues that indicate the possibility of a future negative event (Weick, 1996). The underlying precedent deals with action before causal events can develop into crises.

Preoccupation with failure in a public school setting encourages action and intervention at the first sign a student is at risk (Eck, 2011). Since teamwork is an essential component of high reliability (Baker, Day, & Salas, 2006), this intervention shouldn’t be considered the sole responsibility of the classroom teacher but the result of a collaborative process (Resar, 2006). Learning communities exist in most elementary schools, and as a result, teachers often have an existing professional team with whom they can discuss these issues. However, these teams need to be expanded in order to include situation-appropriate specialists in curriculum (such as a reading consultant) or learning issues (such as a special education teacher).

In terms of preoccupation with failure, the mindful teacher is vigilant as she looks for potential learning problems, and she collaborates to identify resources that best address student learning issues.
Reluctance to Simplify

In an HRO, reluctance to simplify is characterized by openness to various solutions to any given problem and resistance to the “we have always done it this way” mentality. It also looks for the basis or cause of the problem rather than simply reacting to the visible symptoms (Eck, 2011). Most organizations have standardized routines to respond to situations, and this is true of HROs as well. However, these mindful organizations are also open to varied and distinct strategies, and they recognize the value of the team as they make necessary decisions in response to unexpected events.

In a mindful school, teachers are empowered to seek and apply solutions to student learning problems (Hoy, 2002). However, when operationalizing reluctance to simplify, schools must resist the urge to use a single, standard approach; instead they should vary their response scenarios to address the unique learning needs in each situation. Professional development, targeted teacher training, group collaboration, and book studies are all examples of ways schools can increase intervention options (Eck, 2011).

Sensitivity to Operations

In an HRO, sensitivity to operations encourages open communication throughout the organization, with an emphasis on those who serve on the front lines (Eck, 2011). Weick (1999) describes this characteristic as having a sense of the “big picture” while also maintaining an awareness of the specific attributes of the current situation.

It follows that open lines of communication and trust in schools are key components of sensitivity to operations (Bellamy, 2011). These components are enhanced by mutual understanding and shared goals (Cox, Jones, & Collinson, 2006). Research also shows that communication is foundational to successful school reform (Mulford, 2005). In a healthcare
setting, Sutcliffe, Lewton and Rosenthal (2004) found that communication flaws often lead to patient mishaps. If we replace patient with student, it becomes clear that communication is critical for success in the school setting as well. The mindful teacher recognizes that trust and open lines of communication are necessary for student success (Hoy et al., 2006).

**Commitment to Resilience**

Commitment to resilience is the fourth tenet of HRO theory. Resilience is the ability of an organization to respond to change. It also speaks to the organization’s ability to cope with and respond to errors or failures (Bellamy et al., 2005). One form of response is to analyze failures and develop intervention strategies to address potential future issues (van Fenema, 2005).

In a typical HRO, reliability is accomplished through prevention since the catastrophic results of an error would be immediately evident and could have a significant impact on society. In a public school setting, reliability is achieved through resilience (Blatt et al., 2006). Student failure is catastrophic for the individual, the family, and the community as a whole, but it occurs one person at a time and doesn’t have an immediate impact on society (Stringfield, 2011). As a result, schools have often been able to ignore failures and shift blame to other stakeholders. Resilience accepts responsibility and recognizes that though failure is inevitable, it provides an opportunity to examine and learn from the situation so that similar failures can be avoided.

The mindful teacher responds to failure by developing response scenarios for future success (Bellamy et al., 2005).

**Deference to Expertise**

The final tenet of HRO theory is deference to expertise. HRO organizations have clear lines of authority, but when addressing potential risk, authority to make decisions is relinquished
to those with the greatest expertise, regardless of their actual position in the authority structure (Hoy, 2002; Somech, 2005). Toward this end, attention is given to the hiring process to ensure that team-members have a broad range of abilities (Eck, 2011).

When implementing deference to expertise, mindful organizations enable and empower their employees. They accomplish this by having clear hierarchies, rules, and procedures, while maintaining the flexibility to empower individuals, allowing them to work in a cooperative and collaborative manner (Hoy, 2002). As such, collaboration becomes a key component of mindful schools. Not every school that collaborates is mindful; however, every mindful school operates in a collaborative manner.

Mindful teachers engage collaboratively and cooperatively to search for understanding, create meaning, and work for student success (Hernes & Irgens, 2012). To this end, the mindful teacher collaborates with those who have the greatest expertise to address learning issues.

**Teacher Collaboration**

Teacher collaboration is a component of effective schools. In 1999, Marks and Louis identified teacher collaboration and empowerment focused on teaching and learning to be necessary practices for schools to perform well. Empowerment was understood as occurring primarily through teacher participation in decision making and was seen as fostering a culture concerned with instructional improvement. Somech (2005) conducted a study of 983 middle and high school teachers and found that educators performed at the highest level when team empowerment was in place. Neumerski (2013) conducted an extensive review of the literature on educational leadership, including the role of teacher instructional leadership, and noted its importance. She stated, “The aims of instructional leadership are tied to the core work of schools: teaching and learning” (p 316).
Teacher collaboration provides an opportunity to develop new classroom knowledge and practice by allowing teachers to work with colleagues and reflect on current practice, curriculum, and student learning, as well as refine teaching strategies for student success (Harris & Jones, 2010; Little, 2002; Richmond & Manokore, 2010; Scribner & Bradley-Levine, 2010).

One of the key advocates of teacher collaboration, Judith Warren Little (1982), has spent her career exploring the nature of the social organization of schools as related to improvement of teacher learning and practice. Little (1993) wrote:

The most promising forms of professional development engage teachers in the pursuit of genuine questions, problems, and curiosities, over time, in ways that leave a mark on perspectives, policy, and practice. They communicate a view of teachers not only as classroom experts, but also as productive and responsible members of a broader professional community. (p. 133)

Her studies, conducted over several decades, examined how classroom practice is known, shared, and developed through teacher learning communities, as well as its impact on teacher development and school reform (Little, 2002).

In 1995, Karen Seashore Louis and Sharon Kruse published *Professionalism and Community: Perspectives on Reforming Urban Schools*. In this seminal book, they articulated characteristics and conditions for successful teacher communities in schools. The text identified five key characteristics of a professional community: shared values, reflective dialogue, deprivatization of practice, focus on student learning, and collaboration. Scribner et al. (1999) affirmed these five characteristics and went on to describe schools as communities developed through shared leadership and teacher mutual dependence.
In a school setting, teacher collaboration allows meeting around a common set of goals, shared responsibility for work, and a commitment to work together on effective classroom practice (Lavie, 2006; Richmond & Manokore, 2010). For teacher teams to be effective, they need authority to make decisions. However, Vescio et al. (2008) and Dooner et al. (2007) question whether collaboration creates a fundamental change in the traditional authority structure of schools, and how change in practice, if any, develops. This review of literature examines each of these issues.

**Deprivitization of Instructional Practice**

In the past, teaching has largely been private, with an individual teacher and her students in a “kingdom” separated from others in the school by a closed door (Richmond & Manokore, 2010; Thessin & Starr, 2011). This attitude has been adopted by many parents who viewed the school not as a community of learners but as an organization of individual teachers (Louis & Wahlstrom, 2011). Many teachers who reject team teaching and other forms of collaboration accept sole responsibility for instruction (Wood, 2007a). Given this mindset, it was often assumed that the success or failure of any given child rested on the expertise and effort of the classroom teacher alone. Taylor, Goeke, Klein, Onore and Geist (2011) note that reform efforts within the teaching profession are challenged by values of individualism and isolationism. In contrast, teacher collaboration offers an alternative by creating conversation around common goals, curriculum, and an opportunity for implementation of effective classroom practice (Scribner & Bradley-Levine, 2010; Servage, 2009). Sergiovani (2000) stated, “developing a community of practice may be the single most important way to improve a school” (p. 139).

Collaboration reduces teacher isolation by creating a team of professionals that work together to develop common goals (Bryk et al., 1997; Garrett, 2010). When a collaborative team
of educators is given the opportunity to discuss teaching and student learning, they develop shared understanding, beliefs, and values (Abbate-Vaughn, 2005; Doolittle, Sudeck, & Rattigan, 2008). As these commonalities increase, teachers become relationally bound to their colleagues (Servage, 2008), and yield or meld their individual desires to the collective obligation of the team (Dooner et al., 2007).

Teacher teams reduce teacher isolation by allowing professionals to develop curriculum through shared pedagogy and intervention strategies. Louis and Kruse (1997) characterize this as a network of colleagues who share a common interest. Research has shown that teaming positively impacts teacher practice (Richmond & Manokore, 2010), and DuFour (2004) identified this as working together for a common purpose. Given the time to work in teams, educators examine classroom work, compare their practice to research, and develop teaching and intervention systems that positively impact student learning (Gates & Watkins, 2010; Servage, 2008; Wood, 2007a).

Collaboration improves student learning through improved teaching (Harris & Jones, 2010; Vescio et al., 2008). It provides an opportunity for teachers to learn in and from classroom practice (Little, 2002). It encourages development of a school-wide culture that ensures no student is allowed to fail without early, targeted intervention (Emihovich & Battaglia, 2000; Garrett, 2010). Scribner, Sawyer, Watson, & Myers (2007) note that professional community is characterized by inclusiveness, power sharing, and a higher expectation for student achievement. This is accomplished by deciding what to teach, how to teach it, and how to manage students (Abbate-Vaughn, 2005). Once a student is identified as having a learning issue, the team provides a forum where the classroom teacher can seek support and suggestions from colleagues.
This helps to reduce feelings of isolation and encourages the school community to view students as “ours” instead of “mine.”

