A MODEL OF SCHOOL SUCCESS:
INSTRUCTIONAL LEADERSHIP, ACADEMIC PRESS,
AND STUDENT ACHIEVEMENT

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in the Graduate
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* * * * *

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ABSTRACT

The accountability and standards movements in education have intensified pressure on school administrators to raise the achievement levels of their students. The purpose of this inquiry was to develop a path model to explain the connections among key organizational variables and student achievement. One of the difficulties in predicting student achievement is that the socioeconomic status generally overwhelms all other organizational variables in explaining the variance. Thus, it is important to find school properties that can explain student achievement controlling for socioeconomic status. Two characteristics of elementary schools were proposed as key candidates—the instructional leadership of the principal and academic press of the school defined in terms to the extent to which school climate emphasizes high student expectations and intellectual accomplishments.

After reviewing and synthesizing the literature on instructional leadership, a framework and measure of instructional leadership was developed and tested. Three aspects of principal behavior—promoting school-wide professional development, monitoring and providing feedback on the teaching and learning process, and developing and communicating shared goals—defined a general measure of instructional leadership. Then a theoretical path mode to explain achievement was developed with instructional leadership, academic press, and socioeconomic status as the key variables. Using
structural equation modeling the hypothesized relationships were tested with data collected from 146 elementary schools in Ohio, as well as student achievement and socioeconomic data obtained from the Ohio Department of Education.

The findings provided substantial support for the model. Although the instructional leadership of the principal was not directly related to student achievement, it did have an indirect positive effect on achievement through the academic press of the school, which had a direct effect on student achievement in both mathematics and reading, controlling for socioeconomic status. Socioeconomic status had both a direct effect and indirect effect, through academic press, on student achievement.

In sum, this study adds to the understanding of the social dynamics within the school that influence student achievement. Principals can affect the student achievement of their students indirectly using their leadership to develop an organizational climate in which academic and intellectual pursuits are central to the school.
Dedicated to my loving husband, David, and our supportive family
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CHAPTER 1

INTRODUCTION

Today’s educational administrators must lead their schools to high achievement for all students. The reauthorization of the Elementary and Secondary Educational Act in January, 2002 puts profound emphasis on student achievement and provides for ramifications, such as school choice for students, for schools that do not obtain high success for all students (ESEA, 2002). We look to our educational leaders to build the school’s capacity for changes and improvements. Administrators will need to work collaboratively with all facets of the community (students, teachers, parents, policymakers) to create structures, policies and procedures that will facilitate schools to be places where all individuals learn and reach their full potential (Purpel, 1989). Leaders can set the foundation to foster growth in our schools by practicing strong instructional leadership.

Coleman’s research (1966) and Jencks’s (1972) follow-up study posed that socioeconomic factors and family background were central in determining a student’s success in school, and that the school’s characteristics had little to no effect on student achievement. This research spawned others to determine what factors, under the school’s control, would contribute to high student achievement. Weber (1971) studied four instructionally effective inner-city schools to identify determinants of student achievement. He concluded that all four effective schools had strong leadership that
focused decisions around instruction, set high expectations for all students, had a safe, orderly atmosphere, emphasized strong acquisition of reading skills, had additional reading personnel, used phonics in reading programs, individualized instruction, and monitored student progress frequently.

Other researchers broadened the school effectiveness research with similar results. Edmonds (1979a, 1979b, 1982) identified five attributes of effective schools:

“Strong administrative leadership, without which the disparate elements of good schooling can be neither brought together nor kept together, … a climate of expectation in which no children are permitted to fall below minimum but efficacious levels of achievement, … the school’s atmosphere is orderly without being rigid, quiet without being oppressive, and generally conducive to the instructional business at hand,… make it clear that pupil acquisition of basic school skills takes precedence over all other school activities, [and]… there must be some means by which pupil progress can be frequently monitored” (1979b p.32).

Purkey & Smith’s (1983) extensive review of more than 100 studies and research into effective schools strengthens these findings. Their review found nine structure variables that are encompassed in an effective school organization: instructional leadership, school-site management, staff stability, curriculum articulation and organization, school-wide staff development, parental involvement and support, school-wide recognition of academic success, maximized learning time, and district support. They also clearly articulated that these nine variables must be enveloped in a school culture and climate that foster collegial relationships, provides for a sense of community, has clear goals and
commonly shared high expectations, and is orderly and disciplined. The effective school research provides schools with clear goals that should lead improvement efforts.

**Instructional Leadership and Teaching & Learning**

One consistent factor in most of the effective schools research is an emphasis on strong, instructional leadership (Edmonds, 1979ab, 1982; Purkey & Smith, 1983; Weber, 1971; Brookover & Lezotte, 1979). Leadership theories, such as trait, behavior, contingency, and charismatic, provide a theoretical framework for viewing the historic evolution of instructional leadership. Instructional leadership has many different definitions and models that conceptualize it starting from the early 1900’s. The current study synthesizes the many definitions and models of instructional leadership using theoretical and empirical considerations. The instructional leadership construct is defined in terms of principal behaviors that lead a school to educate all students to high student achievement. In the current research, instructional leadership incorporates behaviors which define and communicate shared goals, monitor and provide feedback on the teaching and learning process, and promote school-wide professional development.

Defining and communicating shared goals encompass activities that focus attention to the technical core of schools. These goals increase the effort exerted by school members, increase persistence, and increase the development of strategies (Locke and Latham, 1990). Instructional leaders consistently make decisions with these goals in mind. The shared goals of a school foster group unity and help provide for a climate characterized by academic press, trust and commitment.
Monitoring and providing feedback on the teaching and learning process encompass behaviors that evolve around the academic curriculum. Principal activities may include being visible throughout the school, providing praise and feedback to teachers about classroom and professional growth activities, providing praise and feedback to students about classroom performance or behaviors, and ensuring uninterrupted instructional time. Instructional leaders that monitor the teaching and learning process do so for the purpose of professional growth for the teacher and administrator, not evaluation (Glickman, Gordon, & Ross-Gordon, 2001). Instructional leaders focus on ways of improvement to obtain the shared goals of the school.

Promoting school-wide professional development embraces activities that encourage life-long learning. The educational field consistently evolves and changes as research on learning and child development emerges. It is paramount that educators continue to learn and keep abreast of advances and issues in education. Instructional leaders play an essential role, as they can either stifle or enhance professional development of staff members. Leaders enhance professional growth of staff members by building a culture and climate of collaboration and learning, promoting attendance at workshops or conferences, and providing resources and in-services that cultivate teacher innovation. Providing praise and feedback to staff members about professional development goals and efforts enhances the likelihood that life-long learning will continue.

Instructional leadership behaviors have significant impact on the technical core of schools. Research shows that principals who demonstrate instructional behaviors extract
more commitment and satisfaction from teachers, as well as establish a climate that encourages trust, risk, and collaboration (Larson-Knight, 2000; Blasé & Blasé, 1999a, 1999b, 1998; Sheppard, 1996; and Chrispeels, 1992). These influences culminate into a classroom where students experience lessons designed around learning theory and diverse learning strategies.

Defining and communicating shared goals, monitoring and providing feedback on the teaching learning process and promoting school-wide professional development are inextricably interwoven. Effective instructional leaders demonstrate the behaviors described above from each of these dimensions. Instructional leadership offers schools a process to become more effective at the teaching and learning process. The current research study both synthesizes the predominant models of instructional leadership (Weber, 1996; Murphy, 1990; Hallinger & Murphy, 1985; Hallinger & Heck, 1996) of the last ten years, and encompasses current research to propose a model of instructional leadership that meets the needs, expectations and government mandates for the next generation.

**Climate, Academic Press and Teaching and Learning**

Organizational climate describes the personality of an organization (Halpin & Croft, 1962). Climate is the feel or enduring quality of an environment that affects the behavior of the members and is based on their collective perceptions of behaviors.
Poole (1985) summarizes the basic characteristics of organizational climates:

- deals with the whole or entire organization;
- describes the organization’s values, norms, and beliefs;
- grows from daily routine and practices of the members; and
- influences behaviors and attitudes of the members.

Factors extracted from the school effectiveness research, such as high expectations, emphasis on academics, an orderly and safe environment, and clearly articulate goals, form the conceptualization for this study’s variable of academic press (Edmonds, 1979ab, 1982; Purkey & Smith, 1983; Weber, 1971; Brookover & Lezotte, 1979, Halpin & Croft, 1962; Tagiuri & Litwin, 1968; Hoy, Tarter, & Kottkamp, 1991). Academic press describes a climate characteristic of a school organization. It is measured at the school level and depicts the school’s emphasis on goals and mission, high expectations for all students, academics, and an orderly and safe environment (Hoy, Tarter, & Kottkamp, 199; Hoy & Hannum, 1997).

School climates associated with high levels of academic press benefit the teaching and learning process. Teachers that work in high academic press schools are more likely to use a variety of instructional strategies, collaborate with colleagues, attend to their own professional learning, and provide frequent monitoring of student academic progress (Goddard, Sweetland & Hoy, 2000; Blasé & Blasé, 1998; McEwan, 1998; Chrispeels, 1992). As a result, students that attend schools with an emphasis on academic press are more likely to achieve at higher levels.
The current study will begin with a review of the research about instructional leadership and academic press. A theoretical model of instructional leadership based both on conceptual and empirical considerations will be developed and tested in the form of a theoretical path model describing the relationship among instructional leadership, academic press, socioeconomic status, and student achievement.

**Problem Statement**

A review of the empirical research of the past twenty years indicates that principal leadership can make a difference in student learning (Hallinger & Heck, 1996). A research question that guides this study is whether instructional leadership behaviors are directly or indirectly related to student achievement. Principals, however, do not normally work directly with students; hence the question: how does the instructional leadership of the principal affect student achievement. Researchers have identified climate factors that influence student achievement at the middle and high school levels and the academic press of a building is one key factor (Hoy & Tarter, 1997; Hoy & Sabo, 1998). Thus, the question arises; does the academic press of an elementary school affect student achievement? The relationship between instructional leadership behaviors and academic press of an elementary school also will be examined. Do both instructional leadership and academic press have direct, independent relationships with student achievement, or does instructional leadership work through academic press? These are the two major questions that will be guiding the empirical phase of this study.
Research Hypotheses

The current research will investigate whether instructional leadership has a significant effect on student achievement in elementary schools, albeit directly or indirectly. It will also examine whether academic press has a significant effect on student achievement at the elementary level. The guiding hypotheses for the research are as follows:

1. Instructional leadership behaviors have a positive, direct effect on student achievement, specifically reading and mathematics.
2. All dimensions of instructional leadership (defines and communicates shared goals, monitors and provides feedback on the teaching and learning process, and promotes school-wide professional development) are positively related to academic press of a school.
3. Academic press of a school has a positive effect on student achievement, specifically in reading and mathematics.
4. Instructional leadership behaviors are indirectly related to student achievement, specifically reading and mathematics, through academic press of the school.

These hypotheses will be developed into a theoretical path model in the next chapter.
Definitions of Terms

Terms used throughout the current study are defined below for clarity and understanding.

**Academic Press:** refers to “the extent to which the school is driven by a quest for academic excellence. High but achievable academic goals are set for students, the learning environment is orderly and serious, teachers believe in their students’ ability to achieve, and students work hard and respect those who do well academically” (Hoy & Hannum, 1997, p. 294). Other terms used in literature as synonyms for academic press have been achievement press, environmental press, and academic rigor.

**Instructional Leadership:** represents behaviors of a school leader. In this study, we specifically examine the behaviors of elementary principals. Through synthesis of different instructional leadership models (Weber, 1996; Murphy, 1990; Hallinger & Murphy, 1985; Hallinger & Heck, 1996) and a pilot study of an instructional leadership instrument, the following dimensions of instructional leadership have emerged.

**Defines and Communicates Shared Goals:** means that the leader works collaboratively with staff to define, communicate, and work toward data-driven shared goals of the school. Goals are used in making organizational decisions, aligning instructional practice, purchasing curricular materials, and providing targets for progress. These goals focus the staff around a common mission to achieve.


**Monitors and Provides Feedback on the Teaching and Learning**

**Process:** describes the activities of an instructional leader around the academic curriculum. These activities include being visible throughout the school, talking with students and teachers, providing praise and feedback to teachers, students, and the community regarding academic performances, and ensuring that the instructional time of the school is not interrupted.

**Promotes School-wide Professional Development:** encompasses behaviors of the leader that are consistent with life-long learning. The instructional leader encourages teachers to learn more about student achievement through data analysis, provides professional development opportunities that are aligned to school goals, and provides professional literature and resources to teachers.

**Student Achievement:** is measured by the State of Ohio’s 4th Grade Proficiency Test. This test is used due to its standardized use across all elementary schools. The current research examines fourth grade proficiency data regarding student achievement in the areas of Reading and Mathematics.

**School Climate/Health:** refers to “the set of internal characteristics that distinguishes one school from another and influences the behaviors of its members. In more specific terms, “school climate is the relatively stable property
of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools” (Hoy, Hoffman, Sabo, & Bliss, 1996 p.42).

**Limitations and Assumptions**

The current study is limited to the selection of elementary schools with building configurations of K-4, K-5 or K-6 grades. Participation in the study was voluntary. The principal granted permission for administration of surveys during in-service or regularly scheduled staff meetings. Hence, schools that participate may have principals that have higher levels of instructional leadership behaviors. Particular attention was given to measuring schools of diverse size and socioeconomic status. The sample contains schools from urban, suburban, and rural areas. Although many forms of measuring student achievement exist, this research uses the achievement assessment data given to fourth graders in the state of Ohio. This data is used for consistency of measurement and administration. An assumption that governs the research is that teacher perceptions accurately represent the principal’s actions and school climate.
CHAPTER 2
LITERATURE REVIEW

This chapter focuses on instructional leadership, academic press, and student achievement. The first section will detail the historical and conceptual development of instructional leadership and will propose a model of instructional leadership that will be used in this study. The next section reviews the theoretical underpinnings and conceptualization of academic press. Afterward, the underlying principles and description of the student achievement measure used in this research will be presented. Finally, the chapter closes with a rationale for the research hypotheses, as well as the proposed theoretical model that provides a visual representation of the postulated relationships among instructional leadership, academic press, and student achievement.

**Instructional Leadership**

The definition of leadership in literature has been very diverse. Generally, leadership is defined in terms of traits, behaviors, roles, and processes. According to Yukl (1998), “Researchers usually define leadership according to their individual perspectives and the aspects of the phenomenon of most interest to them” (p.2). Yukl’s syntheses of definitions, “reflect[s] the assumption that [leadership] involves a process whereby intentional influence is exerted by one person over other people to guide, structure and facilitate activities and relationships in a group or organization”(p.3). Said in another way, Hoy & Miskel (2000) assert that “leadership
should be defined broadly as a social process in which a member of a group or organization influences the interpretation of internal and external events, the choice of goals or desired outcomes, organization of work activities, individual motivation and abilities, power relations, and shared orientations” (p.394).

The leadership definition continues to evolve and expand, especially in education. Van de Grift and Houtveen demarcate educational leadership as “the ability of a principal to initiate school improvement, to create a learning oriented educational climate, and to stimulate and supervise teachers in such a way that the latter may exercise their tasks as effectively as possible” (1999, p. 373). Instructional leadership exemplifies this definition in practice. Instructional leadership consists of principal behaviors that set high expectations and clear goals for student and teacher performance, monitor and provide feedback regarding the technical core (teaching and learning) of schools, provide and promote professional growth for all staff members, and help create and maintain a school climate of high academic press (Edmonds, 1979; Bossert, Dwyer, Rowan & Lee, 1982; Hallinger & Murphy, 1985; Murphy, 1990; Weber, 1997; Blasé & Blasé, 1999). Furthermore, Hoy & Hoy (2003) tell us “Above all, the principal must communicate a clear vision on instructional excellence and continuous professional development consistent with the goal of the improvement of teaching and learning” (p. 2).
Leadership Theory

Educational leadership theory has evolved during the last fifty years (Griffiths, 1988 for an extensive review). Several eras of leadership have emerged and are reviewed to provide an historical perspective of instructional leadership.

Trait Theory

The trait approach may be categorized into two phases: early and modern. The early phase of trait theory professed that leadership capacity could be determined by a person’s individual attributes such as personality, physical characteristics, intelligence, motives, temperament, and skills. This early development of the theory focused on comparing leaders to non-leaders. This theory dominated the research until Stogdill’s (1948) review of the leadership research conducted between 1904-1947. Stogdill’s review demonstrated that certain personal traits were associated with leadership. The five general categories include:

- capacity—intelligence, alertness, verbal facility, originality, judgment;
- achievement—scholarship, knowledge, athletic accomplishments;
- responsibility—dependability, initiative, persistence, aggressiveness, self-confidence, desire to excel;
- participation—activity, sociability, cooperation, adaptability, humor; and
- status—socioeconomic position, popularity (Stogdill, 1948 p. 63-64).
However, Stogdill (1948) concluded that although traits could differentiate between leaders and non-leaders, they alone do not produce reliable empirical results. He proposed that situational factors must be considered:

“A person does not become a leader by virtue of the possession of some combination of traits…the pattern of personal characteristics of the leader must bear some relevant relationship to the characteristics, activities, and goals of the followers” (Stogdill, 1948, p. 64).

Stogdill suggested that leadership researchers abandon their research about traits of leaders. However, Yukl (1998) explains that industrial psychologists continued to conduct trait research to improve the managerial selection process. As the research continued, the emphasis of trait theory waned from identifying leaders from non-leaders. The new focus was on managerial effectiveness. This switch in focus distinguishes the two phases of trait theory.

The modern phase of trait theory produced more consistent results about the relationship between traits and leadership effectiveness. Stogdill’s follow-up study (1974) reviewed 163 trait studies conducted between 1949-1970. He determined that many of the leadership traits that distinguished leaders from non-leaders were consistent with leadership effectiveness.

