# A CORRELATIONAL STUDY OF LEADERSHIP PRACTICES OF PRINCIPALS IN RELATION TO THE DEPTH OF IMPLEMENTATION OF PROFESSIONAL LEARNING COMMUNITIES IN LASALLIAN SCHOOLS

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A CORRELATIONAL STUDY OF LEADERSHIP PRACTICES OF PRINCIPALS IN RELATION TO THE DEPTH OF IMPLEMENTATION OF PROFESSIONAL LEARNING COMMUNITIES IN LASALLIAN SCHOOLS



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## Abstract

This quantitative study investigated the leadership practices of principals in relation to the depth of implementation of a professional learning community (PLC). Specific leadership practices of principals were examined to find a relationship between any specific practices and the depth of implementation of a PLC.

The leadership practices of principals that were measured were the observable characteristics of leadership as identified by Marzano, Waters, and McNulty's (2005) 21 responsibilities of the school leader. Depth of implementation of a professional learning community was measured using Hord's (1997) five dimensions of a PLC: (1) Shared and Supportive Leadership; (2) Shared Values and Vision; (3) Collective Learning and Application; (4) Shared Personal Practice; (5) Supportive Conditions.

This quantitative study used surveys of teachers and principals in 45 Lasallian college preparatory schools throughout the United States. This study surveyed 1,423 teachers and principals in 45 schools. There were 472 respondents who completed the entire survey.

One variable was the observable characteristics of principal leadership as measured by the Marzano, Waters, and McNulty's questionnaire 21 responsibilities of the school leader. The other variable was the depth of implementation of Hord's (1997) five dimensions of a professional learning community as measured by the Professional Learning Community Assessment-Revised (PLCA-R).

This study surveyed 1,423 teachers and principals in 45 schools. There were 472 respondents who completed the entire survey.

The study found that there was a positive relationship between the leadership behaviors from all 21 categories and every dimension of a PLC. More than half of the large correlation coefficients were in the leadership categories of Culture, Communication, Change Agent and Order

The study showed a positive relationship between leadership behaviors of the principal and depth of implementation of PLCs.

Keywords: principal leadership, professional learning communities, correlational, private school, Lasallian

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# Chapter 1: Introduction

This study is a quantitative study to investigate the leadership practices of principals in relation to the depth of implementation of a professional learning community (PLC). Specific leadership practices of principals were examined to find a relationship between any specific practices and the depth of implementation of a PLC.

## Purpose

The purpose of this study is to investigate the leadership practices of principals in relation to the depth of implementation of professional learning communities in Lasallian schools. The leadership practices of principals that were measured were the observable characteristics of leadership as identified by Marzano, Waters, and McNulty's (2005) 21 Responsibilities of the School Leader. Depth of implementation of a professional learning community was measured using Hord's (1997) five dimensions of a PLC: (1) Shared and Supportive Leadership; (2) Shared Values and Vision; (3) Collective Learning and Application; (4) Shared Personal Practice; (5) Supportive Conditions.

This quantitative study used surveys of teachers and principals in 45 Lasallian college preparatory schools throughout the United States. One set of variables was the observable characteristics of principal leadership as measured by the Marzano, Waters, and McNulty's questionnaire 21 Responsibilities of the School Leader. The other set of variables was the depth of implementation of Hord's (1997) five dimensions of a professional learning community as measured by the Professional Learning Community Assessment-Revised (PLCA-R).

**Background**

Leadership plays an essential role in determining the success of a school. However, the definition of leadership and the essential elements of good leadership are less clear. Although there are many different theories on and definitions of leadership, many acknowledge its importance. Research has shown that leadership has an effect on student achievement (Leithwood, Louis, Anderson, & Wahlstrom, 2004a; Marzano et al., 2005). In education, classroom instruction and leadership are the two most significant factors impacting student achievement (Leithwood et al., 2004a). Leadership is not the action of an individual; it is not a solo act (Kouzes & Posner, 2003, p. 22). With schools facing greater challenges, no single person can lead a school alone; it must be a collaborative effort (DuFour & Marzano, 2011). Kouzes and Posner (2003) describe collaboration as a social imperative, without which extraordinary things cannot be accomplished in organizations.

Morrissey (2000) described school improvement efforts that "lacked the fundamental supportive cultures and conditions necessary for achieving significant gains in teaching and learning" (p. 3). Historically, teachers have worked in isolation. The improvements in professional practice, which are necessary to address the increasing needs of students, are unlikely without productive interaction with colleagues (Morrissey, 2000). Principals were already faced with sufficient challenges, but now needed new supports to help teachers meet their own learning needs.

Professional learning communities provide the infrastructure to overcome the obstacles of developing professionally while working in isolation (Little, 1991; Martin-Kniep, 2008; Schmoker, 2004a; Sergiovanni, 1992). The structure of a PLC provides a

school culture of collegiality that assists teachers and administrators in advancing their practice and, therefore, improves student achievement (Morrissey, 2000). Schmoker (2005) described PLCs as the best way to improve schools, offering "immense, unprecedented hope for schools and the improvement of teaching" (p. 138).

**Research Problem**

Leadership has been a topic for discussion and study in social sciences throughout history and its importance is acknowledged in literature (Antonakis, Cianciolo, & Sternberg, 2004; Bass, 1990; Daft, 2008; Kouzes & Posner, 2007; Pfeffer, 1977; Pierce & Newstrom, 2006). The ambiguous and diverse definitions of leadership and the lack of clarity in what leadership looks like makes the practice of leadership a challenge (Pfeffer, 1977). The problem is that leadership behaviors must be clearly defined and the relationship of those behaviors to depth

According to Bligh and Schyns (2007), people credit leadership for organizational performance in an effort to "make sense of complex organizational phenomena" (p. 343). Research (Meindl, Ehrlich, & Dukerich, 1985) showed that people tend to attribute causality for organizational outcomes to leaders rather than to equally likely sources such as subordinates or external forces. At the extremes of the performance continuum, the tendency to attribute causality increases. Meindl (2004) stated the belief in leadership provides "a sense of comfort and security, in reducing feelings of uncertainty, and in providing a sense of human agency and control" (p. 464).

Marzano, Waters, and McNulty (2005) conducted a study to identify a relationship between specific leadership behaviors of principals and student achievement.

The findings from their study defined 21 leadership responsibilities and their correlation with student achievement.

Many researchers and practitioners have described the qualities of PLCs (Hipp & Huffman, 2010). They have adequately described what these communities should look like, but have provided little guidance on how to sustain them. While many have recognized the role that leadership plays in establishing a PLC, there is little research offered as to the specific actions leaders should take to maintain them (DuFour, DuFour, Eaker, & Many, 2010; DuFour & Marzano, 2011; Hipp & Huffman, 2010; Hord, 1997; Hord & Sommers, 2008; Huffman & Hipp, 2003; Martin-Kniep, 2008; Schmoker, 2004a; Sergiovanni, 1992). Hord (1997) identified the critical attributes of a PLC and organized them into five dimensions. The Professional Learning Community Assessment-Revised (PLCA-R) was developed to assess a school's progress along the PLC continuum (Olivier et al., 2009).

This study focused on specific leadership behaviors of principals and their relationship to depth of implementation of certain aspects of PLCs.

**Research Questions**

The four research questions used for the quantitative study are:

1. To what extent do teachers observe the principal in their school demonstrating specific actions related to each of Marzano, Waters, and McNulty's (2005) 21 leadership responsibilities?
2. To what extent do principals characterize their own actions as related to each of the 21 leadership responsibilities?

3. What is the depth of implementation of each of Hord's five dimensions of a professional learning community as observed by teachers and principals within their schools?
4. Is there a relationship between any of the 21 leadership responsibilities and the depth of implementation of Hord's five dimensions of a professional learning community?

**Significance of the Study**

School leaders are ultimately responsible for school performance (Spillane, 2006; DuFour & Eaker, 1998). Specifically, principals are responsible for the success of many school initiatives, including PLCs. The leadership behaviors of principals may influence a school's progress along the PLC continuum. The assumption that leadership is causally related to organizational performance underlies much of the research on leadership (Pfeffer, 1977). The performance of schools is influenced by the choices in action principals make regarding leadership behaviors. The areas of leadership, leadership in education, and professional learning communities have been thoroughly studied (Antonakis, Cianciolo, & Sternberg, 2004; Bass, 1990; Daft, 2008; DuFour, DuFour, Eaker, & Many, 2010; DuFour & Marzano, 2011; Hipp & Huffman, 2010; Hord, 1997; Hord & Sommers, 2008; Kouzes & Posner, 2007; Martin-Kniep, 2008; Marzano et al., 2005; Pierce & Newstrom, 2006; Schmoker, 2004a). This research will add to these areas of study by focusing on specific leadership practices of principals as they relate to depth of implementation of PLCs. The results from this study can be used in training and practice to help principals lead PLCs. The data produced will inform principals which behaviors have an effect on the depth of implementation of a PLC.

**Definition of Terms**

The following list of definitions represents terms used throughout this study. These definitions are presented to clarify roles and titles that are specific to Lasallian schools and a working definition of a professional learning community. The terms are defined in the context of this study and are intended to provide clarification to the reader.

*Brother*: This title is given to vowed religious of the Brothers of the Christian Schools. Comparable to titles such as "Sister," "Father," "Reverend." Commonly used in other religious orders to denote a vowed religious who is not an ordained priest (De La Salle Institute [DLSI], 2008).

*Brothers of the Christian Schools:* This is the official name of the religious institute founded by Saint John Baptist de La Salle. For the United States, the recommended usage is "De La Salle Christian Brothers" (DLSI, 2008). The schools in this study are all sponsored by the De La Salle Christian Brothers.

*Depth of Implementation of a PLC:* The depth of implementation was measured by assessing a school's progress within the five dimensions and critical attributes along a continuum by analyzing specific school and classroom procedures using the PLCA-R. (Olivier, Hipp & Huffman, 2010)

*Institute of the Brothers of the Christian Schools:* This term refers to the international governing organization of the De La Salle Christian Brothers. The institute is divided into five Regions: (1) Africa; (2) North America; (3) Latin America; (4) Asia and Oceania; and (5) Europe and Mediterranean. The Region of North America is divided into four Districts: (1) Eastern North America; (2) Midwest; (3) San Francisco - New Orleans; and (4) Francophone Canada. This study

included only the English-speaking districts of the Region (Eastern North America, Midwest, and San Francisco - New Orleans).

*Lasallian:* This term is derived from "La Salle" and can be used in two ways. It can be used as an adjective with a noun, such as a Lasallian school, or it can refer to a person within the Lasallian mission, such as a teacher in a Lasallian school (DLSI, 2008).

*Lasallian Partner:* This term refers to colleagues, associates, co-workers, and supporters who contribute professionally to the Lasallian educational mission as teachers, administrators, counselors, social workers, etc., but who are not members of the De La Salle Christian Brothers. The title "Partner" can be used with or without "Lasallian" and is generally capitalized (DLSI, 2008).

*Lasallian Schools:* Lasallian schools are Catholic educational institutions sponsored by the Brothers of the Christian Schools. Lasallian educational institutions exist in over 80 countries throughout the world and include elementary schools, middle schools, high schools, universities, and centers for youth and family services (DLSI, 2008).

*Professional Learning Community (PLC):* A PLC is an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve. Professional learning communities operate under the assumption that the key to improved learning for students is continuous job-embedded learning for educators (DuFour, DuFour, Eaker, & Many, 2010).

*Visitor:* This term is the title of the superior of the Brothers of a District (DLSI, 2008).

## Summary

This chapter explained the research problem addressed by this study and described the purpose statement and research questions that guided this study. This chapter provided a background and overview the leadership practices of principals and professional learning communities (PLCs). The significance of the study was stated, and terms used throughout the study were defined.

Chapter two will focus on the review of the literature and research for the purpose of this study. Specifically, the literature review will focus on leadership, leadership in education, and PLCs.

## Chapter 2: Review of the Literature

The purpose of this study is to investigate the leadership practices of principals in relation to the depth of implementation of critical attributes of a professional learning community. These leadership practices and observable characteristics of a PLC were studied in Lasallian college preparatory schools throughout the United States. This chapter provides a review of the literature related to leadership, leadership in education, and PLCs.

### Leadership

Leadership has been a topic of interest and discussion for more than four thousand years. Bass (1990) noted, "From its infancy, much of the study of history has been the study of leaders–what they did and why they did it" (p. 3). Although leadership has been studied since ancient times, it has only been a topic of scientific research for the past 100 years (Daft, 2008). Over that time, there have been more than twenty-six thousand books published on leadership (Reeves, 2002). Despite the frequency of study, the definition of leadership has varied greatly. Noting this phenomenon, Bass (1990) stated, "there are almost as many different definitions of leadership as there are persons who have attempted to define the concept" (p. 11). Bennis (2009) compared leadership to beauty, declaring it "hard to define, but you know it when you see it" (p. *xxx*). Despite the abundance of research, Jones (2005) stated that there is no "coherent, paradigm-shifting model or approach that both scholars and practitioners can accept and work with" (Jones, 2005, p. 259).

**Defining leadership.** Many scholars offer a definition of leadership, however, because of the different contexts, settings, and aspects of leadership, a universally

accepted definition of leadership does not exist in the literature. Peter Drucker (1996) offered a simple definition that addressed one aspect of leadership: "the only definition of a leader is someone who has followers" (p. 104). Yukl (2006) stated that there is no correct definition of leadership, but rather an arbitrary, subjective one. "It is neither feasible nor desirable at this point in the development of the discipline to attempt to resolve the controversies over the appropriate definition of leadership" (p. 8).

Bass (1990) described the search for a single definition of leadership as fruitless, however many researchers have tried to define leadership. In 1994, 54 researchers from 38 countries gathered for the first Global Leadership and Organizational Behavior Effectiveness (GLOBE) research conference. During the conference, researchers worked to develop consensus on a working definition of leadership. The researchers defined organizational leadership as "the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organizations of which they are members" (House, Javidan, Hanges, & Dorfman, 2002, p. 5).

Northouse (2010) noted that the phenomenon of leadership includes four central ideas: (a) leadership is a process, (b) leadership involves influence, (c) leadership occurs in groups, and (d) leadership involves common goals (pp. 2-3). Using these components, Northouse defined leadership as "a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3). As a process, leadership is an interactive event where the leader affects followers and the followers affect the leader. Northouse stressed influence, stating that without it, leadership is nonexistent. DuFour and Marzano (2011) emphasize this fundamental element by stating, "leadership is ultimately about the ability to influence others" (p. 3).

Antonakis, Cianciolo, and Sternberg (2004) defined leadership as "an influencing process–and its resultant outcomes–that occurs between and leader and followers" (p. 5). Their definition acknowledges the relationship between the leader and followers and that the influencing process occurs within a specific context. The relationship is evaluated by the behaviors of the leader and the perceptions of the followers while the resultant outcomes are measured in the achievement of goals.

Rost (1993) claimed that the inability of both practitioners and scholars to offer a precise, accurate definition of leadership prevented people from identifying it whether participating or witnessing it. Rost and Barker (2000) make a distinction between an industrial view of leadership and the postindustrial construct of leadership. The industrial view is "inadequate for educational purposes because it does not address the nature of the complex social relationships among people who practice leadership, nor does it accurately accommodate their purposes, motives, and intentions" (p. 3). In this view, leadership rests in the characteristics or abilities of the leader. The authors' criticism of leadership development programs is that have typically focused on fostering the "leadership potential" of an individual and ignored the "complex process of leadership itself" (p. 4). The postindustrial construct of leadership is based on the premise that "leadership is a socially constructed reality" (p. 5). Postindustrial leadership is based on the mutual needs of all members of society, must be inclusive, and must incorporate the "complexities of social processes and the pluralistic nature of global society" (p. 5). Rost (1993) defined postindustrial leadership as "an influence relationship among leaders and collaborators who intend real changes that reflect their mutual purposes" (p. 99).

Daft (2008) stated that leadership is an evolving concept and that scholars have

proposed many definitions. He attributed his definition to Joseph Rost, stating, "leadership is an influence relationship among leaders and followers who intend real changes and outcomes that reflect their shared purposes" (Daft, 2008, p. 4). The key elements of Daft's definition are: (a) Leadership involves influence, (b) it occurs among people, (c) those people desire significant changes, and (d) the changes reflect purposes shared by leaders and followers (p. 4). The influence is multidirectional in the relationship and the changes sought reflect the shared vision of both leaders and followers. This shared vision motivates all to achieve the desired future. One important aspect of leadership is influencing others to join in an effort around a vision. Daft declared leadership "a *people* activity" that "occurs *among* people; it is not something done to people" (p. 5).

Lyne de Ver (2009) stated that most definitions of leadership ignore the "importance of context and the political nature of leadership" (p. 9), opting to focus on traits, styles, or behaviors. Her conception of leadership is as a political process that is dependent on the context. Her definition has three factors:

1. Leadership implies the organization or mobilization of people and resources (i.e. economic, political and other) in pursuit of particular ends.
2. Leadership must always be understood contextually, occurring within a given indigenous configuration of power, authority and legitimacy, shaped by history, institutions, goals and political culture.
3. Leadership regularly involves forging formal or informal coalitions, vertical or horizontal, of leaders and elites, in order to solve the pervasive collective action problems which largely define the challenges of growth and development (p. 9).

**The importance of leadership.** Research (Bass, 1990) indicates that leadership is a factor in job performance, job satisfaction, and "is often regarded as the single most critical factor in the success or failure of institutions" (p. 8). Bass (1990) posits, "In industrial, educational, and military settings, and in social movements, leadership plays a critical, if not the most critical, role, and is therefore an important subject for study and research" (p. 20). Reviews of the academic research on leadership indicate a wide range of theories to explain the phenomenon of leadership (e.g., Antonakis, Cianciolo, & Sternberg, 2004; Bass, 1990; Daft, 2008; Northouse, 2010; Pierce & Newstrom, 2006). Clark (2005) claimed that the key to organizational success is determined by leadership ability. Leadership is mysterious, but "becomes demystified when you discover the secrets behind it" (para. 7). Reeves (2002) stated, "Leaders are the architects of improved individual and organizational performance" (p. 12). Leadership in education is discussed later in this chapter.

**The viability of leadership as a concept.** Despite the popularity of leadership as a subject of research, some question its viability as a concept (Bligh, Kohles, & Pillai, 2011; Bligh & Schyns, 2007; Pfeffer, 1977; Meindl & Ehrlich, 1987; Meindl, Ehrlich, & Dukerich, 1985). Pfeffer (1977) stated that the concept of leadership should not be the focus of study if the intent is in determining causality for organizational outcomes and that the effects of leadership are debatable. Additionally, Pfeffer (1977) contends that leadership is "associated with a set of myths reinforcing a social construction of meaning" and attributes "causality to leadership roles, thereby providing a belief in the effectiveness of individual control" (p. 111). Two theories that question whether leadership itself should be a topic of study are the romance of leadership and the

ambiguity of leadership.

***The romance of leadership.*** The romance of leadership theory refers to the bias that occurs when people in organizations reduce the complex, causal forces that dictate organizational performance into human terms (Meindl & Ehrlich, 1987). Meindl's interpretation of leadership was as a "sensemaking activity that is primarily in the eye of the beholder" (Bligh, Kohles, & Pillai, 2011). People "prefer to cope and come to grips with the cognitive and moral complexities" (p. 92), and credit leadership for outcomes in terms that are understandable and easy to communicate to others. Meindl did not dismiss the value of leadership, but suggested, "we seemed to be particularly susceptible to believing in it, even in the absence of any scientific proof of its efficacy" (Bligh & Schyns, 2007, p. 345). The goal for Meindl was not to "reject the importance of leadership," but to promote his position that "it is easier to believe in leadership than to prove it" (Bligh & Schyns, 2007, p. 345).

***The ambiguity of leadership.*** When an organization experiences success, it is common to credit the leader. Much of the research on leadership is based on the assumption that there is a causal relationship between leadership and organizational performance (Pfeffer, 1977). Pfeffer asserted three issues with the importance placed on leadership as a concept: (a) the ambiguity (the unclear dimensions and definitions) of leadership, (b) the question of whether leadership has discernible effects on organizational outcomes; and (c) the selection process for leadership positions (p. 104). Most leaders are appointed to those positions and are selected based on certain characteristics or styles of behavior. Once in a formal position, leaders often have limited range of behavior and discretion. Organizational performance is influenced by many

variables, but typically, leaders can only affect a few (Pfeffer, 1977).

**Trait theory.** Initially, research of leadership was based on the theory that it was a phenomenon resting within the leader, ignoring the follower and any relationship between the two (Pierce & Newstrom, 2006). In the 1920s, the initial serious research led to trait theory, which sought to identify the common attributes of effective leaders. The trait theory is based on the premise that there are certain innate qualities or characteristics that differentiate leaders from nonleaders (Northouse, 2010). The popularity of trait theory waned as attempts to classify common characteristics in effective leaders were unsuccessful (Goffee & Jones, 2006). Research by Stodgill (as cited in Northouse, 2010) showed "no consistent trait set of traits differentiated leaders from nonleaders across a variety of situations" (p. 15). These findings led to a reconceptualization of leadership as a relationship rather than internal qualities of an individual. Following the findings, most scholars effectively ended trait research (Antonakis et al., 2004).

**Behavioral styles.** By the 1950s, trait theory had been replaced by a theory that focused on leaders' behavioral styles and situational leadership. A focus on behavior of leaders suggests that anyone who employs certain practices could become an effective leader (Daft, 2008). Researchers found no consistent link between leadership styles and performance outcomes, no single style of leadership to be effective in all situations, and that certain situations require different leadership styles (Blake & McCanse, 1991; Northouse, 2010; Yukl, 2006). This led to theories that success of a leader's behavioral style was contingent on the situation (Antonakis et al., 2004).

**Contingency theory.** Focus by researchers on the situation where leadership

occurred led to contingency theory, which states that the style of leadership depends on a specific situation. The effectiveness of the leader is contingent on how well the style of the leader matches the context (Northouse, 2010). Daft (2008) states that the most important contingencies to leadership are situation and followers. Important situational variables include "task, structure, context, and environment," while the "needs, maturity, and cohesiveness of the followers" (p. 65) are major factors in determining the most effective style of leadership. Goffee and Jones (2006) agree that particular situations dictate the most effective style of leadership, however, they state that this theory does not provide a model for leaders. They stated that because "there are endless contingencies in life, there are endless varieties of leadership" (p. 64). According to the contingency theory model, leaders must choose their styles to their situation in order to be most effective (Seashore et al., 2010).

**Participative leadership.** Bass (2000) stated that future leadership in education should be democratic, that followers "should be empowered to share in decision-making," and that "the distinction between leader and followers will be blurred" (p. 29). He predicted that the ability to share information instantly should accelerate the inclination to share power. Spillane (2005) asserted, "Distributed leadership is first and foremost about leadership practice rather than leaders or their roles, functions, routines, and structures" (p. 144). Leadership practice should be viewed as "a product of the interactions of school leaders, followers, and their situation" (p. 144), rather than as a product of the traits of the leader.

**Transformational and charismatic leadership.** These theories focus on the relationship between the leader and the followers and on how leaders influence their

associates. Both types of leader share a compelling vision, with clear communication of the shared meaning surrounding the vision. These leaders set high goals and expectations, and are viewed as self-confident, role models (Bessette, 1999; Seashore et al., 2010). Burns (as cited in Kouzes & Posner, 2007) described transformational leadership occurring when people "raise one another to higher levels of motivation and morality… Transforming leadership ultimately becomes moral in that it raises the level of human conduct and ethical aspiration of both the leader and the led" (p. 122).

**Focus of group processes.** Northouse (2010) defines leadership as a phenomenon within the context of the interactions between leaders and followers. According to Northouse, the group processes are the change and activity in which the leader is at the center of group and "embodies the will of the group" (p. 2). From this viewpoint, leadership becomes available to everyone. Jago (1982) stated that leadership can be observed in leader behaviors within the process and, therefore, can be learned. DeRue and Ashford (2010) posit that leadership is constructed in organizations when one claims a leader identity and others grant it. When a person grants another leadership, he or she claims a follower identity, which in turn, the leader grants. Through this process, people become a leader or follower. DeRue and Ashford assert that leadership is not necessarily prescribed by position, but developed through reciprocal relationships "within a broader organizational context, and is dynamic over time" (p. 627).

**Twenty-first century research.** While some lament the lack of a single definition of leadership, others view this as a positive because leadership is a complex, multi-dimensional process. (Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010). Researchers are continuing to be attracted to the field with a view of leadership as a complex, socially

constructed process. The increase in research over the last decade has resulted in the development of diverse theories of leadership (Dinh et al., 2014). A common thread to this research is a focus on the "*processes by which antecedent elements affect outcomes pertaining to leaders, followers, or organizational phenomena* [original emphasis]*"* (Dinh et al., 2014, p. 37). Phills (2005) stresses the importance of research on the mechanisms through which leaders affect organizational performance. Research with a focus on the processes of leadership exposes limitations of existing theory and frames future research. In a review of leadership research published between 2000 and 2012, Dinh et al. (2014) identified a total of 66 different leadership theory domains (p. 56). The domains represent a focus on the various aspects of the leadership process such as outcomes, perceptions, events, individuals, dyads, organizations, political systems, which is a contributing factor to the lack of a unified theory of leadership.

The authors (Dinh et al., 2014) based their leadership theory categorization scheme on existing classification schemes (Bacharach; Lowe and Gardner; Gardner et al.; Lord and Dinh; as cited in Dinh et al., 2014). The studies were classified first within one of two theory domains: established theory or emergent theory. Then, studies were classified based on themes within those domains. Table 1 lists the theory domains with examples of theories within each domain for research published between 2000 and 2012.

Table 1

*Leadership Theory Domains in Research Published Between 2000 and 2012*

| Thematic category title | Leadership theories and content within thematic category |
|---|---|
| | **Established theories** |
| Neo-Charismatic Theories | Transformational leadership; Charismatic leadership; Transactional leadership; Ideological/pragmatic; outstanding leadership; Self-sacrificing leadership; Pygmalion effects; Inspirational leadership |
| Information Processing Theories | Leader and follower cognition; Implicit leadership; Attribution theories of leadership; Information processing and decision making |
| Social Exchange/Relational Leadership Theories | Leadership Theories; Leader-member exchange (LMX); Relational leadership; Vertical dyadic linkage (VDL); Individualized leadership |
| Dispositional/Trait Theories | Trait theories; Leadership skills/competence; Leader motive profile theory |
| Diversity & Cross-Cultural Leadership Theories | Leadership and diversity; Cross-cultural leadership |
| Follower Centric Theories | Romance of leadership; Aesthetic leadership |
| Behavioral Theories | Participative, shared leadership, delegation and empowerment; Behavioral approaches (OSU/LBDQ); Leadership reward and punishment behavior |
| Contingency Theories | Path-goal theory; Situational leadership theory; Contingency leadership theory; Leadership substitute theory; Adaptive leadership theory; Normative decision model; Cognitive resource theory; Life cycle theory; Multiple linkage model; Flexible leadership theories |
| Power and influence theories | Power and influence of leadership; Political theory and influence tactics of leadership |
| | **Emerging theories** |
| Strategic Leadership | Strategic/top executive; Upper echelons theory; Public leadership |
| Team Leadership | Leadership in team and decision groups |
| Contextual, Complexity and System Perspectives of Leadership | Contextual theories of leadership; Social network theories of leadership; Complexity Theories of leadership; Integrative leadership |
| Leader Emergence and Development | Leadership development; Leadership emergence |
| Ethical/Moral Leadership Theories | Authentic leadership theory; Ethical leadership theory; Spiritual leadership theory; Servant leadership theory |
| Leading for Creativity, Innovation and Change | Leading for creativity and innovation; Leading organizational change; Leading for organizational learning and knowledge |
| Identity-Based Leadership Theories | Social identity theory of leadership; Identity and identification process theories of leadership |
| Other Nascent Approaches | Emotions and leadership; Destructive/abusive/toxic leadership; Biological approaches to leadership; E-leadership; Leader error and recovery; Entrepreneurial leadership |

*Note.* Adapted from "Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives," by J. E. Dinh, R. G. Lord, W. L. Gardner, J. D. Meuser, R. C. Liden, and J. Hu, 2014, *The Leadership Quarterly*, *25*(1), 36–62.

Table 2 represents the frequency and percentage of leadership theory categories in research published between 2000 and 2012. Several studies fit more than one thematic category and were classified under multiple domains or categories. The total of number of articles in this study was 752, but because many articles employed multiple theoretical frameworks, the overall frequency total was 1933 (Dinh et al., 2014). The percentage for each domain was calculated by dividing each frequency by 752. For example, 294 of 752, or 39% of the studies were classified as using Neo-charismatic Theories.

Table 2

*Frequency and Percentage of Leadership Theory Categories in Research Published Between 2000 and 2012*

| Leadership Theory Categories | Frequency | % |
|---|---|---|
| Established theories | | |
| Neo-charismatic Theories | 294 | 39% |
| Leadership and Information Processing | 194 | 26% |
| Social Exchange/Relational | 156 | 21% |
| Dispositional/Trait Theories | 149 | 20% |
| Leadership and Diversity; Cross-Cultural Leadership | 81 | 11% |
| Follower-Centric Leadership Theories | 69 | 9% |
| Behavioral Theories | 64 | 9% |
| Contingency Theories | 55 | 7% |
| Power and Influence of Leadership | 52 | 7% |
| Total | 1114 | |
| Emerging theories | | |
| Strategic Leadership | 182 | 24% |
| Team Leadership | 112 | 15% |
| Contextual, Complexity and System Perspectives of Leadership | 110 | 15% |
| Leader Emergence and Development | 102 | 14% |
| Ethical/Moral Leadership Theories | 80 | 11% |
| Leading for Creativity, Innovation and Change | 72 | 10% |
| Identity-Based Leadership Theories | 60 | 8% |
| Other Nascent Approaches | 101 | 13% |
| Total | 819 | |

*Note.* The total frequency exceeds the number of articles because articles often employ multiple theoretical frameworks. Percentage is calculated by using the frequency divided by 752, the total number of articles. Adapted from "Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives," by J. E. Dinh, R. G. Lord, W. L. Gardner, J. D. Meuser, R. C. Liden, and J. Hu, 2014, *The Leadership Quarterly*, *25*(1), 36–62.

**Leadership in Education**

According to Leithwood, Louis, Anderson, and Wahlstrom (2004a), leadership is "second only to classroom instruction among all school-related factors that contribute to what students learn at school" (p. 5). Marzano, Waters, and McNulty (2005) stated that because of the importance of leadership, "an effective principal is thought to be a necessary precondition for an effective school" (p. 5). The authors used a 1977 U.S. Senate Committee Report on Equal Educational Opportunity to justify their position. The report acknowledged that the most important and influential individual in any school is the principal.