A core benefit of collaboration, and the success or failure of the work of teacher teams, rests with effective teacher interaction (Wood, 2007b). Louis, Dretzke, & Wahlstrom (2010) found that teacher relationships lead to stronger focused instruction. Through the collaborative process, teacher practice is deprivatized, as noted earlier, which is an important step toward systemic change/growth of teaching strategies (Little, 2002; Scribner, Hagar & Warne, 2002). A scheduled time to communicate and work with colleagues provides a sense of common purpose and collegiality among the teaching staff (Doolittle et al., 2008).

One of the key components of teacher interaction is reflective dialogue. This ability to openly reflect on classroom procedures with colleagues provides an opportunity for teachers to examine the effectiveness of classroom strategies and discuss how to implement best practice (Abbate-Vaughn, 2005). One strategy to achieve reflective dialogue is through critical dialogue (Dooner et al., 2007). This requires team members to actively listen to one another and clearly articulate their views. When communication among professionals is open and focused on classroom practice, change that benefits student learners follows (Harris & Jones, 2010).

Another key component of the collaboration process is the creation of a culture of learning within the school (Richmond & Manokore, 2010). Organizational learning is synonymous with team learning (Devos, Van den Broeck, & Vanderheyden, 1998). Training provided to teachers should emphasize the value of working with other professionals, the interdependence of the various components of the school as a system, and the importance of openness and safety when expressing ideas and opinions in the learning group (Lavie, 2006). As they explore possibilities for the classroom, team members should be able to express their
opinions, listen respectfully to others, and defend their position. In other words, the school should have a culture in which people are respected and relationships are valued.

**Shared Decision Making**

As noted, schools in the past have been characterized by isolated practice (Rosenholtz, 1989). In contrast, teacher collaboration creates a team of professionals who decide what to teach, how to teach it, and how to manage the classroom (Abbate-Vaughn, 2005). Teacher collaboration and empowerment is necessary for high performance in schools (Marks & Louis, 1999). Harris (2003) stated it this way: “A professional community, therefore, is one where teachers participate in decision making, have a shared sense of purpose, engage in collaborative work, and accept joint responsibility for the outcomes of their work” (p. 321).

Scribner et al. (1999) noted that a school, operating as a community of learners, is no longer best served by a traditional, top-down authority structure. Instead, teacher empowerment increases the quality of decisions made in the school and improves instructional practice and student achievement (Somech, 2005). In Somech’s (2005) quantitative study, he found a positive association between performance and both personal and team empowerment. Marks and Louis (1999) noted that in high performing schools, leadership is decentralized. As a result, authority is often delegated to the teacher team.

**Focus on Student Learning and Improvement of Assessment**

The teacher team occupies a unique place within the school because it is situated between school policy and teaching in the classroom (Dooner et al., 2007). Since professional development should be focused on student achievement, one of the benefits of teacher involvement is the ability to focus professional development on students’ classroom needs (Garrett, 2010; Harris & Jones, 2010)). To this end, analysis of assessment data identifies areas
of need, and training can be sought to address these specific areas. This inquiry allows teachers to gain knowledge through outside experts, develop that knowledge through classroom experience, and meld the two to make an informed change concerning ongoing classroom practice (Wood, 2007a). As a result, collaborative teams support teachers as they respond to assessment data (Thessin & Starr, 2011).

An emphasis on the use of data in schools has grown with the use of technology (Wohlstetter, Datnow & Park, 2008). Data-driven decision-making has been positively correlated to student learning, as well as to school effectiveness and improvement (Dunn et al., 2012). Collaboration during team work allows data-literate teachers time to share their expertise with those who are in need of support (Dunn & Airola, 2013). This sharing helps ensure that all students benefit from decisions made based on testing data.

Formative assessment is the appraisal of student response to allow for immediate adjustment of instruction (Dunn et al., 2012; Marlow, 2010; Roskos & Neuman, 2012) and to ensure students have mastered key skills (Dirksen, 2011). The teacher evaluates whether individual students need remediation, grade-level support, or have mastery and require enrichment activities (Dunn et al., 2013; McLeod, 2009). Evaluation can take the form of observation, strategic questioning, assignments, or learning activities (Dirksen, 2011). Research has shown that formative assessment positively affects student performance and has greater impact on student learning than any other classroom strategy (Duckor, 2014; Hattie, 2008; McLeod, 2009). Teachers need to plan for assessment (Roskos & Neuman, 2012); the collaboration process can facilitate this by allowing teachers to discuss with team members its application in the classroom.
While formative assessment provides information concerning student understanding as concepts are being taught, summative assessment provides a measurement of the effectiveness of student retention of those concepts (Dirksen, 2011; Marlow, 2010). The collaborative team provides a forum for teachers to develop common summative assessments (Bernhardt, 2009), as well as to evaluate assessment results to determine the effectiveness of teaching strategies.

Standardized testing is the third level of the assessment process. These tests, often created and normed at the state or federal level, provide a broader view of school and classroom achievement, can be used to gauge how well district goals are being met, allow for discussion concerning the effectiveness of teaching strategies, and can help predict future successes and minimize potential student failures (Bernhardt, 2009).

**Shared Leadership**

A teacher community shifts the culture of the school from individuality to collegiality; it creates an environment where professionals participate in decision making, share a common sense of purpose, work collaboratively, and accept responsibility for student results in the classroom (Bryk et al., 1997; Harris, 2003; Little, 2002). Teacher communication and the ability to address and process new information as a community of professionals are improved when teachers are given the professional opportunity to work as teams (Kruse & Louis, 1997). The shift in the culture of the school to professionalism positively affects teacher practice and student outcomes (Richmond & Manokore, 2010).

This shift in the culture and structure of schools creates an inherent tension between teacher leadership and the principal (Scribner et al., 2002). Since the strength of the professional community is directly related to the autonomy provided to teachers, it is imperative that principals recognize the necessity to empower their teaching staff (Kruse & Louis, 1997). From
a teacher’s viewpoint, this leadership is characterized by the authority to make decisions (Scribner & Bradley-Levine, 2010). From an organizational view, empowerment is focused on teaching and learning, and as a result, student outcomes (Marks & Louis, 1999). When teachers have a voice in decision-making, they have a greater belief in those decisions and a vested interest in their implementation (Devos et al., 1998). Positive relationships between and among the principal and teachers lead to a stronger focus on instruction; additionally, managing the empowerment of teacher leadership is a critical component of school success (Louis et al., 2010).

Teacher leadership and school improvement are strongly correlated (Harris, 2003). The essence of leadership is the ability to accomplish results through others (Devos et al., 1998), and evidence supports the fact that effective leadership makes a difference in the performance of schools (Louis et al., 2010). This culture of shared leadership and decision making is a characteristic of collaboration (Scribner et al., 2007). Leadership permeates all organizations and is vested in accomplishment and influence, and not simply in a designated position (Maxcy & Nguyen, 2006). Teacher collaboration recognizes that there are multiple leaders in a building who have varied expertise (Harris & Spillane, 2008). As a result, when districts make the commitment to support teacher collaboration, they need to recognize that the team must be given authority to make decisions. Students benefit from this shared leadership, the collective creativity provided by the team model, shared values within the school community, and the creation of a supportive learning environment (Doolittle et al., 2008). The literature recognizes that there is a positive relationship between school improvement and teacher leadership in schools (Harris, 2003).

Though leadership is shared in effective schools, the district administration continues to play a key role in the success of teacher collaboration. Initially, district administration
establishes the need for collegial work by sharing the rationale for the collaborative process, as well as providing training to participants. This training helps teachers understand their responsibility for participation as team members. Key components of team success also include involvement of teachers in the planning process, being clear on the role they play in the district plan for improvement, and providing support for specific needs of individual schools for implementation (Thessin & Starr, 2011). Ongoing support from the district includes coordinating the work of teams, providing release time for participating teachers, and insuring professional development is aligned with the work of the team and with district goals (Jacobson, 2010; Rafoth & Foriska, 2006).

Group strategy components include a clear understanding of the communication process, a clear mission including goals and objectives, a plan to complete the work necessary to accomplish goals, and an understanding of the decision making process through appropriate commitment by group members (Doolittle et al., 2008). The implementation of teacher teams increases lateral communication among colleagues and encourages staff members to receive and evaluate information (Kruse & Louis, 1997); this, in turn, increases teacher efficacy. This belief in the ability to teach creates understanding that educators have the skills necessary to positively impact student learning (Hoy, 2002).

The training of group process within the school is an important component of team success and needs to be a priority of the building principal. Groups often operate in a passive communication mode in which expressions are only statements of fact. Teams that operate at this level typically lack trust for others in the group. As a result, their effectiveness is limited. In contrast, active communication includes statements of fact as well as directive statements. In order to pursue systemic change, groups need to communicate at an active level, and members
should feel safe expressing their opinions concerning what is happening in both the classroom and the school (Scribner et al., 2007).

To foster this level of healthy communication, the purpose of the group needs to be clear, and members need to be given the authority to address learning issues. This level of sharing requires vulnerability on the part of group members, and administrators can help to create the proper atmosphere by providing clear guidelines for staff interaction (Huggins, Scheurich, & Morgan, 2011). Clearly identifying the problem to be addressed facilitates effective communication (Doerr, 2009).

Though leadership is decentralized, the role of the principal remains important to the team process. Effective principal leadership fosters collective learning of new instructional strategies, and trust in the principal is a predictor of teacher satisfaction (Louis et al., 2010). Principals provide a focus for collaborative work, help maintain that focus on improved teacher and student learning, and provide release time and financial support to participating teachers (Huggins et al., 2011).

**Summary**

In this chapter, the literature on mindfulness has been explored along with the five cognitive processes of HRO theory (preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise) with an emphasis on their applicability in a public school setting. Literature concerned with teacher collaboration was also examined, with particular attention given to deprivatization of instructional practice, shared decision making, focus on student learning and improvement of assessment, and shared leadership.
The research presented has shown that both teacher teams and mindfulness are effective strategies for schools as they attempt to meet the demand for school reform. As teacher teams have become ubiquitous in public schools, the need to examine their implementation and effectiveness through a lens of mindfulness has become evident, and a quantitative research study to investigate the relationship between teacher collaboration and collective mindfulness is clearly needed.