“The leader is characterized by a strong drive for responsibility and task completion, vigor, and persistence in pursuit of goals, venturesomeness and originality in problem solving, drive to exercise initiative in social situations, self-confidence and sense of personal identity, willingness to accept consequences of decision an action, readiness to absorb, interpersonal stress, willingness to tolerate
frustration and delay, ability to influence other persons’ behavior, and capacity to structure social interaction systems to the purpose at hand” (Stogill, 1974, p. 81).

However, these findings are not the sine qua non for leadership effectiveness. Yukl asserts, “Possession of particular traits increases the likelihood that a leader will be effective, but they do not guarantee effectiveness. A leader with certain traits could be effective in one situation but ineffective in a different situation” (1998, p.236).

Trait theory continues to develop trait variables associated with effective leadership. Hoy and Miskel (2000) have categorized these traits into three groups: personality, motivation and skills. Personality traits consist of personal characteristics that are inherent to an individual’s actions and demeanor such as self-confidence, integrity, energy, stress tolerance, and emotional maturity. Motivation traits include a person’s level of expectations, power, drive, and intensity. Skills associated with effective leadership encompass relevant task knowledge and skills needed to accomplish goals and objectives set forth by an organization.

Hoy & Miskel (2000) discuss four distinct categories of skills: technical, interpersonal, conceptual, and administrative. Technical skills are specialized knowledge about methods, processes and procedures for completing tasks efficiently and effectively. Interpersonal skills focus on knowledge about human behavior, group dynamics, communication, and understanding feelings and attitudes of others. Conceptual skills involve cognitive abilities to solve complex problems. It entails good judgment, intuition, creative thinking, and the ability to work through cumbersome and ambiguous situations.
Administrative skills comprise the integration of the technical, interpersonal, and conceptual skills for completion of managerial tasks, such as planning, supervising, facilitating meetings, and mentoring.

Trait theory and research have provided researchers and practitioners with useful information about leadership traits and effectiveness. It is important that when selecting an educational leader for a particular district or building, a balance and fit are made between the person’s personal traits and the environmental situations that are involved. Trait theory in practice should lead to an effective selection and goodness of fit for both organization and leader.

Leadership Behavior Theory

Leadership behavior theory provides the framework for behavioral research of leaders. It hypothesizes that identifiable leadership behaviors exist that distinguishes an effective leader from an ineffective leader. Research during the last fifty years has been comprised of observations, interviews and questionnaires. The conceptualization of leadership behaviors has centered around two main characteristics: interpersonal relations or consideration for others and task-oriented behaviors such as goal attainment, production, and structure (Hoy & Forsyth, 1986, Yukl, 1998; Hoy & Miskel, 2000).

Hemphill and Coons (1950) developed one of the most influential leadership behavior questionnaire instruments at The Ohio State University. This instrument, the Leadership Behavior Description Questionnaire (LBDQ), was developed by researchers compiling a list of descriptors of leadership behaviors. Through refinement and field
tests, 1,800 items were narrowed to 150. Factor analysis of responses pointed toward two broad categories: “initiating structure” and “consideration” (Yukl, 1998).

“Initiating Structure refers to the leader’s behavior in delineating the relationship between himself and members of the work-group, and in endeavoring to establish well-defined patterns of organization, channels of communication and methods of procedure. Consideration refers to behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the leaders and the members of his staff” (Halpin, 1966, p. 39).

In addition to the findings of the two dimensions of effective leadership behavior, the LBDQ studies yielded that effective leaders demonstrate frequent behaviors on both dimensions. When evaluating leadership behaviors, superiors emphasize structure and employees emphasize consideration, and a modest relationship exists between the perception of the leader’s behavior by the subordinates and the leader himself (Halpin, 1966).

The Ohio State leadership questionnaires have been utilized in hundreds of studies. A well-known correlation study by Fleishman and Harris (1962) about the patterns of leadership behaviors, consideration and initiating structure, related to employee grievances and turnover, indicated that supervisors who were very considerate had fewer grievances and turnover in their work units than supervisors who were low on the consideration scale. Supervisors who were high on structure had more turnover and grievances than supervisors who scored low on the structure scale. A statistical analysis confirmed the existence of a significant curvilinear relationship (Fleishman and Harris,
Although other studies have shown mixed results, a consistent finding is a positive relationship between consideration and subordinate satisfaction (Kunz & Hoy, 1976; Hoy & Brown, 1988). Yukl (1998) contends that it is important to conclude that the same styles of leadership behaviors are not optimal in all situations.

Yukl (1998) proposes an integrated framework for classifying behaviors. His taxonomy includes three factors that are closely aligned with “consideration” and “initiating structure”. They include task-oriented behavior, relations-oriented behaviors, and change-oriented behaviors. Yukl (1998) provides a brief description of each factor:

- **Task-oriented behavior**—Doing things that are primarily concerned with accomplishing the task, utilizing personnel and resources efficiently, maintaining stable and reliable operations, and making incremental improvements in quality and productivity. Key component behaviors include clarifying roles, planning and organizing operations, and monitoring operations. This category includes initiating structure but is defined more broadly.

- **Relations-oriented behavior**—Doing things that are primarily concerned with improving relationships and helping people, increasing cooperation and teamwork, increasing subordinate job satisfaction, and building identification with the organization. Key component behaviors include supporting, developing, recognizing, consulting, and managing conflict. This category is similar to consideration, but it is defined more broadly and in a way that seeks to integrate task concerns as well.
• Change-oriented behavior—Doing things that are primarily concerned with improving strategic decisions, adapting to change in the environment, making major changes in objectives, processes, or products/services, and gaining commitment to the changes. Key component behaviors include scanning and interpreting external events, articulating an appealing vision, proposing innovative strategies, making persuasive appeals about the need for change, encouraging and facilitating experimentation, and developing a coalition to support and implement change (p.61).

Leaders need to use all three categories of behaviors depending on their situations and organizational environments. Hoy and Miskel (2000) contend that, “In sum, appropriately applying or balancing different types of behaviors for varying situations is fundamental to enhancing leadership performance” (p.402).

Contingency Theories of Effective Leadership

Contingency theories seek to explain the moderating or intervening variables that distinguish a leader’s behavior across situations. This type of theory embraces leadership traits, characteristics of a situation, and how these factors impact leader effectiveness. Path-Goal Theory is presented as one of the prominent theories of contingency.

Path-Goal Theory

The original path-goal theory postulated that a leader’s behaviors influence the satisfaction, motivation and performance of subordinates (House, 1971). Path-goal theory evolved around a causal relation among the leader’s behavior, situation, and subordinate’s satisfaction, motivation, and performance. Yukl (1998) illustrated the
theory to demonstrate this causal relationship. This visual demonstrates the effect of the leader’s behavior on subordinate effort, and satisfaction depends upon the intervening and situational variables. The causal relationship serves as a roadmap directing the type of leadership behaviors that need to be exhibited depending upon the situation and expectations for a desired outcome.

Figure 2.1 Path-Goal Theory

House (1996) reformulated the path-goal theory in response to empirical research and to keep pace with the changing nature of organizations. The propositions of the theory have been broadened to include the effects of the leader on subordinates’ abilities to perform effectively and the leader’s effect on work-unit performance as well as on dyadic relationships. Leadership behaviors have been increased from four to ten: path-goal clarifying, achievement oriented, work facilitation, supportive, interaction, group oriented decision process, representation, networking, value based, and shared leadership.

Source: Yukl, 1998, p.267
House modernized the conceptions of subordinates’ motivation and abilities and task characteristics as situational variables. The reformulated path-goal theory has yet to be tested empirically. However, House (1996) supported this theory by integrating current leadership theories and empirical generalizations. He recognized the limitation of scope of the theory because it did not address “emergent-informal leadership, leadership as it affects several levels of managers and subordinates in organizations, political behavior of leaders, strategic leadership of organizations, or leadership as it relates to change” (House, 1996, p. 348).

Charismatic Leadership

Early conceptions of charismatic leadership emerged from Max Weber’s (1947) work with charisma. Weber (1947) defined charisma as a leader’s influence based on the follower’s perception that the leader possesses endowed exceptional qualities. According to Weber (1947), charisma appears during a crisis when a leader, who is perceived to have exceptional characteristics, emerges and provides a vision for the future. Followers are drawn to the leader and profound loyalty develops. If taken to extremes, such as with Hitler, charisma may be used to skew followers into negative consequences. Several theories of charismatic leadership exist (Yukl, 1998). We will examine House’s original theory (1977) of charismatic leadership and its revision by Shamir, House, and Arthur (1993).

House’s Charismatic Leadership

House’s charismatic leadership theory addressed the personal traits and conditions under which charismatic leadership is likely to emerge. House (1977) provided a set of
observable, personal characteristics of a leader and descriptions of environmental conditions. According to House (1977), charismatic leaders have a strong need for power, high self-confidence, strong conviction of beliefs and ideas, well-developed communication skills, and the skill to arouse high degrees of motivation in followers.

Charismatic behaviors that build leader influence consist of providing a vision for success, demonstrating personal identification to followers, role modeling behaviors for followers to emulate, setting high expectations about followers’ performance and simultaneously professing confidence in their ability to achieve (House, 1977, Yukl, 1998, Hoy & Miskel, 2000). Conditions that foster charismatic leadership include times of crisis, need for change, work environments that provide for the defining of task roles in ideological terms that appeal to the followers (House, 1977; Yukl, 1998).

Research on House’s theory of charismatic leadership has shown some support for the theory. Studies have shown that behaviors, such as high expectations and professing confidence in followers’ abilities, have been attributed to leadership effectiveness (Yukl, 1998). Overall, more research is needed to draw substantial conclusions.

**Self-Concept Theory of Charismatic Leadership**

Shamir, House and Arthur made extensive revisions to House’s earlier charismatic leadership theory in 1993. The revised theory attempts to explain why charismatic leaders are able to influence followers to rise above their own self-interests for the good of the organization. Shamir et. al. drew on developed theories of motivation to explain the processes and behaviors that influence followers.
The influencing processes and behaviors include personal identification of the leader to the followers, social identification, internalization, and self-efficacy. Personal identification occurs when the leader makes self-sacrifices to demonstrate courage and leadership. Followers perceive the leader as one who wants the best for them and will do anything to achieve it.

Social identification arises as the leader provides a sense of unit for a group. This could be achieved through the use of symbols, rituals, and ceremonies. The leader fosters group unity through the use of shared values, beliefs, and norms among the group. The internalization process develops as followers begin to link their self-concepts to their work. Followers’ values are defined in terms of task objectives. Intrinsic motivation becomes more apparent in effort and completion of tasks. Charismatic leaders raise levels of self and collective efficacy by setting high expectations and espousing high levels of confidence in followers to achieve. Followers believe that they personally, and as a group, can accomplish and obtain goals and objectives set forth.

**Transformational and Transactional Leadership**

Burns (1978) proposed a theory of transformational leadership in his book, *Leadership*. This book is descriptive research on political leaders. Transformational leadership is a process in which “leaders and followers raise one another to higher levels of morality and motivation” (1978, p.20). In comparison, transactional political leaders motivate followers by exchanging services or rewards for certain acts of behavior (Burns, 1978).
Burns posed that transformational leadership and transactional leadership are on a continuum. Bass (1985) expanded on Burn’s theory, however distinctly breaking up the continuum into two types (kinds) of leadership.

A transformational leader is one who motivates the follower to do more than they would ordinarily not do (Bass, 1985). Transformational leadership can be achieved in any one of three interrelated ways (Bass, 1985, p.20):

1. By raising our level of awareness, our level of consciousness about the importance and value of designated outcomes, and ways of reaching them.
2. By getting us to transcend our own self-interest for the sake of the team, organization, or larger polity.
3. By altering our need level of Maslow’s hierarchy or expanding our portfolio of needs and wants.

Transformational leadership goes beyond the basic needs of the organization and its members to foster higher level needs for change and potential. The leader transcends the everyday routine into a shared, long-range vision for the organization. Burns (1978, p.4) contends, “The transforming leader looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower.” The object of transformational leadership is “to turn individuals’ attention toward larger causes, thereby converting self-interest into collective concerns” (Keeley, 1998, p.113). Transformational leadership’s primary characteristic is evidence of a common goal or shared vision. The purpose of leaders and followers “which might have started out as separate but related, as in the case with transactional leadership, become fused” (Burns 1978, p.20).
Transformational leadership includes four dimensions in its definition. They are idealized influence or charisma, inspirational motivation, intellectual stimulation, and individual consideration (the 4 I’s) (Bass and Avolio, 1994). Let’s examine each of these four dimensions.

Bass and Avolio (1994) characterize idealized influence or charisma as the way leaders behave resulting in the leader becoming a role model for the members of the organization. Principals that are leading school reform efforts need to affect every aspect of the school environment. Conger and Kanuago (1988) identify three steps in establishing idealized influence. First, the leader identifies deficiencies in the status quo. Second, he or she formulates and articulates a vision of ideal goals that highlight deficiencies. Finally, the leader devises innovative means of achieving the vision.

In demonstrating inspirational motivation, leaders motivate and inspire those around them by providing meaning and challenge to their followers’ work (Bass & Avolio, 1994). Leaders become the team cheerleaders for team spirit. The leader displays positive praise, enthusiasm, and optimism towards all followers. The leader works collaboratively to establish a long-range shared vision. The leader communicates clear expectations the followers want to meet and also reveals a strong commitment to goals (Bass & Avolio, 1994).

The transformational leader who shows intellectual stimulation encourages the members to think outside of the box without fear of criticism. The leader engages in non-
directive behaviors when dealing with problem solving and decision-making.

“Transformational leaders stimulate their followers’ efforts to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways” (Bass & Avolio, 1994, p3). The transformational leader embraces conflict and uses it as a productive tool for innovative problem solving and decision-making. The leader models this behavior and demonstrates to other members of the organization to use conflict as a tool for broadening possibilities and gaining opportunities for growth. The leader holds members of the organization in high esteem. The leader respects the members’ professionalism and values ideas and opinions that may conflict with hers.

Transformation leaders pay special attention to individualized consideration, as they become mentors and coaches for members of their organization. This dimension of transformational leadership incorporates multiple practices. They include, but are not limited to, the leader: promoting learning opportunities for individual members; recognizing individual differences in terms of needs and desires; individualizing the leader’s behaviors to demonstrate acceptance of individuals; and delegating tasks to develop followers (Bass & Avolio, 1994). Leaders employ these practices as they interact with members of the organization. Examples include giving some members more autonomy, providing others more encouragement and support, and extending firmer standards and structures to those who require such.

In contrast, Bass’s definition of transactional leaders extends the definition to supervisory-subordinate relations in general (1985). Bass’s definition described the relations between leader and follower as (1985, p.11):
1. Recognizes what it is we want to get from our work and tries to see that we get what we want if our performance warrants it.

2. Exchanges rewards and promises of reward for our effort.

3. Is responsive to our immediate self-interests if they can be met by our getting the work done.

Transactional leadership includes four dimensions (Bass, 1996). The dimensions are contingent reward, active management by exception, passive management by exception and laissez-faire leadership. Contingent reward behaviors include the leader specifying what needs to be accomplished for the follower to obtain the reward (Bass, 1996). Active management by exception comprises of close monitoring of followers and correcting action to make certain work is done effectively (Bass, 1996). Passive management by exception encompasses contingent punishment to correct deviations from acceptable performance standards (Bass, 1996). The last dimension, laissez-faire leadership, describes behaviors that show indirect behaviors and passive indifference about followers’ actions or tasks (Bass, 1996).

Transactional leaders do not emphasize change or reform. Leaders that predominantly lead by transactional leadership foster the status quo, instead of striving for a shared long-range vision. Transactional leadership has characterized typical leadership in schools. “The object of such leadership is an agreement on a course of action that satisfies the immediate, separate purposes of both leaders and followers” (Keeley, 1998, p.113).
The above leadership theories provide a framework for the historical evolution of instructional leadership. Leadership in social organizations evolves as the social and political climate influence the organization. Thus, the instructional leadership construct amalgamates trait, behavior, contingency, charismatic and transformational theories. Strong instructional leaders possess specific traits and behaviors, such as charisma, which can be applied in different situations and environments. The premise of instructional leadership is to lead teachers and students to reach their full potentials by creating climates characterized by high academic press, defining and communicating shared goals, monitoring the teaching and learning process, and promoting life-long learning of stakeholders and the organization.

**Instructional Leadership and School Effectiveness**

Considerable evidence exists that a strong instructional leader is a fundamental characteristic of an effective school (Edmonds, 1979; Purkey & Smith, 1983; Hallinger & Heck, 1996). Barth (1990) stipulates, “The principal is the key to a good school. The quality of the educational program depends on the school principal. The principal is the most important reason why teachers grow—or are stifled on the job. The principal is the most potent factor in determining school climate. Show me a good school, and I’ll show you a good principal” (p.64). The school effectiveness research reinforces these statements as substantiated in the review below.

Coleman’s (1966) & Jencks (1972) research on equality of educational opportunity demonstrated that socioeconomic factors and family background were central
in determining a student’s success in school and the school’s characteristics had little to no effect on student achievement. This dismal outlook of education did not explain how some schools in low socioeconomic communities were succeeding at high levels. Educators and other educational researchers believed that the school and characteristics within the school could affect students in reaching high levels of achievement. This hypothesis led to the school effectiveness research which hoped to determine which factors under the school’s control would attribute to high student achievement regardless of socioeconomic conditions and family background.

Weber’s (1971) studies of four effective inner city schools directly opposes Coleman (1966) and Jencks’ (1972) findings. Weber defined an effective school by its ability to educate poor children as well as middle class children. All four of the schools earned scores above the national averages on standardized norm-referenced assessments. His findings delineate seven factors that were crucial to the effectiveness of the schools: strong leadership, where the principal was influential in setting the tone of the school, high expectations for students, an orderly and quiet atmosphere, emphasis on reading skills and phonic awareness, frequent evaluation of skills to guide instruction, additional reading personnel, and individualization of instruction. These findings were duplicated by Brookover and Lezotte (1977).