> If a school is a vibrant, innovative, child-centered place, if it has a reputation for excellence in teaching, if students are performing to the best of their ability, one can almost always point to the principal's leadership as the key to success. (as cited in Marzano et al., 2005, pp. 5-6)

Many suggested that the research on school leadership, while extensive, did not outline specific leadership behaviors with direct effect on student achievement. (Marzano et al., 2005). Marzano et al. disagreed with this claim because it was based largely on narrative reviews of research. Glass, McGaw, and Smith (as cited in Marzano et al.) state that "conclusions based on narrative reviews of vast amounts of research are probably strongly biased by the conventional wisdom to which the synthesizer subscribes" (p. 9). Marzano et al. selected meta-analysis to synthesize the research on leadership in an effort to provide the most objective findings. Jackson (as cited in Guzzo, Jackson, and Katzell, 1987) found, "social scientists consider objectivity to be one of the primary advantages of

meta-analysis" (p. 413). In a search for objectivity, Marzano et al. employed meta-analysis as a research methodology.

Marzano et al. (2005) examined 69 studies from of 35 years of research in their meta-analysis looking for specific behaviors related to principal leadership. The findings from the meta-analysis defined 21 leadership responsibilities. The results from the meta-analysis are listed in Table 3. None of the responsibilities is new to educational research; however, the research of Marzano et al. indicates a statistically significant relationship for them with student achievement. The correlations (Avg. *r*) in Table 3 are averages computed from the correlations found in multiple studies from the meta-analysis. Marzano et al. stated, "each average can be considered an estimate of the true correlation between achievement and the various leadership responsibilities" (p. 153). The correlation reported is the average of the correlation values within the range at the 95 percent confidence interval. Marzano et al. (2005) stated that the "correlation is significant at the .05 level, which is a commonly accepted level of significance in the social sciences" (p. 153). Additionally, the "findings indicate that all are important to the effective execution of leadership in schools" (p. 64).

Table 3

*The 21 Responsibilities and Their Correlations (r) with Student Academic Achievement*

| Responsibility | The Extent to Which the Principal... | Avg. *r* |
|---|---|---|
| 1. Affirmation | Recognizes and celebrates accomplishments and acknowledges failures | 0.19 |
| 2. Change Agent | Is willing to challenge and actively challenges the status quo | 0.25 |
| 3. Contingent Rewards | Recognizes and rewards individual accomplishments | 0.24 |
| 4. Communication | Establishes strong lines of communication with and among teachers and students | 0.23 |
| 5. Culture | Fosters shared beliefs and a sense of community and cooperation | 0.25 |

| Responsibility | The Extent to Which the Principal... | Avg. *r* |
|---|---|---|
| 6. Discipline | Protects teachers from issues and influences that would detract from their teaching time or focus | 0.27 |
| 7. Flexibility | Adapts his or her leadership behavior to the needs of the current situation and is comfortable with dissent | 0.28 |
| 8. Focus | Establishes clear goals and keeps those goals in the forefront of the school's attention | 0.24 |
| 9. Ideals/Beliefs | Communicates and operates from strong ideals and beliefs about schooling | 0.22 |
| 10. Input | Involves teachers in the design and implementation of important decisions and policies | 0.25 |
| 11. Intellectual Stimulation | Ensures faculty and staff are aware of the most current theories and practices and makes the discussion of these a regular aspect of the school's culture | 0.24 |
| 12. Involvement in Curriculum, Instruction, and Assessment | Is directly involved in the design and implementation of curriculum, instruction, and assessment practices | 0.20 |
| 13. Knowledge of Curriculum, Instruction, and Assessment | Is knowledgeable about current curriculum, instruction, and assessment practices | 0.25 |
| 14. Monitoring/Evaluating | Monitors the effectiveness of school practices and their impact on student learning | 0.27 |
| 15. Optimizer | Inspires and leads new and challenging innovations | 0.20 |
| 16. Order | Establishes a set of standard operating procedures and routines | 0.25 |
| 17. Outreach | Is an advocate and spokesperson for the school to all stakeholders | 0.27 |
| 18. Relationships | Demonstrates an awareness of the personal aspects of teachers and staff | 0.18 |
| 19. Resources | Provides teachers with materials and professional development necessary for the successful execution of their jobs | 0.25 |
| 20. Situational Awareness | Is aware of the details and undercurrents in the running of the school and uses this information to address current and potential problems | 0.33 |
| 21. Visibility | Has quality contact and interactions with teachers and students | 0.20 |

*Note.* Adapted from *School Leadership that Works: From Research to Results*, by R. J. Marzano, T. Waters, and B. A. McNulty, 2005, Alexandria, VA: Association for Supervision and Curriculum Development.

Instructional Leadership has been a popular theme in educational leadership for over four decades (Marzano et al., 2005), but despite its popularity, the concept is not well defined (Leithwood, Louis, Anderson, & Wahlstrom, 2004b; Marzano et al., 2005; Mendels, 2012; Seashore, Leithwood, Wahlstrom, & Anderson, 2010). The primary focus for instructional leaders is teaching, not building management. Instructional leaders focus classroom practices of teachers, recognize good and effective instruction, and guide teachers through feedback. Instructional leaders are expected to "understand the tenets of quality instruction, and to have sufficient knowledge of the curriculum to ensure that appropriate content is being delivered to all students" (Seashore et al., 2010, pp. 39-40). Principals, as instructional leaders, support instruction by improving and maintaining learning environments for teachers.

**Professional Learning Communities**

The concept of professional learning community has its basis in organizational theory (Hipp & Huffman, 2010). Starting in the 1960s, researchers began to discuss isolation in schools and how this inhibited educators from making the progress that had been made in other professions (Schmoker, 2004a). In most schools, teachers are kept apart by the norms of isolation and privacy (Sergiovanni, 1992). Johnson (as cited in Sergiovanni, 1992) cited "fears of competition, exposure of shortcomings and discomforting criticism" as obstacles to collaboration and cooperation (p. 89).

The ideas and terms associated with professional learning communities have been used since the 1980s, when people began to examine the influence that a school as an organization can have on a teacher (Martin-Kniep, 2008; Schmoker, 2004a). Peter Senge (1990) defined a learning organization as "an organization that is continually expanding

its capacity to create its future" (p. 14). Senge predicted the successful organizations of the future as those that "tap people's commitment and capacity to learn at all levels" (p. 4). Five "component technologies" are critical aspects if an organization is going to learn (p. 6). Senge refers to the components as disciplines because they need to be practiced continually and mastered. The five disciplines are: (1) Systems Thinking, (2) Personal Mastery, (3) Mental Models, (4) Shared Vision, and (5) Team Learning.

Systems thinking refers to "a conceptual framework, a body of knowledge and tools that have been developed… to make the full pattern clearer" (Senge, 1990, p. 7). Personal mastery is "the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively" (p. 7). Senge specifically describes the relationship between individual learning and organizational learning and the mutual commitment between individual and organization. Mental models are the "deeply ingrained assumptions… that influence how we understand the world and how we take action" (p. 8). Shared vision is a picture of the future that inspires people to learn because they want to, not because they are ordered to. Team learning is based on the idea that teams dialogue, used by Senge to refer to thinking together. This practice allows teams to "develop extraordinary capacities for coordinated action" (p. 10).

The five disciplines must be deployed together, making systems thinking the key element. The interrelated disciplines augment each other to produce collective results that are greater than the total individual results (Senge, 1990). Introducing the five disciplines simultaneously is a challenge (Senge, 1990). Zemke (1999) added, "It is a whole lot easier to talk about a 'learning organization' than to create one" (p. 40).

Hord (1997) noted, "As Senge's paradigm shift was explored by educators and shared in educational journals, the label became *learning communities*" (p. 18). An early example of professional learning communities research is Judith Little's work on collegiality. Little (1991) stated:

> School improvement is most surely and thoroughly achieved when:
>
> Teachers engage in frequent, continuous, and increasingly concrete and precise talk about teaching practice (as distinct from teacher characteristics and failings, the social lives of teachers, the foibles and failures of students and their families, and the unfortunate demands of society on the school). By such talk, teachers build up a shared, language adequate to the complexity of teaching, capable of distinguishing one practice and its virtues from another, and capable of integrating large bodies of practice into distinct and sensible perspectives on the business of teaching. Other things being equal, the utility of collegial work and the rigor of experimentation with teaching is a direct function of the concreteness, precision, and coherence of the shared language (p. 12).

Little (1991) described the frequent observation of classroom instruction by both teachers and administrators, followed by constructive feedback. Only through this process does the talk about teaching become useful. Additionally, Little described the collaboration of teachers and administrators on the planning, design, and evaluation of instructional materials. Through this process, "teachers and administrators *teach each other* the practice of teaching" (p. 13). Michael Fullan (as cited in Schmoker, 2004b) stated that Little's research was the most accurate summarization of the school-level factors that affect student achievement (p. 430).

DuFour & Eaker (1998) stated, "The most promising strategy for sustained, substantive school improvement is developing the ability of school personnel to function as professional learning communities" (p. xi). Schmoker (2004a) advanced that learning communities "virtually guarantee success and a sense of competence: the moment teachers begin to closely examine their lessons and the results of those lessons, instruction improves and competence increases" (p. 85). Professional learning communities are job-embedded professional development, meaning that they are "grounded in day-to-day teaching practice" and based primarily in schools (Croft, et al., 2010, p. 2). Elmore (2004) described improvement as "a function of *learning to do the right things* in the settings where you work" (p. 73). Research indicates that teachers gain confidence and become empowered when working in PLCs (Carver, 2004). Hargreaves (2003) compared the practice of teaching in professional learning communities to open source software. He applies the idea that "software evolves faster, works better and spreads faster as more people work on it" (p. 18) to the networks of teachers that can work collectively toward student achievement and school improvement.

The use of the term professional learning community has become so popular that it is used to describe any collaboration between individuals with education as the topic of discussion (DuFour, DuFour, Eaker, & Many, 2010). Fullan (2006) noted, "the term travels faster and better than the concept" (p. 10). This lack of precision has led to ambiguity about the meaning of the term. Professional learning communities could be viewed as a passing phase without a deep understanding of their fundamental concepts, specifically collaboration. Much of what passes for collaboration is "typically lightweight, unfocused stuff, with little chance of affecting instruction or its quality"

(Schmoker, 2004a, p. 85). The lack of clarity about the critical attributes of a PLC could diminish the ability to determine their effectiveness.

DuFour et al. (2010) define a PLC as "an *ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve*" (p. 11). A professional learning community is created only through collegial learning, with an administrative focus on staff learning (Hord & Sommers, 2008). DuFour et al., (2010) list specific attributes that distinguish a PLC from a group of teachers working together. A PLC has (1) a shared mission, vision, values and goals, (2) collaborative teams, (3) collective inquiry into current best practices, (4) action orientation and experimentation, (5) commitment to continuous improvement, and (6) results orientation.

Research has linked student achievement and school reform with certain characteristics in schools. These supports are common characteristics of a professional learning community. DuFour, DuFour, Eaker, and Karhanek (2010) showed stronger student achievement in schools with cultures that held certain characteristics. These school cultures (1) ensure that students learn, (2) foster purposeful collaboration among groups of teachers, and (3) focus on results tied into the improvement of instructional practice. Bryk, Sebring, Allensworth, Luppescu, and Easton (2010) listed what they called essential supports to school reform: (1) school leadership, (2) parent and community ties, (3) professional capacity of the faculty, (4) student-centered learning climate, and (5) instructional guidance. Students in schools in which each of the five supports was considered strong achieved substantial gains in reading and math (Bryk et al., 2010). Bryk et al. (2010) stated the link between student achievement in reading and

math and strength in each of the five supports and summarized that school improvement and student achievement are driven by school organization.

Professional learning communities are widely supported in literature. Myers and Simpson (1998) described learning communities as "cultural settings in which everyone learns, in which every individual is an integral part, and in which every participant is responsible for both the learning and the overall well-being of everyone else" (p. 2). The National Association of Elementary School Principals (2008) defined learning communities as "places in which adults and students work collaboratively and demonstrate a commitment to continuous improvement of performance" (p. 3).

Kouzes and Posner (2007) describe a sense of interdependence, in which "everyone knows that they cannot succeed unless everyone else succeeds" and that they must coordinate their efforts (p. 233). Ancona et al., (2007) describe the myth of the complete leader who controls an organization without input or assistance from anyone. When leaders see themselves as incomplete, they rely on others within the organization to compensate for any missing skills (Ancona, Malone, Orlikowski, & Senge, 2007). The incomplete leader "knows that leadership exists throughout the organizational hierarchy– wherever expertise, vision, new ideas, and commitment are found" (p. 111).

Speck (1999) stated that a school learning community "promotes and values learning as an ongoing, active collaborative process with dynamic dialogue by teachers, students, staff, principal, parents, and the school community to improve the quality of learning and life within the school" (p. 8). Leithwood et al. (2004a) stated that the use of the term professional learning community indicates an interest in establishing a "school-wide culture that makes collaboration expected, inclusive, genuine, ongoing and focused

on critically examining practice to improve student outcomes" (p. 66).

The structure of most schools minimizes collaboration, reflection, and innovation for professional staff (Martin-Kniep, 2008). Educators "need the context, content, time, and processes to support learning; develop knowledge, skills, and dispositions that promote inquiry around practice; and evidence a value for the learning and contributions of its members, adult and child alike" (Martin-Kniep, 2008, p. 3). This structure to develop the practice of teaching can be accomplished through professional learning communities, where schools build "capacity and resilience to operate as learning organizations" (Martin-Kniep, 2008, p. 3).

**Leadership in Professional Learning Communities**

Research indicates that leadership is important to school improvement. Researchers have also demonstrated the important role that the principal plays in these efforts. Many of the leadership activities described have a connection to aspects of PLCs. Fullan (2001) stated that the role of the principal is to produce "greater capacity in the organization in order to get better results" (p. 65). Sergiovanni (2007) identified principals as leaders of leaders who "build up the capacities of teachers and others, so that direct leadership will no longer be needed" (p. 79). Elmore (2000) described the enhancement of skills and knowledge of the people in an organization as a leader's primary responsibility. Fullan (2005) stated that leadership, not individual leaders, is the key to sustainable reform. Leadership is a relationship and the success of an organization depends on the ability to build and sustain relationships (Kouzes & Posner, 2007). According to Davis, Darling-Hammond, LaPointe, and Meyerson (2005), there is general agreement that student achievement is influenced by school leaders in two ways: (1) by

supporting and developing effective teachers and (2) by the implementation of effective organizational processes (p. 1).

While some have suggested that schools have become too dependent on a single leader, DuFour and Eaker (1998) suggested the principal is as important as ever in school improvement efforts:

> The importance of effective leadership in any change process is well established. It is difficult to imagine implementing and sustaining a school change process through all of the inevitable setbacks and frustrations without strong leadership from a competent principal. (p. 183)

Newmann, King, and Youngs (2000) argue that school capacity is the key to improved instruction. They proposed five aspects of school capacity that must be addressed through professional development: (1) teachers' knowledge, skills and dispositions; (2) professional community; (3) program coherence; (4) technical resources; and (5) principal leadership (p. 290).

Principals are most effective when they "work collaboratively towards clear, common goals with district personnel, other principals, and teachers" (Seashore et al., 2010, p. 282). Research indicates that when leadership is shared throughout a school community, relationships are stronger and student achievement is higher (Seashore et al., 2010, p. 282). The strength of the interactions between formal and informal leaders throughout a network of professionals collaborating toward common goals will determine the success of PLCs (Spillane, 2006). Seashore et al. (2010) stated, "District support for shared leadership fosters the development of professional communities. Where teachers feel attached to a professional community, they are more likely to use instructional

practices that are linked to improved student learning" (p. 282). No particular way to share leadership exists; it is determined by the goals associated with certain tasks. Seashore et al. (2010) concluded, "The more encompassing the goal, the greater the likelihood that multiple sources of leadership will be appropriate" (p. 282).

**Hord's Model of a Professional Learning Community**

Huffman and Hipp (2003) maintain that school leaders must create communities of learners where the entire professional staff is engaged in collaboration and continuous learning. Hord and Sommers (2008) describe the work of PLCs as "continuous and intentional staff learning, so that staff always are increasing their effectiveness leading to students' increased successful learning" (p. 24). Hord (1997) conducted a literature review (1) to define and describe what the literature is calling the professional learning community; (2) to describe what happens when a school staff studies, works, plans, and takes action collectively on behalf of increased learning for students; and (3) to reveal what is known about how to create such communities of professionals in schools (p. 5). Hord (1997) cited characteristics of successful professional learning communities found in literature. The necessary requirements include:

- the collegial and facilitative participation of the principal who shares leadership—and thus, power and authority—through inviting staff input in decision making
- a shared vision that is developed from an unswerving commitment on the part of staff to students' learning and that is consistently articulated and referenced for the staff's work
- collective learning among staff and application of the learning to solutions that address students' needs

- the visitation and review of each teacher's classroom behavior by peers as a feedback and assistance activity to support individual and community improvement
- physical conditions and human capacities that support such an operation (p. 24)

Hord (1997) organized the necessary attributes of a PLC and divided them into the following five dimensions: (1) shared and supportive leadership, (2) shared values and vision, (3) collective learning and application of learning, (4) shared personal practice, and (5) supportive conditions. The five dimensions and associated critical attributes are outlined in Table 4.

Table 4

*Hord's Five PLC Dimensions and Critical Attributes*

| Dimension | Critical attributes |
|---|---|
| Shared and Supportive Leadership | Nurturing leadership among staff.<br>Shared power, authority, and responsibility.<br>Broad-based decision making that reflects commitment and accountability.<br>Sharing information. |
| Shared Values and Vision | Espoused values and norms.<br>Focus on student learning.<br>High expectations.<br>Shared vision guides teaching and learning. |
| Collective Learning and Application | Sharing information.<br>Seeking new knowledge, skills, and strategies.<br>Working collaboratively to plan, solve problems, and improve learning opportunities. |
| Shared Personal Practice | Peer observations to offer knowledge, skills, and encouragement.<br>Feedback to improve instructional practices.<br>Sharing outcomes of instructional practices.<br>Coaching and mentoring. |
| Supportive Conditions | |
| Relationships | Caring relationships.<br>Trust and respect.<br>Recognition and celebration.<br>Risk-taking.<br>Unified effort to embed change. |
| Structures | Resources (time, money, materials, people).<br>Facilities.<br>Communication systems. |

*Note.* Adapted from *Reculturing Schools as Professional Learning Communities* by J. B. Huffman and K. K. Hipp, 2003, Lanham, MD: ScarecrowEducation.

## Summary

Research has demonstrated a relationship between leadership and student achievement. While there are many different definitions and theories, many agree that leadership is a phenomenon that involves influence, occurs in groups, and reflects a shared purpose. Classroom instruction and leadership have the greatest impact on student achievement. The benefits of professional learning communities were presented because research and literature show a relationship between PLCs and student achievement (Bredeson, 2000; DuFour et al., 2010; Fullan 2001, 2005; Hord, 1997; Huffman and Hipp, 2010; Leithwood et al., 2004a; Martin-Kniep, 2008; Myers and Simpson, 1998; Seashore et al., 2010; Sergiovanni, 2007; Speck, 1999; Spillane, 2006). The importance of leadership in education was stated to demonstrate its importance as a factor in PLCs.

Chapter three describes the research design and methodology used to collect and analyze data associated with specific leadership behaviors of principals and critical attributes of professional learning communities. It will include the purpose of the study, the research design, the instrument used for data collection, the population, the sample in the study, the sampling method, the instrument used for data collection, the plan for data analysis, and limitations and delimitations of the study.

## Chapter 3: Methodology

This chapter describes the research design and methodology used in this study to gather and analyze data related to leadership practices of principals and depth of implementation of professional learning communities in Lasallian schools. It includes the purpose of the study, the methodology, the instrumentation, the method of data collection, the data analysis, the delimitations and limitations of the study, and a summary of the chapter.

The purpose of this study is to investigate the leadership practices of principals in relation to the depth of implementation of a professional learning community. The leadership practices of principals that were measured were the observable characteristics as identified by Marzano, Waters, and McNulty's (2005) 21 Responsibilities of the School Leader. Depth of implementation of a professional learning community was measured using Hord's (1997) five dimensions of a PLC: (1) Shared and Supportive Leadership; (2) Shared Values and Vision; (3) Collective Learning and Application; (4) Shared Personal Practice; (5) Supportive Conditions.

This quantitative study used surveys of teachers and principals in 45 Lasallian college preparatory schools throughout the United States. One set of variables was the observable characteristics of principal leadership as measured by the Marzano, Waters, and McNulty's questionnaire 21 Responsibilities of the School Leader. The other set of variables was the depth of implementation of Hord's (1997) five dimensions of a professional learning community as measured by the Professional Learning Community Assessment-Revised (PLCA-R).

## Methodology

Quantitative methods for this study were utilized to determine the strength of relationships between specific leadership actions and depth of implementation of PLCs in schools. This study was undertaken to determine relationships between two variables, leadership practices and implementation of PLCs. Aliaga and Gunderson (2000) describe quantitative research methods as explaining phenomena by collecting and analyzing numerical data. Surveys can be a quick and inexpensive tool to measure many variables and collect large amounts of data from a geographically expansive sample (Check & Schutt, 2012, p. 160). The research questions in this study involve teachers' observations of leadership behaviors of principals, self-assessment of principals, and assessment of personal experiences within PLCs by teachers and principals.

The schools in this study are dispersed throughout the country and the data were communicated to the researcher, rather than observed. Two of the most important criteria when considering survey design for research are whether the "data are best obtained directly from the respondents" and if "data can be obtained by brief answers to structured questions" (Vogt, Gardner, & Haeffele, 2012). Vogt et al. (2012) suggested surveys were an efficient method to gather the data directly from a large number of respondents, on ordered scales as responses to structured questions, in a confidential setting. These qualities are essential to this study; therefore, the researcher selected a survey design to gather the data. This study relied on the perceptions and observations of participants for data. The observed leadership practices and perceived depth of implementation of PLCs are measured through questionnaires as ordinal variables.

The population in this quantitative study consists of all the teachers and 45 of the 46 principals in the Lasallian college preparatory schools throughout the United States. It should be noted that the researcher is one of the 46 principals and did not participate in the study**.** For this study, the population is the sample. Each of the 45 schools was invited to participate in the study.

**Instrumentation**

Data for this study were obtained through surveys administered to two groups of people: (1) principals and (2) teachers. The two-part survey is comprised of modified versions of two existing instruments; one measured observable characteristics of principal leadership and the other measured the observed depth of implementation of five dimensions of a professional learning community.

These leadership practices of principals and critical attributes of PLCs were measured using adaptations of two existing survey instruments. The leadership practices of principals were measured using an adaption of a questionnaire designed to assess the 21 Responsibilities of the School Leader (Marzano et al., 2005).

Depth of implementation of a PLC was measured by surveying teachers and principals using selected items from an instrument designed to assess a school's position on the continuum of PLC development (see Appendix D). Both the PLC instrument and the leadership instrument used a four-point Likert scale. The participants' responses were ordered for the purposes of statistical analysis.

**Questionnaire measuring the 21 Responsibilities of the School Leader.** Marzano, Waters, and McNulty (2005) constructed a 92-item questionnaire for building principals, with multiple items for each of the 21 Responsibilities of the School Leader.

The questionnaire asks principals to measure behaviors associated with one of the responsibilities using a four-point, forced choice, Likert scale response format. The highest rating is "this characterizes me or my school to a great extent" and the lowest is "this does not characterize me or my school." Each of the 92 items was intended to measure principals' behavior in each of the 21 responsibilities, plus two underlying factors: first-order and second order change. The original 92-item survey was adapted for this study.

The items in the questionnaire were limited to those items that measure the 21 responsibilities in order to give focus to the research questions of this study and to make the administration of the survey more manageable in terms of time for the respondents. From the original 92-item list, the number of items for each responsibility was reduced to three. After receiving feedback, one additional item from each responsibility was eliminated for a total of 42 survey items.

The original 92-item McREL questionnaire was administered only to principals. For this study, the questionnaire was given to both principals and teachers. For the survey administered to principals, the language from the original questionnaire items was used. The survey was adapted for each group. In the survey intended for teachers, the language in some of the items was changed to reflect an observation of the behavior of the principal. For example the item from the principals' survey, "I am highly visible to the teachers and students in my school" was changed to "In my school, the principal is highly visible to the teachers and students." The overall length of the survey and the proposed language change for the administration to the teachers were discussed in a conversation with Maura McGrath, Knowledge Management Specialist at McREL

International (M. McGrath, personal communication, October 30, 2013). Two proposed 42-item instruments were submitted, in writing, and McREL responded with written permission for use of the adapted surveys (see Appendix B).

The complete 92-item questionnaire (see Appendix D) was posted on the McREL website from September 2003 to February 2004 and 652 principals completed the survey. Cronbach's alpha is a measure of internal consistency reliability. The responses to the questionnaire had a Cronbach's Alpha of .92 (Marzano et al., 2005). As a guideline, a Cronbach's alpha above 0.7 is acceptable for research purposes (Muijs, 2012).

**Professional Learning Community Assessment-Revised.** This study used the Professional Learning Community Assessment-Revised (PLCA-R) to measure the depth of implementation in schools of essential aspects of PLCs. The PLCA-R was designed for school leaders to administer to personnel in order to assess everyday classroom and school-level practices as they relate to Hord's five dimensions of a PLC (Olivier et al., 2003). This tool is commonly used by schools across the country to determine the strength of practices in each dimension of a PLC (Olivier et al., 2003).

Hord (1997) conducted a review of existing literature to describe what professional learning communities look like, how they function, why they are important, and how they are created. Through the review, Hord identified necessary attributes of a PLC and divided them into the following five dimensions. (1) The principal must administer in a collegial manner with shared authority, and invite the input from staff when making decisions. (2) The principal and staff in an organization share a vision where a focus on learning exists and guides all decisions. (3) Information is shared to plan, address students' needs, and solve problems collaboratively. (4) Peers observe one

another and discuss instructional practices to support the learning community. (5) Supportive conditions exist including physical resources, such as time and facilities, and professional relationship qualities, including trust, respect, and commitment to improvement.

Hord developed an instrument using 17 descriptors, each with three items, organized into the five dimensions. The purpose of this instrument was to measure key aspects of PLCs along a developmental continuum as the PLC progressed from "initiation to implementation to institutionalization" (Huffman and Hipp, 2003).

Olivier, Hipp, and Huffman (2003) extended Hord's work by reorganizing and redefining the critical attributes and dimensions of the PLC. This redesign offered a school more precision in determining its position on the PLC continuum (Olivier et al., 2003). In an attempt to demystify the idea of the professional learning community, the authors defined a PLC as "*Professional educators working collectively and purposefully to create and sustain a culture of learning for all students and adults*" (Olivier et al., 2010, p. 12). Olivier, Hipp, and Huffman's redesigned instrument, the Professional Learning Community Assessment (PLCA), assessed "perceptions about the school's principal, staff, and stakeholders" (Olivier et al., 2003). The original Professional Learning Community Assessment (PLCA) is a 45-item questionnaire, which measures staff perceptions of school practices related to five dimensions of professional learning communities.

In the questionnaire, respondents use a four-point, forced choice, Likert scale to indicate the degree to which they agree or disagree with statements about: (1) Shared and Supportive Leadership; (2) Shared Values and Vision; (3) Collective Learning and

Application; (4) Shared Personal Practice; (5) Supportive Conditions. In the instrument, the indicators for the fifth dimension, Supportive Conditions, were divided into two categories: Relationships and Structures. The category of Relationships includes the supportive conditions in professional relationships such as trust, respect, and commitment to improvement. The category of Structures includes the supportive conditions in physical resources, including time and facilities.

The instrument was administered over 1,200 times after it was developed, allowing the authors to review reliability. Cronbach's Alpha analyses were conducted to determine internal consistency for each of the six categories. Table 5 shows Alpha values for the sections ranged from .82 in Supportive Conditions-Relationships to .94 in Supportive and Shared Leadership.

Table 5

*Cronbach's Alpha Reliability Values (n=1,209)*

| Survey Category | Cronbach's Alpha |
|---|---|
| Supportive and Shared Leadership | .94 |
| Shared Values and Vision | .92 |
| Collective Learning and Application | .91 |
| Shared Personal Practice | .87 |
| Supportive Conditions-Relationships | .82 |
| Supportive Conditions-Structures | .88 |

*Note.* Adapted from *Reculturing Schools as Professional Learning Communities* by J. B. Huffman and K. K. Hipp, 2003, Lanham, MD: ScarecrowEducation.

Olivier, Hipp, and Huffman (2010) concluded that the original instrument lacked assessment of the use of data to improve student learning after feedback and review of over 1,200 administrations of the survey. Therefore, a new instrument, Professional Learning Community Assessment-Revised (PLCA-R), incorporated seven new

statements related to a school's use of data, resulting in a 52-item questionnaire. Satisfactory internal consistency for reliability for this assessment tool was determined through construct validity by expert study and factor analysis (SEDL, 2013).

Dr. Olivier granted permission to utilize the survey and discussed options for altering the instrument (D. Olivier, personal communication, December 13, 2013). The researcher explained that the proposed survey would incorporate two existing questionnaires and would be lengthy without reduction. Dr. Olivier shared that the PLCA and the PLCA-R have been used many times, with many different adaptions, and granted permission to alter the instrument (see Appendix A). After consultation with Dr. Olivier, the researcher reduced the number of items in the PLCA-R from 52 to 21 (see Appendix D).

**Expert Panel Review**

Pretesting is a key stage in the survey questionnaire development process (Presser & Blair, 1994). Presser and Blair (1994) indicated that expert review is the most productive form of pretesting in problem identification (p.73). For this study, a panel of experts was formed to review the survey and provide feedback to the researcher. The expert panel included former teachers and former principals from Lasallian schools, as well as educators with no Lasallian school experience. The panel provided feedback on the quality of survey instrument and length of time for completion. To test face validity, the expert panel was asked to classify each statement of the survey as clear or confusing. Additionally, the expert panel was asked to provide suggestions for clarification to ensure that what the survey is asking is as transparent as possible. After this process, final adjustments (mostly correction of typographic errors) were made to the instruments

before administration. None of the contributors to the expert review participated in the study.

**Researcher Bias**

In this study, the researcher was a principal in a Lasallian school. In the invitation letter to potential survey participants, the researcher identified himself by name, as a doctoral candidate conducting research, and as working in a specific Lasallian school. The researcher had a collegial relationship with many of the principals in the study, but no relationship with most of the teachers in the study. Participants were assured that confidentiality would be maintained throughout the study. The researcher excluded data from unfinished surveys in order to minimize bias caused by incomplete data.