In the next chapter, the rationale for survey design is introduced, as well as the procedures for sampling and the development of the sampling frame. The next section examines development and implementation of the survey instrument. In the fourth section, statistical procedures are discussed, including analysis of the data. The final sections include a discussion of ethical considerations, and study limitations/delimitations.
CHAPTER THREE

Methodology

This study was conducted to examine teacher collaboration and organizational mindfulness in schools. Investigating the nature and integration of mindfulness and teacher collaborative practices in schools will provide the foundation for improving teaching and desired student learning outcomes. Chapter three of this dissertation discusses the development and implementation of Teacher Improvement Practices and Sentiments (TIPS), a survey designed to measure teacher awareness of the shared beliefs and practices that are shown in literature to be critical to teacher collaboration.

When reviewing educational research, a meaningful overlap between collective mindfulness and teacher collaboration became evident. Both collective mindfulness and teacher collaboration seek improved educator practice and student learning, and both focus on cooperation and teamwork. Currently, researchers interested in collective mindfulness and teacher collaboration lack an investigative tool with specificity, therefore, the purpose of this dissertation was to develop an instrument that would examine this specific relationship in schools. To this end, the TIPS survey was developed and disseminated to a sample of Washington schools to measure teacher collaboration and collective mindfulness. The following research questions were explored:

1) How mindful are teachers about their collaborative efforts to improve instruction?

2) What constructs or factors are present in teacher responses on organizational mindfulness for improving instruction?

This chapter is divided into several sections. In the first section, the survey design rationalize is introduced, along with the procedures for gathering data using the TIPS and school-level data
provided by OSPI. The next section explains sampling size and the sampling frame for external validity. The third section presents the development and organization of the TIPS survey. In the fourth section statistical procedures are discussed, including analysis of the data. The final sections include ethical considerations, study limitations/delimitations, and a summary of the chapter.

**Survey Design and Data Collection Procedures**

The survey format is the most widely used application of quantitative research in the field of education (Anseel, Lievens, Schollaert, & Choragwicka, 2010; Simsek & Veiga, 2001). Surveys administered on the internet have become ubiquitous, as they are less costly than many other modes of information gathering (Wiersma & Jurs, 2005). “Survey research is a specific type of field study that involves the collection of data from a sample of elements, drawn from a well-defined population, through the use of a questionnaire (Visser, Krosnick, & Lawrakas, 2000, p. 223).” Data gathered through surveys provides insight into existing relationships between variables, including testing theory, and determines the scope or nature of variables in a population (Anseel et al., 2010; Baruch & Holtom, 2008).

Research has identified a protocol that increases the rate of return on surveys (Couper, Traugott, & Lamias, 2011). This protocol includes prior notification, distribution of the survey, and a minimum of two follow-ups to thank participants and/or encourage non-respondents to consider participation (Anseel et al., 2010; Baruch & Holtom, 2008; Dillman, 2000; Goyder, 1985; Heberlein & Baumgartner, 1978; Reis & Judd, 2000; Schaefer & Dillman, 1998; Scott, 1961).

In order for subjects to be sent invitations for this survey, a sample of elementary schools in Washington State was created. (The procedures that were followed to establish the size of the
sample are explained in greater detail in the next section of this chapter.) After the sample schools were randomly chosen, five teachers from each building were identified to participate in the study.

Once schools and teachers were identified, e-mail contact was made in order to introduce the study and invite participation in the TIPS survey on instructional leadership in Washington Schools (Appendix A). Since university endorsement of surveys increases participation (Bruvold, Comer, & Rospert, 1990; Fox, Crask, & Kim, 1988), notice of administration by Washington State University (WSU), as well as assurances of confidentiality and voluntary participation, were included in the e-mail. In the case where an email address was invalid, random teachers were selected as replacements. One week after the initial contact, partial and non-respondents were contacted a second time urging participation (Appendix B). Teachers were again assured confidentiality and that their participation was voluntary, with the additional enticement of a drawing for a $25 gift card from the pool of respondents. Two weeks after initial contact an additional follow-up was made to partial and non-respondents (Appendix C). The final TIPS contact of partial and non-respondents was made three weeks after the initial contact, and included the date and time that the survey would close (Appendix D). The survey was open and available for one month.

In addition to gathering data from teachers, school data were also collected on elementary campuses in Washington State from 2015 reports provided by the Office of the Superintendent for Public Instruction (OSPI). School level data included size of school, percentage of students by gender, percentage of racial minority students, percentage of students who qualified for free/reduced meals, students per teacher, average teacher experience, and percentage of teachers with at least a Master’s degree. State assessment scores for fifth graders in reading, math, and
science were also downloaded. State protocols were followed by educators for collecting information reported to the state and general public and helped ensure the quality and score reliability of this information.

**Sampling Size and Sampling Frame**

Determining the size of a sample that accurately reflects the population is an important step in the survey process (Shavelson, 1996). Generally, the larger the sample size, the greater the accuracy and statistical power of the results. Statistical power is the ability to measure differences or effects between groups. Statistical power also allows researchers to determine the degree to which results are likely to accurately reflect the larger population (reducing sampling error). McNamara’s (1994) formula for determining sample size was used to identify the number of schools to include in the study. The procedures for calculating the sample size are now explained.

A sampling frame, consisting of the target population of elementary schools in Washington State, was first identified (Babbie, 1990; Nesbary; 2000). On its School Report Card website, OSPI lists the public schools in Washington State, and the registry for 2015 was used. The information from this file was imported to the SPSS program. Non-traditional programs, such as charter schools and alternative programs, were excluded. Elementary schools, defined as any configuration of classrooms from pre-kindergarten through sixth grade, were identified. There were 2,097 total schools which were sorted using the “grade_span” variable with the aforementioned attributes. McNamara’s (1994) formula for determining sample size necessary for representativeness was utilized, with a 5% margin of error and a confidence level of 99%. This analysis indicated that 293 elementary schools should be included in the stratified random sample.
Instrumentation

Since an instrument with the desired specificity to measure teacher collaboration and collective mindfulness was not available, a team of researchers was convened. This team developed a survey on mindfulness entitled Teacher Improvement Practices and Sentiments (TIPS). The following section describes the TIPS survey.

Five researchers, acting as a learning community, developed the Teacher Improvement Practices and Sentiments (TIPS) survey used in this study. A literature review was completed to explore the attributes of mindfulness and teacher collaboration. Attention was given to literature exploring the ways these concepts are present in the work of public school teachers. The TIPS instrument was created to explore the tenets of organizational mindfulness which include preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise as perceived by classroom teachers. This questionnaire provided direct investigation of these attributes as they exist in public schools (Feuer et al., 2002). In addition, questions were aligned with six of the eight criterion identified on the Association of Washington School Principals (ASWP) leadership framework (see Table 1). Column 1 of Table 1 provides the individual items from the TIPS survey. Column 2 provides alignment with mindfulness and the five cognitive processes of HRO theory. Column 3 shows alignment of the TIPS items with Criterion 1, 3, 4, 5, 7, & 8 from the AWSP leadership framework. Included criteria were Criterion 1 (creating a culture), Criterion 3 (planning with data), Criterion 4 (aligning curriculum), Criterion 5 (improving instruction), Criterion 7 (engaging communities), and Criterion 8 (closing the gap). Column 4 in Table 1 provides citations from supporting literature.
<table>
<thead>
<tr>
<th>TIPS Item</th>
<th>Mindfulness Process</th>
<th>AWSP Criteria</th>
<th>Supporting Literature</th>
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<tr>
<td>1) Students should be responsible for their</td>
<td>D) Reluctance to</td>
<td>1. Creating a</td>
<td>DiPaola &amp; Tschannen-Moran, 2005; Hoy &amp; Tarter, 2011; Leithwood, Louis, Anderson,</td>
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<td>learning</td>
<td>Simplify Culture</td>
<td>Culture</td>
<td>Wahlstrom, 2004; Leithwood, Patten, &amp; Jantzi, 2010; Miller, 1993; Scribner et al.,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2007; Stringfield, 1995, 1998; Weick &amp; Sutcliffe, 2001, 2006; Weick et al, 2005</td>
</tr>
<tr>
<td>2) Maintaining order in the classroom is a</td>
<td>D) Reluctance to</td>
<td>4. Aligning</td>
<td>Bauer &amp; Brazer, 2012; Hoy &amp; Tarter, 2011; Miller, 1993; Stringfield, Reynolds, &amp;</td>
</tr>
<tr>
<td>high priority</td>
<td>Simplify Curriculum</td>
<td>Curriculum</td>
<td>Schaeffer, 2008; Weick &amp; Sutcliffe, 2001, 2006</td>
</tr>
</tbody>
</table>

(continued)
Table 1 – Alignment of TIPS Items (continued)

<table>
<thead>
<tr>
<th>TIPS Item</th>
<th>Mindfulness Process</th>
<th>AWSP Criteria</th>
<th>Supporting Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>3) Parents in this school do the best they can to support their student(s)</td>
<td>D) Reluctance to Simplify 7. Engaging Community</td>
<td></td>
<td>Miller, 1993; Senge, 1990; Stringfield, 1995, 1998; Weick &amp; Sutcliffe, 2001, 2006</td>
</tr>
<tr>
<td>4) Student’s motivation and performance is dependent on their home environment: teachers cannot do much to overcome this</td>
<td>B) Commitment to Resilience 7. Engaging Community</td>
<td></td>
<td>Blase J. &amp; Blase J., 2004; Bryk &amp; Schneider, 2002; DiPaola &amp; Tschannen-Moran, 2005; Hoy et al., 2006; Leithwood et al., 2010; Mayer, Davis, &amp; Schoorman, 1995; Senge, 1990; Stringfield, 1995, 1998; Weick &amp; Sutcliffe, 2006</td>
</tr>
</tbody>
</table>
Table 1 – Alignment of TIPS Items (continued)