Brookover and Lezotte’s (1977) study identified eight schools in Michigan to be examined. Six of the schools were deemed to be improving and effective by annual, standardized, criterion-referenced assessments administered by the Michigan Department of Education in the fourth and seventh grades. Two of the schools were deem to be
declining or ineffective by the same pupil performance measure. These schools were then observed and interviewed by trained researchers and the school personnel were asked to complete a questionnaire about the school. The observations, interviews and questionnaires were designed to extract information that would indicate differences between the effective and ineffective schools.

The results of the studied showed that the effective schools:

- emphasized obtaining specified reading and mathematic goals and objectives;
- held the belief that all students could learn regardless of factors outside of the school’s control;
- set high academic expectations for all students;
- had higher levels of efficacy in teaching the basic reading and mathematic skills;
- directed more time to the acquisition of reading and mathematics;
- embraced the school and state accountability assessment programs; and
- had a principal that exhibited behaviors of an instructional leader. He was more assertive, provided an orderly and serious atmosphere, and assessed the school’s progress toward academic goals.

These results showed that there were considerable differences between schools that succeeded, in spite of socioeconomic or family background factors. Edmonds (1979) broadened the school effectiveness research by his work in Detroit, Michigan.
Edmonds (1979) and his colleagues began a search for effective schools educating poor children in Detroit. The search started in September, 1974 with the analysis of the Stanford Achievement Test and the Iowa Test of Basic Skills school data from 20 schools that comprise the Model Cities Neighborhood. To be deemed an effective school, schools earned at or above the city average grade equivalent in mathematics and reading. An ineffective school was defined as below the city average. Of the 20 schools, five schools were identified as effective in teaching both math and reading.

Next, the schools were analyzed for commonalities in family background and socioeconomic status. Two schools were determined to be similar in social factors. One of the schools was four months above the city average in reading and mathematics and the other school was nearly three months below the city’s average in reading and one and half months below the city math average. Hence, Edmonds and his colleagues inferred that “pupil family background neither causes nor precludes elementary school instructional effectiveness” (1979, p.31).

Edmonds widened his study by broadening his sample to include effective schools with different social backgrounds. Fifty-five more schools were identified for analysis. After analysis of the first schools from Detroit’s Model Cities neighborhood and the fifty-five additional schools, the following distinguishable characteristics of effective schools were extracted (Edmonds, 1979).

Schools that were effective created a climate where all children could learn. Teachers were held accountable for all students within their classroom to achieve, without exception. Teachers were not excused from the responsibility of teaching and
students’ learning. Excuses about family background or characteristics did not carry much weight. All teachers were held accountable to teach and all students were held accountable to learn.

Schools that were effective avoided actions and activities that did not work and were committed to implementing teaching strategies that did. Teachers were continuously re-evaluating their teaching pedagogy and changing as students’ needs changed.

Schools that were effective had strong leadership. “One of the most tangible and indispensable characteristics of effective schools is strong administrative leadership, without which the disparate elements of good schooling can be neither brought together nor kept together” (Edmonds, 1979, p. 32).

Schools that were effective had a climate of expectation that all children would succeed to high levels. Teachers provided support and instilled confidence in students’ abilities to achieve academically.

Schools that were effective had atmospheres that were orderly, serious, quiet, and conducive to academic achievement. Building practices were organized around the technical core of teaching and learning. Instructional time took precedence above other school activities. Decision-making by the principal, teachers, and students was made around what was best for student learning.

Finally, effective schools had an evaluation system firmly established where frequent evaluation of student learning was monitored. In turn, this created constant data gathering of student progress and identification of areas for remediation or enrichment.
The data was used to make instructional decisions by building, grade level, classroom, and individual student. Edmond’s research demonstrated that regardless of family background and socioeconomic factors, schools could and should be educating all students to high levels of academic achievement.

Purkey & Smith (1983) conducted an extensive review of more than 100 school effectiveness studies. Their review was limited to studies that determined or examined school-level factors associated with school effectiveness. The review differed from other reviews of the school effectiveness literature in three ways: their orientation was skeptical; evidence gathering was extended to include outlier studies, case studies, surveys, and evaluations as well as studies of program implementation and organizational theories (Purkey & Smith, 1983).

They concluded that an “academically effective school was distinguished by its culture: a structure, process and climate of values and norms that emphasize successful teaching and learning” (p. 442). Purkey & Smith (1983) delineated specific characteristics associated with the structure and process.

The organizational structure variables identified in academically effective schools included instructional leadership, school-site management, staff stability, curriculum articulation and organization, school-wide staff development, parental involvement and support, school-wide recognition of academic success, maximized learning time, and district support (Purkey & Smith, 1983). These organizational factors do not ensure that a school will be an academically effective school; however, if these factors are in place it
is more likely that a school will be more effective in educating all students regardless of family background or socioeconomic status.

The four process variables that defined the school culture and climate include collaborative planning and collegial relationships, a sense of community, clear goals and commonly shared high expectations, and order and discipline (Purkey & Smith, 1983). These factors alone do not ensure a culture and climate that yields a productive school, but, “a school’s culture, or more specifically its climate, seems to be the determining factor in its success or failure as a place of learning” (Purkey & Smith, 1983, p. 444).

Purkey & Smith’s review (1983), as well as the other studies discussed (Weber, 1971; Brookover and Lezotte, 1977; Edmonds, 1979), provide significant evidence that instructional leadership impacts the technical core of schools. The influence that an instructional leader has on the teaching and learning is extensive. Researchers have studied this influence with positive results as described in the next section.

*Instructional Leadership and Teaching & Learning*

In-depth studies of teachers’ perceptions about characteristics of school principals that influence teachers’ classroom instruction have concluded that the behaviors associated with instructional leadership positively influence classroom instruction (Larson-Knight, 2000; Blasé & Blasé, 1999a, 1999b, 1998; Sheppard, 1996; Chrispeels, 1992).

Specifically, Blasé & Blasé’s (1998, 1999a) findings indicate that when instructional leaders monitor and provide feedback on the teaching and learning process, there were increases in teacher reflection and reflectively informed instructional behaviors, a rise in implementation on new ideas, greater variety in teaching strategies, more response to
student diversity, lessons were prepared and planned more carefully, teachers were more likely to take risks and had more focus on the instructional process, and teachers used professional discretion to make changes in classroom practice. Teachers also indicated positive effects on motivation, satisfaction, confidence, and sense of security.

Conversely, principals that did not engage in monitoring and providing feedback of the teaching and learning process had a negative effect on teachers and classroom practice (Blasé & Blasé, 1998). Teachers with non-instructional leaders felt a sense of abandonment, anger, and futility, as well as lower levels of trust and respect for the principal, motivation and self-efficacy.

Instructional leadership behaviors associated with promoting professional growth and staff development yield positive effects for classroom practice (Larson-Knight, 2000; Blasé & Blasé, 1998, 1999a, 1999b; Sheppard, 1996; Chrispeels, 1992). In particular, leaders that engage in behaviors that inform staff about current trends and issues, encourage attendance at workshops, seminars, and conferences, build a culture of collaboration and learning, promote coaching, use inquiry to drive staff development, set professional growth goals with teachers, and provide resources foster teacher innovation in using a variety of methods, materials, instructional strategies, reflective practice, and technology in the classroom. This, in turn, increases the likelihood of increased student achievement (Sheppard, 1996; Blasé & Blasé, 1998).

Locke and Latham (1990) assert that goal setting is an effective way to increase motivation and performance. They postulate that goals increase attention to obtaining of the task, increase the effort expended on goal relevant activities, increase persistence to
achieve, and increase the development of strategies to obtain the goal. This is true even in loosely-coupled organizations, such as public schools. Bookbinder (1992) explains that frequent communication of school goals by instructional leaders promotes accountability, a sense of personal ownership and instructional improvements. Principals that define and communicate shared goals with teachers provide organizational structures that guide the school toward a common focus. This common focus on academic press influences teachers’ behaviors within the classroom, which leads to more effective schools (Bookbinder, 1992; Smith & Piele, 1997; Blasé & Blasé, 1998, 1999a).

Hallinger & Heck’s (1996) extensive review of the empirical research about the principal’s role in school effectiveness reveals that of the 22 original studies testing the direct effects of the principal on student achievement, 6 of them indicate a positive relationship; 7 indicate a mixed effect and 9 demonstrate no direct effect. Their review of 19 studies modeling a mediated variable between the principal and student achievement indicate 15 studies show a positive effect by the principal, 2 demonstrate mixed effect and 2 signify no effect. These findings support the need for a model of instructional leadership that works through a mediating variable, such as academic press, to effect student achievement.

**Instructional Leadership Models**

Researchers define instructional leadership through the traits, behaviors and processes a person needs to lead a school effectively. Thus, a multitude of conceptual models that demonstrate instructional leadership exist. This section will review three
prevailing conceptualizations of instructional leadership and introduce a new parsimonious conceptualization of instructional leadership.

*Hallinger & Murphy’s Model (1985)*

Hallinger and Murphy developed their model of instructional management from examining the instructional leadership behaviors of ten elementary principals in one school district and a review of the school effectiveness literature. They collected information from principals, school staffs and central administration supervisors, via a common questionnaire on instructional leadership behaviors. They supplemented this data with organizational information extracted from school documents, such as observations of the principals during clinical assessments, narratives that describe activities the principal engaged in to support the curriculum and instruction in their schools, and faculty meeting minutes and agendas.

From the synthesis of questionnaire and the organizational information, Hallinger and Murphy (1985) created a framework of instructional management with three dimensions and eleven job descriptors. Hallinger and Murphy (1985) used the eleven job descriptors from the three dimension of instructional management to create an appraisal instrument of principal instructional management behavior, The Principal Instructional Management Rating Scale. Hallinger & Murphy’s (1985) conceptualization of instructional management is illustrated in Table 2.1.
Table 2.1 Framework of Instructional Management (Hallinger & Murphy, 1985)

The dimension of defining the school mission includes the principal job descriptors of framing school goals and communicating school goals. Principals demonstrate framing school goals by working with parents and staff to identify the areas of improvement within the school and developing performance goals to these areas (Hallinger & Murphy, 1985). The function of communicating school goals refers to the ways the principal expresses the importance of the school goals to staff, parents, and students. This can be achieved through the use of formal or informal communication (e.g., handbooks, staff meetings, school assemblies, conversations with staff or students, bulletin boards, and teacher and parent conferences).

Managing the instructional program dimension involves working directly with teachers in areas related to curriculum and instruction (Hallinger & Murphy, 1985). Job functions included in this dimension consist of supervising and evaluating instruction, coordinating the curriculum, and monitoring student progress. Supervising and evaluating
instruction comprises activities that provide instructional support to teachers, monitor classroom instruction through informal classroom visits, and aligning classroom practice with school goals (Hallinger & Murphy, 1985). Coordinating the curriculum refers to principal activities that provide opportunities for staff collaboration on alignment of curriculum to standards and achievement tests. The instructional management job function of monitoring student progress refers to the principal’s use of test results for setting goals, assessing the curriculum, evaluating instruction, and measuring progress toward school goals (Hallinger & Murphy, 1985).

Promoting a positive school learning climate dimension encompasses principal behaviors that protect instructional time, promote professional development, maintain high visibility, provide incentives for teachers, develop and enforce academic standards, and provide incentives for learning (Hallinger & Murphy, 1985). The principal’s job functions consist of mostly indirect activities that help create a positive learning environment. According to Hallinger and Murphy,

“Principals can influence student and teacher attitudes through the creation of a reward structure that reinforces academic achievement and productive effort; through clear, explicit standards embodying what the school expects from students; through the careful use of school time; and through the selection and implementation of high-quality staff development programs” (1985, p.223).

The job descriptors in this dimension embody the activities necessary to influence the promotion of a positive learning climate through indirect activities.

*Murphy’s Model (1990)*
Murphy (1990) provided a systematic and comprehensive review of instructional leadership in his synthesis of research findings from the effective schools, school improvement, staff development and organizational change literature. Using this review, he built an instructional leadership framework which incorporates studies and findings. The framework consists of four dimensions of instructional leadership broken down into sixteen different roles or behaviors. The four dimensions of the instructional leader, developing mission and goals; managing the educational production function; promoting an academic learning climate; and developing a supportive work environment, are describe below and indicate the different instructional leader roles or behaviors that make up that dimension.

Developing a mission and goals is fundamental in creating a sense of shared purpose and linking efforts within the school around a common vision (Murphy, 1990). Murphy broke down this dimension into two major roles or behaviors of the principal: framing school goals and communicating school goals. Framing school goals encompasses setting goals that emphasize student achievement for all students, incorporating data on past and current student performance and including staff responsibilities for achieving the goals. Communicating goals frequently, and formally and informally, to students, parents, and teachers stresses the importance that school goals guide the activities of the school.

Managing the educational production function of the school is the second dimension of Murphy’s (1990) framework. This dimension emphasizes management behaviors of the principal. The instructional leader promotes quality instruction by
conducting teacher conferences and evaluations, visiting classrooms, providing specific suggestions and feedback on the teaching and learning process, and determining teacher assignments in the best interest of student learning (Murphy, 1990; Teddlie & Stringfield, 1985). Additionally, the principal allocates and protects instructional time with school policies and procedures. The principal works with teachers to coordinate the curriculum through aligning school goals and objectives with state standards, assessments and district curriculum. The instructional leader monitors the progress of students frequently. An instructional leader models how to use assessment data to set goals and evaluate instruction (Murphy, 1990).

Promoting an academic learning climate refers to the behaviors of the principal that influences the norms, beliefs, and attitudes of the teachers, students, and parents of a school (Murphy, 1990). “Principals foster the development of a school learning climate conductive to teaching and learning by establishing positive expectations and standards, by maintaining high visibility, providing incentives for teachers and students, and promoting professional development” (p.174). This dimension deals directly with the teaching and learning process in classrooms.

The final dimension of Murphy’s (1990) framework, developing a supportive work environment, denotes how an instructional leader establishes organizational structures and processes that support the teaching and learning process. The principal that exemplifies this dimension creates a safe and orderly learning environment, provides opportunities for meaningful student involvement, develops staff collaboration and
cohesion, secures outside resources in support of school goals, and forges links between the home and school.

Murphy’s instructional leadership comprehensive framework, illustrated in Table 2.2, provides an extensive examination of an instructional leader. However, this framework, developed through a synthesis of the literature, has not been empirically tested. It is not apparent that a leader who exhibits behaviors from all dimensions has an impact on the fundamental goal of schools: high student achievement.

<table>
<thead>
<tr>
<th>Developing Mission and Goals</th>
<th>Managing the Educational Production Function</th>
<th>Promoting an Academic Learning Climate</th>
<th>Developing a Supportive Work Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing school goals</td>
<td>Promoting quality instruction</td>
<td>Establishing positive expectations and standards</td>
<td>Creating a safe and orderly learning environment</td>
</tr>
<tr>
<td>Communicating school goals</td>
<td>Supervising and evaluating instruction</td>
<td>Maintaining high visibility</td>
<td>Providing opportunities for meaningful student involvement</td>
</tr>
<tr>
<td></td>
<td>Allocating and protecting instructional time</td>
<td>Providing incentives for teachers and students</td>
<td>Developing staff collaboration and cohesion</td>
</tr>
<tr>
<td></td>
<td>Coordinating the curriculum</td>
<td>Promoting professional development</td>
<td>Securing outside resources in support of school goals</td>
</tr>
<tr>
<td></td>
<td>Monitoring student progress</td>
<td></td>
<td>Forging links between the home and the school</td>
</tr>
</tbody>
</table>

Table 2.2 Murphy’s Comprehensive Instructional Leadership Framework (1990)
Weber’s Model (1996)
Weber addressed the need for instructional leadership regardless of the school’s organizational structure. Weber concludes, “The research suggests that even if an instructional leader were not packaged as a principal, it would still be necessary to designate such a leader. The leaderless-team approach to a school’s instructional program has powerful appeal, but a large group of professionals still needs a single point of contact and an active advocate for teaching and learning” (1996, p.254). Weber’s point is especially poignant in today’s educational arena of shared leadership and site-based management. Attention to instructional leadership will need to continue regardless of the hierarchical nature of a school organization. Weber (1996) identified five essential domains of instructional leadership: defining the school’s mission, managing curriculum and instruction, promoting a positive learning climate, observing and improving instruction, and assessing the instructional program.

Weber described defining the school’s mission as a dynamic process of cooperation and reflective thinking to create a mission that is clear and honest. The mission of the school should bind the staff, student and parents to a common vision. The instructional leader offers the stakeholders the opportunity to discuss values and expectations for the school. Together they work to create a shared mission for the school.

Managing curriculum and instruction must be consistent with the mission of the school (Weber, 1996). The instructional leader’s repertoire of instructional practices and classroom supervision offers teachers the needed resources to provide students with
opportunities to succeed. The leader helps teachers use current research in best practices and instructional strategies to reach school goals for student performance.

Promoting a positive learning climate comprises the expectations and attitudes of the whole school community. “Indeed, of all the important factors that appear to affect students’ learning, perhaps having the greatest influence is the set of beliefs, values, and attitudes that administration, teachers, and students hold about learning” (Weber, 1996, p.263). Leaders promote a positive learning climate by communicating instructional goals, establishing high expectations for performance, establishing an orderly learning environment with clear discipline expectations, and working to increase teacher commitment to the school (Weber, 1996).

Observing and improving instruction starts with the principal establishing trusting and respectful relationships with the school staff. Weber (1996) proposed that observations are opportunities for professional interactions. These interactions provide professional development opportunities for both the observer and one being observed. In other words, a reciprocal relationship develops where both people involved gain valuable information for professional growth. Principals enhance the experience by emphasizing research as the foundation for initiating teaching strategies, remediation, and differentiation of the lessons.

Weber’s last domain of instructional leadership, assessing the instructional program, is essential for improvement of the instructional program (Weber, 1996). The instructional leader initiates and contributes to the planning, designing, administering, and analysis of assessments that evaluate the effectiveness of the curriculum. This
continuous scrutiny of the instructional program enables teachers to effectively meet students’ needs through constant revision and refinement.