**Data Collection**

The researcher requested permission from the Visitor of each of the three Districts to include his schools in the study. Written requests to participate in the study were distributed to the 45 principals in the region after permission was granted. In the participation request letter, the researcher requested an e-mail directory of the teaching faculty at each school. Some principals indicated that they were not allowed to distribute e-mail directories because of agreements with faculty. When addresses were available, surveys were e-mailed directly to the teachers. Eight principals agreed to forward the survey to their teachers. The researcher sent follow-up e-mails three times to the teachers and principals who had not responded to encourage participation. The invitation was sent to 1,423 potential participants and 598 accepted the invitation for a 42% response rate. Of the 598 participants who accepted the invitation and began the survey, 472 completed the survey.

The questionnaire was delivered and data collected using Survey Monkey. In a cover letter to the survey, the researcher stated that participation in this research study was voluntary and that participants could withdraw at any time. Participants were assured that confidentiality would be maintained throughout the study. The researcher provided a telephone number and e-mail address to participants for any questions concerning the study. The cover letter to the survey is attached in Appendix C.

**Data Analysis**

Survey response data were transferred from Survey Monkey into the Statistical Package for the Social Sciences (IBM-SPSS), version 20, for data analysis. The data from both sections of the survey were responses on a Likert scale. The data produced from the Likert scale are often treated as both ordinal and interval, and the scale is labeled quasi-interval (Cresswell, 2012). The type of statistical test used is determined by the type of scale; while nonparametric are used with ordinal scales, parametric are used with interval scales.

For the purposes of this study, the researcher treated the Likert scales as ordinal scales during data analysis (Cresswell, 2012). The data were analyzed using descriptive and inferential statistical methods in order to examine the relationships between variables. The analysis and discussion of the data are presented in the next chapter. Descriptive methods were used to examine the variables related to three of the research questions. Inferential methods were used to address the fourth research question. The intervals for both scales were theoretically equal, but that cannot be guaranteed. The survey response values can be rank ordered according to level of agreement. The level of

agreement increases from Disagree to Agree to Strongly Agree, however, the distance between each of the values cannot be assumed to be the same.

The variables from the leadership survey were organized into 21 groups representing the 21 Responsibilities of the School Leader (Marzano et al., 2005). The variables from the PLC survey were organized into six groups representing the six categories of the PLCA-R (Olivier et al., 2009). For each group of variables in both surveys, a new variable was computed transforming all of the data in each variable using mean as the function. This process resulted in 21 leadership variables and six PLC variables.

Spearman's rho correlations were calculated in order to determine strength of relationship between the two sets of variables. Spearman's rho calculates a correlation coefficient on rankings of ordinal variables rather than on the actual data (Muijs, 2012). As a measure of reliability, Cronbach's alpha was calculated for the items in the leadership survey instrument and the PLC survey instrument.

**Delimitations of the Study**

Possible delimitations of the study include:

(1) The population for this study was comprised of teachers and principals in Lasallian college preparatory schools throughout the United States. The results may not be generally applied to all schools.

(2) Participants were asked to represent the degree to which they feel conditions exist or the degree to which they agree with statements; honesty can only be assumed.

(3) The survey instrument used in this study measured responses using a four-point, forced choice, Likert scale format. Responses were limited to the prescribed range of categories of the instrument.

(4) Respondents were asked to respond without clarification as they could in an interview.

**Limitations of the Study**

The survey was administered during the month of May, which is the final month of school for most of the participating schools. This may have contributed to a lower response rate and completion rate.

Data from the study could not be analyzed for individual schools. There was no guarantee that teachers and the principal from the same school would participate in the study.

**Summary**

Chapter three described the methodology and research design of this quantitative study that is designed to explore four questions about specific leadership practices of principals and the depth of implementation of a professional learning community. Participants in the study were principals and teachers in Lasallian schools throughout the United States. Surveys were used to gather data measuring observable leadership practices of principals and personal experiences in PLCs. The quantitative data collected from the survey were calculated and analyzed with the Statistical Package for the Social Sciences program. The strength of relationship was determined using Spearman's rho correlations for each pair of variables. Chapter four of this dissertation presents the findings from the study.

## Chapter 4: Data Analysis

The purpose of this chapter is to present the data and analysis of the data from the survey as they relate to each research question. The data are presented according to research questions and begin with an overview of demographics of the participants

This study surveyed teachers and principals in 45 Lasallian college preparatory schools throughout the United States. The findings from research questions one and two are presented together and the findings for research question three and four are presented separately. The data used to address research questions one and two are from the leadership section of the survey. The data used to answer research question three are from the PLC section of the survey. The data used to answer research question four are the analysis of the data from both the leadership and PLC sections of the survey.

### Participant Demographics

The survey was sent to 1,423 principals and teachers. Twenty-eight principals and 570 teachers responded to the survey for a response rate of 42%. Of the 598 respondents, 472 completed the entire survey.

Table 6 lists demographic characteristics of the participants in the study. Participants were asked to provide years working in their current school as well as their overall years working in education. All 25 principals and 248 of the 447 teachers (55.5%) have been working in education for more than 15 years. As Table 6 indicates, the participants have a wide range of experience in their current schools.

Table 6

*Demographic Characteristics of Participants (*N = *472)*

| | Teachers | | Principals | |
|---|---|---|---|---|
| Demographic feature | *n* | % | *n* | % |
| Years working in current school | | | | |
| Less than 2 years | 53 | 11.9% | 2 | 8.0% |
| 2 - 5 years | 85 | 19.0% | 4 | 16.0% |
| 5 - 10 years | 102 | 22.8% | 3 | 12.0% |
| 10 - 15 years | 80 | 17.9% | 5 | 20.0% |
| More than 15 years | 127 | 28.4% | 11 | 44.0% |
| Total | 447 | 100.0% | 25 | 100.0% |
| Years working in education | | | | |
| Less than 2 years | 12 | 2.7% | 0 | 0.0% |
| 2 - 5 years | 42 | 9.4% | 0 | 0.0% |
| 5 - 10 years | 84 | 18.8% | 0 | 0.0% |
| 10 - 15 years | 61 | 13.6% | 0 | 0.0% |
| More than 15 years | 248 | 55.5% | 25 | 100.0% |
| Total | 447 | 100.0% | 25 | 100.0% |

Data for this study were obtained through the use of a two-part survey. The Leadership section of the survey measured observable characteristics of principal leadership and the Professional Learning Community Assessment-Revised (PLCA-R) section measured the observed depth of implementation of five dimensions of a professional learning community. The response options ranged from 1 (This does not characterize me or my school.) to 4 (This characterizes me or my school to a great extent.) on the section of the survey about leadership behaviors.

**Research Question #1: To what extent do teachers observe the principal in their school demonstrating specific actions related to each of Marzano, Waters, and McNulty's (2005) 21 leadership responsibilities?**

**Research Question #2: To what extent do principals characterize their own actions as related to each of the 21 leadership responsibilities?**

**Teachers' responses.** A finding from these data is that teachers gave the highest percentage of responses at levels three or four to the Leadership Categories of Outreach, Ideals/Beliefs, and Affirmation.

***Outreach.*** On the teachers' survey, 89% rated Outreach at a level three or level four (see Table 55). Fifty-five percent of teachers selected level four as the response for this category. Eighty-eight percent of teachers rated principals at a level three or level four on the first survey item in this category, "Our principal is a strong advocate for my school to the community at large" (see Table 56). The response rate for this item at level four was 54%. Ninety percent of teachers rated principals at a level three or level four on the second survey item in this category, "Our principal is a strong advocate for my school to the parents of our students" (see Table 57). The response rate for this item at level four was 57%.

***Ideals/Beliefs.*** Table 31 indicates that 82% of teachers responded at level three or level four for the Ideals/Beliefs category. Forty-one percent of the teachers selected level four as the response. Eighty-four percent of teachers rated principals at a level three or level four on the first survey item in this category, "In my school, the principal has explicitly communicated strong beliefs and ideals to teachers" (see Table 32). The response rate for this item at level four was 39%. Eighty percent of teachers rated

principals at a level three or level four on the second survey item in this category, "My principal's behavior is consistent with his or her ideals and beliefs regarding schools, teachers, and learning" (see Table 33). The response rate for this item at level four was 42%.

***Affirmation.*** Table 7 shows that 79% of teachers responded at level three or level four for the Ideals/Beliefs category. Thirty-seven percent of teachers selected level four as the response. Sixty-five percent of teachers rated principals at a level three or level four on the first survey item in this category, "The accomplishments of individual teachers in my school are recognized and celebrated" (see Table 8). The response rate for this item at level four was 21%. Ninety-two percent of teachers rated principals at a level three or level four on the second survey item in this category, "The accomplishments of the students and the school in general are recognized and celebrated" (see Table 9). The response rate for this item at level four was 53%.

**Principals' responses.** A finding from these data is that principals gave the highest percentage of responses at levels three or four to the Leadership Categories of Situational Awareness, Outreach, Communication, and Discipline.

***Situational Awareness.*** On the principals' survey, 98% rated Situational Awareness at a level three or level four (see Table 64). Fifty-five percent of the principals selected level four. Ninety-six percent of principals rated level three or level four on the first survey item in this category, "Our principal is aware of the issues in my school that have not formally come to the surface but might cause discord" (see Table 65). Twenty-eight percent of principals rated this item at level four. Fifty-seven percent of teachers responded at a level three or level four for this survey item. One hundred

percent of principals rated level three or level four on the second survey item in this category, "In my school, the principal is aware of what is running smoothly and what is not running smoothly" (see Table 66). Sixty-four percent of principals rated this item at level four. For this survey item, 67% of teachers responded at a level three or level four.

***Outreach.*** On the principals' survey, 96% rated Outreach at a level three or level four (see Table 55). Seventy-six percent of principals rated this category at level four. Ninety-six percent of principals rated this item at level three or level four on the first survey item in this category, "Our principal is a strong advocate for my school to the community at large" (see Table 56). Eighty percent of principals rated this item at level four. Ninety-six percent of principals rated this item at level three or level four on the second survey item in this category, "Our principal is a strong advocate for my school to the parents of our students" (see Table 57). Seventy-two percent of principals rated this item at level four.

***Communication.*** On the principals' survey, 94% rated Communication at a level three or four (see Table 16). Thirty-six percent of principals rated this category at level four. Ninety-two percent of principals rated this item at level three or level four on the first survey item in this category, "Effective ways for teachers to communicate with one another have been established in my school" (see Table 17). Thirty-two percent of principals rated this item at level four. For this survey item, 69% of teachers responded at a level three or level four. Ninety-six percent of principals rated this item at level three or level four on the second survey item in this category, "Lines of communication are strong between teachers and the principal" (see Table 18). Forty percent of principals

rated this item at level four. For this survey item, 58% of teachers responded at a level three or level four.

***Discipline.*** On the principals' survey, 94% rated Discipline at a level three or four (see Table 22). Twenty-six percent of principals rated this category at level four. One hundred percent of principals rated this item at level three or level four on the first survey item in this category, "In my school, the instructional time of teachers is well protected" (see Table 23). Thirty-six percent of principals rated this item at level four. For this survey item, 60% of teachers responded at a level three or level four. Eighty-eight percent of principals rated this item at level three or level four on the second survey item in this category, "In my school, teachers are protected from undue distractions and interruptions to their teaching" (see Table 24). Sixteen percent of principals rated this item at level four. For this survey item, 51% of teachers responded at a level three or level four.

**Combined responses.** A finding from these data is that teachers and principals combined to give the highest percentage of responses at levels three or four to the Leadership Categories of Outreach, Ideals/Beliefs, and Affirmation.

***Outreach.*** Table 55 indicates that 90% of teachers and principals responded at a level three or level four for the Outreach category in the combined survey totals. Fifty-seven percent of teachers and principals rated this category at level four. Eighty-nine percent of teachers and principals selected level three or level four on the first survey item in this category, "Our principal is a strong advocate for my school to the community at large" (see Table 56). Fifty-six percent of teachers and principals rated this item at level four. Ninety-one percent of teachers and principals selected level three or level four

on the second survey item in this category, "Our principal is a strong advocate for my school to the parents of our students" (see Table 57). The response rate for this item at level four was 58%.

***Ideals/Beliefs.*** Table 31 indicates that 82% of teachers and principals responded at a level three or level four for the Ideals/Beliefs category in the combined survey totals. Forty-one percent of teachers and principals rated this category at level four. Eighty-four percent of teachers and principals selected level three or level four on the first survey item in this category, "In my school, the principal has explicitly communicated strong beliefs and ideals to teachers" (see Table 32). Thirty-nine percent of teachers and principals rated this item at level four. Eighty percent of teachers and principals selected level three or level four on the second survey item in this category, "My principal's behavior is consistent with his or her ideals and beliefs regarding schools, teachers, and learning" (see Table 33). Forty-three percent of teachers and principals rated this item at level four.

***Affirmation.*** Table 7 indicates that 79% of teachers and principals responded at a level three or level four for the Affirmation category in the combined survey totals. Thirty-eight percent of teachers and principals rated this category at level four. Sixty-six percent of teachers and principals selected level three or level four on the first survey item in this category, "The accomplishments of individual teachers in my school are recognized and celebrated" (see Table 8). Twenty-two percent of teachers and principals rated this item at level four. Ninety-two percent of teachers and principals selected level three or level four on the second survey item in this category, "The accomplishments of

the students and the school in general are recognized and celebrated" (see Table 9). Fifty-four percent of teachers and principals rated this item at level four.

**Leadership survey data.** The variables from the McREL leadership survey were organized into 21 groups representing the 21 Responsibilities of the School Leader (Marzano et al., 2005). For each group, the data were combined into a single variable. This process resulted in 21 leadership variables. For example, the data from survey items in the Affirmation category, "The accomplishments of individual teachers in my school are recognized and celebrated" and "The accomplishments of the students and the school in general are recognized and celebrated," were combined into one new variable, Affirmation. Tables 8 and 9 represent the data for the items from the Leadership survey that were selected and used for the Affirmation category variable (L1). Table 7 represents the data for the new variable, Affirmation.

Table 7

*Affirmation Category (L1) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 57 | 6% | 1 | 2% | 58 | 6% |
| 2 | 135 | 15% | 5 | 10% | 140 | 15% |
| 3 | 369 | 41% | 18 | 36% | 387 | 41% |
| 4 | 333 | 37% | 26 | 52% | 359 | 38% |
| *M* | 3.09 | | 3.38 | | 3.11 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 8

*Responses to Survey Item "The Accomplishments of Individual Teachers in My School are Recognized and Celebrated."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 44 | 10% | 1 | 4% | 45 | 10% |
| 2 | 113 | 25% | 4 | 16% | 117 | 25% |
| 3 | 195 | 44% | 12 | 48% | 207 | 44% |
| 4 | 95 | 21% | 8 | 32% | 103 | 22% |
| *M* | 2.76 | | 3.08 | | 2.78 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 9

*Responses to Survey Item "The Accomplishments of the Students and the School in General are Recognized and Celebrated."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 13 | 3% | 0 | 0% | 13 | 3% |
| 2 | 22 | 5% | 1 | 4% | 23 | 5% |
| 3 | 174 | 39% | 6 | 24% | 180 | 38% |
| 4 | 238 | 53% | 18 | 72% | 256 | 54% |
| *M* | 3.43 | | 3.68 | | 3.44 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 10 represents the data for the second variable, Change Agent. Tables 11 and 12 represent the data for the items from the Leadership survey that were selected and used for the Change Agent category variable (L2).

Table 10

*Change Agent Category (L2) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 107 | 12% | 1 | 2% | 108 | 11% |
| 2 | 227 | 25% | 6 | 12% | 233 | 25% |
| 3 | 351 | 39% | 23 | 46% | 374 | 40% |
| 4 | 209 | 23% | 20 | 40% | 229 | 24% |
| *M* | 2.74 | | 3.24 | | 2.77 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 11

*Responses to Survey Item "In My School, the Principal Consciously Tries to Challenge the Status Quo to Get People Thinking."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 58 | 13% | 1 | 4% | 59 | 13% |
| 2 | 118 | 26% | 2 | 8% | 120 | 25% |
| 3 | 173 | 39% | 13 | 52% | 186 | 39% |
| 4 | 98 | 22% | 9 | 36% | 107 | 23% |
| *M* | 2.70 | | 3.20 | | 2.72 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 12

*Responses to Survey Item "In My School, We Systematically Consider New and Better Ways of Doing Things."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 49 | 11% | 0 | 0% | 49 | 10% |
| 2 | 109 | 24% | 4 | 16% | 113 | 24% |
| 3 | 178 | 40% | 10 | 40% | 188 | 40% |
| 4 | 111 | 25% | 11 | 44% | 122 | 26% |
| *M* | 2.79 | | 3.28 | | 2.81 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 13 represents the data for the third variable, Contingent Rewards. Tables 14 and 15 represent the data for the items from the Leadership survey that were selected and used for the Contingent Rewards category variable (L3).

Table 13

*Contingent Rewards Category (L3) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 94 | 11% | 1 | 2% | 95 | 10% |
| 2 | 202 | 23% | 15 | 30% | 217 | 23% |
| 3 | 374 | 42% | 19 | 38% | 393 | 42% |
| 4 | 224 | 25% | 15 | 30% | 239 | 25% |
| *M* | 2.81 | | 2.96 | | 2.82 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 14

*Responses to Survey Item "Individuals Who Excel in My School are Recognized and Rewarded."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 46 | 10% | 0 | 0% | 46 | 10% |
| 2 | 93 | 21% | 3 | 12% | 96 | 20% |
| 3 | 190 | 43% | 12 | 48% | 202 | 43% |
| 4 | 118 | 26% | 10 | 40% | 128 | 27% |
| *M* | 2.85 | | 3.28 | | 2.87 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 15

*Responses to Survey Item "In My School, Advancement and Reward are not Automatically Given for Simply 'Putting in Your Time.'"*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 48 | 11% | 1 | 4% | 49 | 10% |
| 2 | 109 | 24% | 12 | 48% | 121 | 26% |
| 3 | 184 | 41% | 7 | 28% | 191 | 40% |
| 4 | 106 | 24% | 5 | 20% | 111 | 24% |
| *M* | 2.78 | | 2.64 | | 2.77 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 16 represents the data for the fourth variable, Communication. Tables 17 and 18 represent the data for the items from the Leadership survey that were selected and used for the Communication category variable (L4).

Table 16

*Communication Category (L4) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 112 | 13% | 0 | 0% | 112 | 12% |
| 2 | 213 | 24% | 3 | 6% | 216 | 23% |
| 3 | 360 | 40% | 29 | 58% | 389 | 41% |
| 4 | 209 | 23% | 18 | 36% | 227 | 24% |
| *M* | 2.74 | | 3.30 | | 2.77 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 17

*Responses to Survey Item "Effective Ways for Teachers to Communicate with One Another Have Been Established in My School."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 35 | 8% | 0 | 0% | 35 | 7% |
| 2 | 104 | 23% | 2 | 8% | 106 | 22% |
| 3 | 204 | 46% | 15 | 60% | 219 | 46% |
| 4 | 104 | 23% | 8 | 32% | 112 | 24% |
| *M* | 2.84 | | 3.24 | | 2.86 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 18

*Responses to Survey Item "Lines of Communication are Strong Between Teachers and the Principal."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 77 | 17% | 0 | 0% | 77 | 16% |
| 2 | 109 | 24% | 1 | 4% | 110 | 23% |
| 3 | 156 | 35% | 14 | 56% | 170 | 36% |
| 4 | 105 | 23% | 10 | 40% | 115 | 24% |
| *M* | 2.65 | | 3.36 | | 2.68 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 19 represents the data for the fifth variable, Culture. Tables 20 and 21 represent the data for the items from the Leadership survey that were selected and used for the Culture category variable (L5).

Table 19

*Culture Category (L5) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 64 | 7% | 0 | 0% | 64 | 7% |
| 2 | 173 | 19% | 4 | 8% | 177 | 19% |
| 3 | 412 | 46% | 31 | 62% | 443 | 47% |
| 4 | 245 | 27% | 15 | 30% | 260 | 28% |
| *M* | 2.94 | | 3.22 | | 2.95 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 20

*Responses to Survey Item "Teachers in My School Regularly Share Ideas."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 23 | 5% | 0 | 0% | 23 | 5% |
| 2 | 85 | 19% | 1 | 4% | 86 | 18% |
| 3 | 215 | 48% | 16 | 64% | 231 | 49% |
| 4 | 124 | 28% | 8 | 32% | 132 | 28% |
| *M* | 2.98 | | 3.28 | | 3.00 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 21

*Responses to Survey Item "In My School, We Share a Vision of What We Could Be Like."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 41 | 9% | 0 | 0% | 41 | 9% |
| 2 | 88 | 20% | 3 | 12% | 91 | 19% |
| 3 | 197 | 44% | 15 | 60% | 212 | 45% |
| 4 | 121 | 27% | 7 | 28% | 128 | 27% |
| *M* | 2.89 | | 3.16 | | 2.90 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 22 represents the data for the sixth variable, Discipline. Tables 23 and 24 represent the data for the items from the Leadership survey that were selected and used for the Discipline category variable (L6).

Table 22

*Discipline Category (L6) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *N* | % |
| 1 | 131 | 15% | 0 | 0% | 131 | 14% |
| 2 | 264 | 30% | 3 | 6% | 267 | 28% |
| 3 | 336 | 38% | 34 | 68% | 370 | 39% |
| 4 | 163 | 18% | 13 | 26% | 176 | 19% |
| *M* | 2.59 | | 3.20 | | 2.63 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 23

*Responses to Survey Item "In My School, the Instructional Time of Teachers is Well Protected."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 53 | 12% | 0 | 0% | 53 | 11% |
| 2 | 124 | 28% | 0 | 0% | 124 | 26% |
| 3 | 171 | 38% | 16 | 64% | 187 | 40% |
| 4 | 99 | 22% | 9 | 36% | 108 | 23% |
| *M* | 2.71 | | 3.36 | | 2.74 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 24

*Responses to Survey Item "In My School, Teachers are Protected from Undue Distractions and Interruptions to Their Teaching."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 78 | 17% | 0 | 0% | 78 | 17% |
| 2 | 140 | 31% | 3 | 12% | 143 | 30% |
| 3 | 165 | 37% | 18 | 72% | 183 | 39% |
| 4 | 64 | 14% | 4 | 16% | 68 | 14% |
| *M* | 2.48 | | 3.04 | | 2.51 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 25 represents the data for the seventh variable, Flexibility. Tables 26 and 27 represent the data for the items from the Leadership survey that were selected and used for the Flexibility category variable (L7).

Table 25

*Flexibility Category (L7) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 155 | 17% | 1 | 2% | 156 | 17% |
| 2 | 215 | 24% | 3 | 6% | 218 | 23% |
| 3 | 307 | 34% | 30 | 60% | 337 | 36% |
| 4 | 217 | 24% | 16 | 32% | 233 | 25% |
| *M* | 2.66 | | 3.22 | | 2.69 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 26

*Responses to Survey Item "In My School, the Principal is Comfortable Making Major Changes in How Things are Done."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 50 | 11% | 0 | 0% | 50 | 11% |
| 2 | 80 | 18% | 2 | 8% | 82 | 17% |
| 3 | 154 | 34% | 15 | 60% | 169 | 36% |
| 4 | 163 | 36% | 8 | 32% | 171 | 36% |
| *M* | 2.96 | | 3.24 | | 2.98 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 27

*Responses to Survey Item "In My School, the Principal Encourages People to Express Opinions That are Contrary."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 105 | 23% | 1 | 4% | 106 | 22% |
| 2 | 135 | 30% | 1 | 4% | 136 | 29% |
| 3 | 153 | 34% | 15 | 60% | 168 | 36% |
| 4 | 54 | 12% | 8 | 32% | 62 | 13% |
| *M* | 2.35 | | 3.20 | | 2.39 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 28 represents the data for the eighth variable, Focus. Tables 29 and 30 represent the data for the items from the Leadership survey that were selected and used for the Focus category variable (L8).

Table 28

*Focus Category (L8) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 64 | 7% | 2 | 4% | 66 | 7% |
| 2 | 197 | 22% | 12 | 24% | 209 | 22% |
| 3 | 403 | 45% | 19 | 38% | 422 | 45% |
| 4 | 230 | 26% | 17 | 34% | 247 | 26% |
| *M* | 2.89 | | 3.02 | | 2.90 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 29

*Responses to Survey Item "In My School, We have Designed Concrete Goals for Our Curriculum."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 33 | 7% | 2 | 8% | 35 | 7% |
| 2 | 87 | 19% | 5 | 20% | 92 | 19% |
| 3 | 204 | 46% | 10 | 40% | 214 | 45% |
| 4 | 123 | 28% | 8 | 32% | 131 | 28% |
| *M* | 2.93 | | 2.96 | | 2.93 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 30

*Responses to Survey Item "We Have Specific Goals for Specific Instructional Practices in My School."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 31 | 7% | 0 | 0% | 31 | 7% |
| 2 | 110 | 25% | 7 | 28% | 117 | 25% |
| 3 | 199 | 45% | 9 | 36% | 208 | 44% |
| 4 | 107 | 24% | 9 | 36% | 116 | 25% |
| *M* | 2.85 | | 3.08 | | 2.87 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 31 represents the data for the ninth variable, Ideals/Beliefs. Tables 32 and 33 represent the data for the items from the Leadership survey that were selected and used for the Ideals/Beliefs category variable (L9).

Table 31

*Ideals/Beliefs Category (L9) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 50 | 6% | 0 | 0% | 50 | 5% |
| 2 | 111 | 12% | 4 | 8% | 115 | 12% |
| 3 | 370 | 41% | 19 | 38% | 389 | 41% |
| 4 | 363 | 41% | 27 | 54% | 390 | 41% |
| *M* | 3.17 | | 3.46 | | 3.19 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 32

*Responses to Survey Item "In My School, the Principal has Explicitly Communicated Strong Beliefs and Ideals to Teachers."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 22 | 5% | 0 | 0% | 22 | 5% |
| 2 | 48 | 11% | 4 | 16% | 52 | 11% |
| 3 | 202 | 45% | 11 | 44% | 213 | 45% |
| 4 | 175 | 39% | 10 | 40% | 185 | 39% |
| *M* | 3.19 | | 3.24 | | 3.19 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 33

*Responses to Survey Item "My Principal's Behavior is Consistent with His or Her Ideals and Beliefs Regarding Schools, Teachers, and Learning."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 28 | 6% | 0 | 0% | 28 | 6% |
| 2 | 63 | 14% | 0 | 0% | 63 | 13% |
| 3 | 168 | 38% | 8 | 32% | 176 | 37% |
| 4 | 188 | 42% | 17 | 68% | 205 | 43% |
| *M* | 3.15 | | 3.68 | | 3.18 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 34 represents the data for the tenth variable, Input. Tables 35 and 36 represent the data for the items from the Leadership survey that were selected and used for the Input category variable (L10).

Table 34

*Input Category (L10) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 231 | 26% | 2 | 4% | 233 | 25% |
| 2 | 363 | 41% | 9 | 18% | 372 | 39% |
| 3 | 233 | 26% | 32 | 64% | 265 | 28% |
| 4 | 67 | 7% | 7 | 14% | 74 | 8% |
| *M* | 2.15 | | 2.88 | | 2.19 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 35

*Responses to Survey Item "In My School, Teachers have Direct Input into All Important Decisions."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 129 | 29% | 0 | 0% | 129 | 27% |
| 2 | 190 | 43% | 5 | 20% | 195 | 41% |
| 3 | 103 | 23% | 19 | 76% | 122 | 26% |
| 4 | 25 | 6% | 1 | 4% | 26 | 6% |
| *M* | 2.05 | | 2.84 | | 2.10 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 36

*Responses to Survey Item "Teachers are Directly Involved in Establishing Policy in My School."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 102 | 23% | 2 | 8% | 104 | 22% |
| 2 | 173 | 39% | 4 | 16% | 177 | 38% |
| 3 | 130 | 29% | 13 | 52% | 143 | 30% |
| 4 | 42 | 9% | 6 | 24% | 48 | 10% |
| *M* | 2.25 | | 2.92 | | 2.29 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 37 represents the data for the eleventh variable, Intellectual Stimulation. Tables 38 and 39 represent the data for the items from the Leadership survey that were selected and used for the Intellectual Stimulation category variable (L11).

Table 37

*Intellectual Stimulation Category (L11) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 110 | 12% | 2 | 4% | 112 | 12% |
| 2 | 235 | 26% | 17 | 34% | 252 | 27% |
| 3 | 335 | 37% | 14 | 28% | 349 | 37% |
| 4 | 214 | 24% | 17 | 34% | 231 | 24% |
| *M* | 2.73 | | 2.92 | | 2.74 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 38

*Responses to Survey Item "In My School, the Principal is Informed about the Current Research and Theory Regarding Effective Schooling."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 24 | 5% | 0 | 0% | 24 | 5% |
| 2 | 82 | 18% | 6 | 24% | 88 | 19% |
| 3 | 185 | 41% | 8 | 32% | 193 | 41% |
| 4 | 156 | 35% | 11 | 44% | 167 | 35% |
| *M* | 3.06 | | 3.20 | | 3.07 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 39

*Responses to Survey Item "In My School, We Systematically have Discussions about Current Research and Theory."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 86 | 19% | 2 | 8% | 88 | 19% |
| 2 | 153 | 34% | 11 | 44% | 164 | 35% |
| 3 | 150 | 34% | 6 | 24% | 156 | 33% |
| 4 | 58 | 13% | 6 | 24% | 64 | 14% |
| *M* | 2.40 | | 2.64 | | 2.42 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 40 represents the data for the twelfth variable, Involvement in Curriculum, Instruction, and Assessment. Tables 41 and 42 represent the data for the items from the Leadership survey that were selected and used for the Involvement in Curriculum, Instruction, and Assessment category variable (L12).

Table 40

*Involvement In Curriculum, Instruction, and Assessment Category (L12) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 276 | 31% | 4 | 8% | 280 | 30% |
| 2 | 317 | 35% | 18 | 36% | 335 | 35% |
| 3 | 211 | 24% | 23 | 46% | 234 | 25% |
| 4 | 90 | 10% | 5 | 10% | 95 | 10% |
| *M* | 2.13 | | 2.58 | | 2.15 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent. C, A, & I = Curriculum, Instruction, and Assessment.

Table 41

*Responses to Survey Item "In My School, the Principal is Directly Involved in Helping Teachers Design Curricular Activities for Their Classes."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 167 | 37% | 3 | 12% | 170 | 36% |
| 2 | 166 | 37% | 11 | 44% | 177 | 38% |
| 3 | 78 | 17% | 9 | 36% | 87 | 18% |
| 4 | 36 | 8% | 2 | 8% | 38 | 8% |
| *M* | 1.96 | | 2.40 | | 1.99 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 42

*Responses to Survey Item "In My School, the Principal is Directly Involved in Helping Teachers Address Instructional Issues in Their Classrooms."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 109 | 24% | 1 | 4% | 110 | 23% |
| 2 | 151 | 34% | 7 | 28% | 158 | 33% |
| 3 | 133 | 30% | 14 | 56% | 147 | 31% |
| 4 | 54 | 12% | 3 | 12% | 57 | 12% |
| *M* | 2.30 | | 2.76 | | 2.32 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 43 represents the data for the thirteenth variable, Knowledge of Curriculum, Instruction, and Assessment. Tables 44 and 45 represent the data for the items from the Leadership survey that were selected and used for the Knowledge of Curriculum, Instruction, and Assessment category variable (L13).