<table>
<thead>
<tr>
<th>TIPS Item</th>
<th>Mindfulness Process</th>
<th>AWSP Criteria</th>
<th>Supporting Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>5) Teachers spend much time on solving student learning problems</td>
<td>A) Preoccupation with Failure</td>
<td>8. Closing the Gap</td>
<td>Bellamy et al., 2005; DuFour, 2004; Miller, 1993; Rogers Commission, 1986; Starbuck &amp; Milliken, 1988; Stringfield, 1995, 1998; Weick &amp; Sutcliffe, 2006; Weick et al., 1999</td>
</tr>
<tr>
<td>6) Participation in PLCs has helped teachers know better their strengths and weaknesses in instruction</td>
<td>A) Preoccupation with Failure</td>
<td>5. Improving Instruction</td>
<td>Bellamy et al., 2005; Leithwood &amp; Jantzi, 2008; Miller, 1993; Rogers Commission, 1986; Starbuck &amp; Milliken, 1988; Stringfield, 1995, 1998; Weick &amp; Sutcliffe, 2006; Weick et al., 1999</td>
</tr>
<tr>
<td>TIPS Item</td>
<td>Mindfulness Process</td>
<td>AWSP Criteria</td>
<td>Supporting Literature</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------</td>
<td>---------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>8) With hard work a teacher can get through even the most difficult situation</td>
<td>C) Commitment to Resilience</td>
<td>5. Improving Instruction</td>
<td>Bryk &amp; Schneider, 2002; DiPaola &amp; Tschannen-Moran, 2005; Hoy &amp; Tarter, 2011; Hoy et al., 2006; Leithwood et al., 2010; Stringfield, 1995, 1998; Tschannen-Moran &amp; Hoy, 1998</td>
</tr>
<tr>
<td>TIPS Item</td>
<td>Mindfulness Process</td>
<td>AWSP Criteria</td>
<td>Supporting Literature</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9) Not enough PLC time is used for improving instruction</td>
<td>D) Sensitivity to Operations</td>
<td>4. Aligning Curriculum</td>
<td>Bauer &amp; Brazer, 2012; Bellamy et al., 2005; Copland, 2003; DuFour, 2002, 2004; Fullan, 2001; Hallinger &amp; Heck, 1996; Kruse &amp; Louis, 1997; Leithwood et al., 2004; Stringfield, 1995, 1998; Stringfield et al., 2008; Weick &amp; Sutcliffe, 2006; Weick et al., 2005</td>
</tr>
<tr>
<td>10) Student data provided to teachers is not useful for developing interventions</td>
<td>A) Preoccupation with Failure</td>
<td>3. Planning with Data</td>
<td>Bellamy et al., 2005; Fullan, 2001; Miller, 1993; Rogers Commission, 1986; Starbuck &amp; Milliken, 1988; Stringfield, 1995, 1998; Weick &amp; Sutcliffe, 2006; Weick et al., 1999; Weick et al., 2005</td>
</tr>
</tbody>
</table>
### Table 1 – Alignment of TIPS Items (continued)

<table>
<thead>
<tr>
<th>TIPS Item</th>
<th>Mindfulness Process</th>
<th>AWSP Criteria</th>
<th>Supporting Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>12) Teachers talk with students to know what is going on at home</td>
<td>C) Deference to Expertise</td>
<td>7. Engaging Community</td>
<td>Fullan, 2001; Senge, 1990; Weick &amp; Stucliffe, 2001, 2006; Weick et al., 1999</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>TIPS Item</th>
<th>Mindfulness Process</th>
<th>AWSP Criteria</th>
<th>Supporting Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIPS Item</td>
<td>Mindfulness Process</td>
<td>AWSP Criteria</td>
<td>Supporting Literature</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------</td>
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</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>TIPS Item</th>
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<th>Supporting Literature</th>
</tr>
</thead>
</table>

(continued)
Table 1 – Alignment of TIPS Items (continued)

<table>
<thead>
<tr>
<th>TIPS Item</th>
<th>Mindfulness Process</th>
<th>AWSP Criteria</th>
<th>Supporting Literature</th>
</tr>
</thead>
</table>
Questions on the TIPS survey were selected response (Wiersma & Jurs, 2005) and utilized a unipolar rating scale. Participants were asked to quantify beliefs in questions 1-10, and received the following instructions: “Below is a brief collection of statements about teacher instructional practices and beliefs. Using the scale on the column for questions 1-10, please indicate the proportion of teachers at (school name) that you believe would agree with each statement.” Answers were recorded on a five-point scale ranging from \textit{a few to almost all}. After completing the first section, participants were asked to rate frequency in questions 11-18, with responses on a six-point scale ranging from \textit{less than once a month} to \textit{daily}. Instructions for the second section were: “For questions 11-18, please indicate the frequency that teachers at (school name)…

<table>
<thead>
<tr>
<th>TIPS Item</th>
<th>Mindfulness Process</th>
<th>AWSP Criteria</th>
<th>Supporting Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>18) Teachers hear colleagues offer praise to unmotivated students</td>
<td>B) Commitment to Resilience</td>
<td>1. Creating a Culture</td>
<td>Blase J. &amp; Blase J., 2004; DiPaola &amp; Tschannen-Moran, 2005; Fullan, 2001; Hoy et al., 2006; Leithwood &amp; Mascall, 2008; Leithwood et al., 2004; Mayer et al., 1995; Price, 2012; Wahlstrom &amp; Louis, 2008; Weick &amp; Sutcliffe, 2006</td>
</tr>
</tbody>
</table>
name) would say they practice each statement. Please answer according to what accurately reflects your recent experience rather than what you think their responses should be.” To discourage automatic answers and response bias, some of the items included were reverse scored. This procedure not only helps engage the respondent and discourages a “fill-in-the-bubble” mentality, it also provides the researcher with an internal check for reliability.

Participants were also asked to supply demographic data including gender, ethnicity, years teaching, number of years at the current school, and highest degree earned. This data will be used to compare attributes of the sample with the population to ensure it is representative.

**Data Management and Analysis**

Survey results were analyzed with respect to the hypotheses and research questions of the study. Convergent validity, as well as measures of variability and central tendency including mean, median, and standard deviation, were investigated. Teacher data from the survey was merged with demographic data provided by OSPI. Since survey scale responses were ordinal, missing data for respondents was replaced using a median value. In an effort to reduce the bias of any individual teacher, responses were averaged by building to create a collective score for each school.

Analyses of variables were performed on the TIPS survey to determine distribution of scores using measures of central tendency and variability. Descriptive analyses were also conducted on school variables provided by OPSI including total enrollment, number of students on free or reduced lunch programs, number of racial minority students, number of transitional/bilingual students, and the percentage of 5th grade students meeting standard in reading, mathematics, and science on spring 2014 state assessments. Other variables, also
provided by OPSI, include average class size, average years of teacher experience, and the percentage of teachers with a master’s degree were also analyzed.

An exploratory factor analysis (EFA) was utilized to assess the underlying constructs on the items that measure organizational mindfulness of teachers for improving instruction. The results of the factor analysis were compared to the five tenets of HRO theory (Weick, 2007), as well as the AWSP leadership criteria. Huck (2012) states, “Factor analysis is a procedure that attempts to reduce the complexity of a multi-variable data set so it becomes easier for people to use the data in applied settings or in the development/refinement of theory” (p. 479). EFA produces a correlation matrix, allowing the researcher to analyze the variance and covariance within and among the set of variables (Leech, Barrett, & Morgan, 2011). Reliability of factor scores (internal consistency) was assessed using Cronbach’s alpha.

**Ethics**

Ethical administration of survey research speaks to its morality (Babbie, 2004). Standards of conduct include protection of participants, conclusions based on research findings, and complete and accurate reporting of information (Sproull, 1988). It is also important that respondents are fully informed (Babbie, 2004; Fink, 2003; McNamara, 1994; Sproull, 1988). This includes disclosure of the purpose of the survey, and how the data set will ultimately be used (Babbie, 1990).

Participants in the survey participated freely and were not pressured (Babbie, 1990; McNamara, 1994). In addition, participation did not cause injury to the respondent, including the careless use or disclosure of sensitive data (Babbie, 1990, 2004). The identity of participants was protected through confidentiality (Babbie, 1990; McNamara, 1994). Identity of respondents was disassociated from the data received/reported.
An Exemption Determination Application was submitted by the team of researchers to the Institutional Review Board (IRB) of Washington State University Office of Research Assurances prior to administration of the surveys. The official title of the study was “Mindful Instruction and Leadership Practice: A Survey of Teachers and Administrators in Washington State.” It was determined by the IRB that the study qualified as exempt from full review. This addressed the issues of human rights and informed consent. Subjects were also notified that the survey was voluntary, and that names and individual responses would be kept confidential.

**Delimitations and Limitations**

The sampling frame chosen limits the population studied. A national survey was too costly to complete, both in terms of time and expense. As a result, findings from this research project may not be generalizable to other states. To determine if conclusions from the survey apply elsewhere, it should be replicated to determine if findings are generalizable. The sampling frame also removed non-traditional schools from the study, requiring further research to determine if conclusions are representative of these populations. A second delimitation occurred when not all randomly chosen teachers/schools could be contacted by email. These individuals/schools were replaced in the study, and their exclusion represents a threat to the validity of the study.

Non-respondents are a limitation to the study. Though design of the study gave consideration to response rate, some individuals chose not to participate. It could not be determined why certain individuals did not respond, however, if they represented a similar viewpoint or characteristic it could have an impact on survey results, and thus presents a potential limitation. As a result, every effort was made by the researcher to examine respondents
and make comparisons with non-respondents to ensure that something in the design of the study did not discourage a sub-group from participation, and thus create a threat to validity.