Weber’s model (1996) of instructional leadership incorporates research about shared leadership and empowerment of informal leaders to create a school that underscores the emphasis of academics and student achievement for all students. However, this model, like Murphy’s (1990) model, has not been empirically tested. It is not clear that if a principal demonstrates behaviors from Weber’s model, high levels of student achievement will result. Weber’s model is summarized in Table 2.3.

<table>
<thead>
<tr>
<th>Defining the School’s Mission</th>
<th>Managing Curriculum and Instruction</th>
<th>Promoting a Positive Learning Climate</th>
<th>Observing and Improving Instruction</th>
<th>Assessing the Instructional Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructional leader collaboratively develops a common vision and goals for the school with stakeholders.</td>
<td>The instructional leader monitors classroom practice alignment with the school’s mission, provides resources and support in the use of instructional best practices, and models and provides support in the use of data to drive instruction.</td>
<td>The instructional leader promotes a positive learning climate by communicating goals, establishing expectations, and establishing and orderly learning environment.</td>
<td>The instructional leader observes and improves instruction through the use of classroom observation and professional development opportunities.</td>
<td>The instructional leader contributes to the planning, designing, administering, and analysis of assessments that evaluate the effectiveness of the curriculum.</td>
</tr>
</tbody>
</table>

Table 2.3 Weber’s (1996) Instructional Leadership Framework
Synthesizing the three predominate models (Hallinger & Murphy, 1985; Murphy, 1990; Weber, 1996) of instructional leadership already discussed, three distinct similarities emerged. All three models indicated the importance of instructional leaders defining and communicating goals, monitoring and providing feedback on the teaching and learning process, and promoting and emphasizing the importance of professional development. The three similarities parallel Locke and Latham’s goal setting theory.

Locke and Latham’s goal setting theory (1984, 1990) postulate that setting defined challenging goals help motivate individuals to increase performance toward the goals. Feedback is important to maximize the motivating force of the goals. Additionally, individuals may need resources or professional development opportunities to assist in the development of specific task strategies to accomplish the goals. The three dimensions of instructional leadership demonstrate the goal-setting theory in practice in an educational setting. An instructional leader needs to work collaboratively with staff to define shared goals for the school year. The leader needs to monitor and provide feedback of the teaching and learning process as it relates to the specified, shared goals. Finally, it is the instructional leader’s responsibility to provide resources and professional development opportunities that help the staff reach the goals.

Table 2.4 illustrates the three dimensions of instructional leadership that will be used in this research study.
Instructional Leadership

<table>
<thead>
<tr>
<th>Defines and Communicates Shared Goals</th>
<th>Monitors and Provides Feedback on the Teaching and Learning Process</th>
<th>Promotes School Wide Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>This means that the leader works collaboratively with staff to define, communicate, and use data-driven shared goals of the school. Goals are used in making organizational decisions, aligning instructional practice, purchasing curricular materials, and providing targets for progress. These goals focus the staff around a common mission to achieve.</td>
<td>This dimension describes the activities of an instructional leader around the academic curriculum. These activities include being visible throughout the school, talking with students and teachers, providing praise and feedback to teachers, students, and community on academic performances, and ensuring that the instructional time of the school is not interrupted.</td>
<td>Encompassed in this dimension are behaviors that are consistent with life-long learning. The instructional leader encourages teachers to learn more about student achievement through data analysis, provides professional development opportunities that are aligned to school goals, and provides professional literature and resources to teachers.</td>
</tr>
</tbody>
</table>

Table 2.4 Instructional Leadership Model Created for the Current Study

This hypothesized framework of instructional leadership has been empirically tested in a pilot study of an instructional leadership instrument. The pilot study is described in detailed in the next chapter.
Organizational Climate and Academic Press

Organizational climate originated in the late 1950’s to early 1960’s as social scientists researched variations in work environments. Halpin & Croft described organizational climate “as the organizational ‘personality’ of a school; figuratively, ‘personality’ is to the individual what climate is to the organization” (1962, p. 1). Thus, school climate is “a relatively enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools” (Hoy & Miskel, 2000). While various definitions of climate exist, there is consensus about the basic properties of climate. Poole (1985) encapsulated these basic tenets as follows:

- Organizational climate deals with the whole or entire organization;
- Organizational climate describes the organization’s values, norms, and beliefs;
- Organizational climate grows out of the daily routine and practices of its members; and
- Organizational climate influences behaviors and attitudes of the members.

School effectiveness research denotes that a school climate focused around high expectations, high, achievable standards, and an orderly, serious environment has a positive impact on student learning (Weber, 1971; Brookover & Lezotte, 1977; Edmonds, 1979; Purkey & Smith, 1983).
These characteristics of a school climate juxtapose to become the construct of academic press. Academic press is a way of conceptualizing the academic learning climate of a school that influences administrative, teacher, and student behavior.

Academic press refers to “the extent to which the school is driven by a quest for academic excellence. High but achievable academic goals are set for students, the learning environment is orderly and serious, teachers believe in their students’ abilities to achieve, and students work hard and respect those who do well academically” (Hoy & Hannum, 1997, p. 294). Murphy and colleagues (1982) define academic press in terms of the environmental forces that press for student achievement throughout the school. They affirm that the concept is broader than high expectations for students. Academic press pulls together school forces—school policies, practices, expectations, norms, and rewards—to create an academic environment or press experienced by teachers and students. This specifically presses the participants in the school to strive to do well in school. Other terms in literature synonymous for academic press are achievement press, environmental press, and academic rigor.

Bandura’s (1997) theory on the reciprocal causality involved in social perception suggests that the potential of academic press rejuvenating itself is great when the school experiences performance improvements. Thus, there is a reciprocal relationship between academic press and student achievement. As academic press increases, so will student achievement and vice versa. Hence, instructional leaders that promote academic press will provide a systematic plan for increasing the effectiveness of their buildings.
Academic press has been an overarching characteristic of an effective school throughout the school effectiveness research (Weber, 1971; Brookover & Lezotte, 1977; Edmonds, 1979; Purkey & Smith, 1983). Researchers have shown that schools with high academic press have positive effects on student achievement (Hoy & Sabo, 1998; Hoy, Tarter, & Kottkamp, 1991; Weber, 1971; Brookover & Lezotte, 1977; Edmonds, 1979; Purkey & Smith, 1983). Hence, the emphasis that administrators, teachers and students place on students’ academic success shapes the climate of a school. Hoy and Miskel (2000) contend, “The atmosphere of a school has a major impact on the organizational behavior, and because administrators can have a significant, positive influence of the development of the ‘personality’ of the school, it is important to describe and analyze school climates” (p.190).

Halpin and Croft (1962) developed the well-known Organizational Climate Description Questionnaire (OCDQ) to analyze school climates. This 64 item descriptive questionnaire was created to identify aspects of teacher to teacher and teacher to principal interaction that shaped the school’s climate. Eight subtests were created to describe the characteristics of the group and the behavior of the leader. The characteristics of the group subtest include disengagement, hindrance, esprit, and intimacy. The subtests of the behaviors of the leader include aloofness, production emphasis, thrust, and consideration. Halpin & Croft’s (1962) initial study consisted of mapping climate profiles for each of the 71 elementary schools in the sample. Through this mapping process, they were able to identify six basic school climates that demonstrated a continuum from open to closed climates.
This pioneer work had limitations. The conceptual underpinnings lacked clarity and logic. Halpin and Croft (1962) themselves identified conceptual problems about the adequacy of their subscale of consideration. Hoy and his colleagues addressed these limitations in their revision of the OCDQ. In fact, they created three, simplified versions formulated for the elementary, middle, and secondary levels.

The revised Organizational Climate Descriptive Questionnaire for Elementary schools (OCDQ-E) is a 42 item descriptive questionnaire with six subtests that describe the behaviors of teachers and principals (Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991). The six subtests are divided into two components: teacher behaviors—collegial, intimate, and disengaged—and principal behaviors—supportive, directive, and restrictive. The two components, teacher behaviors and principal behaviors, range on a continuum from closed to open. A factor analysis of the subtests indicated two underlying general factors. The first factor was typified by teacher interactions with low disengagement, high intimacy and high collegial relations. These subtests can be added together to determine openness in faculty relations index score.

The second factor was characterized by high restrictiveness, high directiveness, and low supportive behaviors. These subtests scores can be combined to indicate a degree of openness in principal behaviors. Figure 2.2 below displays the cross between the teacher behaviors and the principal behaviors to chart the climate of the school.
Research findings from the revised OCDQ-E have shown reliable and valid measures of important aspects of school climate (Hoy, Tarter, Kottkamp, 1991). This instrument is useful in providing principals with information about their schools that can help guide change. Hoy and Forsyth (1987) contend principals who develop an open and trusting climate are more likely to show improvement in school effectiveness.

Organizational health provides another conceptual framework for studying the school climate. Organizational health depicts the interpersonal dynamics of students, teachers, and administration in a school (Hoy & Sabo, 1998). Matthew Miles (1969) defines a healthy organization as one that continues to strive, cope and evolve over the long haul. Hence, “A healthy school is one in which the institutional, administrative, and teacher levels are in harmony, and the school is meeting functional needs as it successfully copes with disruptive external forces and directs its energies toward its mission” (Hoy & Tarter, 1997).

Parsons and colleagues asserted that all social systems need to solve problems of adaptation, goal attainment, integration, and latency for the organization to continue to grow and develop (Parsons, Bales, & Shils, 1953). Parsons (1967) proposed that formal
organizations are divided into three distinct levels of responsibility and control over activities to solve their basic problems and meet their needs. These distinct levels are technical, managerial, and institutional.

The technical level concerns the technical core of schools—teaching and learning. It is the teachers’ and principals’ responsibility to solve problems associated with effective teaching and learning. This level includes the dimensions of morale and academic press. Morale refers to the collective sense of the staff around openness, trust, accomplishments, and job satisfaction. Academic press describes the extent to which the school focuses around academic achievement and high expectations.

The managerial level controls the internal efforts of the school. This responsibility falls to the principals and other administrators of the school who create ways to develop teacher trust, loyalty, commitment, and motivation. They also need to allocate and disburse resources to produce an effective technical level. Principal influence, consideration, initiating structure, and resource support define the dimensions within the managerial level. Principal influence explains the principal’s capacity to affect the actions of superiors. Consideration, which encompasses the principal’s concern for the overall welfare of the teachers, depicts the principal’s attitudes and personality such as friendliness, approachability, supportiveness, and collegiality. Initiating structures describes principal behaviors that are task and achievement oriented. Resource support applies to the degree to which a teacher has access to needed classroom supplies and instructional materials.
The third level, institutional level, connects the school with the larger community. Schools need support and backing from the community, free from undue pressures and interference, to serve its function effectively. Institutional integrity characterizes this level. The school’s ability to shield and protect the school programs and teachers from destructive external forces provides the school with institutional integrity.

This Parsonian framework (1967) provides the theoretical underpinnings for defining and measuring school health. Hoy and colleagues, (Hoy & Feldman, 1987; Hoy, Tarter, & Kottkamp, 1991; Hoy & Tarter, 1997; Hoy & Sabo, 1998) using the Parsonian perspective, have developed three instruments to measure organization health, the Organizational Health Inventory for Secondary Schools (OHI-S) ( Hoy & Feldman, 1987; Hoy, Tarter, & Kottkamp, 1991), the Organizational Health for Middle Schools (OHI-M) (Hoy & Sabo, 1998) and the Organizational Health for Elementary Schools (OHI-E) ( Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991).

As the current study concerns the organizational health of elementary schools, the OHI-E is reviewed in detailed. Using the seven dimensions (institutional integrity, principal influence, consideration, initiating structure, resource support, morale, and academic emphasis) from the technical, managerial, and institutional levels, an instrument to measure elementary school health was created. Through factor analysis of pilot studies, a collapse of some dimensions into broader factors occurred. Hoy and colleagues (Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991) interpreted this collapse due to the differences between secondary and elementary schools’ structure,
complexity, and climate. Hence, the OHI-E has five elements of health: institutional integrity, collegial leadership, resource influence, teacher affiliation, and academic press.

Collegial leadership combines the initiating structure and consideration dimensions as well as resource influence, which combine resource support and principal influence. The morale dimension has been broadened and renamed as “teacher affiliation”. Teacher affiliation encompasses morale and includes the teacher’s perception of his/her identification with the school, job, students, and colleagues. The questionnaire entails 37 items around these five subscales.

Research findings on the three OHI instruments have been very promising (Goddard, Sweetland, & Hoy, 2000; Hoy & Sabo, 1998; Hoy & Hannum, 1997; Hoy & Tarter, 1997 & Hoy, Tarter, & Kottkamp, 1991). They have shown that organizational health is positively related to student performance, faculty trust, and school effectiveness. Hence, Hoy & Miskel assert,

“Moreover, sound interpersonal dynamics in school life are not only important as ends in themselves but are predictive of school effectiveness, student achievement, organizational commitment, humanism in teacher attitudes, and faculty trust in colleagues and in principal. Healthy schools are likely to have committed teachers who trust the principal, who hold high academic standards, who are open, and who have students who achieve at high levels” (2000, p. 203).

Most of the research completed with the OHI instruments has been conducted in secondary and middle schools. More research is needed at the elementary level using the OHI-E.
Overall, the OCDQ and the OHI instruments are reliable and valid instruments in determining school health and climate. Even though the instruments are alternate measures of school climate, they complement each other and each has its own benefits. The OHI instruments are best used as predictors of variables linked to such functional factors such as goal attainment, loyalty, commitment, and academic press (Hoy, Tarter, & Kottkamp, 1991). The OCDQ instruments are best used as predictors of variables likened to measures of interaction such as open communication, principal authenticity, and teacher participation in decision making (Hoy, Tarter, & Kottkamp, 1991).

The school climate research has guided educational researchers in identifying variables that leadership may affect. Bossert and colleagues (1982) contend that grounded conceptualizations of the principal’s effect on student learning center on the leader’s role in shaping the school’s instructional climate. The school effectiveness literature underscores the importance of school climates that are characterized by high expectations, high, achievable standards, and an orderly, serious environment (Weber, 1971; Brookover & Lezotte, 1977; Edmonds, 1979; Purkey & Smith, 1983). Hence, a school climate with a high academic press helps shape the behaviors of administrators, teachers, and students (Hoy, Hannum, & Tschannen-Moran, 1998).

Stringfield and Teddlie (1991) asserted that effective schools are focused on academic plans, academic tasks, and a state of academic push. School effectiveness research describes a school climate that promotes an academic focus as a key to creating an effective school (Weber, 1971; Brookover & Lezotte, 1977; Edmonds, 1979; Purkey
& Smith, 1983; Stringfield & Teddlie (1991). The instructional leader bears the responsibility for fostering, and if necessary, building a climate centered on academic press.

The instructional leader develops a school academic learning climate by defining and communicating shared goals that assert high expectations of students, monitoring and providing feedback on the teaching and learning process, and promoting professional development aligned with the faculty’s needs and school goals. McEwan (1998) delineates specific tasks that instructional leaders may employ to build a climate that presses for an academic focus. They incorporate, but are not limited too:

- establishing inclusive classrooms that send the message that all students can learn;
- providing extended learning opportunities for students who need them;
- observing and reinforcing positive teacher behaviors in the classroom that ensure an academically demanding climate and an orderly, well-managed classroom;
- sending messages to teachers and students in a variety of ways that they can succeed; and
- establishing policies about student progress relative to homework, grading, monitoring progress, remediations, reporting progress, and retention/promotion (McEwan, 1998).

Establishing a climate that promotes academic press has many benefits to the teaching and learning process. Chrispeels (1992) qualitative study of eight elementary schools
indicate that schools, which focus climate around high expectations, high, achievable standards, and an orderly, serious environment, have a positive impact on teacher instruction. Teachers who work in a school with high academic press are more likely to use a variety of instructional strategies, plan diverse lessons to attend to different learning styles, monitor and provide feedback on student progress more frequently, collaborate with colleagues, demonstrate collegial behaviors, and attend to their own professional learning (Chrispeels, 1992; McEwan, 1998; Blasé & Blasé, 1998; Goddard, Sweetland, & Hoy, 2000).

**Student Achievement and the Standards Movement**

During the past two decades, policymakers, superintendents, instructional leaders, educators, and parents have sought to reform and restructure the educational system in the United States. Achievement for all students, regardless of socioeconomic status, gender, race, and ethnicity, has become a focal point for advancement. Since *A Nation At Risk*, The National Commission on Excellence in Education (1983), educational standards have been the vehicle for this effort.

The standards movement of the last twenty years has led to federal and state legislation that created challenging standards for all students and assessments to test knowledge of those standards. This new standards-based education system encompasses three core features: content and performance standards for each discipline, assessments aligned to the standards, and accountability for meeting standards on the assessment (Briars & Resnick, 2000).
Federal legislative and political initiatives have been the catalyst for the standards movement in the United States. In 1983, *A Nation at Risk* by The National Commission on Excellence in Education brought to light the “rising tide of mediocrity” (1983, p.5) in the educational system. The commission had several recommendations for Department of Education and policymakers. Recommendation B, which addressed standards and expectations, started the flurry of legislation and restructuring known as the standards movement. Recommendation B states,

“That schools, colleges and universities adopt more rigorous and measurable standards, and higher expectations for academic performance and student conduct, and that four-year colleges and universities raise their requirements for admission. This will help students do their best educationally with challenging materials in an environment that supports learning and authentic accomplishment (1983, p. 19).”

This recommendation led the state of California to embark on a decade-long revision of curriculum to content standards (Kendell & Marzano, 2000). During the next several years (1983-89), many professional national councils started to develop teams for the creation of content standards around their disciplines (e.g., The National Council of Teachers of Mathematics NCTM).

In 1989, President George Bush convened the Charlottesville Education Summit which was comprised of federal representation from the Department of Education and state governors. The Summit addressed the need for a national response to education meritocracy. It led to a number of commitments and developments for education:
1. The creation of the National Education Goals provides a national framework, but gives states and communities flexibility, to design their own strategies to achieve them.