Table 43

*Knowledge Of Curriculum, Instruction, and Assessment Category (L13) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 98 | 11% | 0 | 0% | 98 | 10% |
| 2 | 215 | 24% | 6 | 12% | 221 | 23% |
| 3 | 350 | 39% | 24 | 48% | 374 | 40% |
| 4 | 231 | 26% | 20 | 40% | 251 | 27% |
| *M* | 2.80 | | 3.28 | | 2.82 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 44

*Responses to Survey Item "In My School, the Principal is Very Knowledgeable About Effective Instructional Practices.*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 53 | 12% | 0 | 0% | 53 | 11% |
| 2 | 92 | 21% | 3 | 12% | 95 | 20% |
| 3 | 178 | 40% | 13 | 52% | 191 | 40% |
| 4 | 124 | 28% | 9 | 36% | 133 | 28% |
| *M* | 2.83 | | 3.24 | | 2.86 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 45

*Responses to Survey Item "In My School, the Principal is Very Knowledgeable About Classroom Curricular Issues."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 45 | 10% | 0 | 0% | 45 | 10% |
| 2 | 123 | 28% | 3 | 12% | 126 | 27% |
| 3 | 172 | 38% | 11 | 44% | 183 | 39% |
| 4 | 107 | 24% | 11 | 44% | 118 | 25% |
| *M* | 2.76 | | 3.32 | | 2.79 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 46 represents the data for the fourteenth variable, Monitoring/Evaluating. Tables 47 and 48 represent the data for the items from the Leadership survey that were selected and used for the Monitoring/Evaluating category variable (L14).

Table 46

*Monitoring/Evaluating Category (L14) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 116 | 13% | 0 | 0% | 116 | 12% |
| 2 | 241 | 27% | 6 | 12% | 247 | 26% |
| 3 | 354 | 40% | 28 | 56% | 382 | 40% |
| 4 | 183 | 20% | 16 | 32% | 199 | 21% |
| *M* | 2.68 | | 3.20 | | 2.70 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 47

*Responses to Survey Item "In My School, the Principal Continually Monitors the Effectiveness of Our Curriculum."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 58 | 13% | 0 | 0% | 58 | 12% |
| 2 | 127 | 28% | 4 | 16% | 131 | 28% |
| 3 | 168 | 38% | 13 | 52% | 181 | 38% |
| 4 | 94 | 21% | 8 | 32% | 102 | 22% |
| *M* | 2.67 | | 3.16 | | 2.69 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 48

*Responses to Survey Item "Our Principal Continually Monitors the Effectiveness of the Instructional Practices Used in Our School."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 58 | 13% | 0 | 0% | 58 | 12% |
| 2 | 114 | 26% | 2 | 8% | 116 | 25% |
| 3 | 186 | 42% | 15 | 60% | 201 | 43% |
| 4 | 89 | 20% | 8 | 32% | 97 | 21% |
| *M* | 2.68 | | 3.24 | | 2.71 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 49 represents the data for the fifteenth variable, Optimizer. Tables 50 and 51 represent the data for the items from the Leadership survey that were selected and used for the Optimizer category variable (L15).

Table 49

*Optimizer Category (L15) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 77 | 9% | 1 | 2% | 78 | 8% |
| 2 | 167 | 19% | 7 | 14% | 174 | 18% |
| 3 | 342 | 38% | 19 | 38% | 361 | 38% |
| 4 | 308 | 34% | 23 | 46% | 331 | 35% |
| *M* | 2.99 | | 3.28 | | 3.00 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 50

*Responses to Survey Item "In My School, the Principal Tries to Inspire Teachers to Accomplish Things That Might Seem Beyond Their Grasp."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 57 | 13% | 1 | 4% | 58 | 12% |
| 2 | 117 | 26% | 4 | 16% | 121 | 26% |
| 3 | 167 | 37% | 11 | 44% | 178 | 38% |
| 4 | 106 | 24% | 9 | 36% | 115 | 24% |
| *M* | 2.72 | | 3.12 | | 2.74 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 51

*Responses to Survey Item "In My School, the Principal Always Portrays a Positive Attitude About Our Ability to Accomplish Substantive Things."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 20 | 4% | 0 | 0% | 20 | 4% |
| 2 | 50 | 11% | 3 | 12% | 53 | 11% |
| 3 | 175 | 39% | 8 | 32% | 183 | 39% |
| 4 | 202 | 45% | 14 | 56% | 216 | 46% |
| *M* | 3.25 | | 3.44 | | 3.26 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 52 represents the data for the sixteenth variable, Order. Tables 53 and 54 represent the data for the items from the Leadership survey that were selected and used for the Order category variable (L16).

Table 52

*Order Category (L16) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 123 | 14% | 0 | 0% | 123 | 13% |
| 2 | 211 | 24% | 9 | 18% | 220 | 23% |
| 3 | 362 | 40% | 21 | 42% | 383 | 41% |
| 4 | 198 | 22% | 20 | 40% | 218 | 23% |
| *M* | 2.71 | | 3.22 | | 2.74 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 53

*Responses to Survey Item "There are Well-Established Procedures in My School Regarding How to Bring Up Problems and Concerns."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 87 | 19% | 0 | 0% | 87 | 18% |
| 2 | 135 | 30% | 7 | 28% | 142 | 30% |
| 3 | 155 | 35% | 12 | 48% | 167 | 35% |
| 4 | 70 | 16% | 6 | 24% | 76 | 16% |
| *M* | 2.47 | | 2.96 | | 2.49 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 54

*Responses to Survey Item "There are Well-Established Routines Regarding the Running of the School That Staff Understand and Follow."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 36 | 8% | 0 | 0% | 36 | 8% |
| 2 | 76 | 17% | 2 | 8% | 78 | 17% |
| 3 | 207 | 46% | 9 | 36% | 216 | 46% |
| 4 | 128 | 29% | 14 | 56% | 142 | 30% |
| *M* | 2.96 | | 3.48 | | 2.98 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 55 represents the data for the seventeenth variable, Outreach. Tables 56 and 57 represent the data for the items from the Leadership survey that were selected and used for the Outreach category variable (L17).

Table 55

*Outreach Category (L17) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 35 | 4% | 0 | 0% | 35 | 4% |
| 2 | 64 | 7% | 2 | 4% | 66 | 7% |
| 3 | 299 | 33% | 10 | 20% | 309 | 33% |
| 4 | 496 | 55% | 38 | 76% | 534 | 57% |
| *M* | 3.40 | | 3.72 | | 3.42 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 56

*Responses to Survey Item "Our Principal is a Strong Advocate for My School to the Community At Large."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 19 | 4% | 0 | 0% | 19 | 4% |
| 2 | 35 | 8% | 1 | 4% | 36 | 8% |
| 3 | 151 | 34% | 4 | 16% | 155 | 33% |
| 4 | 242 | 54% | 20 | 80% | 262 | 56% |
| *M* | 3.38 | | 3.76 | | 3.40 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 57

*Responses to Survey Item "Our Principal is a Strong Advocate for My School to the Parents of Our Students."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 16 | 4% | 0 | 0% | 16 | 3% |
| 2 | 29 | 6% | 1 | 4% | 30 | 6% |
| 3 | 148 | 33% | 6 | 24% | 154 | 33% |
| 4 | 254 | 57% | 18 | 72% | 272 | 58% |
| *M* | 3.43 | | 3.68 | | 3.44 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 58 represents the data for the eighteenth variable, Relationships. Tables 59 and 60 represent the data for the items from the Leadership survey that were selected and used for the Relationships category variable (L18).

Table 58

*Relationships Category (L18) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 94 | 11% | 0 | 0% | 94 | 10% |
| 2 | 181 | 20% | 6 | 12% | 187 | 20% |
| 3 | 390 | 44% | 28 | 56% | 418 | 44% |
| 4 | 229 | 26% | 16 | 32% | 245 | 26% |
| *M* | 2.84 | | 3.20 | | 2.86 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 59

*Responses to Survey Item "In My School, the Principal is Aware of the Personal Needs of the Teachers."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 59 | 13% | 0 | 0% | 59 | 13% |
| 2 | 101 | 23% | 1 | 4% | 102 | 22% |
| 3 | 192 | 43% | 14 | 56% | 206 | 44% |
| 4 | 95 | 21% | 10 | 40% | 105 | 22% |
| *M* | 2.72 | | 3.36 | | 2.76 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 60

*Responses to Survey Item "In My School, the Principal Makes Sure That Significant Events in the Lives of the Teachers in My School are Acknowledged."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 35 | 8% | 0 | 0% | 35 | 7% |
| 2 | 80 | 18% | 5 | 20% | 85 | 18% |
| 3 | 198 | 44% | 14 | 56% | 212 | 45% |
| 4 | 134 | 30% | 6 | 24% | 140 | 30% |
| *M* | 2.96 | | 3.04 | | 2.97 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 61 represents the data for the nineteenth variable, Resources. Tables 62 and 63 represent the data for the items from the Leadership survey that were selected and used for the Resources category variable (L19).

Table 61

*Resources Category (L19) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *N* | % | *n* | % |
| 1 | 58 | 6% | 2 | 4% | 60 | 6% |
| 2 | 144 | 16% | 6 | 12% | 150 | 16% |
| 3 | 408 | 46% | 18 | 36% | 426 | 45% |
| 4 | 284 | 32% | 24 | 48% | 308 | 33% |
| *M* | 3.03 | | 3.28 | | 3.04 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 62

*Responses to Survey Item "Teachers in My School are Regularly Involved in Professional Development Activities that Directly Enhance Their Teaching."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 31 | 7% | 1 | 4% | 32 | 7% |
| 2 | 87 | 19% | 5 | 20% | 92 | 19% |
| 3 | 195 | 44% | 9 | 36% | 204 | 43% |
| 4 | 134 | 30% | 10 | 40% | 144 | 31% |
| *M* | 2.97 | | 3.12 | | 2.97 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 63

*Responses to Survey Item "In My School, the Materials and Resources Teachers Request are Procured and Delivered in a Timely Fashion."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 27 | 6% | 1 | 4% | 28 | 6% |
| 2 | 57 | 13% | 1 | 4% | 58 | 12% |
| 3 | 213 | 48% | 9 | 36% | 222 | 47% |
| 4 | 150 | 34% | 14 | 56% | 164 | 35% |
| *M* | 3.09 | | 3.44 | | 3.11 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 64 represents the data for the twentieth variable, Situational Awareness. Tables 65 and 66 represent the data for the items from the Leadership survey that were selected and used for the Situational Awareness category variable (L20).

Table 64

*Situational Awareness Category (L20) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 130 | 15% | 0 | 0% | 130 | 14% |
| 2 | 210 | 23% | 1 | 2% | 211 | 22% |
| 3 | 369 | 41% | 26 | 52% | 395 | 42% |
| 4 | 185 | 21% | 23 | 46% | 208 | 22% |
| *M* | 2.68 | | 3.44 | | 2.72 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 65

*Responses to Survey Item "Our Principal is Aware of the Issues In My School that Have Not Formally Come to the Surface but Might Cause Discord."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 81 | 18% | 0 | 0% | 81 | 17% |
| 2 | 110 | 25% | 1 | 4% | 111 | 24% |
| 3 | 181 | 40% | 17 | 68% | 198 | 42% |
| 4 | 75 | 17% | 7 | 28% | 82 | 17% |
| *M* | 2.56 | | 3.24 | | 2.60 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 66

*Responses to Survey Item "In My School, the Principal is Aware of What is Running Smoothly and What is Not Running Smoothly."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 49 | 11% | 0 | 0% | 49 | 10% |
| 2 | 100 | 22% | 0 | 0% | 100 | 21% |
| 3 | 188 | 42% | 9 | 36% | 197 | 42% |
| 4 | 110 | 25% | 16 | 64% | 126 | 27% |
| *M* | 2.80 | | 3.64 | | 2.85 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 67 represents the data for the twenty-first variable, Visibility. Tables 68 and 69 represent the data for the items from the Leadership survey that were selected and used for the Visibility category variable (L21).

Table 67

*Visibility Category (L21) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 93 | 10% | 0 | 0% | 93 | 10% |
| 2 | 167 | 19% | 6 | 12% | 173 | 18% |
| 3 | 294 | 33% | 14 | 28% | 308 | 33% |
| 4 | 340 | 38% | 30 | 60% | 370 | 39% |
| *M* | 2.99 | | 3.48 | | 3.01 | |
| *N* | 894 | | 50 | | 944 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 68

*Responses to Survey Item "In My School, the Principal has Frequent Contact with the Students."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 46 | 10% | 0 | 0% | 46 | 10% |
| 2 | 87 | 19% | 3 | 12% | 90 | 19% |
| 3 | 146 | 33% | 5 | 20% | 151 | 32% |
| 4 | 168 | 38% | 17 | 68% | 185 | 39% |
| *M* | 2.98 | | 3.56 | | 3.01 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 69

*Responses to Survey Item "In My School, the Principal is Highly Visible to the Teachers and Students."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 47 | 11% | 0 | 0% | 47 | 10% |
| 2 | 80 | 18% | 3 | 12% | 83 | 18% |
| 3 | 148 | 33% | 9 | 36% | 157 | 33% |
| 4 | 172 | 38% | 13 | 52% | 185 | 39% |
| *M* | 3.00 | | 3.40 | | 3.02 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The options ranged from (1) This does not characterize me or my school to (4) This characterizes me or my school to a great extent.

Table 70

*Percentage of Responses at Level Three or Level Four for the 21 Leadership Categories*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| | % | Rank | % | Rank | % | Rank |
| Affirmation | 79% | 3 | 88% | 10 | 79% | 3 |
| Change Agent | 63% | 13 | 86% | 13 | 64% | 13 |
| Contingent Rewards | 67% | 10 | 68% | 19 | 67% | 10 |
| Communication | 64% | 12 | 94% | 3 | 65% | 12 |
| Culture | 73% | 5 | 92% | 6 | 74% | 5 |
| Discipline | 56% | 19 | 94% | 3 | 58% | 19 |
| Flexibility | 59% | 18 | 92% | 6 | 60% | 18 |
| Focus | 71% | 8 | 72% | 18 | 71% | 8 |
| Ideals/Beliefs | 82% | 2 | 92% | 6 | 83% | 2 |
| Input | 34% | 21 | 78% | 17 | 36% | 20 |
| Intellectual Stimulation | 61% | 16 | 62% | 20 | 61% | 17 |
| Involvement in Curriculum, Instruction, and Assessment | 34% | 20 | 56% | 21 | 35% | 21 |
| Knowledge of Curriculum, Instruction, and Assessment | 65% | 11 | 88% | 10 | 66% | 11 |
| Monitoring/Evaluating | 60% | 17 | 88% | 10 | 62% | 16 |
| Optimizer | 73% | 6 | 84% | 14 | 73% | 6 |
| Order | 63% | 13 | 82% | 16 | 64% | 15 |
| Outreach | 89% | 1 | 96% | 2 | 89% | 1 |
| Relationships | 69% | 9 | 88% | 10 | 70% | 9 |
| Resources | 77% | 4 | 84% | 14 | 78% | 4 |
| Situational Awareness | 62% | 15 | 98% | 1 | 64% | 13 |
| Visibility | 71% | 7 | 88% | 10 | 72% | 7 |

**Research Question #3: What are the strengths of critical attributes for each of Hord's five dimensions of a professional learning community as observed by teachers and principals within their schools?**

The researcher used a questionnaire to assess teachers' and principals' perceptions about the professional learning community in his or her school. The questionnaire used a four-point scale with options of Strongly Disagree, Disagree, Agree, and Strongly Agree.

**Teachers' responses.** A finding from these data is that the PLC Categories with the highest percentage of teacher responses at Agree or Strongly Agree were Supportive Conditions-Relationships, Collective Learning and Application, and Shared Values and Vision.

***Supportive Conditions-Relationships.*** On the teachers' survey, 83% rated the Supportive Conditions-Relationships category at Agree or Strongly Agree (see Table 90). Thirty-three percent of teachers selected Strongly Agree. Ninety-six percent of teachers selected Agree or Strongly Agree for the first survey item in this category, "Caring relationships exist among staff and students that are built on trust and respect" (see Table 91). Forty-five percent of teachers selected Strongly Agree.

Seventy-one percent of teachers selected Agree or Strongly Agree for the second survey item in this category, "A culture of trust and respect exists for taking risks" (see Table 92). Twenty percent of teachers selected Strongly Agree.

Eighty-one percent of teachers selected Agree or Strongly Agree for the third survey item in this category, "Outstanding achievement is recognized and celebrated regularly in our school" (see Table 93). Thirty-four percent of teachers selected Strongly Agree.

***Collective Learning and Application.*** Table 81 shows that 81% of teachers responded at Agree or Strongly Agree for the Collective Learning and Application category. Twenty-one percent of teachers selected Strongly Agree. Eighty percent of teachers selected Agree or Strongly Agree for the first survey item in this category, "Staff members work together to seek knowledge" (see Table 82). Nineteen percent of teachers selected Strongly Agree.

Eighty-five percent of teachers selected Agree or Strongly Agree for the second survey item in this category, "Collegial relationships exist among staff that reflect commitment to school improvement efforts" (see Table 83). Twenty-five percent of teachers selected Strongly Agree.

Seventy-eight percent of teachers selected Agree or Strongly Agree for the third survey item in this category, "Staff members plan and work together to search for solutions to address diverse student needs" (see Table 84). Twenty percent of teachers selected Strongly Agree.

***Shared Values and Vision.*** Table 77 shows that 76% of teachers responded at Agree or Strongly Agree for the Shared Values and Vision category. Eighteen percent of teachers selected Strongly Agree. Fifty-six percent of teachers selected Agree or Strongly Agree for the first survey item in this category, "Shared values support norms of behavior that guide decisions about teaching and learning" (see Table 78). Seven percent of teachers selected Strongly Agree.

Seventy-seven percent of teachers selected Agree or Strongly Agree for the second survey item in this category, "Staff members share visions for school

improvement that have an undeviating focus on student learning" (see Table 79). Eighteen percent of teachers selected Strongly Agree.

Sixty-seven percent of teachers selected Agree or Strongly Agree for the third survey item in this category, "Staff members plan and work together to search for solutions to address diverse student needs" (see Table 80). Thirteen percent of teachers selected Strongly Agree.

**Principals' responses.** A finding from these data is that the PLC Categories with the highest percentage of principal responses at Agree or Strongly Agree were Supportive Conditions-Relationships, Shared and Supportive Leadership, and Collective Learning and Application.

***Supportive Conditions-Relationships.*** On the principals' survey, 95% rated the Supportive Conditions-Relationships category at Agree or Strongly Agree (see Table 90). Fifty-two percent of principals selected Strongly Agree. One hundred percent of principals selected Agree or Strongly Agree for the first survey item in this category, "Caring relationships exist among staff and students that are built on trust and respect" (see Table 91). Sixty percent of principals selected Strongly Agree.

Ninety-six percent of principals selected Agree or Strongly Agree for the second survey item in this category, "A culture of trust and respect exists for taking risks" (see Table 92). Forty percent of principals selected Strongly Agree.

Eighty-eight percent of principals selected Agree or Strongly Agree for the third survey item in this category, "Outstanding achievement is recognized and celebrated regularly in our school" (see Table 93). Fifty-six percent of principals selected Strongly Agree.

***Shared and Supportive Leadership.*** Table 71 indicates that 93% of principals responded at Agree or Strongly Agree for the Shared and Supportive Leadership category. Twenty-eight percent of principals selected Strongly Agree. For this category, 62% of teachers responded Agree or Strongly Agree, which was the lowest percentage at those levels for any category (see Table 98). Ninety-two percent of principals selected Agree or Strongly Agree for the first survey item in this category, "Staff members are consistently involved in discussing and making decisions about most school issues" (see Table 72). Twelve percent of principals selected Strongly Agree. For this item, 56% of teachers responded Agree or Strongly Agree.

One hundred percent of principals selected Agree or Strongly Agree for the second survey item in this category, "The principal shares responsibility and rewards for innovative actions" (see Table 73). Thirty-six percent of principals selected Strongly Agree. For this item, 68% of teachers responded Agree or Strongly Agree.

Ninety-two percent of principals selected Agree or Strongly Agree for the third survey item in this category, "The principal participates democratically with staff sharing power and authority" (see Table 74). Thirty-two percent of principals selected Strongly Agree. For this item, 53% of teachers responded Agree or Strongly Agree.

Ninety-two percent of principals selected Agree or Strongly Agree for the fourth survey item in this category, "Leadership is promoted and nurtured among staff" (see Table 75). Forty-eight percent of principals selected Strongly Agree. For this item, 53% of teachers responded Agree or Strongly Agree.

Eighty-eight percent of principals selected Agree or Strongly Agree for the fifth survey item in this category, "Stakeholders assume shared responsibility and

accountability for student learning without evidence of imposed power and authority" (see Table 76). Twelve percent of principals selected Strongly Agree. For this item, 64% of teachers responded Agree or Strongly Agree.

***Collective Learning and Application.*** Table 81 indicates that 88% of principals responded at Agree or Strongly Agree for the Collective Learning and Application category. Twenty-eight percent of the principals selected Strongly Agree. Eighty-eight percent of principals selected Agree or Strongly Agree for the first survey item in this category, "Staff members work together to seek knowledge" (see Table 82). Twenty percent of principals selected Strongly Agree.

Ninety-two percent of principals selected Agree or Strongly Agree for the second survey item in this category, "Collegial relationships exist among staff that reflect commitment to school improvement efforts" (see Table 83). Thirty-six percent of principals selected Strongly Agree.

Eighty-four percent of principals selected Agree or Strongly Agree for the third survey item in this category, "Staff members plan and work together to search for solutions to address diverse student needs" (see Table 84). Twenty-eight percent of principals selected Strongly Agree.

**Combined responses.** A finding from these data is that the PLC Categories with the highest percentage of responses at Agree or Strongly Agree from the combined teachers' and principals' surveys were Supportive Conditions-Relationships, Collective Learning and Application, and Shared Values and Vision.

***Supportive Conditions-Relationships.*** Table 90 shows that 83% of teachers and principals responded at Agree or Strongly Agree for the Supportive Conditions-

Relationships category in the combined survey totals. Thirty-four percent of teachers and principals rated Strongly Agree for this category. Ninety-seven percent of teachers and principals responded at Agree or Strongly Agree on the first survey item in this category, "Caring relationships exist among staff and students that are built on trust and respect" (see Table 91). Forty-six percent of teachers and principals rated Strongly Agree for this item.

Seventy-two percent of teachers and principals responded at Agree or Strongly Agree on the second survey item in this category, "A culture of trust and respect exists for taking risks" (see Table 92). Twenty-one percent of teachers and principals rated Strongly Agree for this item.

Eighty-one percent of teachers and principals responded at Agree or Strongly Agree on the third survey item in this category, "Outstanding achievement is recognized and celebrated regularly in our school" (see Table 93). Thirty-five percent of teachers and principals rated Strongly Agree for this item.

***Collective Learning and Application.*** Table 81 shows that 82% responded at Agree or Strongly Agree for the Collective Learning and Application category in the combined survey totals. Twenty-two percent of teachers and principals rated Strongly Agree for this category. Eighty-one percent of teachers and principals responded at Agree or Strongly Agree on the first survey item in this category, "Staff members work together to seek knowledge" (see Table 82). Nineteen percent of teachers and principals rated Strongly Agree for this item.

Eighty-six percent of teachers and principals responded at Agree or Strongly Agree on the second survey item in this category, "Collegial relationships exist among

staff that reflect commitment to school improvement efforts" (see Table 83). Twenty-six percent of teachers and principals rated Strongly Agree for this item.

Seventy-eight percent of teachers and principals responded at Agree or Strongly Agree on the third survey item in this category, "Staff members plan and work together to search for solutions to address diverse student needs" (see Table 84). Twenty percent of teachers and principals rated Strongly Agree for this item.

***Shared Values and Vision.*** Table 77 indicates that 76% responded at Agree or Strongly Agree for the Shared Values and Vision category. Eighteen percent of teachers and principals rated Strongly Agree for this category. Fifty-seven percent of teachers and principals responded at Agree or Strongly Agree on the first survey item in this category, "Shared values support norms of behavior that guide decisions about teaching and learning" (see Table 78). Seven percent of teachers and principals rated Strongly Agree for this item.

Seventy-seven percent of teachers and principals responded at Agree or Strongly Agree on the second survey item in this category, "Staff members share visions for school improvement that have an undeviating focus on student learning" (see Table 79). Eighteen percent of teachers and principals rated Strongly Agree for this item.

Sixty-seven percent of teachers and principals responded at Agree or Strongly Agree on the third survey item in this category, "Staff members plan and work together to search for solutions to address diverse student needs" (see Table 80). Thirteen percent of teachers and principals rated Strongly Agree for this item.

**PLC survey data.** The variables for the PLC survey were organized into six groups representing the six categories of the PLCA-R (Olivier et al., 2009). For each

group, a new variable was created (see Appendices E and F). This process resulted in six PLC variables. Table 71 represents the data for the first PLC variable, which was created for the Supportive and Shared Leadership category. Tables 72 through 76 represent the data for the items that were selected and used for the Supportive and Shared Leadership category variable (P1).

Table 71

*Shared and Supportive Leadership Category (P1) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 194 | 9% | 0 | 0% | 194 | 8% |
| Disagree | 669 | 30% | 9 | 7% | 678 | 29% |
| Agree | 1107 | 50% | 81 | 65% | 1188 | 50% |
| Strongly Agree | 265 | 12% | 35 | 28% | 300 | 13% |
| *M* | 2.65 | | 3.21 | | 2.68 | |
| *N* | 2235 | | 125 | | 2360 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 72

*Responses to Survey Item "Staff Members are Consistently Involved in Discussing and Making Decisions About Most School Issues."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 45 | 10% | 0 | 0% | 45 | 10% |
| Disagree | 154 | 34% | 2 | 8% | 156 | 33% |
| Agree | 217 | 49% | 20 | 80% | 237 | 50% |
| Strongly Agree | 31 | 7% | 3 | 12% | 34 | 7% |
| *M* | 2.52 | | 3.04 | | 2.55 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 73

*Responses to Survey Item "The Principal Shares Responsibility and Rewards for Innovative Actions."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| 1 | 26 | 6% | 0 | 0% | 26 | 6% |
| 2 | 117 | 26% | 0 | 0% | 117 | 25% |
| 3 | 234 | 52% | 16 | 64% | 250 | 53% |
| 4 | 70 | 16% | 9 | 36% | 79 | 17% |
| *M* | 2.78 | | 3.36 | | 2.81 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 74

*Responses to Survey Item "The Principal Participates Democratically with Staff Sharing Power and Authority."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 57 | 13% | 0 | 0% | 57 | 12% |
| Disagree | 156 | 35% | 2 | 8% | 158 | 33% |
| Agree | 186 | 42% | 15 | 60% | 201 | 43% |
| Strongly Agree | 48 | 11% | 8 | 32% | 56 | 12% |
| *M* | 2.50 | | 3.24 | | 2.54 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 75

*Responses to Survey Item "Leadership is Promoted and Nurtured Among Staff."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 57 | 13% | 0 | 0% | 35 | 7% |
| Disagree | 156 | 35% | 2 | 8% | 114 | 24% |
| Agree | 186 | 42% | 11 | 44% | 242 | 51% |
| Strongly Agree | 48 | 11% | 12 | 48% | 81 | 17% |
| *M* | 2.50 | | 3.40 | | 2.78 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 76

*Responses to Survey Item "Stakeholders Assume Shared Responsibility and Accountability for Student Learning Without Evidence of Imposed Power and Authority."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 31 | 7% | 0 | 0% | 31 | 7% |
| Disagree | 130 | 29% | 3 | 12% | 133 | 28% |
| Agree | 239 | 53% | 19 | 76% | 258 | 55% |
| Strongly Agree | 47 | 11% | 3 | 12% | 50 | 11% |
| *M* | 2.68 | | 3.00 | | 2.69 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 77 represents the data for the second PLC variable, which was created for the Shared Values and Vision category. Tables 78 through 80 represent the data for the items that were selected and used for the Shared Values and Vision category variable (P2).

Table 77

*Shared Values and Vision Category (P2) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 44 | 3% | 0 | 0% | 44 | 3% |
| Disagree | 278 | 21% | 11 | 15% | 289 | 20% |
| Agree | 784 | 58% | 44 | 59% | 828 | 58% |
| Strongly Agree | 235 | 18% | 20 | 27% | 255 | 18% |
| *M* | 2.90 | | 3.12 | | 2.91 | |
| *N* | 1341 | | 75 | | 1416 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 78

*Responses to Survey Item "Shared Values Support Norms of Behavior that Guide Decisions About Teaching and Learning."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 45 | 10% | 0 | 0% | 45 | 10% |
| Disagree | 154 | 34% | 2 | 8% | 156 | 33% |
| Agree | 217 | 49% | 20 | 80% | 237 | 50% |
| Strongly Agree | 31 | 7% | 3 | 12% | 34 | 7% |
| *M* | 2.52 | | 3.04 | | 2.55 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 79

*Responses to Survey Item "Staff Members Share Visions for School Improvement that have an Undeviating Focus on Student Learning."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 12 | 3% | 0 | 0% | 12 | 3% |
| Disagree | 93 | 21% | 5 | 20% | 98 | 21% |
| Agree | 262 | 59% | 15 | 60% | 277 | 59% |
| Strongly Agree | 80 | 18% | 5 | 20% | 85 | 18% |
| *M* | 2.92 | | 3.00 | | 2.92 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 80

*Responses to Survey Item "Stakeholders are Actively Involved in Creating High Expectations that Serve to Increase Student Achievement."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 19 | 4% | 0 | 0% | 19 | 4% |
| Disagree | 129 | 29% | 5 | 20% | 134 | 28% |
| Agree | 242 | 54% | 15 | 60% | 257 | 54% |
| Strongly Agree | 57 | 13% | 5 | 20% | 62 | 13% |
| *M* | 2.75 | | 3.00 | | 2.77 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 81 represents the data for the third PLC variable, which was created for the Collective Learning and Application category. Tables 82 through 84 represent the data for the items that were selected and used for the Collective Learning and Application category variable (P3).