**Summary**

In the Encyclopedia of Survey Research Methods, Janice Ballou (2008) states: “A survey is a research method used by social scientists (e.g. economists, political scientists, psychologists, and sociologists) to empirically and scientifically study and provide information about people and social phenomena” (p 860). This chapter discussed the methodology of the study including survey design, sampling size and sampling frame, instrumentation, data management and analysis, ethics, and delimitations and limitations.
CHAPTER FOUR

Data Analysis

This study explores mindful teacher collaboration for improving instruction in response to the ongoing call for school reform and increased student outcomes. In order for schools to make systemic and long-lasting change, fundamental shifts in the culture of the school (including changes in systems of operation and beliefs), must be made. Speaking to this point, DuFour and Fullan (2013) stated:

Cultural change required altering long-held assumptions, beliefs, expectations, and habits that represent the norm for people in the organization. These deeply held but typically unexamined assumptions help people make sense of their world. More simply put, culture is just “the way we do things around here.” (p. 2)

This chapter presents the analysis of data provided by the TIPS survey that was administered to a sample of teachers in Washington State schools. The TIPS survey results are organized to address the study’s research questions. The first section presents a descriptive analysis of the OSPI variables for the 293 schools selected for the sample and for the sampling frame of regular elementary schools in Washington State from which it was drawn. The response rate, and a description of school level variables for respondents, are then offered in the following section. The third section of the chapter, in answer to the first research question, presents the descriptive analysis of teacher responses to items. The results of the factor analysis, conducted to address the study’s second research question, are presented in the last section. The chapter concludes with a discussion and summary of research findings.
A Representative Sample

Excluding non-traditional schools, OSPI data indicated there were 2,893 public schools in Washington State in 2013-2014. From these, 58% were elementary schools, which were defined as any configuration of grades pre-kindergarten through sixth, identified on the “grade_span” variable. McNamara’s (1994) formula for determining sample size necessary for representativeness was utilized, with a five percent margin of error and a confidence level of 99%. As a result, 293 elementary schools were randomly selected for inclusion in the study from the OSPI register of schools.

Information on school level variables was taken from the OSPI data-base for the 2014-2015 school year. Data on the schools for this year were provided for 1,189 regular elementary schools. The school-level variables provided by the OSPI provided the ability to assess the representativeness of the 293 schools selected for the sample as compared to the average elementary school in the state. The first variable examined was school size. Other student variables included the number of students that participate in free/reduced lunch programs (which is an indicator of socio-economic level), the number of students in special education, the number of ethnic minority students, and the number of transitional-bilingual students (see Table 2).

The statistics provided in Table 2 below indicate there are minor differences between the sampling frame and the randomly drawn sample. Sample schools were slightly larger than the average elementary school. Both average state and sample schools had 50% of students who participated in the free or reduced price lunch program. The state had an average of 46% minority students, while the sample had a minority representation of 53%, which is the largest discrepancy between average state and sample schools. Transitional bilingual students made up sixteen percent of both groups. Though some differences are noted, they are not excessive. The
standard deviations for school size, free and reduced lunch, and minority students are large, indicating a variability in both the population and the sample. For example, Table 2 indicates the typical elementary school in Washington State is of moderate size, even though there is a large range in school enrollment. The smallest elementary school in the state is 34 students, while the largest has an enrollment of 848 students. The special education and transitional bilingual standard deviations indicate less variability.

Table 2: School Level Variables – A Comparison of Sample to State

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean Sample</th>
<th>Median Sample</th>
<th>Mean State</th>
<th>Median State</th>
<th>SD Sample</th>
<th>SD State</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Size</td>
<td>435</td>
<td>450</td>
<td>418</td>
<td>440</td>
<td>152</td>
<td>194</td>
</tr>
<tr>
<td>Free/Reduced Lunch</td>
<td>219</td>
<td>206</td>
<td>208</td>
<td>195</td>
<td>137</td>
<td>146</td>
</tr>
<tr>
<td>Special Ed</td>
<td>61</td>
<td>59</td>
<td>63</td>
<td>60</td>
<td>26</td>
<td>36</td>
</tr>
<tr>
<td>Minority</td>
<td>231</td>
<td>195</td>
<td>191</td>
<td>145</td>
<td>160</td>
<td>166</td>
</tr>
<tr>
<td>Transitional Bilingual</td>
<td>71</td>
<td>39</td>
<td>67</td>
<td>33</td>
<td>88</td>
<td>87</td>
</tr>
</tbody>
</table>

OSPI data for the 2014-2015 school year did not include teacher demographic data. As a result, data from the 2013-2014 school year was used. Comparison of sample and sampling frame averages show them to be similar, with sixteen students in the average classroom, teachers with an average of fourteen years of experience, and 17% of teachers holding at least a Master’s Degree. OSPI assessment data for fifth grade students was also used to compare academic proficiency of students in the sample drawn with that of the sampling frame. Proficiency levels
in reading, mathematics, and science on mandated state tests for the 2014-2015 school year were used for this purpose.

In the spring of 2015, Washington students were tested in English/language arts and mathematics using the Smarter Balanced Assessment (SBA). This test is administered by computer and implements the Common Core Standards. Previously, students had been tested using the Measurement of Student Progress (MSP), and this test continues to be used at the fifth and tenth grade levels to test science. Once again, a comparison of the sample drawn and the sampling frame indicates there is a similarity, with approximately 57% of students meeting standard in English/language arts, 48% in mathematics, and 62% in science.

Respondents and their Schools

Response rates for on-line surveys vary greatly, though a rate of 40% is accepted as typical. Wiersma & Jurs (2005) provided examples of surveys with response rates ranging from less than 35% to greater than 60%. Of the 293 schools with teachers invited to participate in the TIPS survey, 191 had teacher(s) who responded. Teacher responses on the TIPS were gathered for 65% of the schools selected for this study.

The average school size of respondents is smaller than that of the sample drawn, though the sampling frame average of 418 is closer to respondent size than to the sample. Fifty-three percent of students in respondent schools participated in free and reduced price lunch programs, which was higher than the sample and population rates of 50%. Schools with teachers who responded to TIPS had smaller minority populations of 28%, and a slightly larger percentage of students (17%) who participated in transitional/bilingual programs. Further, comparison of teacher variables between TIPS respondent schools and those in the sample indicate the average school of responding teachers is much the same as the sample, having sixteen students per class,
teachers with an average of fourteen years of experience, and 17% of teachers holding at least a
Master’s Degree. Standard deviations were relatively small, indicating little variation in these
characteristics among both respondents and the sample. Finally, a comparison of average
student achievement data of TIPS respondent schools with those of the sample drawn indicates
students in respondent schools performed at a slightly lower rate than the sample drawn, with
55% meeting standard on the English/language arts test, 47% on the mathematics test, and 62%
on the science test.

*TIPS Item Analysis*

The mean, median, and standard deviation were calculated for each of the TIPS items
organized by the five tenets of HRO theory. Items 1-10 quantify respondent beliefs on a five-
point measure. This scale ranged from *A Few* to *Almost All*. For questions 11-18 answers were
recorded on a six-point scale with frequency measures ranging from *Less than once a Month* to
*Daily*. Since item scores were measured on two different scales, the item scores were converted
to scale scores by dividing the average score reported by teachers in a school by five for items 1-
10 and six for items 11-18. These scores were then multiplied by 100 to create a scale score. A
school average was then calculated for the scale scores, which facilitated interpretation by
sorting average item scores per cognitive process from highest to lowest.

*Preoccupation with Failure*

The first HRO cognitive process, preoccupation with failure, requires focus on problems
at their first sign of development, allowing for early intervention. This tenet is associated with
items five, six, ten, fourteen and fifteen on the TIPS survey. Table 3 provides statistical
information on this tenet. With an average score about five, teachers shared that they felt most
of their fellow teachers would report checking for understanding daily. Respondents also shared
that they believed more than half of their colleagues (Mdn = 4) spend much of their time attempting to solve student learning problems.

Since a mindful response to item 10 would be *A Few*, responses were reversed. An average score of 4.8 is an indication that many teachers believed student data provided was helpful for development of student interventions. The lowest rated item pertained to what respondents felt about participation in professional learning communities (PLCs). Teachers in the study shared that about half of the teachers in their school (Mdn = 3.5) would agree that involvement in their school’s learning community had been helpful in better knowing their strengths and weaknesses as instructors. A high percentage of schools (92%) had teachers who claimed that most teachers in their school would report hearing daily critical comments about students or the state of education today. This is indicative of a culture of blaming, and is not a mindful response.

| Table 3 – TIPS – Preoccupation with Failure |
|-------------------------------|----------|-----|------|-------|
| **Item** | **Scale** | **N** | **M** | **Median** | **SD** |
| 15 Teachers use checks for understanding to see where students are in their learning | 89 | 191 | 5.3 | 5.5 | 0.8 |
| 5 Teachers spend much time on solving student learning problems | 79 | 191 | 3.9 | 4.0 | 0.8 |
| 10 Student data provided to teachers is not useful for developing interventions | 77 | 191 | 3.8 | 4.0 | 1.1 |
| 6 Participation in PLCs has helped teachers know better their strengths and weaknesses in instruction | 69 | 191 | 3.4 | 3.5 | 1.0 |
| 14 Teachers share critical comments including: students, the school, and the state of education today | 33 | 191 | 2.0 | 2.0 | 1.1 |
Reluctance to Simplify