2. A clear recognition that state education improvement efforts need to focus on raising the achievement levels of all students, in all schools—rather than simply creating models of excellence and innovation.

3. A broad consensus among state leaders, business leaders, parents and the education community regarding the overall direction education reform needs to take. This consensus centers on raising academic standards; measuring student and school performance against those standards; providing schools and educators with the tools, skills, and resources needed to prepare students to reach the standards; and holding schools accountable for the results.


From 1989-94, the National Council of Teachers of Mathematics, the American Association for the Advancement of Science, The Consortium of National Arts Education, The Center for Civic Education, The Committee for National Health Education Standards, The National Council of Teachers of English, The National Standards in Foreign Language Project, and the National Council for Social Studies all wrote and published content standards for curriculum frameworks in public education. Also during this time, the federal government established the National Council on Education Standards and Testing (NCEST) and the National Education Goals Panel.
(NEGP). These federal organizations were founded to lead a bipartisan consensus on national standards and assessments.


The Goals 2000: Educate America Act, an outgrowth of the Charlottesville Education Summit, allowed for the partnership of federal and state governments to support communities in an effort to improve student achievement for all students (Dept. of Ed. 2001). “At the heart of the Goals 2000 Act is a grant program designed to help states and communities develop and implement their own education reforms focused on raising student achievement” (p. 184).

This Act put into law many of the recommendations that evolved from the Education Summit; in addition it created the National Education Standards and Improvement Council (NESIC). This council’s purpose was to certify national and state content and performance standards and state assessments (Kendell & Marzano, 2000).

Goals 2000 also encouraged states to create educational standards and aligned assessments by offering federal grants to support the work. “The standards-based reform
movement promoted by Goals 2000 provides the conceptual and operational undergirding for the reforms in Title 1 and other ESEA programs as they were reauthorized in 1994” (The Urban Institute, 1997, p I-1).

The reauthorization of The Elementary and Secondary Education Act (ESEA) of 1994, also known as Improving America’s Schools Act, provided for greater flexibility in federal funds to support state-led reform efforts. Originally established in 1965, ESEA was intended to address inequities in financial matters among school districts. For instance, Title 1 of the ESEA addressed the need for remediation of skills for students from low-income communities (U.S. Dept. of Ed. 2001). The reauthorization of ESEA then changed the emphasis of Title 1 from one of remediation to the promoting of high standards (The Urban Institute, 1997).

The reauthorized ESEA also introduced new accountability provisions in that, “It required the states to develop high content and performance standards for students in federal programs and that the assessment system that tracks the progress of students in federal programs be the same as for all students. It also required, under Title 1, that the states and districts establish criteria for ‘adequate yearly progress’ for schools and provide technical assistance to those districts and schools not making adequate progress. In addition, it established reporting requirements…” (p. I-1). These two federal laws pushed standards-based education to the forefront of school districts that were receiving federal funds. Goals 2000 and the reauthorized ESEA of 1994 demonstrated the federal bias for standards and their use.
Between 1994-99, the standards movement continued to press into the fabric and culture of American schools. National councils were revising and publishing standards; states and school districts were working intently to meet the federal legislative requirements to establish standards and assessments; and state educational standards were enacted in all states, except Iowa. Iowa choose to leave standards up to local education agencies.

In 1999, Congress and President Clinton reauthorized ESEA yet again; and re-titled it as the Educational Excellence for All Children Act of 1999 (EEAC). This act “reaffirm[s] and strengthen[s] the federal government’s role in promoting academic excellence and equal educational opportunity for every American child” (Dept. of Ed. 1999, p 1). The EEAC builds on the principles set forth in the Improving America’s Schools Act of 1994. The guiding principles of the EEAC are to “hold high standards in every classroom, improve teacher and principal quality through professional development, strengthen accountability, and ensure that all children can learn in an environment that is safe, disciplined, and drug-free” (p.4). EEAC continued to stress high academic standards and aligned assessments as well as to allow flexibility of federal funds for schools to use towards reaching high student achievement.

In 2000, George W. Bush, then presidential candidate, revealed his education plan, *No Child Left Behind* (NCLB). This plan, which reauthorized ESEA, was signed into law on January 8, 2002. NCLB shifted the primary focus of the standards movement from defining standards to creating and administering standardized assessments, increasing accountability of student performance and annual year progress, providing
parental choice of schools, and the use of scientifically researched based instructional methods. Provisions of NCLB call for annual administration and reporting of assessments by states in reading and mathematics for grades three through eight by the 2004-2005 school year. Schools that fail to sustain progress for all students must provide school choice for parents and students and pay for the transportation to and from the school of their choice.

The reauthorization of ESEA in 2002 shows the federal commitment to raising expectations of our public schools and holding them accountable for student achievement and the use of standardized assessments provides the vehicle for accountability. The federal government recognizes the use of state criterion-referenced assessments as a measure of student achievement.

State of Ohio

As federal legislation passed and was signed into law, the states worked diligently to create education standards and assessments. Ohio was no exception. In August 1997, the Governor signed Senate Bill 55 into law. This law’s main foci were the creation of annual state assessments for grades four, six, nine, and twelve; academic accountability measures for Ohio’s public schools; and setting a tone of high academic standards for public schools. It included provisions for:

- a fourth grade reading guarantee;
- a 12th grade scholarship for any student who passed all five potions of the proficiency test;
• providing for the Department of Education to make previous proficiency test scores available to the public;
• creating regulations for summer intervention/retention;
• instituting accountability standards;
• discerning criteria for placing districts in one of four categories: effective, continuous improvement, academic watch, and academic emergency; and
• requiring school districts in need of continuous improvement to establish continuous improvement plans (ORC 33 § 3302.02).

The Department of Education established Learning Outcomes as content standards and State Model Competencies as performance standards. The Learning Outcomes and the State Model Competencies guided the creation of annual proficiency assessments in Ohio.

Senate Bill 1, signed into law on June 12, 2001, extended the assessment and accountability movement in Ohio. This bill called for the creation of new standards in the areas of reading, mathematics, writing, science, and citizenship for grades K-12. For each of the new standards, grade level indicators and benchmark performance standards must be delineated and passed by the State School Board. All students in grades K-8 and tenth are required annually to take either a diagnostic or achievement assessment to measure progress toward the new standards. The new achievement and diagnostic assessments will be “rolled out” in phases starting in the 2003-2004 school year.

Until then, all students in fourth, sixth, and ninth grades are required to continue to complete the Ohio Proficiency Tests in all five subject areas. The Ohio General
Assembly and the Ohio State Board of Education consider the Ohio Proficiency Test scores as reliable and valid measures of student achievement (ODE, 2001). This current study uses the percentage of students passing either the fourth-grade reading proficiency assessment or the fourth-grade mathematics proficiency assessment to operationalize the dependent variable of student achievement.

*Fourth Grade Proficiency Assessments as a Measure of Student Achievement*

The Ohio fourth grade proficiency assessments were developed through multiple stages. Through a bidding process, a vendor was chosen to develop the assessments. The proficiency tests were aligned with the learning outcomes and state model competencies that go along with the state courses of study. After the drafts were developed, they were presented to the review committee from the Ohio Department of Education (ODE) and a committee of practicing educators who screened each item through a multi-step process.

The process included a check for gender and ethnic bias, content review, field test of items, bias review of field test results, and content review of field test results. According to Max Xu (2002), Associate Director of Assessment for ODE, only items that successfully went through and passed all steps are included in the test bank for the proficiency assessments. Xu (2002) asserts that this process validates the test both because the items are aligned to the learning outcomes, state competencies, and state courses of study, as well as the multi-step screening and field test procedures of the items. Statistics and an alpha reliability coefficient are calculated each year for the items on the assessment. The Table 2.5 summarizes the data for the 2001-2002 school year.
The reliability coefficients in the reading and mathematic subtest are .84 and .86 respectfully and are sufficient to determine that the reading and mathematic subtests are reliable instruments.

The administration and scoring of the proficiency test follow standardized procedures based on the information provided by The Ohio Rangefinder Committee and the Ohio Department of Education (ODE, 1996). Administration of the proficiency assessment compares to other standardized administration procedures, such as those used during the SAT and ACT. Proctors of the assessments read a script to the students that clearly define the directions and process for taking the assessments. Proctors are not allowed to assist students in anyway in completing the assessment, and students are not allowed to use dictionaries or other reference materials during the assessment.

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th>Mathematics</th>
<th>Citizenship</th>
<th>Science</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Count</td>
<td>72062</td>
<td>125720</td>
<td>125949</td>
<td>125877</td>
<td>120959</td>
</tr>
<tr>
<td>Reliability</td>
<td>.84</td>
<td>.86</td>
<td>.87</td>
<td>.82</td>
<td>.54*</td>
</tr>
<tr>
<td>Raw Score Mean</td>
<td>36.96</td>
<td>35.60</td>
<td>42.59</td>
<td>35.56</td>
<td>5.63</td>
</tr>
<tr>
<td>Raw Score Standard Deviation</td>
<td>7.55</td>
<td>9.38</td>
<td>8.50</td>
<td>7.91</td>
<td>1.13</td>
</tr>
<tr>
<td>SEM</td>
<td>3.02</td>
<td>3.51</td>
<td>3.06</td>
<td>3.36</td>
<td>0.77</td>
</tr>
<tr>
<td>Scale Score Mean</td>
<td>210.53</td>
<td>224.47</td>
<td>228.83</td>
<td>224.61</td>
<td>NA</td>
</tr>
<tr>
<td>Scale Score Standard Deviation</td>
<td>17.33</td>
<td>26.63</td>
<td>25.97</td>
<td>36.46</td>
<td>NA</td>
</tr>
<tr>
<td>SEM</td>
<td>6.93</td>
<td>9.96</td>
<td>9.36</td>
<td>15.47</td>
<td>NA</td>
</tr>
</tbody>
</table>

Table 2.5 Grade 4 Summary Statistics: Source 2002 Technical Report ODE
assessments are untimed, so the students may complete the test at their own speed, and then students turn in tests to the proctors when they are finished. The proctors are not allowed to read through the completed assessments and must turn in all assessment books to testing coordinator each day. When all assessments are turned in, the testing coordinator packs, seals and sends them to ODE.

The Ohio Department of Education contracts with a vendor for the scoring of the assessments. The scoring procedures for the short answer and extended response questions follow a standardized process. Trained readers of the assessments employ rubrics and anchor papers to ensure continuity and inter-rater reliability. A senior reader and table leaders monitor the scoring and check for consistency of readers throughout the scoring process. Random papers are flagged to be used for inter-rater reliability tests. Strict adherence to the scoring procedures is a must.

The proficiency assessments provide a reliable and valid measure of student achievement for students in Ohio. Every Ohio public elementary school with fourth graders administers the proficiency exam during the same week in March and follows the standardized administration procedures described above. Thus, the fourth grade reading and mathematics assessments provide a common, standardized measure of student achievement. The standardized scoring procedures provide a reliable, consistent rating of achievement. The availability of this common assessment and the strict standardization procedures provides clear evidence why the fourth grade proficiency assessments can be used as a measure of student achievement. It assures that the schools in this study are measured for reading and mathematic achievement in a uniformed and consistent way.
Rationale for Hypothesis

The purposes of this research are to explore the relationships between instructional leadership and student achievement, academic press and student achievement, and instructional leadership and academic press. Research has demonstrated that socioeconomic status does affect student achievement (Coleman, 1966; Jencks, 1972). Thus, socioeconomic status will be a control variable in this study. This research proposes a theoretical model of student achievement. The model develops a multivariate analysis, where the strengths of each variable’s influence on each other can be estimated.

Although the direct effects of principals on student achievement have been mixed (Hallinger & Heck, 1996), the conceptualization of instructional leadership in this study lends itself to direct involvement with students. There are several questions on the instructional leadership measurement instrument used in this study that demonstrate this direct involvement: The principal…visits the classroom to ensure classroom instruction aligns with school goals; provides private feedback to student effort; works with students on academic tasks; provides public praise of outstanding student performance; walks around the school and talks with students and teachers; and sets high but achievable standards for all students. Instructional leaders that work, talk, and provide feedback directly to students, may have an effect on their achievement.

Elementary schools are also smaller organizations where the principal may impact students more directly than in larger middle or secondary schools. Elementary schools
have smaller student populations than do middle or secondary schools. These smaller organizations may allow the instructional leader to become more involved in individual student’s progress. Hoy and colleagues (Hoy & Tarter, 1997; Hoy, Tarter, & Kottkamp, 1991) acknowledge the difference of elementary schools’ structure, complexity, and climate in the development of the Organizational Health Inventory for Elementary Schools. The original seven subtests of organizational health (institutional integrity, principal influence, consideration, initiating structure, resource support, morale and academic emphasis) collapsed into five broader subtests (teacher affiliation, collegial leadership, resource influence, institutional integrity, and academic emphasis). The collapse of the initiating structure and consideration into collegial leadership demonstrates that leadership in elementary schools may have different roles. Leaders in the elementary school may be more directly involve in student progress. Hence, it is hypothesized that:

H1. Instructional leadership behaviors have a positive, direct effect on student achievement.

Instructional leadership behaviors, such as defining and communicating goals; monitoring and providing feedback on the teaching and learning process; and promoting school-wide professional development evoke a climate that promotes a focus on teaching and learning. Each of the dimensions describes roles and behaviors of the instructional leader that guide the creation of a school climate that promotes an emphasis on academic rigor (Blasé & Blasé, 1999, Sheppard, 1996; Murphy, Weil, Hallinger, Mitman, 1985; Bossert et. al, 1982). Thus the following relationship is hypothesized:
H2. All dimensions of instructional leadership (Defines and Communicates Shared Goals, Monitors and Provides Feedback on the Teaching and Learning Process, and Promotes School-wide Professional Development) are positively related to academic press of a school.

The school effectiveness research shows evidence that schools with high academic press have positive effects on student achievement (Weber, 1971; Brookover & Lezotte, 1977; Edmonds, 1979; Purkey & Smith, 1983). School environments that are characterized by safe, orderly atmospheres, high, attainable goals, high expectations for staff and students, and an emphasis on academics have higher levels of academic press (Hoy & Sabo, 1998; Hoy & Hannum, 1997; Hoy & Tarter, 1997 & Hoy, Tarter, & Kottkamp, 1991). Academic press of a school helps create a learning climate that promotes success of all students.

A school climate characterized by high levels of academic press has been associated with increases in student achievement (Goddard, Sweetland, & Hoy, 2000; Hoy & Sabo, 1998; Hoy & Hannum, 1997; Hoy & Tarter, 1997 & Hoy, Tarter, & Kottkamp, 1991). Specifically, Goddard et. al (2000) demonstrated through a multilevel analysis that a 1-unit increase in an urban elementary school’s academic press score was associated with a 16.53 point average gain in student mathematics achievement and an 11.39 point average gain in reading achievement on standardized measures of student achievement.

Accordingly, the following is hypothesized:
H3. Academic press of a school has a positive effect on student achievement, specifically reading and mathematics.

Hallinger and Heck’s (1996) extensive review of empirical research about the principal’s role in school effectiveness reveals evidence that leaders may affect student achievement through an intervening variable. Hallinger and Heck (1996) reviewed 19 studies that modeled an indirect relationship through a mediating variable between leaders and student outcomes, and 17 out of the 19 studies showed positive to mixed effects of the principal on student achievement. Hallinger & Heck assert, “Well-designed studies must use theoretical models that allow for the likelihood that the relationship between principal actions and school outcomes is indirect rather than direct” (1996, p. 24).


Thus, the hypothesis:

H4. Instructional leadership behaviors are indirectly related to student achievement through academic press of the school.
Path Model:

The postulated relationships, controlling for SES, among instructional leadership, academic press, and student achievement come together to form a theoretical path model. The proposed model follows:

![Path Diagram of Student Achievement]

Figure 2.3 Path Model of Student Achievement

The two-way arrows in the path diagram denote a reciprocal relationship among constructs. The diagram demonstrates the relationships within the previously stated hypotheses. For example, instructional leadership has a direct and indirect relationship with student achievement. It is hypothesized that the relationship is reciprocal. The more frequent the instructional leadership behaviors, the higher the academic press and student achievement at a school. The higher the school’s academic press, the more likelihood of instructional leadership behaviors and higher student achievement. The higher the school’s student achievement, the higher the academic press and the more likelihood of instructional behaviors of the principal.
CHAPTER 3

METHODOLOGY

To test the hypotheses and theoretical model of this study, data were collected from 146 elementary schools in Ohio. The sampling, instrumentation, data collection procedures, and data analysis methods are described below.

Sample

The sample was comprised of 146 elementary schools in Ohio. Particular attention was taken to gain participation of urban, rural and suburban schools. A distribution of participating schools was monitored and adjusted using measures of urban-rural density and socioeconomic status. Parameters of participating schools included those which had at least twenty-one certified teachers and had building grade configurations that contain fourth grade. Using information gathered from the Ohio Department of Education, of the 2,689 elementary schools in Ohio, 1,095 schools qualified for this study. A standardized protocol was constructed to solicit participation.

Research Instruments

Instructional leadership, academic press, socioeconomic status, and student achievement were measured in this study. Each of the variables had a distinct measurement instrument as described below.
The Development of the Instructional Leadership Instrument

The instructional leadership instrument was developed specifically for this research. The model of instructional leadership used in the current study was a synthesis of Hallinger & Murphy (1985), Murphy (1990) and Weber’s (1996) work. A parsimonious conceptualization of instructional leadership was developed and tested.