Table 81

*Collective Learning and Application Category (P3) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 32 | 2% | 0 | 0% | 32 | 2% |
| Disagree | 223 | 17% | 9 | 12% | 232 | 16% |
| Agree | 802 | 60% | 45 | 60% | 847 | 60% |
| Strongly Agree | 284 | 21% | 21 | 28% | 305 | 22% |
| *M* | 3.00 | | 3.16 | | 3.01 | |
| *N* | 1341 | | 75 | | 1416 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 82

*Responses to Survey Item "Staff Members Work Together to Seek Knowledge."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 10 | 2% | 0 | 0% | 10 | 2% |
| Disagree | 80 | 18% | 3 | 12% | 83 | 18% |
| Agree | 274 | 61% | 17 | 68% | 291 | 62% |
| Strongly Agree | 83 | 19% | 5 | 20% | 88 | 19% |
| *M* | 2.96 | | 3.08 | | 2.97 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 83

*Responses to Survey Item "Collegial Relationships Exist Among Staff that Reflect Commitment to School Improvement Efforts."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 9 | 2% | 0 | 0% | 9 | 2% |
| Disagree | 55 | 12% | 2 | 8% | 57 | 12% |
| Agree | 270 | 60% | 14 | 56% | 284 | 60% |
| Strongly Agree | 113 | 25% | 9 | 36% | 122 | 26% |
| *M* | 3.09 | | 3.28 | | 3.10 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 84

*Responses to Survey Item "Staff Members Plan and Work Together to Search for Solutions to Address Diverse Student Needs."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 13 | 3% | 0 | 0% | 13 | 3% |
| Disagree | 88 | 20% | 4 | 16% | 92 | 19% |
| Agree | 258 | 58% | 14 | 56% | 272 | 58% |
| Strongly Agree | 88 | 20% | 7 | 28% | 95 | 20% |
| *M* | 2.94 | | 3.12 | | 2.95 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 85 represents the data for the fourth PLC variable, which was created for the Shared Personal Practice category. Tables 86 through 89 represent the data for the items that were selected and used for the Shared Personal Practice category variable (P4).

Table 85

*Shared Personal Practice Category (P4) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 103 | 6% | 2 | 2% | 105 | 6% |
| Disagree | 432 | 24% | 16 | 16% | 448 | 24% |
| Agree | 895 | 50% | 54 | 54% | 949 | 50% |
| Strongly Agree | 358 | 20% | 28 | 28% | 386 | 20% |
| *M* | 2.84 | | 3.08 | | 2.86 | |
| *N* | 1788 | | 100 | | 1888 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 86

*Responses to Survey Item "Opportunities Exist for Staff to Observe Peers and Offer Encouragement."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 33 | 7% | 0 | 0% | 33 | 7% |
| Disagree | 135 | 30% | 3 | 12% | 138 | 29% |
| Agree | 205 | 46% | 15 | 60% | 220 | 47% |
| Strongly Agree | 74 | 17% | 7 | 28% | 81 | 17% |
| *M* | 2.72 | | 3.16 | | 2.74 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 87

*Responses to Survey Item "Staff Members Provide Feedback to Peers Related to Instructional Practices."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 38 | 9% | 1 | 4% | 39 | 8% |
| Disagree | 172 | 38% | 8 | 32% | 180 | 38% |
| Agree | 181 | 40% | 14 | 56% | 195 | 41% |
| Strongly Agree | 56 | 13% | 2 | 8% | 58 | 12% |
| *M* | 2.57 | | 2.68 | | 2.58 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 88

*Responses to Survey Item "Staff Members Informally Share Ideas and Suggestions for Improving Student Learning."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *N* | % | *n* | % | *n* | % |
| Strongly Disagree | 4 | 1% | 0 | 0% | 4 | 1% |
| Disagree | 33 | 7% | 2 | 8% | 35 | 7% |
| Agree | 290 | 65% | 13 | 52% | 303 | 64% |
| Strongly Agree | 120 | 27% | 10 | 40% | 130 | 28% |
| *M* | 3.18 | | 3.32 | | 3.18 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 89

*Responses to Survey Item "Opportunities Exist for Coaching and Mentoring."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *N* | % | *n* | % | *n* | % |
| Strongly Disagree | 28 | 6% | 1 | 4% | 29 | 6% |
| Disagree | 92 | 21% | 3 | 12% | 95 | 20% |
| Agree | 219 | 49% | 12 | 48% | 231 | 49% |
| Strongly Agree | 108 | 24% | 9 | 36% | 117 | 25% |
| *M* | 2.91 | | 3.16 | | 2.92 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 90 represents the data for the fifth PLC variable, which was created for the Supportive Conditions-Relationships category. Tables 91 through 93 represent the data for the items that were selected and used for the Supportive Conditions-Relationships category variable (P5).

Table 90

*Supportive Conditions-Relationships Category (P5) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 42 | 3% | 0 | 0% | 42 | 3% |
| Disagree | 189 | 14% | 4 | 5% | 193 | 14% |
| Agree | 665 | 50% | 32 | 43% | 697 | 49% |
| Strongly Agree | 445 | 33% | 39 | 52% | 484 | 34% |
| *M* | 3.13 | | 3.47 | | 3.15 | |
| *N* | 1341 | | 75 | | 1416 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 91

*Responses to Survey Item "Caring Relationships Exist Among Staff and Students that are Built on Trust and Respect."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 5 | 1% | 0 | 0% | 5 | 1% |
| Disagree | 11 | 2% | 0 | 0% | 11 | 2% |
| Agree | 229 | 51% | 10 | 40% | 239 | 51% |
| Strongly Agree | 202 | 45% | 15 | 60% | 217 | 46% |
| *M* | 3.40 | | 3.60 | | 3.42 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 92

*Responses to Survey Item "A Culture of Trust and Respect Exists for Taking Risks."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 24 | 5% | 0 | 0% | 24 | 5% |
| Disagree | 105 | 23% | 1 | 4% | 106 | 22% |
| Agree | 228 | 51% | 14 | 56% | 242 | 51% |
| Strongly Agree | 90 | 20% | 10 | 40% | 100 | 21% |
| *M* | 2.86 | | 3.36 | | 2.89 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 93

*Responses to Survey Item "Outstanding Achievement is Recognized and Celebrated Regularly in Our School."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 13 | 3% | 0 | 0% | 13 | 3% |
| Disagree | 73 | 16% | 3 | 12% | 76 | 16% |
| Agree | 208 | 47% | 8 | 32% | 216 | 46% |
| Strongly Agree | 153 | 34% | 14 | 56% | 167 | 35% |
| *M* | 3.12 | | 3.44 | | 3.14 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 94 represents the data for the sixth PLC variable, which was created for the Supportive Conditions- Structures category. Tables 95 through 98 represent the data for the items that were selected and used for the Supportive Conditions- Structures category variable (P6).

Table 94

*Supportive Conditions-Structures Category (P6) Response Distribution*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 91 | 7% | 1 | 1% | 92 | 6% |
| Disagree | 316 | 24% | 10 | 13% | 326 | 23% |
| Agree | 707 | 53% | 32 | 43% | 739 | 52% |
| Strongly Agree | 227 | 17% | 32 | 43% | 259 | 18% |
| *M* | 2.80 | | 3.27 | | 2.82 | |
| *N* | 1341 | | 75 | | 1416 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 95

*Responses to Survey Item "Time is Provided to Facilitate Collaborative Work."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 32 | 7% | 0 | 0% | 32 | 7% |
| Disagree | 146 | 33% | 6 | 24% | 152 | 32% |
| Agree | 219 | 49% | 10 | 40% | 229 | 49% |
| Strongly Agree | 50 | 11% | 9 | 36% | 59 | 13% |
| *M* | 2.64 | | 3.12 | | 2.67 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 96

*Responses to Survey Item "Fiscal Resources are Available for Professional Development."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 23 | 5% | 1 | 4% | 24 | 5% |
| Disagree | 57 | 13% | 3 | 12% | 60 | 13% |
| Agree | 240 | 54% | 7 | 28% | 247 | 52% |
| Strongly Agree | 127 | 28% | 14 | 56% | 141 | 30% |
| *M* | 3.05 | | 3.36 | | 3.07 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 97

*Responses to Survey Item "Communication Systems Promote a Flow of Information Among Staff."*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| Response | *n* | % | *n* | % | *n* | % |
| Strongly Disagree | 36 | 8% | 0 | 0% | 36 | 8% |
| Disagree | 113 | 25% | 1 | 4% | 114 | 24% |
| Agree | 248 | 55% | 15 | 60% | 263 | 56% |
| Strongly Agree | 50 | 11% | 9 | 36% | 59 | 13% |
| *M* | 2.70 | | 3.32 | | 2.73 | |
| *N* | 447 | | 25 | | 472 | |

*Note.* The means were calculated by assigning the values to the responses in the following way: Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4.

Table 98

*Percentage of Responses at Agree or Strongly Agree for Each of the PLC Categories*

| | Teachers | | Principals | | Combined | |
|---|---|---|---|---|---|---|
| | % | Rank | % | Rank | % | Rank |
| Shared and Supportive Leadership | 61% | 6 | 93% | 2 | 63% | 6 |
| Shared Values and Vision | 76% | 3 | 85% | 5 | 76% | 3 |
| Collective Learning and Application | 81% | 2 | 88% | 3 | 81% | 2 |
| Shared Personal Practice | 70% | 4 | 82% | 6 | 71% | 4 |
| Supportive Conditions-Relationships | 83% | 1 | 95% | 1 | 83% | 1 |
| Supportive Conditions-Structures | 70% | 5 | 85% | 4 | 70% | 5 |

**Research Question #4: Is there a relationship between any of the 21 leadership responsibilities and the depth of implementation of Hord's five dimensions of a professional learning community?**

The individual items from the McREL leadership survey were organized into 21 groups representing the 21 Responsibilities of the School Leader (Marzano et al., 2005). The individual items from the PLC survey were organized into six groups representing the six categories of the PLCA-R (Olivier et al., 2009). A variable was created for each group of survey items. This process resulted in 21 leadership variables and six PLC variables (see Appendices E and F). The researcher measured the strength of relationship between each leadership variable and each PLC variable. Spearman's rho correlations were calculated in order to determine strength of relationship between the two sets of variables.

**Describing correlation coefficients.** According to Hopkins (2002), behavioral and social scientists attempt to present their quantitative findings in understandable, qualitative terms. Expanding on the work of Cohen (2008), Hopkins suggests describing

correlation coefficients between .1 and .3 as small or minor, coefficients between .3 and .5 as moderate or medium, coefficients between .5 and .7 as large or major, and coefficients between .7 and .9 as very large (see Table 99). A correlation less than .1 is trivial and a correlation greater than .9 is nearly perfect (Hopkins, 2002). The correlation coefficients for the data in this study will be described using these synonyms.

Table 99

*Synonyms Used for the Descriptors of Correlation Coefficients between Leadership Category Variables and PLC Category Variables*

| Correlation Coefficient | Descriptor |
|---|---|
| $r_s < .1$ | Trivial, very small, insubstantial, tiny, practically zero |
| $.1 \leq r_s < .3$ | Small, low, minor |
| $.3 \leq r_s < .5$ | Moderate, medium |
| $.5 \leq r_s < .7$ | Large, high, major |
| $.7 \leq r_s < .9$ | Very large, very high, huge |
| $r_s \geq .9$ | Nearly perfect, practically perfect, or almost perfect |

*Note.* Adapted from *A New View of Statistics* by W. G. Hopkins, 2002, Retrieved from http://sportsci.org/resource/stats/effectmag.html.

**Spearman's Rho correlation coefficients.** The correlation coefficient between each of the 21 leadership categories and each of the six PLC categories was calculated. This resulted in 126 correlation coefficient values.

***Significance level.*** Salkind (2008) defines significance level as "the risk associated with not being 100% confident that what you observe in an experiment is due to the treatment or what was being tested" (p. 157). The significance level was 0.000 ($p = 0$) for all 126 correlations calculated using SPSS.

***Distribution of correlation coefficients.*** A finding from these data is that all of the values were positive, ranging from a low of .227 to a high of .665 (see Table 100).

Nine of the correlation coefficients, or 7%, had a value below .3 ($r_s < .3$, $p < .001$). Ninety-three of the 126 correlation coefficients, or 74%, had a value greater than or equal to .3 and less than .5 ($.3 \leq r_s < .5$, $p < .001$). Twenty-four of the 126 correlation coefficients, or 19%, had a value greater than or equal to .5 ($r_s \geq .5$, $p < .001$). Using Hopkins' (2002) scale, 7% of the correlation coefficients were small or minor, 74% were moderate or medium, and 19% were large or major. The correlation coefficients between each of the 21 leadership categories and each of the six PLC categories are listed in Tables 102 through 122.

The correlations in this study focused on the survey results of teachers and principals as combined participants. Only 25 out of the 472 participants were principals. When correlations were calculated for teachers alone, the results were similar to the combined (principals and teachers) correlations. Thirty-one values were slightly larger and 95 values were slightly smaller with the greatest difference being .019 and the average difference being .006. The *p*-value for each correlation was 0.

When the correlations were calculated for principals alone, the results were very different from those previously stated. Most correlations were positive, nine were negative, and only 11 had *p*-values less than .01. The small sample size (25) could have contributed to the high *p*-values.

Table 100

*Distribution of Correlation Coefficients between Leadership Category Variables and PLC Category Variables (*N = *126)*

| Correlation Coefficient | n | % |
|---|---|---|
| $r_s \geq .6$ | 4 | 3% |
| $.5 \leq r_s < .6$ | 20 | 16% |
| $.4 \leq r_s < .5$ | 44 | 35% |
| $.3 \leq r_s < .4$ | 49 | 39% |
| $r_s \leq .3$ | 9 | 7% |

Table 101 shows that four of the leadership categories had at least two large correlations, eleven had one large correlation, and six had none. The leadership categories Change Agent (see Table 103) and Order (see Table 117) both had large correlation coefficients with two PLC categories: Shared and Supportive Leadership and Supportive Conditions-Structures. The leadership category Communication had large coefficients with three PLC categories: Shared and Supportive Leadership, Shared Values and Vision and Supportive Conditions-Structures (see Table 105). The leadership category Culture had large coefficients with all six of the PLC categories (see Table 106).

Table 101

*Distribution of Correlation Coefficients between Leadership Categories and PLC Categories*

| | Small | Moderate | Large |
|---|---|---|---|
| | $.1 \leq r_s < .3$ | $.3 \leq r_s < .5$ | $.5 \leq r_s < .7$ |
| Affirmation | 0 | 5 | 1 |
| Change Agent | 0 | 4 | 2 |
| Contingent Rewards | 0 | 6 | 0 |
| Communication | 0 | 3 | 3 |
| Culture | 0 | 0 | 6 |
| Discipline | 1 | 5 | 0 |
| Flexibility | 0 | 5 | 1 |
| Focus | 0 | 6 | 0 |
| Ideals/Beliefs | 2 | 3 | 1 |
| Input | 0 | 5 | 1 |
| Intellectual Stimulation | 0 | 6 | 0 |
| Involvement in Curriculum, Instruction, and Assessment | 1 | 4 | 1 |
| Knowledge of Curriculum, Instruction, and Assessment | 0 | 5 | 1 |
| Monitoring/Evaluating | 0 | 5 | 1 |
| Optimizer | 0 | 5 | 1 |
| Order | 0 | 4 | 2 |
| Outreach | 2 | 4 | 0 |
| Relationships | 0 | 5 | 1 |
| Resources | 0 | 5 | 1 |
| Situational Awareness | 1 | 4 | 1 |
| Visibility | 2 | 4 | 0 |

***Leadership categories with the highest average correlation coefficients.*** The four leadership categories, Change Agent, Order, Communication, and Culture had the highest average values for correlation coefficient. The category Culture was the highest overall with an average value of .529. Table 106 indicates that the strongest relationship was with Collective Learning and Application ($r_s$ = .559, $p$ < .001), followed by Supportive Conditions-Relationships ($r_s$ = .548, $p$ < .001), and Shared and Supportive Leadership ($r_s$ = .535, $p$ < .001). The three categories with the lowest correlations were Shared Values and Vision ($r_s$ = .523, $p$ < .001), Shared Personal Practice ($r_s$ = .508, $p$ < .001), and Supportive Conditions-Structures ($r_s$ = .500, $p$ < .001), although all were considered large.

The second highest ranked leadership category was Communication with an average value of .501. Table 105 indicates that three of the categories had large correlations: Shared and Supportive Leadership ($r_s$ = .636, $p$ < .001), Supportive Conditions-Structures ($r_s$ = .545, $p$ < .001), and Shared Values and Vision ($r_s$ = .509, $p$ < .001). The other three correlations were moderate, but all were above .4: Supportive Conditions-Relationships ($r_s$ = .484, $p$ < .001), Shared Personal Practice ($r_s$ = .421, $p$ < .001), and Collective Learning and Application ($r_s$ = .412, $p$ < .001).

The third and fourth highest ranked leadership categories were Change Agent, with an average of the correlation coefficients of .472 and Order, with an average of the correlation coefficients of .457.

Change Agent (see Table 103) had large correlation coefficients with two PLC categories: Shared and Supportive Leadership ($r_s$ = .576, $p$ < .001) and Supportive Conditions-Structures ($r_s$ = .539, $p$ < .001). The other four correlations were moderate,

with three of the four above .4: Supportive Conditions-Relationships ($r_s$ = .464, $p$ < .001), Shared Values and Vision ($r_s$ = .452, $p$ < .001), Shared Personal Practice ($r_s$ = .412, $p$ < .001), and Collective Learning and Application ($r_s$ = .386, $p$ < .001).

Order (see Table 117) had large correlation coefficients with the same two PLC categories: Shared and Supportive Leadership ($r_s$ = .541, $p$ < .001) and Supportive Conditions-Structures ($r_s$ = .532, $p$ < .001). The other four correlations were also moderate, with three of the four above .4: Shared Values and Vision ($r_s$ = .465, $p$ < .001), Shared Personal Practice ($r_s$ = .427, $p$ < .001), Supportive Conditions-Relationships ($r_s$ = .424, $p$ < .001), and Collective Learning and Application ($r_s$ = .352, $p$ < .001).

***Highest correlation coefficients between individual categories.*** Four Spearman's rho correlation coefficients between a leadership category and a PLC category had a value above .6 ($r_s$ < .6): Input and Shared and Supportive Leadership ($r_s$ = .665, $p$ < .001), Communication and Shared and Supportive Leadership ($r_s$ = .636, $p$ < .001), Optimizer and Shared and Supportive Leadership ($r_s$ = .612, $p$ < .001), and Situational Awareness and Shared and Supportive Leadership ($r_s$ = .622, $p$ < .001).

All four correlations were between a leadership and one PLC category, Shared and Supportive Leadership. The survey items that were selected and used for this PLC category are: (a) Staff members are consistently involved in discussing and making decisions about most school issues, (b) The principal shares responsibility and rewards for innovative actions, (c) The principal participates democratically with staff sharing power and authority, (d) Leadership is promoted and nurtured among staff, and (e) Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.

The highest correlation coefficient was between Input and Shared and Supportive Leadership ($r_s$ = .665, p < .001). The first survey item in this category, "In my school, teachers have direct input into all important decisions" had a correlation coefficient of .587 ($r_s$ = .587, p < .001). The second survey item in this category, "Teachers are directly involved in establishing policy in my school" had a correlation coefficient of .627 ($r_s$ = .627, p < .001). Ten correlation coefficients between each leadership item in the Input category and each PLC item in the Shared and Supportive Leadership category were calculated (see Table 132). Five out of the ten had a value greater than or equal to .5 ($r_s \leq .5$).

The second highest correlation coefficient was between Communication and Shared and Supportive Leadership ($r_s$ = .636, p < .001). The first item in this category, "Effective ways for teachers to communicate with one another have been established in my school" had a correlation coefficient of .418 ($r_s$ = .418, p < .001). The second item in this category, "Lines of communication are strong between teachers and the principal" had a correlation coefficient of .640 ($r_s$ = .640, p < .001). Three out of the ten correlation coefficients between each leadership item and each PLC item had a value greater than or equal to .5 ($r_s \leq .5$). The correlation coefficients between each item of the survey are listed in Appendix G.

The third highest correlation coefficient was between Situational Awareness and Shared and Supportive Leadership ($r_s$ = .622, p < .001). The first item in this category, "Our principal is aware of the issues in my school that have not formally come to the surface but might cause discord" had a correlation coefficient of .531 ($r_s$ = .531, p < .001). The second item in this category, "In my school, the principal is aware of what is

running smoothly and what is not running smoothly" had a correlation coefficient of .582 ($r_s$ = .582, p < .001). Three out of the ten correlation coefficients between each leadership item and each PLC item had a value greater than or equal to .5 ($r_s \leq .5$) (see Appendix G).

The fourth highest correlation coefficient was between Optimizer and Shared and Supportive Leadership ($r_s$ = .612, p < .001). The first item in this category, "In my school, the principal tries to inspire teachers to accomplish things that might seem beyond their grasp" had a correlation coefficient of .596 ($r_s$ = .596, p < .001). The second item in this category, "In my school, the principal always portrays a positive attitude about our ability to accomplish substantive things" had a correlation coefficient of .426 ($r_s$ = .426, p < .001). Three out of the ten correlation coefficients between each leadership item and each PLC item had a value greater than or equal to .5 ($r_s \leq .5$) (see Appendix F).

***PLC categories with the highest average correlation coefficients.*** The PLC category with the highest correlation coefficients with the leadership categories was Shared and Supportive Leadership (see Tables 102 through 122). Of the 21 leadership categories, 62% had large correlations and 32% of the correlation coefficients were moderate. The lowest correlation was with the leadership category Focus ($r_s$ = .370, $p$ < .001), however it was still a moderate correlation value. All four of the correlations above .6 with a leadership category were with the Shared and Supportive Leadership category.

The PLC category with the lowest correlation coefficients with the leadership categories was Collective Learning and Application. Only one of the 21 leadership categories had a large correlation and 67% of the correlation coefficients were moderate.

Six correlation coefficients with the leadership categories were considered small ($r_s < .3$). Overall, there were 9 correlations below .3; six were with Collective Learning and Application and three were with Shared Personal Practice.

Table 102

*Correlation Between Leadership Category L1 (Affirmation) and the Six PLC Categories*

| PLC Category | $r_s$ | $p$ |
|---|---|---|
| Shared and Supportive Leadership | .467 | 0.000 |
| Shared Values and Vision | .362 | 0.000 |
| Collective Learning and Application | .343 | 0.000 |
| Shared Personal Practice | .393 | 0.000 |
| Supportive Conditions-Relationships | .528 | 0.000 |
| Supportive Conditions-Structures | .477 | 0.000 |
| Average of the correlation coefficients | .428 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 103

*Correlation Between Leadership Category L2 (Change Agent) and the Six PLC Categories*

| PLC Category | $r_s$ | $p$ |
|---|---|---|
| Shared and Supportive Leadership | .576 | 0.000 |
| Shared Values and Vision | .452 | 0.000 |
| Collective Learning and Application | .386 | 0.000 |
| Shared Personal Practice | .412 | 0.000 |
| Supportive Conditions-Relationships | .464 | 0.000 |
| Supportive Conditions-Structures | .539 | 0.000 |
| Average of the correlation coefficients | .472 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 104

*Correlation Between Leadership Category L3 (Contingent Rewards) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .450 | 0.000 |
| Shared Values and Vision | .362 | 0.000 |
| Collective Learning and Application | .367 | 0.000 |
| Shared Personal Practice | .451 | 0.000 |
| Supportive Conditions-Relationships | .473 | 0.000 |
| Supportive Conditions-Structures | .471 | 0.000 |
| Average of the correlation coefficients | .429 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 105

*Correlation Between Leadership Category L4 (Communication) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .636 | 0.000 |
| Shared Values and Vision | .509 | 0.000 |
| Collective Learning and Application | .412 | 0.000 |
| Shared Personal Practice | .421 | 0.000 |
| Supportive Conditions-Relationships | .484 | 0.000 |
| Supportive Conditions-Structures | .545 | 0.000 |
| Average of the correlation coefficients | .501 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 106

*Correlation Between Leadership Category L5 (Culture) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .535 | 0.000 |
| Shared Values and Vision | .523 | 0.000 |
| Collective Learning and Application | .559 | 0.000 |
| Shared Personal Practice | .508 | 0.000 |
| Supportive Conditions-Relationships | .548 | 0.000 |
| Supportive Conditions-Structures | .500 | 0.000 |
| Average of the correlation coefficients | .529 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 107

*Correlation Between Leadership Category L6 (Discipline) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .464 | 0.000 |
| Shared Values and Vision | .333 | 0.000 |
| Collective Learning and Application | .227 | 0.000 |
| Shared Personal Practice | .300 | 0.000 |
| Supportive Conditions-Relationships | .376 | 0.000 |
| Supportive Conditions-Structures | .392 | 0.000 |
| Average of the correlation coefficients | .349 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 108

*Correlation Between Leadership Category L7 (Flexibility) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .591 | 0.000 |
| Shared Values and Vision | .399 | 0.000 |
| Collective Learning and Application | .311 | 0.000 |
| Shared Personal Practice | .323 | 0.000 |
| Supportive Conditions-Relationships | .452 | 0.000 |
| Supportive Conditions-Structures | .463 | 0.000 |
| Average of the correlation coefficients | .423 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 109

*Correlation Between Leadership Category L8 (Focus) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .370 | 0.000 |
| Shared Values and Vision | .398 | 0.000 |
| Collective Learning and Application | .403 | 0.000 |
| Shared Personal Practice | .427 | 0.000 |
| Supportive Conditions-Relationships | .302 | 0.000 |
| Supportive Conditions-Structures | .442 | 0.000 |
| Average of the correlation coefficients | .390 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 110

*Correlation Between Leadership Category L9 (Ideals/Beliefs) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .536 | 0.000 |
| Shared Values and Vision | .359 | 0.000 |
| Collective Learning and Application | .266 | 0.000 |
| Shared Personal Practice | .290 | 0.000 |
| Supportive Conditions-Relationships | .413 | 0.000 |
| Supportive Conditions-Structures | .427 | 0.000 |
| Average of the correlation coefficients | .382 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 111

*Correlation Between Leadership Category L10 (Input) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .665 | 0.000 |
| Shared Values and Vision | .407 | 0.000 |
| Collective Learning and Application | .304 | 0.000 |
| Shared Personal Practice | .370 | 0.000 |
| Supportive Conditions-Relationships | .368 | 0.000 |
| Supportive Conditions-Structures | .461 | 0.000 |
| Average of the correlation coefficients | .429 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 112

*Correlation Between Leadership Category L11 (Intellectual Stimulation) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .420 | 0.000 |
| Shared Values and Vision | .344 | 0.000 |
| Collective Learning and Application | .340 | 0.000 |
| Shared Personal Practice | .324 | 0.000 |
| Supportive Conditions-Relationships | .349 | 0.000 |
| Supportive Conditions-Structures | .450 | 0.000 |
| Average of the correlation coefficients | .371 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 113

*Correlation Between Leadership Category L12 (Involvement in Curriculum, Instruction, and Assessment) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .561 | 0.000 |
| Shared Values and Vision | .384 | 0.000 |
| Collective Learning and Application | .283 | 0.000 |
| Shared Personal Practice | .312 | 0.000 |
| Supportive Conditions-Relationships | .339 | 0.000 |
| Supportive Conditions-Structures | .406 | 0.000 |
| Average of the correlation coefficients | .381 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 114

*Correlation Between Leadership Category L13 (Knowledge of Curriculum, Instruction, and Assessment) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .566 | 0.000 |
| Shared Values and Vision | .429 | 0.000 |
| Collective Learning and Application | .355 | 0.000 |
| Shared Personal Practice | .368 | 0.000 |
| Supportive Conditions-Relationships | .382 | 0.000 |
| Supportive Conditions-Structures | .481 | 0.000 |
| Average of the correlation coefficients | .430 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 115

*Correlation Between Leadership Category L14 (Monitoring/Evaluating) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .564 | 0.000 |
| Shared Values and Vision | .440 | 0.000 |
| Collective Learning and Application | .326 | 0.000 |
| Shared Personal Practice | .349 | 0.000 |
| Supportive Conditions-Relationships | .406 | 0.000 |
| Supportive Conditions-Structures | .499 | 0.000 |
| Average of the correlation coefficients | .431 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 116

*Correlation Between Leadership Category L15 (Optimizer) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .612 | 0.000 |
| Shared Values and Vision | .427 | 0.000 |
| Collective Learning and Application | .332 | 0.000 |
| Shared Personal Practice | .374 | 0.000 |
| Supportive Conditions-Relationships | .467 | 0.000 |
| Supportive Conditions-Structures | .490 | 0.000 |
| Average of the correlation coefficients | .450 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 117

*Correlation Between Leadership Category L16 (Order) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .541 | 0.000 |
| Shared Values and Vision | .465 | 0.000 |
| Collective Learning and Application | .352 | 0.000 |
| Shared Personal Practice | .427 | 0.000 |
| Supportive Conditions-Relationships | .424 | 0.000 |
| Supportive Conditions-Structures | .532 | 0.000 |
| Average of the correlation coefficients | .457 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 118

*Correlation Between Leadership Category L17 (Outreach) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .435 | 0.000 |
| Shared Values and Vision | .332 | 0.000 |
| Collective Learning and Application | .280 | 0.000 |
| Shared Personal Practice | .239 | 0.000 |
| Supportive Conditions-Relationships | .327 | 0.000 |
| Supportive Conditions-Structures | .348 | 0.000 |
| Average of the correlation coefficients | .327 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 119

*Correlation Between Leadership Category L18 (Relationships) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .592 | 0.000 |
| Shared Values and Vision | .393 | 0.000 |
| Collective Learning and Application | .315 | 0.000 |
| Shared Personal Practice | .366 | 0.000 |
| Supportive Conditions-Relationships | .436 | 0.000 |
| Supportive Conditions-Structures | .472 | 0.000 |
| Average of the correlation coefficients | .429 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 120

*Correlation Between Leadership Category L19 (Resources) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .377 | 0.000 |
| Shared Values and Vision | .365 | 0.000 |
| Collective Learning and Application | .354 | 0.000 |
| Shared Personal Practice | .402 | 0.000 |
| Supportive Conditions-Relationships | .381 | 0.000 |
| Supportive Conditions-Structures | .533 | 0.000 |
| Average of the correlation coefficients | .402 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 121

*Correlation Between Leadership Category L20 (Situational Awareness) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .622 | 0.000 |
| Shared Values and Vision | .419 | 0.000 |
| Collective Learning and Application | .299 | 0.000 |
| Shared Personal Practice | .396 | 0.000 |
| Supportive Conditions-Relationships | .404 | 0.000 |
| Supportive Conditions-Structures | .484 | 0.000 |
| Average of the correlation coefficients | .437 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 122

*Correlation Between Leadership Category L21 (Visibility) and the Six PLC Categories*

| PLC Category | $r_s$ | *p* |
|---|---|---|
| Shared and Supportive Leadership | .472 | 0.000 |
| Shared Values and Vision | .307 | 0.000 |
| Collective Learning and Application | .244 | 0.000 |
| Shared Personal Practice | .229 | 0.000 |
| Supportive Conditions-Relationships | .302 | 0.000 |
| Supportive Conditions-Structures | .336 | 0.000 |
| Average of the correlation coefficients | .315 | |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

## Conclusion

The purpose of this chapter was to present and analyze the data that was collected from the survey instruments as they relate to each research question.