The second HRO cognitive process is reluctance to simplify, which encourages teachers to consider the specifics of any given problem or intervention and tailor an appropriate response. This tenet is associated with items one, two, three, and thirteen on the TIPS survey. Table 4 provides statistical information on these items. It is encouraging that most teachers modify instruction for struggling learners, but the fact remains that not all teachers are making these modifications. Perhaps the most concerning response in this area was to item 3, where only 50% of respondents felt that parents were doing their best to support students (Mdn = 3.2). Mindful teachers work to create positive connections between parents and the school in an effort to build support systems for students. Respondents indicated that maintaining order in the classroom is a high priority, which harkens to the traditional classroom and implies an over-simplification of the complex process of learning. Eighty-four percent of respondents stated students should be responsible for their learning, which is counter to creating a shared culture of learning in schools.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
<th>N</th>
<th>M</th>
<th>Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Teachers modify classroom procedures and norms to accommodate struggling learners</td>
<td>82</td>
<td>191</td>
<td>4.9</td>
<td>5.0</td>
</tr>
<tr>
<td>3</td>
<td>Parents in this school do the best they can to support their student(s)</td>
<td>65</td>
<td>191</td>
<td>3.2</td>
<td>3.0</td>
</tr>
<tr>
<td>1</td>
<td>Students should be responsible for their learning</td>
<td>84</td>
<td>191</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>2</td>
<td>Maintaining order in the classroom is a high priority</td>
<td>89</td>
<td>191</td>
<td>1.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Sensitivity to Operations

The third HRO cognitive process is sensitivity to operations, focusing on open communication in an organization, with an emphasis on those closest to any developing situation. This tenet is associated with items nine, sixteen, and seventeen on the TIPS survey. Table 5 provides statistical information on these questions. With a median score of 5.0, greater than 75% of respondent teachers indicated data was being analyzed to inform instruction. An even greater percentage should be expected, since analysis and use of data has been an emphasis in schools since the advent of NCLB. Respondent teachers believed only 70% of teachers in their school were collaborating on ways to help students to meet academic goals. When considering the use of PLC time, only 50% of respondent teachers felt that teachers in their schools were focusing enough time on improving instruction.

Table 5 – TIPS – Sensitivity to Operations

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
<th>N</th>
<th>M</th>
<th>Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Teachers analyze data to inform their instructional practice</td>
<td>77</td>
<td>191</td>
<td>4.6</td>
<td>5.0</td>
</tr>
<tr>
<td>17</td>
<td>Teachers brainstorm with others about ways to get students to standard</td>
<td>71</td>
<td>191</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>9</td>
<td>Not enough PLC time is used for improving instruction</td>
<td>57</td>
<td>191</td>
<td>2.9</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Commitment to resilience

Commitment to resilience is the fourth HRO cognitive process, encouraging organizational members to learn from failure and avoid repetition. Items four, eight, eleven, and
eighteen in the TIPS survey were associated with this tenet. Table 6 provides statistical information on responses to these questions. Item 4 (reversed) indicates 90% of teachers believe they have the ability to affect student motivation and performance. Respondent teachers also saw their schools as positive and encouraging to unmotivated students (Mdn = 5.0). Though a median score of 4.0 might indicate efficacy through the belief that teachers believe they can overcome adversity with hard work, it remains true that 25% of respondents did not believe this was true. Teachers also revealed less confidence in their ability to contribute to school-wide decisions, with 45% believing this was not true for their school.

Table 6 – TIPS – Commitment to Resilience

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
<th>N</th>
<th>M</th>
<th>Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students’ motivation and performance are dependent on their home environment: teachers cannot do much to overcome this</td>
<td>91</td>
<td>191</td>
<td>4.6</td>
<td>4.0</td>
<td>0.9</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers hear colleagues offer praise to unmotivated students</td>
<td>78</td>
<td>191</td>
<td>4.7</td>
<td>5.0</td>
<td>1.2</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With hard work a teacher can get through even the most difficult situation</td>
<td>75</td>
<td>191</td>
<td>3.8</td>
<td>4.0</td>
<td>0.9</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers contribute to school-wide instructional decisions</td>
<td>47</td>
<td>191</td>
<td>2.8</td>
<td>3.0</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Deference to Expertise

Deference to expertise was the final HRO cognitive process evaluated. This tenet looks to those who are most qualified in a specific area without consideration of positional authority. Items seven and twelve in the TIPS survey were associated with this tenet. Table 7 provides statistical information on responses to these questions. Since a higher response on item 7 would
have indicated a less mindful response, this item was reversed, revealing that 89% of respondent
teachers did not believe avoidance was an appropriate response to disagreements. With a median
score of 4.3 on a scale of five, 82% of respondent teachers indicated they believed teachers in
their schools took time to talk with students to understand their home situation.

Table 7: TIPS – Deference to Expertise

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
<th>N</th>
<th>M</th>
<th>Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Avoidance is a practical way to handle difficult colleagues</td>
<td>80</td>
<td>191</td>
<td>4.8</td>
<td>5.0</td>
</tr>
<tr>
<td>12</td>
<td>Teachers talk with students to know what is going on at home</td>
<td>73</td>
<td>191</td>
<td>4.4</td>
<td>4.3</td>
</tr>
</tbody>
</table>

**Exploratory Factor Analysis**

An Exploratory Factor Analysis (EFA) using principal components with varimax rotation
was conducted to address the study’s second research question: What constructs or factors are
present in teacher responses regarding organizational mindfulness for improving instruction?
This analysis examined underlying structures for the eighteen TIPS items. The number of
factors were not specified before analysis. Initial investigation revealed five questions that had
weak or no covariance with other questions. As a result, questions one, two, five, nine and ten
were removed from the analysis.

After removal of the items with poor fit to the model, the EFA was completed and
revealed three factors. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .777,
indicating there are enough items predicted by each of the three factors. Bartlett’s Test of
Sphericity was .000, indicating a strong correlation and providing support for the factor analysis.
Three Eigenvalues were greater than 1, and were found to explain 51% of the covariance in items. As a result, greater than half of the variance was accounted for by the three factors.

The first factor accounted for 29% of the variance, the second factor accounted for 13%, and the third factor accounted for 9%. Table 13 shows the items and factor loadings for the rotated factors. Factors with loadings less than .40 were omitted to enhance clarity.

Factor one is composed of five items, including teacher praise for unmotivated students, understanding a student’s home situation, and making accommodations for struggling learners. These items speak to teachers’ Mindful Focus on Students. The remaining two items, contribute to school-wide instructional decisions and share critical comments, also have an impact on students, though the connection is less direct. All items for this factor indicate a positive loading. The Cronbach’s alpha for this factor is .67.

The second factor is also composed of five items. These items speak to belief in parental support and its impact on student performance, as well as participation in PLCs, including interaction with difficult colleagues and the belief that hard work can help solve difficult situations. These items address teachers’ Mindful Focus on Relationships. Once again all items for this factor indicate a positive loading. Cronbach’s alpha for this factor was .68.

The third factor is composed of three items, including analysis of data, using checks for understanding, and brainstorming with colleagues to explore ways to help students be successful. These items suggest a Mindful Focus on Instruction. This is the only factor that had an item with double loading, with “Brainstorm with others about ways to get students to standard,” also loading on Factor one. The three items for this factor had a positive loading. Cronbach’s alpha for this factor was .68.
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hear colleagues offer praise to unmotivated students</td>
<td>.67</td>
</tr>
<tr>
<td>Talk with students to know what is going on at home</td>
<td>.66</td>
</tr>
<tr>
<td>Share critical comments including: students, the school and the</td>
<td>.64</td>
</tr>
<tr>
<td>state of education today</td>
<td></td>
</tr>
<tr>
<td>Contribute to school-wide instructional decisions</td>
<td>.62</td>
</tr>
<tr>
<td>Modify classroom procedures and norms to accommodate struggling</td>
<td>.57</td>
</tr>
<tr>
<td>learners</td>
<td></td>
</tr>
<tr>
<td>Avoidance is a practical way to handle difficult colleagues</td>
<td>.71</td>
</tr>
<tr>
<td>Parents in this school do the best they can to support their student(s)</td>
<td>.67</td>
</tr>
<tr>
<td>With hard work a teacher can get through even the most difficult</td>
<td>.62</td>
</tr>
<tr>
<td>situation</td>
<td></td>
</tr>
<tr>
<td>Participation in PLCs has helped teachers better know their</td>
<td>.62</td>
</tr>
<tr>
<td>strengths and weaknesses in instruction</td>
<td></td>
</tr>
<tr>
<td>Students’ motivation and performance is dependent on their home</td>
<td>.60</td>
</tr>
<tr>
<td>environment: teachers cannot do much to overcome this</td>
<td></td>
</tr>
<tr>
<td>Analyze data to inform their instructional practice</td>
<td>.82</td>
</tr>
<tr>
<td>Use checks for understanding to see where students are in their</td>
<td>.80</td>
</tr>
<tr>
<td>learning</td>
<td></td>
</tr>
<tr>
<td>Brainstorm with others about ways to get students to standard</td>
<td>.52</td>
</tr>
<tr>
<td></td>
<td>.53</td>
</tr>
</tbody>
</table>
Summary

Analysis of TIPS respondent data using the tenets of HRO theory provided information on the collaborative mindfulness of teachers. Responses indicated a wide range of mindfulness in schools. The item showing the greatest mindful response demonstrated that teachers use “checks for understanding” to ensure student learning. The vast majority of remaining items indicated that a modest level of mindfulness exists in schools, with four notable exceptions. The item rating lowest on the mindfulness scale was “Teachers brainstorm with others about ways to get students to standard.” This is concerning, in that the literature is clear on the positive contribution collaboration has on response to school reform. A second area of concern was the response to the item “Parents in this school do the best they can to support their students.” Since engaging communities is a critical component for schools’ success, it is imperative that mindfulness also impacts the connection between school and home. PLCs have become commonplace in elementary schools, and two additional items which had low mindfulness scores are of concern; they are, “Participation in PLCs has helped teachers better know their strengths and weaknesses in instruction,” and “Teachers brainstorm with others about ways to get students to standard.” It seems evident that principals/teachers need to clarify goals for use of PLC time.