The framework for the pilot instrument consisted of 27 items representing three dimensions of instructional leadership: defining and communicating the school goals, monitoring and providing feedback on the teaching and learning process, and promoting a positive learning climate. The items were as follows:

Defining and Communicating the School Goals
The principal…
1. Develops data-driven academic, school goals in collaboration with teachers
2. Develops school goals that promote high standards and expectations for all students
3. Communicates the school’s academic goals to faculty
4. Develops school goals that are well defined (e.g., responsibilities, time frames, and evaluation criteria)
5. Promotes the school’s academic goals to students
6. Uses school goals when making academic decisions

Monitoring and Providing Feedback on the Teaching and Learning Process
The principal…
7. Visits the classroom to ensure classroom instruction aligns with school goals
8. Evaluates teachers to improve instructional practices
9. Ensures that curricular materials are consistent with school goals
10. Provides time for curriculum alignment among grade levels
11. Monitors the classroom curriculum for alignment to State Standards

12. Uses data on student achievement to guide faculty discussions on the instructional program

13. Provides data on school progress to school community

14. Encourages teachers to use data analysis of student academic progress

*Promoting a Positive Learning Climate*

The principal…

15. Ensures that instructional time is not interrupted

16. Protects teachers from non-instructional activities

17. Walks around the school and talks with students and teachers

18. Works with students on academic tasks

19. Provides private feedback of teacher effort

20. Provides public praise of outstanding teacher performance

21. Provides private feedback of student effort

22. Provides public praise of outstanding student performance

23. Encourages teachers to attend professional development activities that are aligned with school goals

24. Furnishes useful professional materials and resources to teachers

25. Provides for in-house professional development opportunities around instructional best practices

26. Sets high but achievable standards for all students

27. Encourages teachers to enforce strong academic policies (grading, homework, discipline, etc.).
Respondents were asked to indicate the extent to which their principal demonstrated the specific behaviors. A five-point Likert scale was employed for a response system: 0 (Not at all), 1 (Once in a while), 2 (Sometimes), 3 (Fairly often), 4 (Frequently if not always).

**Preliminary Review**

Before field testing the instrument with a sample of practicing teachers, the instrument was reviewed by a panel of researchers. This panel included three experts: an experienced educational leadership researcher and professor in educational administration; a transformational leadership researcher and former middle school administrator; and an instructional leadership researcher and former elementary teacher. The review panel scrutinized the instrument for format, dimension representation, item clarity, instruction coherency, and grammar and syntax usage.

**The Pilot Test**

The preliminary instrument was field tested by 145 teachers enrolled in graduate level classes at The Ohio State University and the College of William and Mary as well as by practicing teachers throughout western New York State. Since the unit of analysis is a school, particular efforts were made to have only one respondent per building complete the survey. Teachers were from elementary and secondary buildings as well as from private and public schools. Three returned surveys were eliminated due to lack of completeness. Analysis of the data was completed on 142 surveys.

**Results of the Pilot Study**

Utilizing the SPSS statistical computer program, data analysis was completed. In all, three factor analyses were done employing principal axis extraction and varimax rotation. An initial factor analysis resulted in the fitting of 23 of the 27 items into four factors with
loadings above .50. A second factor analysis, using only the 23 items that loaded in the initial factor analysis, resulted in the emergence of three factors with loadings at or above .55 fitting 22 of the 23 items. The third factor analysis excluded the one item that did not load above .50 on only one factor, so 22 items were analyzed. Again, three factors were identified. All of the 22 items loaded on the appropriate factors and had factor loadings of .50 or higher. Alpha reliability coefficients were computed for each of the three factors: developing and communicating shared goals (alpha .94); monitoring and providing feedback on the teaching and learning process (alpha .90); and promoting school-wide professional development (alpha .89). Table 3.1 shows each dimension’s items, alpha coefficient, and factor loadings.
Table 3.1 Principal Axis Factoring of the 22 Items of Instructional Leadership

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Coefficients with absolute values below .3 have been suppressed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotes the school’s academic goals to students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develops school goals that promote high standards and expectations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for all students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visits the classroom to ensure classroom instruction aligns with school goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicates the school’s academic goals to faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensures that curricular materials are consistent with the school goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses school goals when making academic decisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develops school goals that are well defined (e.g., responsibilities, time frames, and evaluation criteria)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses data on student achievement to guide faculty discussion on the instructional program</td>
<td></td>
<td>.500</td>
<td></td>
</tr>
<tr>
<td>Sets high but achievable standards for all students</td>
<td></td>
<td></td>
<td>.375</td>
</tr>
<tr>
<td>Provides private feedback to student effort</td>
<td>.379</td>
<td>.576</td>
<td></td>
</tr>
<tr>
<td>Works with students on academic tasks</td>
<td>.356</td>
<td>.631</td>
<td></td>
</tr>
<tr>
<td>Provides data on school’s progress to school community</td>
<td></td>
<td>.614</td>
<td>.384</td>
</tr>
<tr>
<td>Provides private feedback to teacher effort</td>
<td>.401</td>
<td>.570</td>
<td>.436</td>
</tr>
<tr>
<td>Ensures that instructional time is not interrupted</td>
<td></td>
<td></td>
<td>.598</td>
</tr>
<tr>
<td>Provides public praise of outstanding student performance</td>
<td></td>
<td></td>
<td>.491</td>
</tr>
<tr>
<td>Provides public praise of outstanding teacher performance</td>
<td></td>
<td></td>
<td>.673</td>
</tr>
<tr>
<td>Walks around the school and talks with students and teachers</td>
<td></td>
<td></td>
<td>.615</td>
</tr>
<tr>
<td>Develops data-driven academic school goals in collaboration with teachers</td>
<td>.484</td>
<td>.568</td>
<td></td>
</tr>
<tr>
<td>Encourages teachers to use data analysis of student academic progress</td>
<td>.480</td>
<td>.603</td>
<td></td>
</tr>
<tr>
<td>Provides for in-house professional development opportunities around instructional best practices</td>
<td></td>
<td></td>
<td>.688</td>
</tr>
<tr>
<td>Encourages teachers to attend professional development activities that are aligned with school goals</td>
<td></td>
<td>.387</td>
<td>.651</td>
</tr>
<tr>
<td>Furnishes useful professional materials and resources to teachers</td>
<td>.482</td>
<td>.623</td>
<td></td>
</tr>
<tr>
<td><strong>Eigenvalues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cumulative Variance</strong></td>
<td>12.58</td>
<td>1.53</td>
<td>1.07</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 7 iterations

Table 3.1 Principal Axis Factoring of the 22 Items of Instructional Leadership

A closer examination of the items defining the third factor led the researchers to rename it “Promoting school-wide professional development,” which seemed to better capture the factor then “Promoting a Learning Environment”. Some further revisions of
the instrument were necessary. Working from theoretical underpinnings, a total of nine items were added to the instrument to ensure a balance of items in each factor. More specifically, six items were added to broaden the measurement of the third dimension (promoting school-wide professional development), and three items were added to the second dimension (monitoring and providing feedback of the teaching and learning process). The revisions in the instrument resulted in a 31 item questionnaire with 10 items in Defining and Communicating Schools Goals, 10 items in Promoting School-Wide Professional Development, and 11 items in Monitoring and Providing Feedback on the Teaching and Learning Process. The organization of the instructional leadership instrument after revisions is encapsulated in Table 3.2.
<table>
<thead>
<tr>
<th>Defining and Communicating School Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Promotes the school’s academic goals to students</td>
</tr>
<tr>
<td>• Develops school goals which promote high standards and expectations for all students</td>
</tr>
<tr>
<td>• Visits the classroom to ensure classroom instruction aligns with school goals</td>
</tr>
<tr>
<td>• Communicates the school’s academic goals to faculty</td>
</tr>
<tr>
<td>• Ensures that curricular materials are consistent with the school goals</td>
</tr>
<tr>
<td>• Uses school goals when making academic decisions</td>
</tr>
<tr>
<td>• Develops school goals that are well defined (e.g., responsibilities, time frames, and evaluation criteria)</td>
</tr>
<tr>
<td>• Uses data on student achievement to guide faculty discussion regarding the instructional program</td>
</tr>
<tr>
<td>• Sets high but achievable standards for all students</td>
</tr>
<tr>
<td>• Develops data-driven academic school goals in collaboration with teachers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring and Providing Feedback on the Teaching and Learning Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides private feedback to student effort</td>
</tr>
<tr>
<td>• Works with students on academic tasks</td>
</tr>
<tr>
<td>• Provides data on school’s progress to school community</td>
</tr>
<tr>
<td>• Provides private feedback to teacher effort</td>
</tr>
<tr>
<td>• Ensures that instructional time is not interrupted</td>
</tr>
<tr>
<td>• Provides public praise of outstanding student performance</td>
</tr>
<tr>
<td>• Provides public praise of outstanding teacher performance</td>
</tr>
<tr>
<td>• Stays in the office all day*</td>
</tr>
<tr>
<td>*Reversed score</td>
</tr>
<tr>
<td>• Evaluates teachers to improve instructional practice</td>
</tr>
<tr>
<td>• Works with teachers to interpret assessment data for instructional implications</td>
</tr>
<tr>
<td>• Monitors classroom practices for alignment to district curriculum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Promoting School-Wide Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Encourages teachers to use data analysis of student academic progress</td>
</tr>
<tr>
<td>• Provides for in-house professional development opportunities around instructional best practices</td>
</tr>
<tr>
<td>• Encourages teachers to attend professional development activities that are aligned with school goals</td>
</tr>
<tr>
<td>• Furnishes useful professional materials and resources to teachers</td>
</tr>
<tr>
<td>• Schedules time on in-service days for collaboration among teachers</td>
</tr>
<tr>
<td>• Schedules the school day for common planning time</td>
</tr>
<tr>
<td>• Observes teachers for professional development instead of evaluation</td>
</tr>
<tr>
<td>• Plans professional development around teacher needs and wants</td>
</tr>
<tr>
<td>• Supports individualized professional development plans</td>
</tr>
<tr>
<td>• Plans professional development in-services for teachers</td>
</tr>
</tbody>
</table>

Table 3.2 Instructional Leadership Instrument Developed for Full Study
Three subtests of the Organizational Health Inventory (OHI) will be combined to operationalize academic press (Hoy, Tarter & Kottkamp, 1991; Hoy & Tarter, 1997). The three subtests are resource support, principal influence and academic emphasis. An earlier factor analytic study of the Organizational Health Inventory for middle schools showed that the subtests of academic emphasis, resource support, and principal influence formed a second-order factor, academic press (Hoy, Hannum, & Tschannen-Moran, 1998). Reliability scores were computed for each subtests: academic emphasis (alpha=.93), resource support (alpha = .95), and principal influence (alpha = .87) (Hoy, Tarter & Kottkamp, 1991). Construct validity of the scales is reported in Hoy, Tarter & Kottkamp (1991).

Academic press was comprised of 18 Likert-type items. Teachers were asked to describe the extent to which students, teachers and administrators work together to develop a strong academic orientation within the school. Sample items include the following: “Students try hard to improve on previous work;” “Students seek extra work so they can get good grades;” “The principal is able to influence the actions of his or her superiors;” and “Teachers are provided with adequate materials for their classrooms”. Teachers respond to all items along a five-point scale from “never” to “always”.

Academic Press Construct
Socioeconomic Status Construct

A consistent measure for socioeconomic status in all Ohio schools is the participation rate in the federal free and reduced lunch program. This measure approximates a student’s socioeconomic status by obtaining information from students’ families about their household income. Working on a sliding scale, students may qualify for free or reduced lunch. Therefore, the proportion of students who met the criteria for free and reduced lunch determined the school aggregate socioeconomic status. Schools, in turn, reported this information to the Ohio Department of Education, which allowed for a standardized measure across schools as well as one which are easy to obtain. One assumption in using this measure was that most students who qualified for the free or reduced lunch program participated in it.

Student Achievement Construct

The State of Ohio’s fourth grade reading and mathematic assessments provided the measure of student achievement. The reading and mathematic assessments went through an extensive review process to determine content validity. Reliability coefficients of .84 for reading and .86 for mathematics indicated that the instruments were reliable.

The reading assessment contained at least three reading selections: a fiction piece, a non-fiction piece and a poem. Students are asked to answer multiple choice questions for one point; short answer questions worth two points; and extended response items for four points. The items were scored and added to indicate the student’s raw score, which
then was converted to a scaled score. The scaled score was compared to a set passage score. This determines if the student established proficiency status on the assessment.

**Data Collection**

Data for instructional leadership and academic press were collected from the teachers of each school during a regularly scheduled faculty meeting. A trained, skilled researcher administered the survey instruments. Dissemination of the instruments was in a random alternating fashion. One set of teachers completed the instructional leadership survey, and a separate, independent group responded to the academic press items. This procedure ensures a methodological independence between the constructs. Because the unit of analysis being the school, all data were aggregated to the school level, making the alternating distribution of instruments feasible. All respondents were assured confidentiality and anonymity. Socioeconomic status and student achievement data were collected from the Ohio Department of Education.

**Data Analysis**

The unit of analysis for the current research was the school. Teacher responses collected for the instructional leadership and academic press constructs were aggregated to the school level. The unit of analysis for student achievement and socioeconomic status were the school. Using SPSS, descriptive statistics were calculated for the instructional leadership and academic press scales. The bivariate correlations of the variables were tested using correlation analysis, and then the model was tested using multivariate statistics. A principal axis factor analysis with varimax rotation was calculated to confirm the number of dimensions observed in instructional leadership and to assess the accuracy of the conceptual model.
Structural equation modeling techniques were employed using AMOS 4.0 software. This software was used to estimate the direct effects of instructional leadership behaviors on student achievement and the indirect effects of instructional leadership behaviors on student achievement through academic press while controlling for socioeconomic status. Structural equation modeling provided for measurement error in the observed variables and enabled researchers to study both the direct and indirect effects of various variables included in a model (Raykov & Marcoulides, 2000).

Hallinger and Heck’s (1996) extensive review of empirical research about the principal’s role in school effectiveness suggests that structural modeling provides for the greatest progress in determining the principal’s role in school effectiveness. Hallinger and Heck conclude,

“The most theoretically and empirically robust models that have been used to study leadership effects tell us that principal leadership that makes a difference is aimed toward influencing internal school processes that are directly linked to student learning. These internal processes range from school policies and norms to the practice of teachers. Studies based on mediated-effects model frequently uncovered statistically significant indirect effects on principal leadership on student achievement via such variables” (1996, p.38).

Hallinger and Heck contend that methodological advancements, such as the use of structural equation modeling, will yield the most headway in addressing issues of the role of the principal in school effectiveness (1996).
CHAPTER 4
RESULTS AND PRESENTATION OF DATA

This chapter presents the data results for the current study. It begins with a description of the demographic information for the sample. Next, the instructional leadership and academic press constructs are verified using factor analysis. Finally, the research hypotheses are first tested using bivariate correlations and then refined using structural equation modeling.

Description of Sample

The sample of the study involves responses from 4,069 teachers representing 146 Ohio elementary schools. The participating schools represent 33 of the 88 Ohio counties. Demographic information is summarized in Table 4.1. Careful consideration was taken to represent Ohio schools demographic makeup. According to the Ohio Department of Education, 44%, 33%, and 23% of all elementary schools are designated as urban, rural and suburban, respectively. The current sample for the study is comprised of 36% of urban schools, 27% of rural schools, and 37% of suburban schools. Building-level grade configuration was marked as a parameter for the study. Although only 65% of Ohio elementary schools are configured as K-5 or K-6 buildings, about 90% of the study sample was K-5 or K-6. This discrepancy was due to the criterion of having fourth grade proficiency data from each participating school.
The teaching staff comparisons are similar. On average, an Ohio elementary school staffs 27 teachers with 13.28 years of teaching experience. The study elementary schools, on average, staffs 24 teachers with 13.14 years of teaching experience.

Even though the demographic makeup of the research sample set parallels that of the state of Ohio, generalizations of the results should be circumspectly applied to Ohio elementary schools.