In summary, the data from the combined survey responses of teachers and principals indicated that there was a significant, positive relationship between leadership actions of the principal and the depth of implementation of Hord's five dimensions of a professional learning community. Of the 126 correlation coefficients calculated for each of the leadership and PLC categories, 7% were small, 74% were moderate, and 19% were large.

The next chapter presents a summary of the findings, conclusions, and recommendations.

## Chapter 5: Summary of Findings, Conclusions, and Recommendations

This chapter presents the findings, conclusions, and recommendations about the data that were collected in this research project. This chapter is organized with the findings from research questions one and two presented together. The findings for research questions one and two are grouped together because they both represent the data collected regarding leadership behaviors of principals. The findings for research question three and question four are each presented separately. Conclusions are presented immediately following the presentation of all findings. The chapter continues with recommendations based on the findings and concludes with recommendations for further study.

### Summary of Findings: Research Questions One and Two

Research question one investigated the perceptions held by teachers about the observed leadership behaviors of the principals in their schools. Research question two investigated principals' assessments of their own leadership behaviors. These two questions were combined in the summary of findings and conclusions because they represent data that assessed similar actions. Data regarding teachers' perceptions of principals' leadership behaviors were analyzed against the data representing the principals' perceptions about their own leadership behaviors. Therefore, the findings and conclusions for these two research questions are presented together. There are two findings and two conclusions in this subsection.

**Finding #1.** Participants gave the highest percentage of responses at levels three or four to the Leadership Categories of Outreach, Ideals/Beliefs, and Affirmation. Outreach addresses the leadership of advocacy and acting as a spokesperson for the

school to all stakeholders. Ideas/Beliefs describes leadership that operates from and shares strong, well-defined ideals and beliefs about schools, teaching, and learning. Affirmation depicts the leadership behaviors that recognize and celebrate accomplishments and acknowledge failures (Marzano et al., 2005). These categories of leadership are connected to implementing or supporting PLCs.

***Outreach.*** Eighty-nine percent of teachers and 96% of principals responded at levels three or four. Fifty-five percent of teachers and 76% of principals responded at a level four.

***Ideals/Beliefs.*** Eighty-two percent of teachers and 92% of principals responded at levels three or four. Forty-one percent of teachers and 54% of principals responded at a level four.

***Affirmation.*** Seventy-nine percent of teachers and 88% of principals responded at levels three or four. Thirty-seven percent of teachers and 52% of principals responded at a level four.

**Finding #2.** Principals' ratings were higher than teachers' ratings for every category on the Leadership survey.

For all categories, 84% of principals' responses were at levels three or four on the Leadership survey, while only 65% of teachers' responses were at levels three or four. Thirty-nine percent of principals' responses were at level four, while only 27% of teachers' responses were at level four.

The differences in percentage of responses at levels three or four between perceptions of teachers and perceptions of principals on survey items ranged from one to 44 percentage points. The average difference between principals' responses and

teachers' responses was 19 percentage points. The categories with the largest differences were Input (44%), Discipline (38%), and Situational Awareness (36%).

Seventy-eight percent of principals selected level three or level four for Input, while only 34% of teachers did. Ninety-four percent of principals selected level three or level four for Discipline, as compared to 56% of teachers. Ninety-eight percent of principals selected level three or level four for Situational Awareness; however, only 62% of teachers selected level three or level four.

The highest category ratings from teachers were identical to the combined ratings of teachers and principals. However, principals gave the highest percentage of responses at levels three or four to the Leadership Categories of Situational Awareness, Outreach, Communication, and Discipline.

**Summary of Findings: Research Question Three**

Research question three investigated the strengths of critical attributes for each of Hord's five dimensions of a professional learning community as observed by teachers and principals within their schools. There are two findings in this subsection.

Data were obtained through the use of a survey in which observable characteristics of a PLC were assessed. Survey items were organized into PLC categories based on Hord's dimensions and the response options were Strongly Disagree, Disagree, Agree, and Strongly Agree.

**Finding #3.** Participants gave the highest percentage of responses at Agree or Strongly Agree to the PLC Categories of Supportive Conditions-Relationships, Collective Learning and Application, and Shared Values and Vision. The central ides for these PLC categories are cooperative and common work and goals of the faculty. Supportive

Conditions-Relationships refers to the relational factors that help build trust and respect among the learning community. Collective Learning and Application refers to the learning community deciding what will be learned and how it will be used to address student learning. Shared Values and Vision describes the focus on student learning, the vision guides teaching and learning, and how they see their roles in the learning community (Hord & Sommers, 2008).

***Supportive Conditions-Relationships.*** Eighty-three percent of teachers and 95% of principals responded Agree or Strongly Agree for this category. Thirty-three percent of teachers and 52% of principals responded Strongly Agree.

***Collective Learning and Application.*** Eighty-one percent of teachers and 88% of principals responded Agree or Strongly Agree for this category. Twenty-one percent of teachers and 28% of principals selected Strongly Agree.

***Shared Values and Vision.*** Seventy-six percent of teachers and 85% of principals responded Agree or Strongly Agree for this category. Eighteen percent of teachers and 27% of principals responded Strongly Agree.

**Finding #4.** Principals' ratings were higher than teachers' ratings for every category on the PLC survey.

This study relied on the perceptions and observations of participants for data. Teachers and principals were asked to assess the depth of implementation of critical attributes of a professional learning community within their schools. The principals' ratings were noticeably higher than the teachers' ratings.

Overall, 88% of principals' responses were Agree or Strongly Agree on the PLC survey, while only 72% of teachers' responses were Agree or Strongly Agree. Thirty-

three percent of principals' responses were Strongly Agree, while only 19% of teachers' responses were Strongly Agree.

The differences in percentage of responses at Agree or Strongly Agree for the items in the PLC section of the survey ranged from seven to 31 percentage points. The average difference between principals' responses and teachers' responses was 15 percentage points. The categories with the largest differences between principals' responses and teachers' responses were Shared and Supportive Leadership (31%), Supportive Conditions-Structures (16%), and Shared Personal Practice (12%).

Ninety-three percent of principals selected Agree or Strongly Agree for Shared and Supportive Leadership, while only 61% of teachers responded with Agree or Strongly Agree. Eighty-five percent of principals selected Agree or Strongly Agree for Supportive Conditions-Structures, as compared to 70% of teachers. Eighty-two percent of principals selected Agree or Strongly Agree for Shared Personal Practice; however, only 70% of teachers selected level three or level four for this category.

The ranking of categories for teachers was identical to the rankings for combined responses. The PLC category of Supportive Conditions-Relationships had the highest percentage for both groups. Principals gave the second highest percentage of responses at Agree or Strongly Agree to the PLC Category of Shared and Supportive Leadership; however, this category had the fewest number of responses at that level for teachers.

**Summary of Findings: Research Question Four**

Research question four investigated the relationship between each of the 21 leadership responsibilities and the six PLC categories. There are eight findings in this subsection.

Data were analyzed using the Statistical Package for the Social Sciences (IBM-SPSS). The researcher measured the strength of relationship between each leadership variable and each PLC variable. Spearman's rho correlations were calculated in order to determine strength of relationship between the two sets of variables.

**Finding #5.** All 126 correlation coefficients calculated between each of the 21 leadership responsibilities and the six PLC categories were positive.

**Finding #6.** Ninety-three percent of the correlations, or 117 out of 126, had a moderate or large correlation coefficient.

**Finding #7.** Twenty-four of the 126 correlation coefficients, or 19%, had a value greater than or equal to .5 (large correlation coefficient). Four of the 126 correlation coefficients had a value greater than or equal to .6.

**Finding #8.** More than half (13 our of 24) of the large correlation coefficients were in four of the leadership categories of Culture, Communication, Change Agent, and Order. Culture had large correlation coefficients with all six of the PLC categories and Communication had large correlation coefficients with three. Change Agent and Order each had large correlation coefficients with two.

**Finding #9.** The four highest correlation coefficients between individual leadership categories and individual PLC categories were between the leadership categories of Input, Communication, Optimizer, and Situational Awareness and a PLC category.

**Finding #10.** The four highest correlation coefficients between individual leadership categories and individual PLC categories were between a leadership category and the PLC category of Shared and Supportive Leadership.

**Finding #11.** The three leadership categories with the highest average correlation coefficients were Culture, Communication, and Change Agent.

**Finding #12.** The PLC category with the highest average correlation coefficients was Shared and Supportive Leadership.

**Summary of Conclusions**

**Conclusions for Research Questions One and Two.** The conclusions below are based upon the data and findings related to research questions one and two.

***Conclusion #1.*** The leadership behaviors in the areas of Outreach, Ideals/Beliefs, and Affirmation are believed to be important to the success of the schools in this study. Teachers and principals recognized the leadership actions of principals in these areas by offering the highest percentage of responses at levels three or four for any of the leadership categories. All of the schools in this study are private, religious schools and therefore, schools of choice. A principal in a private school must act as a spokesperson for the school, clearly articulating the vision for the school, while celebrating accomplishments. The mission of the school and the accomplishments of teachers and students must be communicated to the community at large in order to attract students. The specific leadership behaviors outlined above were measured under the categories of Outreach, Ideals/Beliefs, and Affirmation (see Appendix E).

***Conclusion #2.*** The principals in this study have more favorable perceptions about their own leadership behaviors than the teachers have about the principals in their schools. Only 25 out of 472, or 5%, of participants were principals. This low percentage explains why the combined responses were so closely aligned with the teachers' responses since 95% of the combined responses in the study were from teachers.

This study relied on the perceptions and observations of participants for data. When principals were asked to assess their own leadership behaviors, their ratings were considerably higher than the teachers' ratings. Research (Atkins and Wood, 2002) indicates frequent discrepancies in self-observer ratings when compared to other sources such as peers and subordinates. Atkins and Wood found that overestimation of performance evaluation was encouraged when lower-performing team leaders were asked to evaluate their own performance. The results from self-observers who rated themselves the highest were often negatively related to performance. Atkins and Wood (2002) suggest "self-presentation motivation to be perceived as competent" as a contributing factor to self-overestimation (p. 898).

**Conclusions for Research Question Three.** The conclusions below are based upon the data and findings related to research question three.

***Conclusion #3.*** Teachers gave the highest ratings to the categories that involved teachers supporting students, supporting each other, collaborating, and having common values and a common vision. The categories with the lowest ratings involved teachers' input in leadership and the opportunities teachers had to work together. The data indicate that the teachers feel that they work well together, but the structures do not exist that would provide for these opportunities. The data suggest that the teachers feel that the relationships among the faculty are strong. However, the resources for those collaborative efforts, such as time, money, and facilities, are not as strong. Data from this study suggest that principals should focus on providing opportunities for input from teachers and for teachers to collaborate with each other.

***Conclusion #4.*** The principals in this study have more favorable perceptions about depth of implementation of PLCs in their schools than the teachers have.

Similar to the Leadership section of the survey, only 25 out of 472, or 5%, of participants were principals. This low percentage explains why the combined responses on the PLC section of the survey were so closely aligned with the teachers' responses.

The findings suggest that there is a difference between teachers' perceptions and principal's perceptions of both principal leadership and depth of implementation of PLC. Research (Tichenor and Tichenor, 2009; Goodwin, Cunningham, and Childress, 2003) indicates that a discrepancy between the two groups' perceptions of principals is common due to the changing roles of principals in schools. The change in the daily job requirements of principals has led to new sets of expectations of principals from stakeholders. Goodwin et al. (2003) cited the stress principals "experience as a result of striving to meet higher standards and more stringent measures of accountability in contrast with the responsibility for meeting the growing academic, social, emotional, physical, and moral needs of students" (p. 30). Every principal who participated in this study has been working in education for over 15 years. This suggests that the principals began their careers prior to the start of the new expectations. The increase in complexity and intensity of the position of principal within the last decade has been a challenge for veteran principals (Goodwin et al., 2003).

**Conclusions Research Question Four.** The conclusions below are based upon the data and findings related to research question four.

***Conclusion #5.*** A conclusion from these findings is that a principal can increase the depth of implementation of a PLC by strengthening his or her effectiveness in the 21

leadership categories. All areas of principal leadership are important to the depth of implementation of a PLC. Each of the 21 leadership behaviors of the principal has a positive relationship with depth of implementation of a PLC. The data indicate that there was a positive relationship between every leadership variable and every PLC variable. Most of the 126 pairs of variables (93%) had a moderate or large correlation coefficient. Nineteen percent had a correlation coefficient greater than or equal to .5 or a large correlation coefficient. These data indicate that, overall, there is a relationship between the 21 leadership responsibilities and the depth of implementation of Hord's five dimensions of a PLC. There was a moderately strong relationship between 74% of the pairs of leadership and PLC variables. There was a strong relationship between 19% of the pairs of leadership and PLC variables.

***Conclusion #6.*** A conclusion from these findings is that a principal can increase the depth of implementation of all dimensions of a PLC by strengthening his or her effectiveness in the Culture category. The actions of the principal in the areas of culture have a strong relationship with every dimension of a PLC. Nine of the 24 large correlation coefficients were in two Leadership Categories: Culture and Communication. The highest correlation coefficient between four of the six PLC Categories (Shared Values and Vision, Collective Learning and Application, Shared Personal Practice, and Supportive Conditions-Relationships) and a Leadership Category was with Culture.

Marzano et al. (2005) defined Culture as "the extent to which the leader fosters shared beliefs and a sense of community and cooperation among staff" (p. 48). Behaviors associated with Culture include "promoting cohesion among staff" and "developing a shared vision of what the school could be like" (p. 48). The two individual

survey items from the Culture category, "Teachers in my school regularly share ideas" and "In my school, we share a vision of what we could be like," describe two fundamental components of a PLC. DuFour et al. (2010) listed shared vision and collaborative teams as the first two attributes that distinguish a PLC. The individual items from the PLC section of the survey include language that is consistent with the language from the individual Culture items. Examples from the individual PLC items include:

- Staff members are "involved in discussing and making decisions"
- Staff "work together" and "informally share ideas"
- Collegial relationships
- Collaborative work
- Shared "values" and "visions"

The individual items from the PLC section of the survey and the individual items from the Culture category of the leadership section of the survey items measured similar ideas and used common language. The common ideas and language could have led participants to answer the different survey items with common ideas similarly. This could have caused the large correlation coefficients.

***Conclusion #7.*** A conclusion from these findings is that principals should focus on the behaviors in the Leadership Categories that include fundamental concepts of PLCs, such as Input, Communication, and Optimizer, when implementing or supporting PLCs. The findings indicate that the strongest statistical relationships were between the PLC category of Shared and Supportive Leadership and the leadership categories of Input, Communication, Optimizer, and Situational Awareness.

Individual items from the three leadership categories with the highest correlation coefficients, Input, Communication, and Optimizer, assessed themes that are essential to a PLC. Teachers as informal leaders collaborating with the formal leaders of the school (Input) is a PLC attribute supported by literature (Bredeson, 2000; Leithwood et al., 2004a; Myers and Simpson,1998; Spillane, 2006). Communication within the faculty and with administrators is essential in a PLC (Martin-Kniep, 2008; Seashore et al., 2010; Speck, 1999).

The items from the Optimizer category, "the principal tries to inspire teachers to accomplish things that might seem beyond their grasp" and "the principal always portrays a positive attitude about our ability to accomplish substantive things" are ways of building the collective capacity of the faculty. Capacity building is a fundamental goal of a PLC (Fullan 2001, 2005; Martin-Kniep, 2008; Newmann et al., 2000; Sergiovanni, 2007).

***Conclusion #8.*** A conclusion from these findings is that a principal's leadership is most important in the PLC dimension of Shared and Supportive Leadership. In addition to the four correlation values above .6, the ten highest correlation values were between a leadership and Shared and Supportive Leadership. Fullan (2001) states that leaders will be deemed effective based on the leadership that they produced in others. The leadership behaviors in the category of Shared and Supportive Leadership include nurturing leadership among staff, and the sharing of authority, responsibility, information, and decision making (Huffman and Hipp, 2003). A principal seeking to implement or support a PLC should nurture and promote leadership throughout the faculty and staff.

***Conclusion #9.*** A conclusion from these findings is that principals should involve the staff when creating policies and making decisions when implementing or supporting PLCs. The categories with the highest correlation coefficient were Input and Shared and Supportive Leadership. The leadership behaviors associated with the category of Input include providing opportunities for staff involvement and input in important decisions (Marzano et al., 2005). Cottrell (as cited in Marzano et al., 2005) describes this leadership behavior as listening "to your people" (p. 52). The highest correlation coefficients did not indicate highest ratings from the participants. Input had the lowest percentage (34%) of ratings at levels three or four from teachers. Although 78% of principals rated Input at levels three or four, this percentage ranked seventeenth out of 21. Ninety-three percent of principals selected Agree or Strongly Agree for Shared and Supportive Leadership, but only 61% of teachers did. This was the lowest percentage of responses at that level for teachers.

The three leadership categories with the highest average correlation coefficients were Culture, Communication, and Change Agent. As mentioned earlier, the categories of Culture and Communication are associated with behaviors that are at the heart of a PLC. The items from the Change Agent category, "the principal consciously tries to challenge the status quo to get people thinking" and "we systematically consider new and better ways of doing things" are also central to the idea of school improvement through a PLC. The connection between change efforts and PLCs have been established in literature. Hord (2008) describes the professional relationships, built on trust and respect, in a unified effort to embed change, as an essential element of a PLC. DuFour and Eaker (1998) cite the importance of the leadership of the principal in "implementing and

sustaining a school change process through all of the inevitable setbacks and frustrations" while building a PLC (p. 183).

**Recommendations**

Recommendations are based on the findings and conclusions of this research study. This subsection will discuss recommendations for Lasallian schools, as well as other schools, based upon research findings. This subsection concludes with recommendations for further study.

This study surveyed teachers and principals in Lasallian college preparatory schools in order to examine leadership behaviors, depth of implementation of PLCs, and to determine any relationship between the two. Research has identified the importance of leadership in both PLCs and with student achievement. Results from this study may be beneficial to principals of Lasallian schools looking to strengthen their PLCs. The findings from this study indicated that leadership is important to depth of implementation of PLCs and that behaviors in certain categories, such as Culture and Communication, have a strong relationship with PLC development. The findings may guide behaviors and practices of principals by highlighting points of emphasis for leadership behavior.

**Recommendations based on this study.** It is recommended that the leadership behaviors in the categories of Input, Communication, and Optimizer are points of emphasis for principals when implementing or supporting PLCs. It is recommended that principals focus on providing opportunities for input from teachers and for teachers to collaborate with each other when implementing or supporting PLCs.

This study was conducted through the use of a survey of teachers and principals in Lasallian college preparatory schools. However, none of the items measured in the

survey instruments were unique to Lasallian, Catholic, or private schools. The items assessed leadership behaviors and aspects of PLC that would be found in any school.

**Recommendations for future research**. This study was limited to teachers and principals in 45 Lasallian schools. A recommendation for future research would be to identify and isolate certain characteristics of those individual schools such as administrative structure, school and faculty size, and progress in developing a PLC.

In some schools, the principal was the chief administrator and in some schools a president was. In schools where the principal was the chief administrator, many duties and responsibilities that are associated with the principal are shared with an assistant. A future study could examine the leadership behaviors of the different types of administrators within the different administrative structures of those schools.

The specific schools of participants were not tracked. A future study could examine perceptions about leadership within specific schools or PLCs at different places on the progress continuum. The data about individual principals within PLCs as opposed to principal leadership in general would allow a researcher to compare results within and between individual schools. Relationships between leadership behaviors and PLCs may be different in schools with higher or lower faculty perceptions about leadership.

A future study could compare schools or faculties of different sizes. The leadership and PLC variables that were studied may offer different results in different sized schools. The schools in this study had student populations ranging from 250 to 1,500. The numbers of teachers in each school were not tracked.

This study was limited to Lasallian schools. A similar study could be conducted in schools of other religious orders, or other types of private schools. Additionally, future

studies could focus on leadership and PLCs in public schools. A future study could examine variables such as urban/rural, school size, district size, or different schools within the same district to explore any possible differences in effect of leadership on PLC implementation in schools with different demographic characteristics.

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## Appendix A

### Survey Permission Letter One

The letter on the following page serves as permission from Dianne F. Olivier, Ph.D. to use the Professional Learning Community Assessment-Revised. and from Maura McGrath, Knowledge Management Specialist at McREL International to use the McREL questionnaire.

*Department of Educational Foundations*
*and Leadership*
*P.O. Box 43091*
*Lafayette, LA 70504-3091*

December 13, 2013

James Schlegel
12 Airline Drive
Albany, NY 12205

Dear Mr. Schlegel:

This correspondence is to grant permission to utilize the *Professional Learning Community Assessment-Revised* (PLCA-R) as your instrument for data collection for your doctoral study through Esteves School of Education, Sage Colleges, Albany, New York. I believe your research *examining principal leadership practices in relation to the professional learning communities dimensions* will contribute to the PLC literature and provide valuable information related to overall leadership development within the PLC process. I am pleased that you are interested in using the PLCA-R measure in your research.

This permission letter allows use of the PLCA-R through paper/pencil administration, as well as permission for the PLCA-R online version. For administration of the PLCA-R online version, services must be secured through our online host, SEDL in Austin, TX. Additional information for online administration can be found at www.sedl.org.

While this letter provides permission to use the measure in your study, authorship of the measure will remain as Olivier, Hipp, and Huffman (exact citation on the following page). This permission does not allow renaming the measure or claiming authorship.

Upon completion of your study, I would be interested in learning about your entire study and would welcome the opportunity to receive an electronic version of your completed dissertation research.

Thank you for your interest in our research and measure for assessing professional learning community attributes within schools. Should you require any additional information, please feel free to contact me.

Sincerely,

Dianne F. Olivier, Ph. D.
Assistant Professor
Joan D. and Alexander S. Haig/BORSF Professor
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## Appendix B

## Survey Permission Letter Two

The letter on the following page serves as permission from Maura McGrath, Knowledge Management Specialist at McREL International to use the McREL questionnaire.

McREL
Making a Difference

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James Schlegel
Head of School
Christian Brothers Academy

**Permission to Use McREL Material**

October 30, 2013

Permission is hereby granted to James Schlegel to use in the dissertation that he is writing the following material which was published by McREL:

Figure TN 11.1: Questionnaire Used for the Factor Analysis, pp. 162–164 from *School leadership that works: From research to results.*

We understand that the table will be adapted as part of the dissertation. The survey should be marked as to the source of the material and include the statement "Adapted by permission of McREL." The bibliography should include a full citation as follows:

Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Alexandria, VA: Association for Supervision and Curriculum Development.

This permission is limited to the use and materials specified above. Any change in the use or materials from that specified above requires additional written permission from McREL before such use is made.

Please send McREL a copy of the completed dissertation for our records.

Sincerely,

Maura McGrath
Knowledge Management Specialist

**Appendix C**

**Survey Cover Letter**

Fellow Lasallian,

You are invited to participate in a survey as a part of the study for my doctoral research. This research is conducted through the Doctor of Education program at the Sage Colleges in Albany, NY. The intent of my study is to investigate leadership practices of principals in relation to the five dimensions of a professional learning community. This quantitative study will use data collected from surveys of teachers and principals in the college preparatory schools throughout the Lasallian Region of North America.

Part one of the survey assesses your perceptions about your school based on the five dimensions of a professional learning community (PLC) and related attributes. Part two asks you to indicate the extent to which each of the following leadership behaviors is present in your school. There are no right or wrong responses. Read each statement and select the scale point that best reflects your personal degree of agreement with the statement.

I assure you that confidentiality will be maintained throughout the study. The analysis of this information will help guide practice for principals as instructional leaders. Results of the research will be sent to all schools in an electronic, summary format. If you have any questions concerning the research study, please e-mail me at schlegel@cbaalbany.org or call me at 518-690-1236.

Should you decide to complete this survey, it should take no more than 20 minutes. Thank you in advance for considering my invitation.

Sincerely,

James Schlegel
Christian Brothers Academy
Albany, NY

**Appendix D**

**Survey Instruments**

**The following four instruments are included in this appendix:**

I. **Survey For Principals**

II. **Survey For Teachers**

III. **Original Professional Learning Community Assessment-Revised**

IV. **Original McREL Questionnaire**

## I. Survey For Principals

**Please complete both Part I and Part II.**

**Part I –** Professional Learning Community Assessment-Revised

This questionnaire assesses your perceptions about you, as the principal, the staff, and stakeholders based on the five dimensions of a professional learning community (PLC) and related attributes. There are no right or wrong responses. This questionnaire contains a number of statements about practices, which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement. Be certain to select only one response for each statement.

Key Terms:

- Principal = Principal, not Associate or Assistant Principal
- Staff = All adult staff directly associated with curriculum, instruction, and assessment of students
- Stakeholders = Parents and community members

Scale: 1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

Please represent your personal degree of agreement with each of the following statements.
The options are: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree.

| Shared and Supportive Leadership | | SD | D | A | SA |
|---|---|---|---|---|---|
| 1. | Staff members are consistently involved in discussing and making decisions about most school | 1 | 2 | 3 | 4 |
| 2. | The principal shares responsibility and rewards for innovative actions. | 1 | 2 | 3 | 4 |
| 3. | The principal participates democratically with staff sharing power and authority. | 1 | 2 | 3 | 4 |
| 4. | Leadership is promoted and nurtured among staff. | 1 | 2 | 3 | 4 |
| 5. | Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority. | 1 | 2 | 3 | 4 |

| Shared Values and Vision | | SD | D | A | SA |
|---|---|---|---|---|---|
| 6. | Shared values support norms of behavior that guide decisions about teaching and learning. | 1 | 2 | 3 | 4 |
| 7. | Staff members share visions for school improvement | 1 | 2 | 3 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| | that have an undeviating focus on student learning. | | | | |
| 8. | Stakeholders are actively involved in creating high expectations that serve to increase student achievement. | 1 | 2 | 3 | 4 |
| | | | | | |
| Collective Learning and Application | | SD | D | A | SA |
| 9. | Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work. | 1 | 2 | 3 | 4 |
| 10. | Collegial relationships exist among staff that reflect commitment to school improvement efforts. | 1 | 2 | 3 | 4 |
| 11. | Staff members plan and work together to search for solutions to address diverse student needs. | 1 | 2 | 3 | 4 |
| | | | | | |
| Shared Personal Practice | | SD | D | A | SA |
| 12. | Opportunities exist for staff to observe peers and offer encouragement. | 1 | 2 | 3 | 4 |
| 13. | Staff members provide feedback to peers related to instructional practices. | 1 | 2 | 3 | 4 |
| 14. | Staff members informally share ideas and suggestions for improving student learning. | 1 | 2 | 3 | 4 |
| 15. | Opportunities exist for coaching and mentoring. | 1 | 2 | 3 | 4 |
| | | | | | |
| Supportive Conditions - Relationships | | SD | D | A | SA |
| 16. | Caring relationships exist among staff and students that are built on trust and respect. | 1 | 2 | 3 | 4 |
| 17. | A culture of trust and respect exists for taking risks. | 1 | 2 | 3 | 4 |
| 18. | Outstanding achievement is recognized and celebrated regularly in our school. | 1 | 2 | 3 | 4 |
| | | | | | |
| Supportive Conditions - Structures | | SD | D | A | SA |
| 19. | Time is provided to facilitate collaborative work. | 1 | 2 | 3 | 4 |
| 20. | Fiscal resources are available for professional development. | 1 | 2 | 3 | 4 |
| 21. | Communication systems promote a flow of information among staff. | 1 | 2 | 3 | 4 |

**Part II –** Leadership

Please indicate the extent to which each of the following behaviors characterizes you or your school.
The options are:
(1) This does not characterize me or my school
(2)
(3)
(4) This characterizes me or my school to a great extent

| | | | | | |
|---|---|---|---|---|---|
| 1. | Teachers in my school regularly share ideas. | 1 | 2 | 3 | 4 |
| 2. | In my school, the instructional time of teachers is well protected. | 1 | 2 | 3 | 4 |
| 3. | There are well-established procedures in my school regarding how to bring up problems and concerns. | 1 | 2 | 3 | 4 |
| 4. | I have been successful in protecting teachers from undue distractions and interruptions to their teaching. | 1 | 2 | 3 | 4 |
| 5. | I am directly involved in helping teachers design curricular activities for their classes. | 1 | 2 | 3 | 4 |
| 6. | I am very knowledgeable about effective instructional practices. | 1 | 2 | 3 | 4 |
| 7. | Individuals who excel in my school are recognized and rewarded. | 1 | 2 | 3 | 4 |
| 8. | In my school, teachers have direct input into all important decisions. | 1 | 2 | 3 | 4 |
| 9. | The accomplishments of individual teachers in my school are recognized and celebrated. | 1 | 2 | 3 | 4 |
| 10. | I am aware of the personal needs of the teachers in my school. | 1 | 2 | 3 | 4 |
| 11. | I consciously try to challenge the status quo to get people thinking. | 1 | 2 | 3 | 4 |
| 12. | I try to inspire my teachers to accomplish things that might seem beyond their grasp. | 1 | 2 | 3 | 4 |
| 13. | I continually monitor the effectiveness of our curriculum. | 1 | 2 | 3 | 4 |
| 14. | I am comfortable making major changes in how things are done. | 1 | 2 | 3 | 4 |
| 15. | I stay informed about the current research and theory regarding effective schooling. | 1 | 2 | 3 | 4 |
| 16. | In my school, we systematically consider new and better ways of doing things. | 1 | 2 | 3 | 4 |
| 17. | I am directly involved in helping teachers address instructional issues in their classrooms. | 1 | 2 | 3 | 4 |
| 18. | In my school, we have designed concrete goals for our curriculum. | 1 | 2 | 3 | 4 |
| 19. | I am very knowledgeable about classroom curricular issues. | 1 | 2 | 3 | 4 |
| 20. | I have frequent contact with the students in my school. | 1 | 2 | 3 | 4 |
| 21. | Effective ways for teachers to communicate with one another have been established in my school. | 1 | 2 | 3 | 4 |
| 22. | I am a strong advocate for my school to the community at large. | 1 | 2 | 3 | 4 |
| 23. | Teachers are directly involved in establishing policy in my school. | 1 | 2 | 3 | 4 |
| 24. | The accomplishments of the students and the school in general are recognized and celebrated. | 1 | 2 | 3 | 4 |
| 25. | I always portray a positive attitude about our ability to accomplish substantive things. | 1 | 2 | 3 | 4 |
| 26. | I continually monitor the effectiveness of the instructional practices used in our school. | 1 | 2 | 3 | 4 |
| 27. | I encourage people to express opinions that are contrary. | 1 | 2 | 3 | 4 |
| 28. | I am aware of the issues in my school that have not formally come to the surface but might cause discord. | 1 | 2 | 3 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 29. | There are well-established routines regarding the running of the school that staff understand and follow. | 1 | 2 | 3 | 4 |
| 30. | Teachers in my school are regularly involved in professional development activities that directly enhance their teaching. | 1 | 2 | 3 | 4 |
| 31. | We have specific goals for specific instructional practices in my school. | 1 | 2 | 3 | 4 |
| 32. | I am highly visible to the teachers and students in my school. | 1 | 2 | 3 | 4 |
| 33. | Lines of communication are strong between teachers and myself. | 1 | 2 | 3 | 4 |
| 34. | I am a strong advocate for my school to the parents of our students. | 1 | 2 | 3 | 4 |
| 35. | In my school, we systematically have discussions about current research and theory. | 1 | 2 | 3 | 4 |
| 36. | In my school, advancement and reward are not automatically given for simply "putting in your time." | 1 | 2 | 3 | 4 |
| 37. | I make sure that significant events in the lives of the teachers in my school are acknowledged. | 1 | 2 | 3 | 4 |
| 38. | I have explicitly communicated my strong beliefs and ideals to teachers. | 1 | 2 | 3 | 4 |
| 39. | I am aware of what is running smoothly and what is not running smoothly in my school. | 1 | 2 | 3 | 4 |
| 40. | My behavior is consistent with my ideals and beliefs regarding schools, teachers, and learning. | 1 | 2 | 3 | 4 |
| 41. | In my school, the materials and resources teachers request are procured and delivered in a timely fashion. | 1 | 2 | 3 | 4 |
| 42. | In my school, we share a vision of what we could be like. | 1 | 2 | 3 | 4 |

## II. Survey For Teachers

**Please complete both Part I and Part II.**

**Part I –** Professional Learning Community Assessment-Revised

This questionnaire assesses your perceptions about your principal, staff, and stakeholders based on the five dimensions of a professional learning community (PLC) and related attributes. There are no right or wrong responses. This questionnaire contains a number of statements about practices, which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement.