The identification of three factors, labeled Mindful Focus on Students, Mindful Focus on Relationships, and Mindful Focus on Instruction, provides insight concerning mindfulness in schools. Use of TIPS will allow school personnel to examine the extent to which mindfulness is evident in schools. An overview of the study will be explained in Chapter 5, as well as a summary of the study’s findings including implications of these results and recommendations for further research.
CHAPTER FIVE

CONCLUSION

As a conclusion to the dissertation, Chapter 5 first provides an overview of the study. The second section of the chapter reviews the statistical analysis and subsequent findings of the study. Finally, the third section investigates implications of the study including applications and recommendations for further research.

Overview

Public schools face an unrelenting demand for improved student outcomes. Incited by political action at the local, state and federal government levels, many parents have joined the chorus calling for change. In response, educators have sought strategies to increase student performance and focus on mandated tests and other measures of achievement such as graduation and work readiness. In an attempt to understand and validate reform efforts, scholars have investigated interventions, programs, and practices that promise to improve student outcomes by schools. This study examines two of these strategies: organizational mindfulness and teacher collaboration.

A traditional view of mindfulness, based in Buddhist tradition, recognizes the value of meditation and heightened personal awareness (Bishop et al., 2004; Davidson, 2010; Kabat-Zinn, 2013). Benefits of mindfulness include the ability to deal with negative emotions (Bishop et al., 2004), to increase attention (Kabat-Zinn, 2013), and to expand creativity, and draw novel connections (Langer, 2000). Mindfulness has also been credited with broadening perceptions, and increasing the ability to make sense of information (Langer, 2000; Lutz, Dunne, & Davidson, 2007).
Recognizing its value, mindfulness attributes have been applied at the organizational level (Weick & Sutcliffe, 2006) and produced a positive impact. Weick and Putnam (2006) examined mindfulness in organizations that have critical missions, known as HROs. There are five tenets of HRO theory: preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise (Aven & Krohn, 2014; Christianson et al., 2011; Eck, 2011; Khorsandi & Aven, 2013; Weick & Sutcliffe, 2007).

Since HRO strategies have been found to improve the function of organizations, scholars in education have sought to apply these strategies and principles to schools (Bellamy et al., 2005). In a literature review of mindfulness in schools, Hoy et al., (2002) found that a mindful school empowers teachers to make decisions in a cooperative and collaborative manner. Other applications in a school setting include early identification of learning problems (Resar, 2006), empowerment of teachers to identify and solve problems (Hoy, 2002), recognition of the value of trust and open communication with colleagues to help ensure student success (Hay, Gage, & Tartar, 2006), and the value of seeking expertise to address classroom issues (Hernes & Irgen, 2012). Resilience, a component of HROs, is an important characteristic of mindful schools. Since some level of failure is likely to occur, the resilient school evaluates and responds, attempting to understand and avoid recurrence (Blatt, Christianson, Sutcliffe, & Rosenthal, 2006).

Research has also focused on school improvement through teacher collaboration, a practice that allows teachers to establish a common set of goals, share work responsibility, and develop effective classroom practice (Lavie, 2006; Richmond & Manokore, 2010). Louis and Kruse (1995) discussed five key characteristics of successful teacher communities: shared values, reflective dialogue, deprivitization of practice, focus on student learning, and
collaboration. Scribner et al. (1999) affirmed these characteristics, and added shared leadership and mutual dependence to the list. Collaboration allows teachers to develop shared understanding, beliefs, and values (Abbate-Vaughn, 2005; Doolittle, Sudeck, & Rattigan, 2008). Successful collaboration is predicated on effective teacher interaction (Wood, 2007b), and the implementation of reflective dialogue (Abbate-Vaughn, 2005).

Teacher empowerment and shared decision making are also necessary for high performing schools (Marks & Louis, 1999). This collaboration allows informed decisions to be made based on analysis of formative, summative, and standardized testing data (Wohlstetter, Datnow, & Park, 2008).

Though increased interest in mindfulness has been embraced by educational scholars, focusing on its application in schools, little work has been done to investigate its influence or role as part of the collective work of educators. A wide range of studies reveal teacher collaboration is critical to the improvement of instructional practices, strengthening of school performance, and ultimately successful response to the call for school reform (Mulford, 2005; Mulford & Silins, 2003), and yet further development seems appropriate given continuing concerns with student achievement. The work that has been completed on organizational mindfulness has employed the HRO framework (Bellamy et al., 2005; Weick & Sutcliffe, 2001). At the conclusion of their study of mindfulness in middle schools, Hoy et al., (2006) stated, “The conceptualization and measure of mindfulness of schools is in its early stage. We invite other researchers to use and refine the concept” (p. 253).

There is a meaningful overlap between collective mindfulness and teacher collaboration. Both seek improved educator practice and student learning, and both focus on cooperation and teamwork. Currently, researchers interested in collective mindfulness and teacher collaboration
lack an investigative tool that has specificity. The purpose of this dissertation was to develop an instrument to measure teacher practices and beliefs that reflect the nature of their efforts aimed at improving classroom instruction. To this end, the TIPS survey was developed and tested to measure teacher collaboration and collective mindfulness.

**Summary of Study Findings**

Since a stratified random sample was drawn from the population for this study, findings are generalizable to regular public elementary schools in Washington State. Overall, 65% of schools invited to participate in the TIPS survey had at least one teacher who responded. The average respondent school had 426 students. Fifty-three percent of students in these schools participated in free and reduced price lunch programs, with an ethnic minority population of 28%, and 17% of students who participated in transitional/bilingual programs. Teachers in respondent schools had an average of sixteen students per class, fourteen years of teaching experience, and 17% held at least a Master’s degree. OSPI data indicated 55% of fifth grade students in respondent schools met standard on the English/Language Arts test, 47% on the mathematics test, and 62% on the science test.

Item analysis of TIPS data was completed and organized by the five tenets of HRO theory. The first HRO tenet, preoccupation with failure, requires focus on problems at their first sign of development, allowing for early intervention (Eck, 2011). This tenet is operationalized in the classroom in various ways. One of these is seeking data concerning student learning. The survey results indicated that most teachers are gathering information on student learning through “checks for understanding” on a daily basis. Since Madeline Hunter (1969) formalized this concept through Instructional Theory Into Practice in the 1960’s, it has been part of the
evaluation of teachers. Ensuring that students have mastery of information before proceeding to new concepts allows learning to build on these concepts (Dirksen, 2011).

Teachers also indicated they believe student data is helpful. With the emphasis on data-driven decision-making over the past fifteen years, it would seem this belief should be fully integrated (Wohlstetter, Dtanow, & Park, 2008). Though it is encouraging that respondent teachers believe many teachers in their schools spend time solving student learning problems, it is important to recognize teaching is complex work, and this concept needs to be implemented by all teachers with an emphasis on collaboration (Resar, 2006). Communication is foundational to successful school reform, and to mindfulness (Mulford, 2005). Though teachers need the freedom to express honest beliefs, it would seem communication would be positive if shared beliefs and values were held (Cox et al., 2006). Perhaps the most revealing survey responses concerned PLCs. It appears respondents did not believe teaming with colleagues provided as much insight on instruction as would be hoped. Further investigation is needed to determine what may be happening. Studies find that reflective dialogue assists teachers to openly and honestly evaluate classroom practice, and implement change to benefit students (Harris & Jones, 2010).

The second tenet of HRO theory is reluctance to simplify, which encourages teachers to consider the specifics of any given problem or intervention and tailor an appropriate response. Instead of using a standard approach or routine, respondents report the majority of teachers modify instruction for struggling learners, which is a mindful response (Eck, 2011). Other survey responses were less encouraging. For example, responses indicating that maintaining classroom order is key and believing students are responsible for their own learning harkens to days gone by when teachers were evaluated, not for student learning, but by how well they
managed their environment which is an inappropriate simplification (Richmond & Manokore, 2010; Thessin & Starr, 2011).

Sensitivity to operations, characterized by focusing on open communication in an organization, is the third HRO tenet. The TIPS survey revealed that, generally, teachers in the study schools analyze data to inform instruction and collaborate with other professionals to get students to meet academic expectations (Thessin & Starr, 2011). However, only 50% of respondents believed their colleagues would agree that PLC time was focused on improving instruction. For collaborative work to be effective, it is imperative that specific goals, including improvement of instruction, are established (Garrett, 2010; Harris & Jones, 2010).

The fourth HRO tenet is commitment to resilience, which encourages organizational members to learn from failure and avoid repetition. Respondent teachers saw their schools as having the ability to positively affect students. Since the ability to cope and respond to failures is a key component of resilience, it was encouraging to note that teachers believed their colleagues cope and respond well to difficult situations (Bellamy et al., 2005). The fact that teachers did not believe they could contribute to school-wide decisions was troubling, since teacher leadership and efficacy is a key component of a school’s ability to positively address the call for school reform (Devos et al., 1998; Harris, 2003; Louis et al., 2010).

The final HRO tenet is deference to expertise. This tenet looks to those who are most qualified in a specific area without consideration of positional authority. The ability to seek information and support from colleagues is enhanced when a culture of effective teacher interaction is in place (Wood, 2007b). Training in the use of reflective dialogue, where participants actively listen and clearly articulate personally-held views, enhances this culture (Abbate-Vaughn, 2005; Dooner, et al., 2007).
Factor analysis of TIPS items revealed three factors underlying the data. Eigenvalues for these factors were greater than one, and represented 51% of the covariance for thirteen TIPS items. Factor one established an index for a Mindful Focus on Students as a key component of teacher practice. The Cronbach’s alpha for this factor is .67. All items for this factor indicate a positive loading, ranging from .57 to .67. Items which provide information on this factor include “Hear colleagues offer praise to unmotivated students,” “Talk with students to know what is going on at home,” “Share critical comments including: students, the school and the state of education today,” “Contribute to school-wide instructional decisions,” and “Modify classroom procedures and norms to accommodate struggling learners.” Response to these items provides information on the school’s level of mindfulness as they interact with and serve students, including school-wide instructional decisions.