<table>
<thead>
<tr>
<th>School Demographic Information</th>
<th>State of Ohio</th>
<th>Sample Set of Schools in Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average School Enrollment</td>
<td>374</td>
<td>436</td>
</tr>
<tr>
<td>Percentage of schools designated as Urban</td>
<td>44%</td>
<td>36%</td>
</tr>
<tr>
<td>Percentage of schools designated as Rural</td>
<td>33%</td>
<td>27%</td>
</tr>
<tr>
<td>Percentage of schools designated as Suburban</td>
<td>23%</td>
<td>37%</td>
</tr>
<tr>
<td>Percentage of students participating in the federal free or reduce lunch program</td>
<td>34%</td>
<td>28%</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>27 teachers</td>
<td>24 teachers</td>
</tr>
<tr>
<td>Teacher Experience</td>
<td>13.28 years</td>
<td>13.14 years</td>
</tr>
<tr>
<td>N</td>
<td>1,949 elementary schools</td>
<td>146 elementary schools</td>
</tr>
</tbody>
</table>

Table 4.1 Comparison of State and Sample Demographic Information

**Instructional Leadership Construct Development**

The instructional leadership instrument used in this study came from the pilot work described in detail in chapter 3. The instrument is comprised of 31 items broken into three subtests; professional development, goals, and teaching and learning. Principal axis factoring with varimax rotation was performed on the 31 items to verify the construct of the three factors. Coefficients with absolute values below .3 have been suppressed. Table 4.2 displays the results of the factor analysis.
<table>
<thead>
<tr>
<th>Item (item number, theorized dimension)</th>
<th>Factor 1 (Prof. Dev. (PD))</th>
<th>Factor 2 (Goals (MG))</th>
<th>Factor 3 (Teach. &amp; Learn (TL))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourages teachers to attend professional development activities that are aligned to school goals (7,PD)</td>
<td>.773</td>
<td>.372</td>
<td></td>
</tr>
<tr>
<td>Provides in-house professional development opportunities around instructional best practices(3,PD)</td>
<td>.715</td>
<td>.366</td>
<td></td>
</tr>
<tr>
<td>Plans professional development around teacher needs and wants (27,PD)</td>
<td>.712</td>
<td>.319</td>
<td>.372</td>
</tr>
<tr>
<td>Supports individualized professional development plan (31,PD)</td>
<td>.708</td>
<td>.442</td>
<td></td>
</tr>
<tr>
<td>Plans professional development in-service with teachers(35,PD)</td>
<td>.663</td>
<td>.368</td>
<td>.336</td>
</tr>
<tr>
<td>Ensures that curricular materials are consistent with school goals (17,MG)</td>
<td>.629</td>
<td>.499</td>
<td>.375</td>
</tr>
<tr>
<td>Furnishes useful professional materials and resources to teachers (11,PD)</td>
<td>.616</td>
<td>.458</td>
<td></td>
</tr>
<tr>
<td>Schedules time on in-service for collaboration among teachers(15,PD)</td>
<td>.573</td>
<td>.326</td>
<td>.325</td>
</tr>
<tr>
<td>Provides public praise of outstanding teacher performance (48,TL)</td>
<td>.531</td>
<td>.372</td>
<td>.374</td>
</tr>
<tr>
<td>Uses data on student achievement to guide faculty discussions on the instructional program (33,MG)</td>
<td>.329</td>
<td>.834</td>
<td></td>
</tr>
<tr>
<td>Encourages teachers to use data analysis of student academic progress (41,PD)</td>
<td>.736</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develops data-driven academic goals in collaboration with teachers (29,MG)</td>
<td>.470</td>
<td>.733</td>
<td></td>
</tr>
<tr>
<td>Communicates the school’s academic goals to faculty (13,MG)</td>
<td>.444</td>
<td>.720</td>
<td>.343</td>
</tr>
<tr>
<td>Works with teachers to interpret assessment data for instructional implications(39,TL)</td>
<td>.418</td>
<td>.697</td>
<td>.389</td>
</tr>
<tr>
<td>Uses school goals when making academic decisions (21,MG)</td>
<td>.560</td>
<td>.637</td>
<td>.331</td>
</tr>
<tr>
<td>Develops school goals that are well defined e.g., responsibilities, time frames, and evaluation criteria(25,MG)</td>
<td>.566</td>
<td>.623</td>
<td>.334</td>
</tr>
<tr>
<td>Develops school goals that promote high standards and expectations for all students (5,MG)</td>
<td>.515</td>
<td>.608</td>
<td>.376</td>
</tr>
<tr>
<td>Sets high but achievable standards for all students(37,MG)</td>
<td>.521</td>
<td>.579</td>
<td>.483</td>
</tr>
<tr>
<td>Provides data on school’s progress to the school community (10,MG)</td>
<td>.404</td>
<td>.549</td>
<td>.305</td>
</tr>
<tr>
<td>Provides public praise of outstanding student performance (22,TL)</td>
<td>.397</td>
<td>.437</td>
<td>.411</td>
</tr>
<tr>
<td>Schedules the school day for common planning time (19,PD)</td>
<td>.333</td>
<td>.385</td>
<td></td>
</tr>
<tr>
<td>Visits the classroom to ensure classroom instruction aligns with school goals (9,MG)</td>
<td></td>
<td></td>
<td>.843</td>
</tr>
<tr>
<td>Monitors classroom practices for alignment to district curriculum (40,TL)</td>
<td></td>
<td></td>
<td>.683</td>
</tr>
<tr>
<td>Works with students on academic tasks (6,TL)</td>
<td>.341</td>
<td>.649</td>
<td></td>
</tr>
<tr>
<td>Stays in the office all day (Reversed score)(26,TL)</td>
<td></td>
<td></td>
<td>.597</td>
</tr>
<tr>
<td>Observes teachers for professional development instead of evaluation (23,PD)</td>
<td>.510</td>
<td>.324</td>
<td>.574</td>
</tr>
<tr>
<td>Provides private feedback of student effort (2,TL)</td>
<td>.464</td>
<td>.389</td>
<td>.561</td>
</tr>
<tr>
<td>Provides private feedback of teacher effort (14,TL)</td>
<td>.551</td>
<td></td>
<td>.558</td>
</tr>
<tr>
<td>Evaluates teachers to improve instructional practice (34,TL)</td>
<td>.438</td>
<td>.426</td>
<td>.555</td>
</tr>
<tr>
<td>Provides data on school’s academic goals to students (1,MG)</td>
<td>.478</td>
<td>.469</td>
<td>.510</td>
</tr>
<tr>
<td>Ensures that instructional time is not interrupted (18,TL)</td>
<td>.400</td>
<td>.437</td>
<td>.443</td>
</tr>
<tr>
<td><strong>Eigenvalues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cumulative Variance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Extraction Method:</strong> Principal Axis Factoring <strong>Rotation Method:</strong> Varimax with Kaiser Normalization. <strong>Rotation converged in 5 iterations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 Summary of Principal Axis Factoring on all 31 items
As theorized the factors are highly correlated with one another. Hence, the items often loaded strongly on more than one factor. Steps were taken to reduce the number of items loading strongly on more than one factor by eliminating the items with loadings below .5. Working from theoretical underpinnings and empirical reasoning, two criterion were established for reducing the number of items: eliminate items that did not load above .5 on any factor and eliminate items with multiple high loadings unless such items could be justified theoretically (Bryman and Cramer, 2001). Eight items were eliminated using these criteria. Items that were removed due to loadings below .5 were items 18, 19, 22. Five items were removed for high multiple loadings, and which could not be supported theoretically. These items include 1, 10, 17, 25, and 48.

A second principal axis factoring with varimax rotation was conducted on the remaining 23 items. Three factors were identified with Eigenvalues above one. The three factors explain 72.63% of the variance. Factor one, professional development, consists of seven items with all items loading above .50. Factor two, shared goals, consists of eight items with all items loading greater than .50. Factor three, teaching and learning, consists of eight items with items loading above .50. Table 4.3 presents all 23 items and their respective loading. Coefficients with absolute values below .3 have be suppressed.

The seven items that make up the first factor, professional development, were all conceptualized as indicators of the instructional leader demonstrating promotion of school-wide professional development. The loadings range from .59 to .77. These strong loadings and the conceptualization of the questions based on leadership theory supports construct validity of the items and factor.
Cronbach’s alpha coefficient for inter-item reliability was computed for the seven items. The alpha coefficient was .94. This indicates a strong reliability among the items.

The second factor, goals, consists of eight items. Six of the items were directly related to goals. Two items, 41 and 39, also loaded very high in this factor. Item 41, encourages teachers to use data analysis of student academic progress, and item 39, works with teachers to interpret assessment data for instructional implications, both use analysis of data to make decisions about goals.

The second factor, goals, was conceptualized as the instructional leader develops and communicates shared goals with the staff. Examining the items that load in this factor point toward an extensive conceptualization of how the instructional leader develops goals. The instructional leader uses data and data analysis to make decisions and collaboratively develop goals. According to Murphy (1990), principals need to frame school goals emphasizing student achievement for all students by incorporating data on past and current student performance. Empirically and theoretically included these items into this factor provides for a better fit. Cronbach’s alpha was computed on the eight items in this factor. The alpha is .97.

The third factor, teaching and learning, contains eight items, six of which were concerned with teaching and learning, in particular, monitoring and providing feedback on the teaching and learning process and monitoring the academic curriculum the students’ experience. Two additional items, also fitted the teaching and learning classification. Item 9, the principal visits the classroom to ensure classroom instruction aligns with school goals, and item 23, the principal observes teachers for professional development instead of evaluation, both describe principal activities that monitor the
academic curriculum within the classroom. Principals promote quality instruction by visiting classrooms and conducting teacher conferences and evaluation (Weber, 1996; Murphy, 1990; Teddlie & Stringfield, 1985). The Crobach’s alpha reliability coefficient for the eight items within the third factor is .93.
**Table 4.3 Summary of Principal Axis Factor Analysis of 23 items**

<table>
<thead>
<tr>
<th>Item (item number, theorized dimension)</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prof. Dev. (PD)</td>
<td>Goals (MG)</td>
<td>Teach. &amp; Learn (TL)</td>
</tr>
<tr>
<td>* Coefficients with absolute values below .3 have been suppressed.</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Encourages teachers to attend professional development activities that are aligned to school goals (7,PD)</td>
<td>.769</td>
<td>.371</td>
<td></td>
</tr>
<tr>
<td>Provides for in-house professional development opportunities around instructional best practices (3,PD)</td>
<td>.734</td>
<td>.354</td>
<td></td>
</tr>
<tr>
<td>Plans professional development around teacher needs and wants (27,PD)</td>
<td>.732</td>
<td>.301</td>
<td>.376</td>
</tr>
<tr>
<td>Supports individualized professional development plan (31,PD)</td>
<td>.715</td>
<td>.430</td>
<td></td>
</tr>
<tr>
<td>Plans professional development in-service with teachers (35,PD)</td>
<td>.689</td>
<td>.347</td>
<td>.347</td>
</tr>
<tr>
<td>Furnishes useful professional materials and resources to teachers (11,PD)</td>
<td>.615</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>Schedules time on in-service for collaboration among teachers (15,PD)</td>
<td>.582</td>
<td>.311</td>
<td>.334</td>
</tr>
<tr>
<td>Uses data on student achievement to guide faculty discussions on the instructional program (33, MG)</td>
<td>.348</td>
<td>.828</td>
<td></td>
</tr>
<tr>
<td>Encourages teachers to use data analysis of student academic progress (41, PD)</td>
<td></td>
<td>.754</td>
<td></td>
</tr>
<tr>
<td>Develops data-driven academic goals in collaboration with teachers (29, MG)</td>
<td>.482</td>
<td>.728</td>
<td></td>
</tr>
<tr>
<td>Communicates the school’s academic goals to faculty (13, MG)</td>
<td>.448</td>
<td>.721</td>
<td>.343</td>
</tr>
<tr>
<td>Works with teachers to interpret assessment data for instructional implications (39, TL)</td>
<td>.431</td>
<td>.683</td>
<td>.393</td>
</tr>
<tr>
<td>Uses school goals when making academic decisions (21, MG)</td>
<td>.563</td>
<td>.623</td>
<td>.332</td>
</tr>
<tr>
<td>Develops school goals that promote high standards and expectations for all students (5, MG)</td>
<td>.514</td>
<td>.600</td>
<td>.363</td>
</tr>
<tr>
<td>Sets high but achievable standards for all students (37, MG)</td>
<td>.523</td>
<td>.567</td>
<td>.475</td>
</tr>
<tr>
<td>Visits the classroom to ensure classroom instruction aligns with school goals (9, MG)</td>
<td></td>
<td></td>
<td>.867</td>
</tr>
<tr>
<td>Monitors classroom practices for alignment to district curriculum (40, TL)</td>
<td>.309</td>
<td>.509</td>
<td>.695</td>
</tr>
<tr>
<td>Works with students on academic tasks (6, TL)</td>
<td>.336</td>
<td></td>
<td>.630</td>
</tr>
<tr>
<td>Stays in the office all day (Reversed score) (26, TL)</td>
<td></td>
<td></td>
<td>.589</td>
</tr>
<tr>
<td>Observes teachers for professional development instead of evaluation (23, PD)</td>
<td>.508</td>
<td>.335</td>
<td>.565</td>
</tr>
<tr>
<td>Evaluates teachers to improve instructional practice (34, TL)</td>
<td>.442</td>
<td>.409</td>
<td>.563</td>
</tr>
<tr>
<td>Provides private feedback of teacher effort (14, TL)</td>
<td>.534</td>
<td></td>
<td>.558</td>
</tr>
<tr>
<td>Provides private feedback of student effort (2, TL)</td>
<td>.456</td>
<td>.402</td>
<td>.547</td>
</tr>
</tbody>
</table>

**Eigenvalues**

<table>
<thead>
<tr>
<th></th>
<th>14.94</th>
<th>1.55</th>
<th>1.03</th>
</tr>
</thead>
</table>

**Reliability Alpha**

<table>
<thead>
<tr>
<th></th>
<th>.94</th>
<th>.97</th>
<th>.93</th>
</tr>
</thead>
</table>

**Cumulative Variance**

<table>
<thead>
<tr>
<th></th>
<th>63.84</th>
<th>69.27</th>
<th>72.68</th>
</tr>
</thead>
</table>

**Extraction Method:** Principal Axis Factoring  
**Rotation Method:** Varimax with Kaiser Normalization.  
**Rotation converged in 5 iterations**

93
Most of the items cross load among the different factors. These dual loadings suggest correlation among items. An analysis of the bivariate correlations between factors shows that the factors are highly correlated significant at the .01 level (2-tailed). Table 4.4 displays the Pearson Correlation.

Table 4.4 Summary of Bivariate Correlations between Instructional Leadership Dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Teaching &amp; Learning</th>
<th>Goals</th>
<th>Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and Learning Goals</td>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Professional Development</td>
<td>Pearson Correlation</td>
<td>.837(***)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.766(***)</td>
<td>.854(***)</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Issues of multicollinearity arise due to the strong correlations among the independent factors of instructional leadership (Belsley, Kuh, & Welsch, 1980). However, all three factors are important for understanding the construct of instructional leadership. Because there is considerable theoretical overlap between the three dimensions of instructional leadership, a second-order factor analysis was conducted to confirm one underlying general construct, namely instructional leadership (Kerlinger, 1986; Kerlinger & Lee, 2000). The second-order factor analysis revealed that the three dimensions strongly load on one factor. Hence, all three dimensions were combined to construct a general variable known as instructional leadership. Table 4.5 shows the results of the second-order factor analysis.
Table 4.5 Results from the Second-Order Factor Analysis

As a result of the second-order factor analysis, the instructional leadership construct was defined as a composite of the three first-order factors. An instructional leadership index was created by summing the average scores for each factor. The Cronbach’s alpha coefficient for the instructional leadership (IL) is .92.

<table>
<thead>
<tr>
<th>Dimensions of Instructional Leadership</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotes School wide Professional Development</td>
<td>.884</td>
</tr>
<tr>
<td>Develops and Communicates Shared School Goals</td>
<td>.965</td>
</tr>
<tr>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>.867</td>
</tr>
</tbody>
</table>

Academic Press

Hoy and Tarter’s (1997) Organizational Health Inventory (OHI) was used to measure the academic press variable. Three subtests of the OHI; resource support, principal influence, and academic emphasis, were combined to operationalize academic press (Hoy, Hannum, & Tschannen-Moran, 1998). The academic press construct is comprised of 18 Likert-type items.

In past research, when the OHI has been administered in elementary schools researchers have found the collapse of two factors: resource support and principal influence into one factor; resource influence (Hoy, Tarter & Kottkamp, 1991; Hoy & Tarter, 1997) In the current study, this was not the case. Principal axis factor analysis of the 18 items identified the three factors with Eigenvalues above one. Table 4.6 displays
each item and the corresponding loadings. All items loaded on hypothesized factors with loadings ranging from .52 to .87. The cumulative variance explained was 64.2%. The Cronbach’s Alpha coefficients were .89, .97 and .88 for resource support, principal influence and academic emphasis respectively.
Item (item number and theorized dimension) | Factor Support (RS) | Factor Academic Emphasis (AE) | Factor Principal Influence (PI)  
---|---|---|---  
Teachers are provided with adequate materials for their classrooms (53,RS) | .879 |  |  
Teachers have access to needed instructional materials (81,RS) | .876 |  |  
Teachers receive necessary classroom supplies (60,RS) | .869 |  |  
Supplementary materials are available for classroom use (69,RS)| .862 |  |  
Extra materials are available if requested (71,RS) | .830 |  |  
Students try hard to improve on previous work (15,AE) |  |  | .814  
The school sets high standards for academic performance (5,AE) |  |  | .737  
Teachers in this school believe that their students have the ability to achieve academically (59,AE) |  |  | .726  
Students in this school can achieve the goals that have been set for them (61,AE) |  |  | .696  
Students respect others who get good grades (6,AE) |  |  | .658  
Students seek extra work so they can get good grades (22,AE) |  |  | .625  
The learning environment is orderly and serious (21,AE) |  |  | .594  
Academic achievement is recognized and acknowledged by the school (14,AE) |  |  | .544  
The principal’s recommendations are given serous consideration by his or her superiors (57,PI) |  | .820 |  
The principal gets what he or she asks for from his superiors (66,PI) |  |  | .815  
The principal is able to work well with the superintendent (56,PI) |  |  | .768  
The principal is able to influence the actions of his or her superiors (68,PI) |  |  | .668  
The principal is impeded by superiors (70,PI) reversed scored |  |  | .653  
Eigenvalues | 7.96 | 2.81 | 1.93  
Reliability Alpha | .97 | .88 | .89  
Cumulative Variance | 42.65 | 56.00 | 65.18  

a Rotation converged in 5 iterations.

Table 4.6 Principal Axis Factoring for Academic Press Construct

A second-order factor analysis supports that the three subtests are underlying dimensions of one more general construct, academic press (Kerlinger, 1986; Kerlinger & Lee, 2000). Cronbach’s Alpha Coefficient for the construct of academic press is .71.

Table 4.7 presents the data from the second-order factor analysis. Coefficients with absolute values below .3 have been suppressed.
Table 4.7 Second-Order Factor Analysis for Academic Press

**Descriptive and Correlation Statistics of Research Variables**

Means, minimums, maximums, and standard deviations were calculated for each of the research variables. Descriptive statistics are summarized in Table 4.8.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Press</td>
<td>146</td>
<td>3.68</td>
<td>.27</td>
<td>2.86</td>
<td>4.19</td>
</tr>
<tr>
<td>Instructional Leadership</td>
<td>146</td>
<td>2.68</td>
<td>.50</td>
<td>.45</td>
<td>3.58</td>
</tr>
<tr>
<td>SES—Free and Reduced Lunch Rate</td>
<td>146</td>
<td>.28</td>
<td>.23</td>
<td>.00</td>
<td>.84</td>
</tr>
<tr>
<td>2002 Mean Scaled Math Score</td>
<td>146</td>
<td>225.14</td>
<td>13.71</td>
<td>185.00</td>
<td>252.00</td>
</tr>
<tr>
<td>2002 mean Scaled Reading Score</td>
<td>146</td>
<td>220.80</td>
<td>7.12</td>
<td>200.00</td>
<td>235.00</td>
</tr>
</tbody>
</table>

Table 4.8 Descriptive Statistics of Research Variables

Table 4.9 presents the zero-order correlation matrix of all variables. The correlations showed initial support for all four hypotheses that guided this research.
Coleman (1966) and Jencks (1972) research has clearly substantiated the effect of socioeconomic status on student achievement. As a known contributor to student achievement, socioeconomic status was encompassed in the study as a control variable. Table 4.10 presents a matrix of partial correlations controlling for socioeconomic status.