Key Terms:

- Principal = Principal, not Associate or Assistant Principal
- Staff = All adult staff directly associated with curriculum, instruction, and assessment of students
- Stakeholders = Parents and community members

Scale: 1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

Please represent your personal degree of agreement with each of the following statements.
The options are: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree.

| Shared and Supportive Leadership | | SD | D | A | SA |
|---|---|---|---|---|---|
| 1. | Staff members are consistently involved in discussing and making decisions about most school | 1 | 2 | 3 | 4 |
| 2. | The principal shares responsibility and rewards for innovative actions. | 1 | 2 | 3 | 4 |
| 3. | The principal participates democratically with staff sharing power and authority. | 1 | 2 | 3 | 4 |
| 4. | Leadership is promoted and nurtured among staff. | 1 | 2 | 3 | 4 |
| 5. | Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority. | 1 | 2 | 3 | 4 |

| Shared Values and Vision | | SD | D | A | SA |
|---|---|---|---|---|---|
| 6. | Shared values support norms of behavior that guide decisions about teaching and learning. | 1 | 2 | 3 | 4 |
| 7. | Staff members share visions for school improvement that have an undeviating focus on student learning. | 1 | 2 | 3 | 4 |
| 8. | Stakeholders are actively involved in creating high | 1 | 2 | 3 | 4 |

expectations that serve to increase student achievement.

| Collective Learning and Application | | SD | D | A | SA |
|---|---|---|---|---|---|
| 9. | Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work. | 1 | 2 | 3 | 4 |
| 10. | Collegial relationships exist among staff that reflect commitment to school improvement efforts. | 1 | 2 | 3 | 4 |
| 11. | Staff members plan and work together to search for solutions to address diverse student needs. | 1 | 2 | 3 | 4 |

| Shared Personal Practice | | SD | D | A | SA |
|---|---|---|---|---|---|
| 12. | Opportunities exist for staff to observe peers and offer encouragement. | 1 | 2 | 3 | 4 |
| 13. | Staff members provide feedback to peers related to instructional practices. | 1 | 2 | 3 | 4 |
| 14. | Staff members informally share ideas and suggestions for improving student learning. | 1 | 2 | 3 | 4 |
| 15. | Opportunities exist for coaching and mentoring. | 1 | 2 | 3 | 4 |

| Supportive Conditions - Relationships | | SD | D | A | SA |
|---|---|---|---|---|---|
| 16. | Caring relationships exist among staff and students that are built on trust and respect. | 1 | 2 | 3 | 4 |
| 17. | A culture of trust and respect exists for taking risks. | 1 | 2 | 3 | 4 |
| 18. | Outstanding achievement is recognized and celebrated regularly in our school. | 1 | 2 | 3 | 4 |

| Supportive Conditions - Structures | | SD | D | A | SA |
|---|---|---|---|---|---|
| 19. | Time is provided to facilitate collaborative work. | 1 | 2 | 3 | 4 |
| 20. | Fiscal resources are available for professional development. | 1 | 2 | 3 | 4 |
| 21. | Communication systems promote a flow of information among staff. | 1 | 2 | 3 | 4 |

**Part II –** Leadership

Please indicate the extent to which each of the following behaviors characterizes your principal or your school.
The options are:
(1) This does not characterize me or my school
(2)
(3)
(4) This characterizes me or my school to a great extent

| | | | | |
|---|---|---|---|---|
| 1. Teachers in my school regularly share ideas. | 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
| 2. In my school, the instructional time of teachers is well protected. | 1 | 2 | 3 | 4 |
| 3. There are well-established procedures in my school regarding how to bring up problems and concerns. | 1 | 2 | 3 | 4 |
| 4. In my school, teachers are protected from undue distractions and interruptions to their teaching. | 1 | 2 | 3 | 4 |
| 5. In my school, the principal is directly involved in helping teachers design curricular activities for their classes. | 1 | 2 | 3 | 4 |
| 6. In my school, the principal is very knowledgeable about effective instructional practices. | 1 | 2 | 3 | 4 |
| 7. Individuals who excel in my school are recognized and rewarded. | 1 | 2 | 3 | 4 |
| 8. In my school, teachers have direct input into all important decisions. | 1 | 2 | 3 | 4 |
| 9. The accomplishments of individual teachers in my school are recognized and celebrated. | 1 | 2 | 3 | 4 |
| 10. In my school, the principal is aware of the personal needs of the teachers. | 1 | 2 | 3 | 4 |
| 11. In my school, the principal consciously tries to challenge the status quo to get people thinking. | 1 | 2 | 3 | 4 |
| 12. In my school, the principal tries to inspire teachers to accomplish things that might seem beyond their grasp. | 1 | 2 | 3 | 4 |
| 13. In my school, the principal continually monitors the effectiveness of our curriculum. | 1 | 2 | 3 | 4 |
| 14. In my school, the principal is comfortable making major changes in how things are done. | 1 | 2 | 3 | 4 |
| 15. In my school, the principal is informed about the current research and theory regarding effective schooling. | 1 | 2 | 3 | 4 |
| 16. In my school, we systematically consider new and better ways of doing things. | 1 | 2 | 3 | 4 |
| 17. In my school, the principal is directly involved in helping teachers address instructional issues in their classrooms. | 1 | 2 | 3 | 4 |
| 18. In my school, we have designed concrete goals for our curriculum. | 1 | 2 | 3 | 4 |
| 19. In my school, the principal is very knowledgeable about classroom curricular issues. | 1 | 2 | 3 | 4 |
| 20. In my school, the principal has frequent contact with the students. | 1 | 2 | 3 | 4 |
| 21. Effective ways for teachers to communicate with one another have been established in my school. | 1 | 2 | 3 | 4 |
| 22. Our principal is a strong advocate for my school to the community at large. | 1 | 2 | 3 | 4 |
| 23. Teachers are directly involved in establishing policy in my school. | 1 | 2 | 3 | 4 |
| 24. The accomplishments of the students and the school in general are recognized and celebrated. | 1 | 2 | 3 | 4 |
| 25. In my school, the principal always portrays a positive attitude about our ability to accomplish substantive things. | 1 | 2 | 3 | 4 |
| 26. Our principal continually monitors the effectiveness of the instructional practices used in our school. | 1 | 2 | 3 | 4 |
| 27. In my school, the principal encourages people to express opinions | 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
| that are contrary. | | | | |
| 28. Our principal is aware of the issues in my school that have not formally come to the surface but might cause discord. | 1 | 2 | 3 | 4 |
| 29. There are well-established routines regarding the running of the school that staff understand and follow. | 1 | 2 | 3 | 4 |
| 30. Teachers in my school are regularly involved in professional development activities that directly enhance their teaching. | 1 | 2 | 3 | 4 |
| 31. We have specific goals for specific instructional practices in my school. | 1 | 2 | 3 | 4 |
| 32. In my school, the principal is highly visible to the teachers and students. | 1 | 2 | 3 | 4 |
| 33. Lines of communication are strong between teachers and the principal. | 1 | 2 | 3 | 4 |
| 34. Our principal is a strong advocate for my school to the parents of our students. | 1 | 2 | 3 | 4 |
| 35. In my school, we systematically have discussions about current research and theory. | 1 | 2 | 3 | 4 |
| 36. In my school, advancement and reward are not automatically given for simply “putting in your time.” | 1 | 2 | 3 | 4 |
| 37. In my school, the principal makes sure that significant events in the lives of the teachers in my school are acknowledged. | 1 | 2 | 3 | 4 |
| 38. In my school, the principal has explicitly communicated strong beliefs and ideals to teachers. | 1 | 2 | 3 | 4 |
| 39. In my school, the principal is aware of what is running smoothly and what is not running smoothly. | 1 | 2 | 3 | 4 |
| 40. My principal’s behavior is consistent with his or her ideals and beliefs regarding schools, teachers, and learning. | 1 | 2 | 3 | 4 |
| 41. In my school, the materials and resources teachers request are procured and delivered in a timely fashion. | 1 | 2 | 3 | 4 |
| 42. In my school, we share a vision of what we could be like. | 1 | 2 | 3 | 4 |

## III. Original Professional Learning Community Assessment-Revised

This questionnaire assesses your perceptions about your principal, staff, and stakeholders based on the five dimensions of a professional learning community (PLC) and related attributes. There are no right or wrong responses. This questionnaire contains a number of statements about practices, which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement. Shade the appropriate oval provided to the right of each statement. Be certain to select only one response for each statement.

Key Terms:

- Principal = Principal, not Associate or Assistant Principal
- Staff = All adult staff directly associated with curriculum, instruction, and assessment of students
- Stakeholders = Parents and community members

Scale: 1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

Please represent your personal degree of agreement with each of the following statements.
The options are: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree.

| Shared and Supportive Leadership | SD | D | A | SA |
|---|---|---|---|---|
| 1. Staff members are consistently involved in discussing and making decisions about most school issues. | 1 | 2 | 3 | 4 |
| 2. The principal incorporates advice from staff members to make decisions. | 1 | 2 | 3 | 4 |
| 3. Staff members have accessibility to key information. | 1 | 2 | 3 | 4 |
| 4. The principal is proactive and addresses areas where support is needed. | 1 | 2 | 3 | 4 |
| 5. Opportunities are provided for staff members to initiate change. | 1 | 2 | 3 | 4 |
| 6. The principal shares responsibility and rewards for innovative actions. | 1 | 2 | 3 | 4 |
| 7. The principal participates democratically with staff sharing power and authority. | 1 | 2 | 3 | 4 |
| 8. Leadership is promoted and nurtured among staff members. | 1 | 2 | 3 | 4 |
| 9. Decision-making takes place through committees and communication across grade and subject areas. | 1 | 2 | 3 | 4 |
| 10. Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority. | 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
| 11. Staff members use multiple sources of data to make decisions about teaching and learning. | 1 | 2 | 3 | 4 |
| | | | | |
| Shared Values and Vision | SD | D | A | SA |
| 12. A collaborative process exists for developing a shared sense of values among staff. | 1 | 2 | 3 | 4 |
| 13. Shared values support norms of behavior that guide decisions about teaching and learning. | 1 | 2 | 3 | 4 |
| 14. Staff members share visions for school improvement that have undeviating focus on student learning. | 1 | 2 | 3 | 4 |
| 15. Decisions are made in alignment with the school=s values and vision. | 1 | 2 | 3 | 4 |
| 16. A collaborative process exists for developing a shared vision among staff. | 1 | 2 | 3 | 4 |
| 17. School goals focus on student learning beyond test scores and grades. | 1 | 2 | 3 | 4 |
| 18. Policies and programs are aligned to the school=s vision. | 1 | 2 | 3 | 4 |
| 19. Stakeholders are actively involved in creating high expectations that serve to increase student achievement. | 1 | 2 | 3 | 4 |
| 20. Data are used to prioritize actions to reach a shared vision. | 1 | 2 | 3 | 4 |
| | | | | |
| Collective Learning and Application | SD | D | A | SA |
| 21. Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work. | 1 | 2 | 3 | 4 |
| 22. Collegial relationships exist among staff members that reflect commitment to school improvement efforts. | 1 | 2 | 3 | 4 |
| 23. Staff members plan and work together to search for solutions to address diverse student needs. | 1 | 2 | 3 | 4 |
| 24. A variety of opportunities and structures exist for collective learning through open dialogue. | 1 | 2 | 3 | 4 |
| 25. Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry. | 1 | 2 | 3 | 4 |
| 26. Professional development focuses on teaching and learning. | 1 | 2 | 3 | 4 |
| 27. School staff members and stakeholders learn together and apply new knowledge to solve problems. | 1 | 2 | 3 | 4 |
| 28. School staff members are committed to programs that enhance learning. | 1 | 2 | 3 | 4 |
| 29. Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices. | 1 | 2 | 3 | 4 |
| 30. Staff members collaboratively analyze student work to improve teaching and learning. | 1 | 2 | 3 | 4 |
| | | | | |
| Shared Personal Practice | SD | D | A | SA |
| 31. Opportunities exist for staff members to observe peers and offer encouragement. | 1 | 2 | 3 | 4 |
| 32. Staff members provide feedback to peers related to | 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
| instructional practices. | | | | |
| 33. Staff members informally share ideas and suggestions for improving student learning. | 1 | 2 | 3 | 4 |
| 34. Staff members collaboratively review student work to share and improve instructional practices. | 1 | 2 | 3 | 4 |
| 35. Opportunities exist for coaching and mentoring. | 1 | 2 | 3 | 4 |
| 36. Individuals and teams have the opportunity to apply learning and share the results of their practices. | 1 | 2 | 3 | 4 |
| 37. Staff members regularly share student work to guide overall school improvement. | 1 | 2 | 3 | 4 |
| | | | | |
| Supportive Conditions - Relationships | SD | D | A | SA |
| 38. Caring relationships exist among staff and students that are built on trust and respect. | 1 | 2 | 3 | 4 |
| 39. A culture of trust and respect exists for taking risks. | 1 | 2 | 3 | 4 |
| 40. Outstanding achievement is recognized and celebrated regularly in our school. | 1 | 2 | 3 | 4 |
| 41. School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school. | 1 | 2 | 3 | 4 |
| 42. Relationships among staff members support honest and respectful examination of data to enhance teaching and learning. | 1 | 2 | 3 | 4 |
| | | | | |
| Supportive Conditions - Structures | SD | D | A | SA |
| 43. Time is provided to facilitate collaborative work. | 1 | 2 | 3 | 4 |
| 44. The school schedule promotes collective learning and shared practice. | 1 | 2 | 3 | 4 |
| 45. Fiscal resources are available for professional development. | 1 | 2 | 3 | 4 |
| 46. Appropriate technology and instructional materials are available to staff. | 1 | 2 | 3 | 4 |
| 47. Resource people provide expertise and support for continuous learning. | 1 | 2 | 3 | 4 |
| 48. The school facility is clean, attractive and inviting. | 1 | 2 | 3 | 4 |
| 49. The proximity of grade level and department personnel allows for ease in collaborating with colleagues. | 1 | 2 | 3 | 4 |
| 50. Communication systems promote a flow of information among staff members. | 1 | 2 | 3 | 4 |
| 51. Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members. | 1 | 2 | 3 | 4 |
| 52. Data are organized and made available to provide easy access to staff members. | 1 | 2 | 3 | 4 |

## IV. Original McREL Questionnaire

Please indicate the extent to which each of the following behaviors characterizes your principal or your school.
The options are:
(1) This does not characterize me or my school
(2)
(3)
(4) This characterizes me or my school to a great extent

| | | | | | |
|---|---|---|---|---|---|
| 1. | The changes I am trying to make in my school will represent a significant challenge to the status quo when they are implemented. | 1 | 2 | 3 | 4 |
| 2. | Teachers in my school regularly share ideas. | 1 | 2 | 3 | 4 |
| 3. | In my school, the instructional time of teachers is well protected. | 1 | 2 | 3 | 4 |
| 4. | There are well-established procedures in my school regarding how to bring up problems and concerns. | 1 | 2 | 3 | 4 |
| 5. | I have been successful in protecting teachers from undue distractions and interruptions to their teaching. | 1 | 2 | 3 | 4 |
| 6. | In my school, I have been successful at ensuring that teachers have the necessary resources and professional opportunities to maintain a high standard of teaching. | 1 | 2 | 3 | 4 |
| 7. | I am directly involved in helping teachers design curricular activities for their classes. | 1 | 2 | 3 | 4 |
| 8. | Concrete goals for achievement have been established for each student in my school. | 1 | 2 | 3 | 4 |
| 9. | I am very knowledgeable about effective instructional practices. | 1 | 2 | 3 | 4 |
| 10. | I make systematic and frequent visits to classrooms. | 1 | 2 | 3 | 4 |
| 11. | Individuals who excel in my school are recognized and rewarded. | 1 | 2 | 3 | 4 |
| 12. | Teachers in my school have ready and easy access to me. | 1 | 2 | 3 | 4 |
| 13. | I make sure that my school complies with all district and state mandates. | 1 | 2 | 3 | 4 |
| 14. | In my school, teachers have direct input into all important decisions. | 1 | 2 | 3 | 4 |
| 15. | The accomplishments of individual teachers in my school are recognized and celebrated. | 1 | 2 | 3 | 4 |
| 16. | I am aware of the personal needs of the teachers in my school. | 1 | 2 | 3 | 4 |
| 17. | I consciously try to challenge the status quo to get people thinking. | 1 | 2 | 3 | 4 |
| 18. | I try to inspire my teachers to accomplish things that might seem beyond their grasp. | 1 | 2 | 3 | 4 |
| 19. | The teachers in my school are aware of my beliefs regarding schools, teaching, and learning. | 1 | 2 | 3 | 4 |
| 20. | I continually monitor the effectiveness of our curriculum. | 1 | 2 | 3 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 21. | I am comfortable making major changes in how things are done. | 1 | 2 | 3 | 4 |
| 22. | I am aware of the informal groups and relationships among the teachers in my school. | 1 | 2 | 3 | 4 |
| 23. | I stay informed about the current research and theory regarding effective schooling. | 1 | 2 | 3 | 4 |
| 24. | In my school, we systematically consider new and better ways of doing things. | 1 | 2 | 3 | 4 |
| 25. | I am directly involved in helping teachers address instructional issues in their classrooms. | 1 | 2 | 3 | 4 |
| 26. | I have successfully developed a sense of cooperation in my school. | 1 | 2 | 3 | 4 |
| 27. | I have successfully created a strong sense of order among teachers about the efficient running of the school. | 1 | 2 | 3 | 4 |
| 28. | One of the biggest priorities in my school is to keep the staff 's energy level up and maintain the progress we have already made. | 1 | 2 | 3 | 4 |
| 29. | The changes we are trying to make in our school require the people making the changes to learn new concepts and skills. | 1 | 2 | 3 | 4 |
| 30. | We have made good progress, but we need another “shot in the arm” to keep us moving forward on our improvement efforts. | 1 | 2 | 3 | 4 |
| 31. | In my school, we have designed concrete goals for our curriculum. | 1 | 2 | 3 | 4 |
| 32. | I am very knowledgeable about classroom curricular issues. | 1 | 2 | 3 | 4 |
| 33. | I have frequent contact with the students in my school. | 1 | 2 | 3 | 4 |
| 34. | In my school, seniority is not the primary method of reward and advancement. | 1 | 2 | 3 | 4 |
| 35. | Effective ways for teachers to communicate with one another have been established in my school. | 1 | 2 | 3 | 4 |
| 36. | I am a strong advocate for my school to the community at large. | 1 | 2 | 3 | 4 |
| 37. | Teachers are directly involved in establishing policy in my school. | 1 | 2 | 3 | 4 |
| 38. | The accomplishments of the students and the school in general are recognized and celebrated. | 1 | 2 | 3 | 4 |
| 39. | I have a personal relationship with the teachers in my school. | 1 | 2 | 3 | 4 |
| 40. | I am comfortable initiating change without being sure where it might lead us. | 1 | 2 | 3 | 4 |
| 41. | I always portray a positive attitude about our ability to accomplish substantive things. | 1 | 2 | 3 | 4 |
| 42. | I continually monitor the effectiveness of the instructional practices used in our school. | 1 | 2 | 3 | 4 |
| 43. | I encourage people to express opinions that are contrary | 1 | 2 | 3 | 4 |
| 44. | I am aware of the issues in my school that have not formally come to the surface but might cause discord. | 1 | 2 | 3 | 4 |
| 45. | I continually expose teachers in my school to cutting-edge ideas about how to be effective. | 1 | 2 | 3 | 4 |
| 46. | There are deeply ingrained practices in my school that must be ended or changed if we are to make any significant progress. | 1 | 2 | 3 | 4 |
| 47. | I can be highly directive or nondirective as the situation warrants. | 1 | 2 | 3 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 48. | There is a strong team spirit in my school. | 1 | 2 | 3 | 4 |
| 49. | There are well-established routines regarding the running of the school that staff understand and follow. | 1 | 2 | 3 | 4 |
| 50. | I am directly involved in helping teachers address assessment issues in their classrooms. | 1 | 2 | 3 | 4 |
| 51. | Teachers in my school are regularly involved in professional development activities that directly enhance their teaching. | 1 | 2 | 3 | 4 |
| 52. | The changes I am trying to make in my school will challenge the existing norms. | 1 | 2 | 3 | 4 |
| 53. | We have specific goals for specific instructional practices in my school. | 1 | 2 | 3 | 4 |
| 54. | I am very knowledgeable about effective classroom assessment practices. | 1 | 2 | 3 | 4 |
| 55. | I am highly visible to the teachers and students in my school. | 1 | 2 | 3 | 4 |
| 56. | In my school, we have a common language that is used by administrators and teachers. | 1 | 2 | 3 | 4 |
| 57. | Lines of communication are strong between teachers and myself. | 1 | 2 | 3 | 4 |
| 58. | I am a strong advocate for my school to the parents of our students. | 1 | 2 | 3 | 4 |
| 59. | In my school, decisions are made using a team approach. | 1 | 2 | 3 | 4 |
| 60. | In my school, we systematically acknowledge our failures and celebrate our accomplishments. | 1 | 2 | 3 | 4 |
| 61. | I stay informed about significant personal issues in the lives of the teachers. | 1 | 2 | 3 | 4 |
| 62. | Unless we make significant changes in my school, student achievement is not going to improve much. | 1 | 2 | 3 | 4 |
| 63. | I try to be the driving force behind major initiatives. | 1 | 2 | 3 | 4 |
| 64. | I have well-defined beliefs about schools, teaching, and learning. | 1 | 2 | 3 | 4 |
| 65. | I continually monitor the effectiveness of the assessment practices used in my school. | 1 | 2 | 3 | 4 |
| 66. | I adapt my leadership style to the specific needs of a given situation. | 1 | 2 | 3 | 4 |
| 67. | In my school, we have a shared understanding of our purpose. | 1 | 2 | 3 | 4 |
| 68. | In my school, we systematically have discussions about current research and theory. | 1 | 2 | 3 | 4 |
| 69. | The most important changes we need to make in my school are the ones the staff most strongly resists. | 1 | 2 | 3 | 4 |
| 70. | In my school, teachers are not brought into issues external to the school that would detract from their emphasis on teaching. | 1 | 2 | 3 | 4 |
| 71. | In my school, controversies or disagreements involving only one or a few staff members do not escalate into schoolwide issues. | 1 | 2 | 3 | 4 |
| 72. | We have established specific goals for the assessment practices in my school. | 1 | 2 | 3 | 4 |
| 73. | I provide conceptual guidance for the teachers in my school regarding effective classroom practice. | 1 | 2 | 3 | 4 |
| 74. | In my school, advancement and reward are not automatically | 1 | 2 | 3 | 4 |

given for simply "putting in your time."

| | | | | | |
|---|---|---|---|---|---|
| 75. | I make sure that the central office is aware of the accomplishments of my school. | 1 | 2 | 3 | 4 |
| 76. | I make sure that significant events in the lives of the teachers in my school are acknowledged. | 1 | 2 | 3 | 4 |
| 77. | In my school, we consistently ask ourselves, "Are we operating at the edge versus the center of our competence?" | 1 | 2 | 3 | 4 |
| 78. | I believe that we can accomplish just about anything if we are willing to work hard enough and if we believe in ourselves. | 1 | 2 | 3 | 4 |
| 79. | I have explicitly communicated my strong beliefs and ideals to teachers. | 1 | 2 | 3 | 4 |
| 80. | At any given time, I can accurately determine how effective our school is in terms of enhancing student learning. | 1 | 2 | 3 | 4 |
| 81. | In my school, we are currently experiencing a period during which things are going fairly well. | 1 | 2 | 3 | 4 |
| 82. | I can accurately predict things that may go wrong in my school on a day-to-day basis. | 1 | 2 | 3 | 4 |
| 83. | In my school, we systematically read articles and books about effective practices. | 1 | 2 | 3 | 4 |
| 84. | Our schoolwide goals are understood by all teachers. | 1 | 2 | 3 | 4 |
| 85. | I am aware of what is running smoothly and what is not running smoothly in my school. | 1 | 2 | 3 | 4 |
| 86. | Our schoolwide goals are a prominent part of our day-to-day lives. | 1 | 2 | 3 | 4 |
| 87. | My behavior is consistent with my ideals and beliefs regarding schools, teachers, and learning. | 1 | 2 | 3 | 4 |
| 88. | In my school, it would be useful to have a period of time during which we do not undertake any new, big initiatives. | 1 | 2 | 3 | 4 |
| 89. | In my school, the materials and resources teachers request are procured and delivered in a timely fashion. | 1 | 2 | 3 | 4 |
| 90. | Individuals who work hard and produce results are identified and rewarded in my school. | 1 | 2 | 3 | 4 |
| 91. | I am aware of the details regarding the day-to-day running of the school. | 1 | 2 | 3 | 4 |
| 92. | In my school, we share a vision of what we could be like. | 1 | 2 | 3 | 4 |

## Appendix E

## Leadership Categories and the Items that were Selected and Used for each Category

L1. Affirmation
- L1.1. The accomplishments of individual teachers in my school are recognized and celebrated.
- L1.2. The accomplishments of the students and the school in general are recognized and celebrated.

L2. Change Agent
- L2.1. In my school, the principal consciously tries to challenge the status quo to get people thinking.
- L2.2. In my school, we systematically consider new and better ways of doing things.

L3. Contingent Rewards
- L3.1. Individuals who excel in my school are recognized and rewarded.
- L3.2. In my school, advancement and reward are not automatically given for simply "putting in your time."

L4. Communication
- L4.1. Effective ways for teachers to communicate with one another have been established in my school.
- L4.2. Lines of communication are strong between teachers and the principal.

L5. Culture
- L5.1. Teachers in my school regularly share ideas.
- L5.2. In my school, we share a vision of what we could be like.

L6. Discipline
- L6.1. In my school, the instructional time of teachers is well protected.
- L6.2. In my school, teachers are protected from undue distractions and interruptions to their teaching.

L7. Flexibility
- L7.1. In my school, the principal is comfortable making major changes in how things are done.
- L7.2. In my school, the principal encourages people to express opinions that are contrary.

L8. Focus
- L8.1. In my school, we have designed concrete goals for our curriculum.
- L8.2. We have specific goals for specific instructional practices in my school.

L9. Ideals/Beliefs
- L9.1. In my school, the principal has explicitly communicated strong beliefs and ideals to teachers.
- L9.2. My principal's behavior is consistent with his or her ideals and beliefs regarding schools, teachers, and learning.

L10. Input
- L10.1. In my school, teachers have direct input into all important decisions.
- L10.2. Teachers are directly involved in establishing policy in my school.

L11. Intellectual Stimulation
- L11.1. In my school, the principal is informed about the current research and theory regarding effective schooling.
- L11.2. In my school, we systematically have discussions about current research and theory.

L12. Involvement in Curriculum, Instruction, and Assessment
- L12.1. In my school, the principal is directly involved in helping teachers design curricular activities for their classes.

L12.2. In my school, the principal is directly involved in helping teachers address instructional issues in their classrooms.

L13. Knowledge of Curriculum, Instruction, and Assessment

L13.1. In my school, the principal is very knowledgeable about effective instructional practices.

L13.2. In my school, the principal is very knowledgeable about classroom curricular issues.

L14. Monitoring/Evaluating

L14.1. In my school, the principal continually monitors the effectiveness of our curriculum.

L14.2. Our principal continually monitors the effectiveness of the instructional practices used in our school.

L15. Optimizer

L15.1. In my school, the principal tries to inspire teachers to accomplish things that might seem beyond their grasp.

L15.2. In my school, the principal always portrays a positive attitude about our ability to accomplish substantive things.

L16. Order

L16.1. There are well-established procedures in my school regarding how to bring up problems and concerns.

L16.2. There are well-established routines regarding the running of the school that staff understand and follow.

L17. Outreach

L17.1. Our principal is a strong advocate for my school to the community at large.

L17.2. Our principal is a strong advocate for my school to the parents of our students.

L18. Relationships

L18.1. In my school, the principal is aware of the personal needs of the teachers.

L18.2. In my school, the principal makes sure that significant events in the lives of the teachers in my school are acknowledged.

L19. Resources

L19.1. Teachers in my school are regularly involved in professional development activities that directly enhance their teaching.

L19.2. In my school, the materials and resources teachers request are procured and delivered in a timely fashion.

L20. Situational Awareness

L20.1. Our principal is aware of the issues in my school that have not formally come to the surface but might cause discord.

L20.2. In my school, the principal is aware of what is running smoothly and what is not running smoothly.