Factor two indexes a Mindful Focus on Relationships. Cronbach’s alpha for this factor was .68. All items for this factor had a positive loading, ranging from .60 to .71. Items which provide information on this factor include “Avoidance is a practical way to handle difficult colleagues,” “Parents in this school do the best they can to support their student(s),” “With hard work a teacher can get through even the most difficult situation,” “Participation in PLCs has helped teachers know better their strengths and weaknesses in instruction,” and “Students’ motivation and performance is dependent on their home environment: teachers cannot do much to overcome this.” Response to these items provides information on mindful interaction between teachers, students, and parents.

The third factor was a Mindful Focus on Instruction, represented by three items. Cronbach’s alpha for this factor was .68. All factors for this item had a positive loading, ranging from .53 to .82. Items on the TIPS survey, providing information on this factor, include,
“Analyze data to inform their instructional practice,” “Use checks for understanding to see where students are in their learning,” and “Brainstorm with others about ways to get students to standard.” Response to these items provides information on mindful instructional decisions, including the use of data and collaboration with colleagues concerning instructional decisions.

**Implications**

This study adds to the body of research by providing specific information on the attributes of organizational mindfulness and teacher collaboration in elementary schools. The TIPS survey was created in order to investigate these attributes. Statistical analysis indicates the TIPS survey provides valuable insight into the presence of mindfulness in schools. The following is a discussion of the applicability of these findings to current practice, and recommendations for future research.

**Applicability to Practice**

Through this study, a team of researchers developed and administered the TIPS survey. The instrument allows schools to assess the degree to which actions and decisions reflect mindfulness and teacher collaborative processes. Having this knowledge will inform decisions concerning implementation of these attributes at the organizational level, and help identify areas where further investigation and training might be needed.

Analysis of the TIPS survey revealed two areas of concern. First is the effective use of PLC time. Though some form of team collaboration has become ubiquitous in elementary schools, it appears this time could be used more effectively by providing training in group process and maintaining a teacher focus on goals. Principals can play a key role in the success of PLCs by sharing the rationale for the group, as well as providing training in group process.
Principals can also insure the work of the team is aligned with building, district, and/or state goals (Jacobson, 2010; Rafoth & Foriska, 2006).

The second area of concern dealt with a lack of teacher efficacy. Research indicates that when given the opportunity to discuss teaching and student learning, the collaborative team develops shared understandings, beliefs, and values (Abbate-Vaughn, 2005; Doolittle, Sudeck, & Ratitigan, 2008; Hoy et al., 2002). By increasing these commonalities, teachers become relationally bound to their colleagues (Servage, 2008). This often leads to a willingness to yield personal desires to the collective obligation of the team (Dooner et al., 2007). Along with work in the PLC, teachers need to have a collaborative voice in the decisions of the school (Bryk et al., 1997; Harris, 2003; Little, 2002). Teacher leadership and school improvement are strongly correlated (Harris, 2003; Louis et al., 2010).

Analysis of TIPS items revealed areas of effective mindfulness integration. These areas include tailoring interventions to specific struggling students, the use of data to impact instruction, and positive interaction with students. Mindfulness research by Weick (1996), Resar (2006), and Eck (2011) has application to these areas as teachers are vigilant when looking for indications of future problems, investigating the basis of problems, and working collaboratively for solutions.

Finally, EFA revealed three factors which underlie the data and provide insight into critical areas for schools as they attempt to meet the challenge of educational reform: Mindful Focus on Students, Mindful Focus on Relationships, and Mindful Focus on Instruction. As an alternative to forcing the labels of HRO theory on schools (Aven & Krohn, 2014; Christianson et al., 2011; Eck, 2011; Khorsandi & Aven, 2013; Weick & Sutcliffe, 2007), consideration should
be given to these school-specific labels. They simplify the process of evaluating mindfulness in schools, and reduce the areas of investigation.

**Future Research**

The sampling frame established for this study limited the population to elementary schools in Washington State. As a result, results may not be generalizable to other states or regions. The frame also excluded schools that are non-traditional, such as correctional schools or hospitals. To determine if the results of this study generalize to other states, regions, or educational settings, the study should be replicated in these areas.

Analysis of the TIPS data revealed some questions which had little or no shared variance with other questions on the survey. In an effort to refine this tool, these questions should be carefully considered, and decisions should be made concerning their revision or elimination from the tool.

The TIPS survey provides a tool to examine organizational mindfulness and teacher collaboration in schools. Further investigation should be done to determine if attributes of mindfulness can be used to predict student outcomes. If a relationship between mindfulness and student performance can be established, which of the five mindful cognitive processes are the best predictors?

Further research needs to be done on the three factors identified in the EFA. This research will verify that this information can be replicated, as well as its generalizability to other school populations.

It is hoped that this study and the development of the TIPS survey instrument will further the thoughtful integration of collective mindfulness and teacher collaboration in schools.
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Appendix A

Tips First Invitation

TIPS First Invitation and Replacement

Dear ${m://FirstName} ${m://LastName}:

One of the top priorities in K-12 education today is effective instruction. We are serious about this priority – and we need your help to guide our efforts. We are inviting you to participate in a study on instructional practices in Washington’s schools. The Teacher Improvement Practices and Sentiments (TIPS) survey will take less than 10 minutes of your time, which we know is valuable.

The survey asks for your opinions on a range of topics, such as student motivation and staff collaboration in ${e://Field/School}. We will use the results of the survey to help identify current instructional leadership practices in our schools, as well as opportunities for improvements that might make our schools even better at meeting the needs of our students.

*TIPS is available and can be accessed by following the link:* ${l://SurveyLink?d=Take the TIPS}

Or copy and paste the URL below into your internet browser:

${l://SurveyURL}
We will report the results, so you’ll be able to see and discuss the overall findings for your school, as well as from teachers across the state. The survey administration, data analysis, and report preparation will be overseen by Washington State University. **WSU routinely works with confidential data and will respect and protect your identity.** Results will only be reported in summary form – in no case will it be possible to determine an individual’s responses or identity.

In addition, to show our appreciation **all respondents will be entered into a drawing for a $25 gift card.** For results to be most meaningful and useful, everyone needs to participate and give their honest and thoughtful answers.

If you have any questions about the survey, please feel free to contact Gordon Gates, resilientschools@comcast.net. Thank you in advance for sharing your opinions with us. We look forward to analyzing and sharing the results on the ongoing effort by educators to improve teaching and learning our state.

Sincerely,

Joshua Meek, Principal, Moses Lake School District  
Kevin Peterson, Principal, Mead Public Schools  
Jenny Rodriquez, Principal, Delta High School  
Ken Russell, Assistant Superintendent, Mead Public Schools  
Gary Spencer, Doctoral Student, Washington State University  
Gordon Gates, Professor, Washington State University
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Appendix B

TIPS Second Invitation

Dear ${m://FirstName} ${m://LastName},

One of the top priorities in schools today is effective instruction. We are serious about this priority – and we need your participation to understand teacher practices in Washington’s schools. The Teacher Improvement Practices and Sentiments (TIPS) survey will take less than 3 minutes of your time.

TIPS is available and can be accessed by following the link: ${l://SurveyLink?d=Take the TIPS}

Or copy and paste the URL below into your internet browser:

${l://SurveyURL}

The survey administration, data analysis, and report preparation will be overseen by Washington State University. WSU routinely works with confidential data and will respect and protect your identity and that of your school.

To show our appreciation all respondents will be entered into a drawing for a $25 gift card.

For results to be most meaningful and useful, everyone needs to participate and give their honest and thoughtful answers.
If you have any questions about the survey, please feel free to contact Gordon Gates at gates@wsu.edu. Thank you in advance for sharing your opinions with us.

Sincerely,

Gordon Gates, Professor, Washington State University

Teena McDonald, Clinical Assistant Professor, Washington State University

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Appendix C

TIPS Third Invitation

Dear ${m://FirstName} ${m://LastName},

Recently you received an invitation to participate in an important study on teacher practices at ${e://Field/School}. As educators, we know the important contribution that this study will make and are confident that with your participation the findings will provide direction to strengthening resources and services for your school improvement efforts. The power of this message, however, is contingent on your involvement. We are asking for your input on 20 brief questions that will take less than 3 minutes of your time. Of the teachers who started to reply, 87% completed—but we need response.

**Share your opinion by following the link:** ${l://SurveyLink?d=Take the TIPS}

To show our appreciation your name will be entered into a drawing for a $25 gift card. As promised in previous emails, your identity and that of your school will remain confidential.

Thank you in advance for your assistance.

Sincerely,

Kevin Peterson, Principal, Midway Elementary School

Ed.D. Educational Leadership Candidate, Washington State University
Josh Meek, Principal, Moses Lake High School

Ed.D. Educational Leadership Candidate, Washington State University

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Appendix D

TIPS Final Invitation

Dear ${m://FirstName} ${m://LastName},

The deadline for participating in the *Teacher Improvement Practices and Sentiments* (TIPS) study is just a few days away! We have not yet received your responses. We value your contribution. If you have been meaning to respond, time is running out! It will take about 3 minutes of your time to answer our questions. We encourage you to make sure your input is included.

**Share your opinion by following the link:** ${l://SurveyLink?d=Take the TIPS}

Please be assured, your identity and that of your school will remain confidential. Thank you in advance for your assistance and we look forward to sharing our analyzed findings with you.

Respectfully,

Gordon Gates, Professor, Washington State University

Gary Spencer, Doctoral Student, Washington State University

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