L21. Visibility

L21.1. In my school, the principal has frequent contact with the students.

L21.2. In my school, the principal is highly visible to the teachers and students.

## Appendix F

## PLC Categories and the Items that were Selected and Used for each Category

P1. Shared and Supportive Leadership
- P1.1. Staff members are consistently involved in discussing and making decisions about most school issues.
- P1.2. The principal shares responsibility and rewards for innovative actions.
- P1.3. The principal participates democratically with staff sharing power and authority.
- P1.4. Leadership is promoted and nurtured among staff.
- P1.5. Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.

P2. Shared Values and Vision
- P2.1. Shared values support norms of behavior that guide decisions about teaching and learning.
- P2.2. Staff members share visions for school improvement that have an undeviating focus on student learning.
- P2.3. Stakeholders are actively involved in creating high expectations that serve to increase student achievement.

P3. Collective Learning and Application
- P3.1. Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.
- P3.2. Collegial relationships exist among staff that reflect commitment to school improvement efforts.
- P3.3. Staff members plan and work together to search for solutions to address diverse student needs.

P4. Shared Personal Practice
- P4.1. Opportunities exist for staff to observe peers and offer encouragement.
- P4.2. Staff members provide feedback to peers related to instructional practices.
- P4.3. Staff members informally share ideas and suggestions for improving student learning.
- P4.4. Opportunities exist for coaching and mentoring.

P5. Supportive Conditions-Relationships
- P5.1. Caring relationships exist among staff and students that are built on trust and respect.
- P5.2. A culture of trust and respect exists for taking risks.
- P5.3. Outstanding achievement is recognized and celebrated regularly in our school.

P6. Supportive Conditions-Structures
- P6.1. Time is provided to facilitate collaborative work.
- P6.2. Fiscal resources are available for professional development.
- P6.3. Communication systems promote a flow of information among staff.

## Appendix G

## Correlation Between Each of the Individual Survey Items

Table 123

*Correlation Between the Individual Items from the Leadership Category Affirmation (L1) and Each of the Individual PLC Items*

| PLC Item | L1.1 | | L1.2 | |
|---|---|---|---|---|
| | $r_s$ | *P* | $r_s$ | *p* |
| P1.1 | .358 | 0 | .169 | 0 |
| P1.2 | .417 | 0 | .269 | 0 |
| P1.3 | .382 | 0 | .229 | 0 |
| P1.4 | .418 | 0 | .271 | 0 |
| P1.5 | .297 | 0 | .183 | 0 |
| P2.1 | .247 | 0 | .205 | 0 |
| P2.2 | .283 | 0 | .216 | 0 |
| P2.3 | .272 | 0 | .220 | 0 |
| P3.1 | .244 | 0 | .194 | 0 |
| P3.2 | .249 | 0 | .247 | 0 |
| P3.3 | .250 | 0 | .230 | 0 |
| P4.1 | .335 | 0 | .186 | 0 |
| P4.2 | .308 | 0 | .209 | 0 |
| P4.3 | .212 | 0 | .192 | 0 |
| P4.4 | .305 | 0 | .237 | 0 |
| P5.1 | .201 | 0 | .227 | 0 |
| P5.2 | .352 | 0 | .287 | 0 |
| P5.3 | .483 | 0 | .460 | 0 |
| P6.1 | .337 | 0 | .205 | 0 |
| P6.2 | .254 | 0 | .238 | 0 |
| P6.3 | .438 | 0 | .325 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 124

*Correlation Between the Individual Items from the Leadership Category Change Agent (L2) and Each of the Individual PLC Items*

| PLC Item | L2.1 | | L2.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .362 | 0 | .387 | 0 |
| P1.2 | .476 | 0 | .440 | 0 |
| P1.3 | .430 | 0 | .416 | 0 |
| P1.4 | .430 | 0 | .450 | 0 |
| P1.5 | .334 | 0 | .304 | 0 |
| P2.1 | .369 | 0 | .352 | 0 |
| P2.2 | .285 | 0 | .366 | 0 |
| P2.3 | .282 | 0 | .312 | 0 |
| P3.1 | .268 | 0 | .353 | 0 |
| P3.2 | .285 | 0 | .310 | 0 |
| P3.3 | .224 | 0 | .322 | 0 |
| P4.1 | .235 | 0 | .344 | 0 |
| P4.2 | .226 | 0 | .324 | 0 |
| P4.3 | .200 | 0 | .318 | 0 |
| P4.4 | .221 | 0 | .382 | 0 |
| P5.1 | .171 | 0 | .234 | 0 |
| P5.2 | .389 | 0 | .424 | 0 |
| P5.3 | .320 | 0 | .312 | 0 |
| P6.1 | .356 | 0 | .428 | 0 |
| P6.2 | .242 | 0 | .320 | 0 |
| P6.3 | .404 | 0 | .467 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 125

*Correlation Between the Individual Items from the Leadership Category Contingent Rewards (L3) and Each of the Individual PLC Items*

| PLC Item | L3.1 | | L3.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .319 | 0 | .206 | 0 |
| P1.2 | .438 | 0 | .240 | 0 |
| P1.3 | .358 | 0 | .200 | 0 |
| P1.4 | .429 | 0 | .214 | 0 |
| P1.5 | .255 | 0 | .175 | 0 |
| P2.1 | .221 | 0 | .193 | 0 |
| P2.2 | .343 | 0 | .275 | 0 |
| P2.3 | .230 | 0 | .212 | 0 |
| P3.1 | .270 | 0 | .201 | 0 |
| P3.2 | .242 | 0 | .207 | 0 |
| P3.3 | .299 | 0 | .197 | 0 |
| P4.1 | .375 | 0 | .263 | 0 |
| P4.2 | .339 | 0 | .222 | 0 |
| P4.3 | .286 | 0 | .154 | .001 |
| P4.4 | .337 | 0 | .262 | 0 |
| P5.1 | .245 | 0 | .128 | .005 |
| P5.2 | .383 | 0 | .235 | 0 |
| P5.3 | .548 | 0 | .218 | 0 |
| P6.1 | .308 | 0 | .270 | 0 |
| P6.2 | .279 | 0 | .173 | 0 |
| P6.3 | .414 | 0 | .289 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 126

*Correlation Between the Individual Items from the Leadership Category Communication (L4) and Each of the Individual PLC Items*

| PLC Item | L4.1 | | L4.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .295 | 0 | .497 | 0 |
| P1.2 | .358 | 0 | .549 | 0 |
| P1.3 | .337 | 0 | .567 | 0 |
| P1.4 | .374 | 0 | .533 | 0 |
| P1.5 | .307 | 0 | .409 | 0 |
| P2.1 | .404 | 0 | .398 | 0 |
| P2.2 | .341 | 0 | .373 | 0 |
| P2.3 | .320 | 0 | .339 | 0 |
| P3.1 | .318 | 0 | .194 | 0 |
| P3.2 | .360 | 0 | .311 | 0 |
| P3.3 | .385 | 0 | .265 | 0 |
| P4.1 | .309 | 0 | .306 | 0 |
| P4.2 | .278 | 0 | .250 | 0 |
| P4.3 | .317 | 0 | .220 | 0 |
| P4.4 | .344 | 0 | .304 | 0 |
| P5.1 | .294 | 0 | .243 | 0 |
| P5.2 | .364 | 0 | .396 | 0 |
| P5.3 | .286 | 0 | .379 | 0 |
| P6.1 | .379 | 0 | .331 | 0 |
| P6.2 | .229 | 0 | .241 | 0 |
| P6.3 | .495 | 0 | .532 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 127

*Correlation Between the Individual Items from the Leadership Category Culture (L5) and Each of the Individual PLC Items*

| PLC Item | L5.1 | | L5.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .301 | 0 | .403 | 0 |
| P1.2 | .314 | 0 | .429 | 0 |
| P1.3 | .291 | 0 | .474 | 0 |
| P1.4 | .351 | 0 | .460 | 0 |
| P1.5 | .215 | 0 | .364 | 0 |
| P2.1 | .329 | 0 | .453 | 0 |
| P2.2 | .339 | 0 | .486 | 0 |
| P2.3 | .254 | 0 | .380 | 0 |
| P3.1 | .440 | 0 | .367 | 0 |
| P3.2 | .420 | 0 | .400 | 0 |
| P3.3 | .458 | 0 | .436 | 0 |
| P4.1 | .347 | 0 | .328 | 0 |
| P4.2 | .367 | 0 | .303 | 0 |
| P4.3 | .407 | 0 | .297 | 0 |
| P4.4 | .378 | 0 | .401 | 0 |
| P5.1 | .337 | 0 | .335 | 0 |
| P5.2 | .377 | 0 | .483 | 0 |
| P5.3 | .287 | 0 | .397 | 0 |
| P6.1 | .339 | 0 | .354 | 0 |
| P6.2 | .289 | 0 | .248 | 0 |
| P6.3 | .405 | 0 | .389 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 128

*Correlation Between the Individual Items from the Leadership Category Discipline (L6) and Each of the Individual PLC Items*

| PLC Item | L6.1 | | L6.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .307 | 0 | .325 | 0 |
| P1.2 | .381 | 0 | .389 | 0 |
| P1.3 | .360 | 0 | .362 | 0 |
| P1.4 | .359 | 0 | .336 | 0 |
| P1.5 | .265 | 0 | .280 | 0 |
| P2.1 | .243 | 0 | .292 | 0 |
| P2.2 | .244 | 0 | .255 | 0 |
| P2.3 | .212 | 0 | .257 | 0 |
| P3.1 | .195 | 0 | .218 | 0 |
| P3.2 | .102 | .027 | .156 | .001 |
| P3.3 | .177 | 0 | .198 | 0 |
| P4.1 | .231 | 0 | .239 | 0 |
| P4.2 | .212 | 0 | .163 | 0 |
| P4.3 | .189 | 0 | .218 | 0 |
| P4.4 | .226 | 0 | .236 | 0 |
| P5.1 | .107 | .02 | .197 | 0 |
| P5.2 | .366 | 0 | .379 | 0 |
| P5.3 | .251 | 0 | .246 | 0 |
| P6.1 | .278 | 0 | .246 | 0 |
| P6.2 | .185 | 0 | .240 | 0 |
| P6.3 | .357 | 0 | .357 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 129

*Correlation Between the Individual Items from the Leadership Category Flexibility (L7) and Each of the Individual PLC Items*

| PLC Item | L7.1 | | L7.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .209 | 0 | .498 | 0 |
| P1.2 | .357 | 0 | .486 | 0 |
| P1.3 | .184 | 0 | .521 | 0 |
| P1.4 | .240 | 0 | .452 | 0 |
| P1.5 | .224 | 0 | .377 | 0 |
| P2.1 | .243 | 0 | .317 | 0 |
| P2.2 | .201 | 0 | .331 | 0 |
| P2.3 | .175 | 0 | .306 | 0 |
| P3.1 | .159 | .001 | .208 | 0 |
| P3.2 | .187 | 0 | .269 | 0 |
| P3.3 | .129 | .005 | .254 | 0 |
| P4.1 | .092 | .045 | .287 | 0 |
| P4.2 | .130 | .005 | .207 | 0 |
| P4.3 | .163 | 0 | .236 | 0 |
| P4.4 | .162 | 0 | .271 | 0 |
| P5.1 | .193 | 0 | .230 | 0 |
| P5.2 | .299 | 0 | .391 | 0 |
| P5.3 | .230 | 0 | .292 | 0 |
| P6.1 | .245 | 0 | .285 | 0 |
| P6.2 | .193 | 0 | .183 | 0 |
| P6.3 | .335 | 0 | .417 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 130

*Correlation Between the Individual Items from the Leadership Category Focus (L8) and Each of the Individual PLC Items*

| PLC Item | L8.1 | | L8.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .248 | 0 | .265 | 0 |
| P1.2 | .293 | 0 | .310 | 0 |
| P1.3 | .246 | 0 | .299 | 0 |
| P1.4 | .285 | 0 | .304 | 0 |
| P1.5 | .191 | 0 | .237 | 0 |
| P2.1 | .252 | 0 | .248 | 0 |
| P2.2 | .309 | 0 | .344 | 0 |
| P2.3 | .276 | 0 | .270 | 0 |
| P3.1 | .357 | 0 | .346 | 0 |
| P3.2 | .255 | 0 | .277 | 0 |
| P3.3 | .311 | 0 | .310 | 0 |
| P4.1 | .266 | 0 | .295 | 0 |
| P4.2 | .281 | 0 | .292 | 0 |
| P4.3 | .263 | 0 | .282 | 0 |
| P4.4 | .340 | 0 | .347 | 0 |
| P5.1 | .145 | .002 | .139 | .002 |
| P5.2 | .249 | 0 | .238 | 0 |
| P5.3 | .207 | 0 | .246 | 0 |
| P6.1 | .372 | 0 | .315 | 0 |
| P6.2 | .201 | 0 | .254 | 0 |
| P6.3 | .303 | 0 | .366 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 131

*Correlation Between the Individual Items from the Leadership Category Ideals/Beliefs (L9) and Each of the Individual PLC Items*

| PLC Item | L9.1 | | L9.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .269 | 0 | .358 | 0 |
| P1.2 | .380 | 0 | .449 | 0 |
| P1.3 | .324 | 0 | .500 | 0 |
| P1.4 | .326 | 0 | .482 | 0 |
| P1.5 | .237 | 0 | .289 | 0 |
| P2.1 | .243 | 0 | .313 | 0 |
| P2.2 | .267 | 0 | .286 | 0 |
| P2.3 | .206 | 0 | .221 | 0 |
| P3.1 | .149 | .001 | .200 | 0 |
| P3.2 | .185 | 0 | .222 | 0 |
| P3.3 | .124 | .007 | .189 | 0 |
| P4.1 | .154 | .001 | .189 | 0 |
| P4.2 | .146 | .001 | .180 | 0 |
| P4.3 | .203 | 0 | .243 | 0 |
| P4.4 | .207 | 0 | .260 | 0 |
| P5.1 | .194 | 0 | .229 | 0 |
| P5.2 | .305 | 0 | .357 | 0 |
| P5.3 | .267 | 0 | .303 | 0 |
| P6.1 | .187 | 0 | .282 | 0 |
| P6.2 | .164 | 0 | .286 | 0 |
| P6.3 | .358 | 0 | .386 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 132

*Correlation Between the Individual Items from the Leadership Category Input (L10) and Each of the Individual PLC Items*

| PLC Item | L10.1 | | L10.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .534 | 0 | .539 | 0 |
| P1.2 | .445 | 0 | .480 | 0 |
| P1.3 | .521 | 0 | .567 | 0 |
| P1.4 | .485 | 0 | .538 | 0 |
| P1.5 | .350 | 0 | .381 | 0 |
| P2.1 | .301 | 0 | .295 | 0 |
| P2.2 | .339 | 0 | .309 | 0 |
| P2.3 | .303 | 0 | .274 | 0 |
| P3.1 | .233 | 0 | .222 | 0 |
| P3.2 | .245 | 0 | .264 | 0 |
| P3.3 | .232 | 0 | .244 | 0 |
| P4.1 | .336 | 0 | .313 | 0 |
| P4.2 | .237 | 0 | .258 | 0 |
| P4.3 | .222 | 0 | .205 | 0 |
| P4.4 | .247 | 0 | .261 | 0 |
| P5.1 | .158 | .001 | .167 | 0 |
| P5.2 | .322 | 0 | .336 | 0 |
| P5.3 | .276 | 0 | .277 | 0 |
| P6.1 | .321 | 0 | .322 | 0 |
| P6.2 | .215 | 0 | .293 | 0 |
| P6.3 | .402 | 0 | .422 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 133

*Correlation Between the Individual Items from the Leadership Category Intellectual Stimulation (L11) and Each of the Individual PLC Items*

| PLC Item | L11.1 | | L11.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .249 | 0 | .281 | 0 |
| P1.2 | .385 | 0 | .316 | 0 |
| P1.3 | .323 | 0 | .263 | 0 |
| P1.4 | .339 | 0 | .342 | 0 |
| P1.5 | .197 | 0 | .235 | 0 |
| P2.1 | .272 | 0 | .234 | 0 |
| P2.2 | .227 | 0 | .326 | 0 |
| P2.3 | .170 | 0 | .251 | 0 |
| P3.1 | .228 | 0 | .344 | 0 |
| P3.2 | .183 | 0 | .219 | 0 |
| P3.3 | .227 | 0 | .298 | 0 |
| P4.1 | .171 | 0 | .276 | 0 |
| P4.2 | .191 | 0 | .250 | 0 |
| P4.3 | .195 | 0 | .252 | 0 |
| P4.4 | .212 | 0 | .232 | 0 |
| P5.1 | .156 | .001 | .148 | .001 |
| P5.2 | .295 | 0 | .285 | 0 |
| P5.3 | .237 | 0 | .259 | 0 |
| P6.1 | .380 | 0 | .374 | 0 |
| P6.2 | .179 | 0 | .162 | 0 |
| P6.3 | .337 | 0 | .358 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 134

*Correlation Between the Individual Items from the Leadership Category Involvement in Curriculum, Instruction, and Assessment (L12) and Each of the Individual PLC Items*

| PLC Item | L12.1 | | L12.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .379 | 0 | .404 | 0 |
| P1.2 | .450 | 0 | .490 | 0 |
| P1.3 | .426 | 0 | .416 | 0 |
| P1.4 | .409 | 0 | .424 | 0 |
| P1.5 | .298 | 0 | .305 | 0 |
| P2.1 | .226 | 0 | .275 | 0 |
| P2.2 | .284 | 0 | .309 | 0 |
| P2.3 | .293 | 0 | .304 | 0 |
| P3.1 | .253 | 0 | .270 | 0 |
| P3.2 | .159 | .001 | .187 | 0 |
| P3.3 | .237 | 0 | .259 | 0 |
| P4.1 | .205 | 0 | .253 | 0 |
| P4.2 | .201 | 0 | .242 | 0 |
| P4.3 | .199 | 0 | .221 | 0 |
| P4.4 | .226 | 0 | .219 | 0 |
| P5.1 | .111 | .016 | .129 | .005 |
| P5.2 | .267 | 0 | .307 | 0 |
| P5.3 | .251 | 0 | .302 | 0 |
| P6.1 | .296 | 0 | .339 | 0 |
| P6.2 | .141 | .002 | .172 | 0 |
| P6.3 | .341 | 0 | .399 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 135

*Correlation Between the Individual Items from the Leadership Category Knowledge of Curriculum, Instruction, and Assessment (L13) and Each of the Individual PLC Items*

| PLC Item | L13.1 | | L13.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .426 | 0 | .366 | 0 |
| P1.2 | .493 | 0 | .446 | 0 |
| P1.3 | .481 | 0 | .427 | 0 |
| P1.4 | .502 | 0 | .415 | 0 |
| P1.5 | .312 | 0 | .304 | 0 |
| P2.1 | .354 | 0 | .315 | 0 |
| P2.2 | .334 | 0 | .316 | 0 |
| P2.3 | .282 | 0 | .323 | 0 |
| P3.1 | .312 | 0 | .276 | 0 |
| P3.2 | .275 | 0 | .248 | 0 |
| P3.3 | .287 | 0 | .272 | 0 |
| P4.1 | .302 | 0 | .257 | 0 |
| P4.2 | .294 | 0 | .262 | 0 |
| P4.3 | .235 | 0 | .217 | 0 |
| P4.4 | .251 | 0 | .295 | 0 |
| P5.1 | .150 | .001 | .172 | 0 |
| P5.2 | .330 | 0 | .304 | 0 |
| P5.3 | .317 | 0 | .265 | 0 |
| P6.1 | .393 | 0 | .358 | 0 |
| P6.2 | .252 | 0 | .220 | 0 |
| P6.3 | .459 | 0 | .381 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 136

*Correlation Between the Individual Items from the Leadership Category Monitoring/Evaluating (L14) and Each of the Individual PLC Items*

| PLC Item | L14.1 | | L14.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .368 | 0 | .417 | 0 |
| P1.2 | .426 | 0 | .563 | 0 |
| P1.3 | .377 | 0 | .498 | 0 |
| P1.4 | .394 | 0 | .497 | 0 |
| P1.5 | .305 | 0 | .352 | 0 |
| P2.1 | .344 | 0 | .377 | 0 |
| P2.2 | .302 | 0 | .360 | 0 |
| P2.3 | .277 | 0 | .327 | 0 |
| P3.1 | .285 | 0 | .297 | 0 |
| P3.2 | .223 | 0 | .269 | 0 |
| P3.3 | .239 | 0 | .260 | 0 |
| P4.1 | .215 | 0 | .279 | 0 |
| P4.2 | .223 | 0 | .306 | 0 |
| P4.3 | .204 | 0 | .209 | 0 |
| P4.4 | .268 | 0 | .276 | 0 |
| P5.1 | .176 | 0 | .204 | 0 |
| P5.2 | .327 | 0 | .352 | 0 |
| P5.3 | .317 | 0 | .314 | 0 |
| P6.1 | .387 | 0 | .425 | 0 |
| P6.2 | .238 | 0 | .273 | 0 |
| P6.3 | .383 | 0 | .440 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 137

*Correlation Between the Individual Items from the Leadership Category Optimizer (L15) and Each of the Individual PLC Items*

| PLC Item | L15.1 | | L15.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .390 | 0 | .262 | 0 |
| P1.2 | .566 | 0 | .396 | 0 |
| P1.3 | .508 | 0 | .375 | 0 |
| P1.4 | .518 | 0 | .365 | 0 |
| P1.5 | .381 | 0 | .303 | 0 |
| P2.1 | .307 | 0 | .292 | 0 |
| P2.2 | .329 | 0 | .250 | 0 |
| P2.3 | .337 | 0 | .235 | 0 |
| P3.1 | .269 | 0 | .218 | 0 |
| P3.2 | .218 | 0 | .248 | 0 |
| P3.3 | .265 | 0 | .196 | 0 |
| P4.1 | .293 | 0 | .214 | 0 |
| P4.2 | .282 | 0 | .209 | 0 |
| P4.3 | .267 | 0 | .180 | 0 |
| P4.4 | .279 | 0 | .270 | 0 |
| P5.1 | .224 | 0 | .153 | .001 |
| P5.2 | .423 | 0 | .285 | 0 |
| P5.3 | .373 | 0 | .321 | 0 |
| P6.1 | .396 | 0 | .313 | 0 |
| P6.2 | .232 | 0 | .238 | 0 |
| P6.3 | .430 | 0 | .321 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 138

*Correlation Between the Individual Items from the Leadership Category Order (L16) and Each of the Individual PLC Items*

| PLC Item | L16.1 | | L16.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .399 | 0 | .262 | 0 |
| P1.2 | .447 | 0 | .399 | 0 |
| P1.3 | .447 | 0 | .357 | 0 |
| P1.4 | .447 | 0 | .403 | 0 |
| P1.5 | .346 | 0 | .299 | 0 |
| P2.1 | .321 | 0 | .423 | 0 |
| P2.2 | .341 | 0 | .346 | 0 |
| P2.3 | .315 | 0 | .293 | 0 |
| P3.1 | .292 | 0 | .266 | 0 |
| P3.2 | .237 | 0 | .256 | 0 |
| P3.3 | .266 | 0 | .208 | 0 |
| P4.1 | .314 | 0 | .294 | 0 |
| P4.2 | .261 | 0 | .226 | 0 |
| P4.3 | .253 | 0 | .232 | 0 |
| P4.4 | .372 | 0 | .317 | 0 |
| P5.1 | .206 | 0 | .252 | 0 |
| P5.2 | .350 | 0 | .286 | 0 |
| P5.3 | .354 | 0 | .277 | 0 |
| P6.1 | .342 | 0 | .276 | 0 |
| P6.2 | .323 | 0 | .336 | 0 |
| P6.3 | .451 | 0 | .415 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 139

*Correlation Between the Individual Items from the Leadership Category Outreach (L17) and Each of the Individual PLC Items*

| PLC Item | L17.1 | | L17.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .269 | 0 | .274 | 0 |
| P1.2 | .387 | 0 | .349 | 0 |
| P1.3 | .334 | 0 | .315 | 0 |
| P1.4 | .342 | 0 | .295 | 0 |
| P1.5 | .277 | 0 | .246 | 0 |
| P2.1 | .275 | 0 | .250 | 0 |
| P2.2 | .268 | 0 | .275 | 0 |
| P2.3 | .211 | 0 | .221 | 0 |
| P3.1 | .205 | 0 | .156 | .001 |
| P3.2 | .243 | 0 | .206 | 0 |
| P3.3 | .243 | 0 | .138 | .003 |
| P4.1 | .181 | 0 | .142 | .002 |
| P4.2 | .147 | .001 | .120 | .009 |
| P4.3 | .192 | 0 | .173 | 0 |
| P4.4 | .200 | 0 | .201 | 0 |
| P5.1 | .191 | 0 | .142 | .002 |
| P5.2 | .295 | 0 | .208 | 0 |
| P5.3 | .254 | 0 | .229 | 0 |
| P6.1 | .233 | 0 | .227 | 0 |
| P6.2 | .204 | 0 | .212 | 0 |
| P6.3 | .323 | 0 | .297 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 140

*Correlation Between the Individual Items from the Leadership Category Relationships (L18) and Each of the Individual PLC Items*

| PLC Item | L18.1 | | L18.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .432 | 0 | .314 | 0 |
| P1.2 | .521 | 0 | .383 | 0 |
| P1.3 | .513 | 0 | .364 | 0 |
| P1.4 | .494 | 0 | .407 | 0 |
| P1.5 | .365 | 0 | .291 | 0 |
| P2.1 | .296 | 0 | .241 | 0 |
| P2.2 | .321 | 0 | .281 | 0 |
| P2.3 | .278 | 0 | .179 | 0 |
| P3.1 | .242 | 0 | .225 | 0 |
| P3.2 | .237 | 0 | .242 | 0 |
| P3.3 | .242 | 0 | .206 | 0 |
| P4.1 | .260 | 0 | .255 | 0 |
| P4.2 | .229 | 0 | .268 | 0 |
| P4.3 | .210 | 0 | .257 | 0 |
| P4.4 | .213 | 0 | .283 | 0 |
| P5.1 | .195 | 0 | .183 | 0 |
| P5.2 | .367 | 0 | .280 | 0 |
| P5.3 | .330 | 0 | .351 | 0 |
| P6.1 | .315 | 0 | .248 | 0 |
| P6.2 | .249 | 0 | .239 | 0 |
| P6.3 | .404 | 0 | .413 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 141

*Correlation Between the Individual Items from the Leadership Category Resources (L19) and Each of the Individual PLC Items*

| PLC Item | L19.1 | | L19.2 | |
|---|---|---|---|---|
| | $r_s$ | $p$ | $r_s$ | $p$ |
| P1.1 | .233 | 0 | .220 | 0 |
| P1.2 | .241 | 0 | .319 | 0 |
| P1.3 | .234 | 0 | .255 | 0 |
| P1.4 | .317 | 0 | .313 | 0 |
| P1.5 | .180 | 0 | .224 | 0 |
| P2.1 | .333 | 0 | .199 | 0 |
| P2.2 | .315 | 0 | .145 | .002 |
| P2.3 | .281 | 0 | .224 | 0 |
| P3.1 | .376 | 0 | .168 | 0 |
| P3.2 | .285 | 0 | .191 | 0 |
| P3.3 | .265 | 0 | .173 | 0 |
| P4.1 | .338 | 0 | .213 | 0 |
| P4.2 | .305 | 0 | .148 | .001 |
| P4.3 | .294 | 0 | .179 | 0 |
| P4.4 | .358 | 0 | .208 | 0 |
| P5.1 | .280 | 0 | .160 | 0 |
| P5.2 | .280 | 0 | .266 | 0 |
| P5.3 | .273 | 0 | .217 | 0 |
| P6.1 | .350 | 0 | .286 | 0 |
| P6.2 | .474 | 0 | .327 | 0 |
| P6.3 | .362 | 0 | .308 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. $p$ = probability value

Table 142

*Correlation Between the Individual Items from the Leadership Category Situational Awareness (L20) and Each of the Individual PLC Items*

| PLC Item | L20.1 | | L20.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .410 | 0 | .438 | 0 |
| P1.2 | .513 | 0 | .561 | 0 |
| P1.3 | .453 | 0 | .500 | 0 |
| P1.4 | .438 | 0 | .498 | 0 |
| P1.5 | .346 | 0 | .350 | 0 |
| P2.1 | .325 | 0 | .387 | 0 |
| P2.2 | .285 | 0 | .307 | 0 |
| P2.3 | .298 | 0 | .273 | 0 |
| P3.1 | .237 | 0 | .249 | 0 |
| P3.2 | .225 | 0 | .246 | 0 |
| P3.3 | .230 | 0 | .219 | 0 |
| P4.1 | .308 | 0 | .323 | 0 |
| P4.2 | .196 | 0 | .275 | 0 |
| P4.3 | .236 | 0 | .291 | 0 |
| P4.4 | .274 | 0 | .328 | 0 |
| P5.1 | .193 | 0 | .226 | 0 |
| P5.2 | .341 | 0 | .350 | 0 |
| P5.3 | .273 | 0 | .283 | 0 |
| P6.1 | .276 | 0 | .339 | 0 |
| P6.2 | .241 | 0 | .327 | 0 |
| P6.3 | .432 | 0 | .434 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value

Table 143

*Correlation Between the Individual Items from the Leadership Category Visibility (L21) and Each of the Individual PLC Items*

| PLC Item | L21.1 | | L21.2 | |
|---|---|---|---|---|
| | $r_s$ | *p* | $r_s$ | *p* |
| P1.1 | .336 | 0 | .348 | 0 |
| P1.2 | .421 | 0 | .438 | 0 |
| P1.3 | .363 | 0 | .408 | 0 |
| P1.4 | .339 | 0 | .378 | 0 |
| P1.5 | .209 | 0 | .253 | 0 |
| P2.1 | .233 | 0 | .259 | 0 |
| P2.2 | .221 | 0 | .249 | 0 |
| P2.3 | .228 | 0 | .209 | 0 |
| P3.1 | .123 | .007 | .221 | 0 |
| P3.2 | .168 | 0 | .234 | 0 |
| P3.3 | .174 | 0 | .197 | 0 |
| P4.1 | .168 | 0 | .249 | 0 |
| P4.2 | .113 | .014 | .186 | 0 |
| P4.3 | .173 | 0 | .238 | 0 |
| P4.4 | .150 | .001 | .202 | 0 |
| P5.1 | .161 | 0 | .184 | 0 |
| P5.2 | .266 | 0 | .277 | 0 |
| P5.3 | .220 | 0 | .222 | 0 |
| P6.1 | .229 | 0 | .305 | 0 |
| P6.2 | .150 | .001 | .222 | 0 |
| P6.3 | .273 | 0 | .341 | 0 |

*Note.* $r_s$ = Spearman's rho correlation coefficient. *p* = probability value