The first hypothesis proposed that instructional leadership behaviors were positively related to student achievement, specifically reading and mathematics. Promoting school-wide professional development behaviors were significantly and positively related to mathematics (partial r = .25, p < .01) and reading achievement (partial r = .19, p < .05). Developing and communicating shared schools goals behaviors were positively and significantly related to mathematics achievement (partial r = .24, p < .01). Monitoring the teaching and learning process was significantly and positively related to mathematics (partial r = .18, p < .05). Although developing and communicating shared schools and monitoring the teaching and learning process were not significant with reading achievement, they were still positively correlated with each other. The general variable of instructional leadership was positively related to student achievement, both mathematics and reading, but analysis of the partial correlation matrix, controlling for SES, indicated that instructional leadership behaviors as an index is only significantly related to mathematics student achievement (partial r = .24, p < .01).
The second hypothesis predicted that all dimensions of instructional leadership were positively related to the academic press of a school. The correlations supported this hypothesis. All dimensions of instructional leadership were positively related to the academic press of a school. Promoting professional development behaviors have a strong relationship with the academic press of a school \( (r = .56, p<.01) \). Developing and communicating shared goals also had a strong relationship with academic press \( (r = .54, p<.01) \). Monitoring and providing feedback on the teaching and learning process had a moderate relationship \( (r = .45, p<.01) \). The partial correlation supported instructional leadership and academic press have a positive, strong relationship \( (\text{partial } r = .55, p<.05) \) even controlling for the SES of a school.

Table 4.9 Correlations among Research Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prof. Dev.</th>
<th>Goals</th>
<th>T&amp;L</th>
<th>IL</th>
<th>Acpress</th>
<th>SES</th>
<th>Math</th>
<th>Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development Goals</td>
<td>.94*</td>
<td>.85**</td>
<td>.97*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching and Learning</td>
<td>.77**</td>
<td>.80**</td>
<td>.93*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Leadership Index</td>
<td>.93**</td>
<td>.95**</td>
<td>.92**</td>
<td>.92*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Press</td>
<td>.56**</td>
<td>.54**</td>
<td>.45**</td>
<td>.55**</td>
<td>.92*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>.15</td>
<td>.14</td>
<td>.03</td>
<td>.11</td>
<td>.39**</td>
<td>b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>.28**</td>
<td>.26**</td>
<td>.14</td>
<td>.24**</td>
<td>.49**</td>
<td>.76**</td>
<td>.86*</td>
<td>.84*</td>
</tr>
<tr>
<td>Reading</td>
<td>.24**</td>
<td>.21*</td>
<td>.09</td>
<td>.19*</td>
<td>.45**</td>
<td>.79**</td>
<td>.90**</td>
<td>.84*</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
a Cronbach’s alpha reliability coefficient
b Construct measured with single-item indicator, thus alpha can not be calculated.
Correlation is significant at the 0.01 level (2-tailed).

Correlation is significant at the 0.05 level (2-tailed).

Table 4.10 Partial Correlation Matrix Controlling for Socioeconomic Status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prof. Dev.</th>
<th>Goals</th>
<th>T&amp;L</th>
<th>IL</th>
<th>Acpress</th>
<th>Math</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goals</td>
<td>.85**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching and Learning</td>
<td>.77**</td>
<td>.80**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Index</td>
<td>.93**</td>
<td>.95**</td>
<td>.92**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Press</td>
<td>.55**</td>
<td>.53**</td>
<td>.47**</td>
<td>.55**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>.25**</td>
<td>.24**</td>
<td>.18*</td>
<td>.24**</td>
<td>.33**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>.19*</td>
<td>.16</td>
<td>.11</td>
<td>.16</td>
<td>.25**</td>
<td>.75**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The third hypothesis suggests that academic press has a positive effect on student achievement, specifically in reading and mathematics. This hypothesis is supported by the zero-order correlations. Academic press has a positive, strong relationship with mathematics (r = .49, p<.01) and reading (r = .45, p<.01) achievement. When controlling for SES, academic press and mathematics (partial r = .33, p<.01) and reading (partial r = .25, p<.01) continued to share a positive, significant relationship.

Analysis of Path Models for Student Achievement

Hypothesis one and four propose that there are indirect and direct effects on school achievement by instructional leadership behaviors. Hypothesis one states that instructional leadership behaviors have a positive, direct effect on student achievement specifically reading and mathematics. Hypothesis four predicts instructional leadership behaviors are indirectly related to student achievement, specifically reading and
mathematics, through academic press of the school. In order to test these hypotheses path models where constructed using structural equation modeling software, AMOS 4.0 (Arbuckle, 1999).

**Mathematics Achievement**

The bivariate correlations between mathematics achievement and instructional leadership showed initial support for the direct effect of instructional leadership on mathematics achievement. Socioeconomic status as measured by the proportion of students not participating in the federal free and reduced lunch program was included as a control variable. Because the bivariate correlations did not indicate that SES and instructional leadership were significantly related ($r = .11, p > .05$) that relationship was not considered in the path model. A path model analysis was conducted on instructional leadership having a direct effect on math achievement. Figure 4.1 presents this model. The standardized estimate when denoting a direct effect was not statistically, significant ($\beta = .06, p = .36$).

The nested model of mathematics achievement, denoting only an indirect relationship between instructional leadership and mathematics achievement via academic press was analyzed. Figure 4.2 presents this model. A chi-square difference test (see Table 4.10) determined that the nested model was a better fitting model. Thus, the most parsimonious model did not include the direct effect of the instructional leadership on math school achievement. Hence, hypothesis one was only partially supported i.e., instructional leadership was positively related to school math achievement.
**Figure 4.1 Full Model of Mathematics Achievement**

**SES** (Proportion of students not participating in the federal free and reduce lunch program)

-SES → Academic Press: 0.34
-SES → School Achievement in Mathematics: 0.69

**Instructional Leadership** (Professional Development, Goals, Teaching and Learning)

-Instructional Leadership → Academic Press: 0.52
-Instructional Leadership → School Achievement in Mathematics: 0.06

**Explained Variance of Math Achievement**: 0.62
**Explained Variance of Academic Press**: 0.39

**Chi-Square**: 1.871  **Degrees of Freedom**: 1  **P**: 0.17
Fail to reject the null hypothesis $\Sigma = \Sigma \Theta$

**RMESA**: 0.078  **AGFI**: 0.936  **IFI**: 0.996  **Hoelter Critical N**: 515

---

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Figure 4.2 Nested Model of School Achievement in Mathematics
**Reading Achievement**

The partial bivariate correlations controlling for SES did not show initial support for a direct relationship between reading achievement and instructional leadership. Hence, only the path model denoting an indirect relationship between instructional leadership and reading achievement will be discussed. Figure 4.3 illustrates this path model. Socioeconomic status as measured by the proportion of students not participating in the federal free and reduced lunch program was included as a control variable. Since the bivariate correlations did not indicate that SES and instructional leadership were significantly related ($r = .11\ p > .05$) that relationship was not considered in the path model.

![Image of Figure 4.3 Model of School Achievement in Reading](image-url)
Examinations of the component fit of the models were good. The parameter values estimated were all positive and significant at the $p<.01$ level (one-tailed test). The models of school achievement explained a substantial amount of the variance. The Nested Math Achievement model explained 62% of the variance in math achievement. The Reading Achievement model explained 64% of the variance.

Table 4.11 provides a summary of the measure of model fit and goodness of fit statistics for each of the models. Both the nested mathematics and reading path models satisfied all criteria across the different families of model fit indices. Non-significant chi-squares were calculated for each model indicating that the data fit well with the proposed model.

Hypothesis four postulated that instructional leadership behaviors were indirectly related to school achievement, specifically mathematics and reading, through academic press of the school. The path models’ component fit statistics showed support for this hypothesis. In both the reading and math models all parameters were significant. The standardized estimate between instructional leadership and academic press was high and significant ($\beta=.52$, $p<.01$). The standardized estimate between academic press and math achievement was significant ($\beta=.23$, $p<.01$). The standardized estimate between academic press and reading achievement was also significant ($\beta=.16$, $p<.01$).
<table>
<thead>
<tr>
<th>Measures of Model Fit</th>
<th>Model for Mathematics School Achievement (with direct and indirect relationship between IL and Math Achievement)</th>
<th>Nested Model for Mathematics School Achievement (only indirect relationship between IL and Math Achievement)</th>
<th>Model for Reading School Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square H₀ Σ = ΣΘ</td>
<td>$\chi^2 = 1.871 \text{ DF 1 } P = .171 \text{ Fail to reject the null hypothesis}$</td>
<td>$\chi^2 = 2.691 \text{ DF 2 } P = .26 \text{ Fail to reject null hypothesis}$</td>
<td>$\chi^2 = 2.03 \text{ DF 2 } P = .36 \text{ Fail to reject null hypothesis}$</td>
</tr>
<tr>
<td>Chi-Square Difference Test</td>
<td>$\chi^2$ difference: 2.691-1.871 = .820 Degrees of Freedom 2-1 = 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMSEA (Root mean square error of approximation) Parsimony test of fit</td>
<td>.078</td>
<td>.049</td>
<td>.010</td>
</tr>
<tr>
<td>AGFI (Adjusted Goodness of Fit Index)</td>
<td>.936</td>
<td>.954</td>
<td>.965</td>
</tr>
<tr>
<td>IFI (Incremental Fit Index)</td>
<td>.996</td>
<td>.997</td>
<td>1.000</td>
</tr>
<tr>
<td>Hoelter Critical N .01 index</td>
<td>515</td>
<td>497</td>
<td>658</td>
</tr>
<tr>
<td>Component Fit Statistics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explained Variance in School Achievement</td>
<td>62%</td>
<td>62%</td>
<td>64%</td>
</tr>
<tr>
<td>Explained Variance in Academic Press</td>
<td>39%</td>
<td>39%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Table 4.11 Summary of Model Fit Measures
Conclusion

This chapter articulates the analysis of the data for this study. It shows instructional leadership is composed of three highly correlated dimensions. The first dimension of instructional leadership is characterized by principal behaviors that promote school-wide professional development. Some examples of these behaviors include encouraging teachers to attend professional development activities that are aligned with school goals, furnishing useful professional materials and resources to teachers and providing for in-house professional development opportunities around instructional best practices.

The second dimension of instructional leadership is comprised of principal behaviors that described how the principal defines and communicates shared goals. For example, develops data-driven academic goals in collaboration with teachers, communicates the school’s academic goals to faculty, and develops school goals that promote high standards and expectations for all students.

The third dimension of instructional leadership is made up of behaviors that portray the principal as she monitors and provides feedback on the teaching and learning process. Some behaviors that are include are visiting the classroom to ensure classroom instruction aligns with school goals, working with students on academic tasks, and evaluating teachers to improve instructional practice.

Bivariate correlations and structural equation modeling were use to test the four hypotheses. All hypotheses, but one, were supported by the data. The data supported the conclusions that instructional leadership behaviors were positively related to academic
press of a school; academic press was positively related to school achievement; and instructional leadership was positively related to school mathematics and reading achievement indirectly through academic press. The data did not support the propositions instructional leadership was directly related to student achievement.
CHAPTER 5

Discussion of Results

The results of the current research are discussed in this chapter. It begins with a summary of the findings, and is followed by an in-depth discussion of the created instructional leadership measurement tool and the supported relationships that form the model of student achievement proposed in this study. The chapter concludes with the implications of the research.

Summary of Findings

The research of this study led to several significant findings that are summarized below and will be discussed in the next section.

1. Principal axis factor analyses performed on the sample data, in the pilot and in the current research, resulted in three, highly correlated factors of instructional leadership: promoting school-wide professional development, developing and communicating shared goals, and monitoring and providing feedback on the teaching and learning process. A second-order factor analysis supported the conclusion that all three dimensions measured a general variable known as instructional leadership.
2. Zero-order correlations and partial correlations, controlling for socioeconomic status (SES), supported the hypothesized relationships among instructional leadership behaviors and academic press. Instructional leadership behaviors, on all three factors, were positively related to academic press as demonstrated by the following correlations: promoting professional development ($r = .56$, $p<.01$; partial $r = .55$, $p<.01$), developing and communicating shared goals ($r = .54$, $p<.01$; partial $r = .53$, $p<.01$), and monitoring and providing feedback on the teaching and learning process ($r = .45$, $p<.01$; partial $r = .47$, $p<.01$). The overall instructional leadership index shares a positive significant relationship with academic press ($r = .55$, $p<.01$; partial $r = .55$, $p<.01$).

3. Zero-order correlations and partial correlations supported the hypothesized relationship between academic press and student achievement. Academic press was significantly correlated with student achievement (mathematics $r = .49$, $p<.01$, partial $r = .33$, $p<.01$; reading $r = .45$, $p<.01$, partial $r = .25$, $p<.01$).

4. Zero-order correlations showed a significant relationship between SES and the variables of academic press ($r = .39$, $p<.01$) and student achievement (mathematics $r = .76$, $p<.01$; reading $r = .79$, $p<.01$). On the contrary, SES was not significantly related to instructional leadership behaviors.

5. Zero correlations and partial correlations, controlling for SES, supported the relationships between instructional leadership behaviors and student achievement. In particular, instructional leadership behavior characterized by promoting school-wide professional development was correlated with achievement in mathematics ($r = .28$, $p<.01$; partial $r = .25$, $p<.01$) and reading ($r = .24$, $p<.01$; partial $r = .19$, $p<.01$).
p<.05); instructional leadership behavior characterized by developing and communicating shared goals was correlated with mathematics achievement (r = .26, p< .01; partial r = .24, p<.01); and instructional leadership behavior characterized by providing feedback on the teaching and learning process was positively correlated with mathematics achievement (partial r = .18, p<.05). The overall index score of instructional leadership was positively correlated with mathematics achievement (r = .24, p<.01; partial r = .24, p<.01).

6. A path analysis captured the relationships among instructional leadership, academic press, student achievement, and socioeconomic status. Instructional leadership is directly related to academic press (beta = .52, p<.05). The hypothesized, direct relationship between instructional leadership and student achievement was not supported. However, instructional leadership was indirectly related to student achievement through academic press (instructional leadership to academic press (beta = .52, p<.05); academic press to student achievement in mathematics (beta = .23, p<.05) and reading (beta = .16, p<.05)). Socioeconomic status was directly related to achievement in mathematics (beta = .68, p<.05) and reading (beta = .73, p<.05). Socioeconomic status was directly related to academic press (beta = .34, p<.05). Figure 5.1 shows the student achievement path model supported by the current study.
Discussion

This section begins with the conceptualization of the instructional leadership variable used in this study followed by an in-depth examination of the interrelationships among the variables of the study: instructional leadership, academic press, student achievement, and socioeconomic status.

Conceptualization of Instructional Leadership

The instructional leadership framework used in the current research was conceptualized by synthesizing three predominate models of instructional leadership, proposed by Hallinger and Murphy (1985), Murphy (1990) and Weber (1996), and

Hallinger and Murphy’s (1985) framework was created by amalgamating school effectiveness literature and qualitative data collected from 10 elementary schools. The framework served as a template for an appraisal instrument; The Principal Instructional Management Rating Scale. This framework offers a detailed view of instructional leadership behaviors. Hallinger and Murphy’s instructional leadership model (1985) consists of three dimensions: defines the mission, manages instructional program, and promotes school climate. Encompassed within these three dimensions are 11 specific job descriptors: framing school goals; communicating school goals; supervising and evaluating instruction; coordinating curriculum; monitoring student progress; protecting instructional time; promoting professional development; maintaining high visibility; providing incentives for teachers; enforcing academic standards; and providing incentives for students.

Murphy (1990) constructed his model from a synthesis of the effective schools, school improvement, staff development, and organizational change literature. Murphy’s model of instructional leadership (1990) has four dimensions: developing mission and goals; managing the educational production function; promoting an academic learning climate; and developing a supportive work environment. Each of these dimensions has specific roles or behaviors; there are sixteen behaviors in all. Murphy’s model of instructional leadership is comprehensive, but does not offer an empirical way of measuring instructional leadership.
Weber (1996) proposed a model of instructional leadership that addressed the diversity of school organizations, i.e., site-based management and shared leadership. Weber suggested that a point person in the school, either the principal or lead teacher, needs to be an advocate for teaching and learning. Weber’s model identified five essential domains of instructional leadership, regardless of hierarchical structure within the school. The domains include: defining the school’s mission; managing curriculum and instruction; promoting a positive learning climate; observing and improving instruction; and assessing the instructional program. Although this model incorporates research about shared leadership and empowerment of informal leaders, the model does not have empirical support.

Working from the premise that instructional leadership should increase the schools performance, Locke and Latham’s Goal-Setting Theory was used to guide the conceptualization of instructional leadership used in the current research. Locke and Latham (1984, 1990) postulated that defining and communicating challenging goals are a motivational force to increase performance toward goals. They also stressed the importance of feedback in maximizing the motivational force of the goals. Additionally, individuals may need resources or professional development opportunities to assist in the development of specific task strategies to accomplish the goals. Initiating the goal-setting theory into practice aligns very well with the amalgamation of similarities extracted from the instructional leadership models above.

The model of instructional leadership conceptualized for the current research combines the similarities among the three models above, as well as, integrates Locke and Latham’s Goal-Setting Theory (1984, 1990) as an underlying theoretical foundation.
Thus, the instructional leadership framework used in this study has three highly, correlated dimensions: defining and communicating goals, monitoring and providing feedback on the teaching and learning process, and promoting school-wide professional development.

The proposed instructional leadership model of this study has empirical support. The pilot and the full study data showed a reliable and valid conceptualization of instructional leadership. Factor analysis demonstrated three highly, correlated dimensions of instructional leadership. A second-order factor analysis supported the conclusion that the three dimensions measured one general variable known as instructional leadership. Specific details of the measurement of instructional leadership are discussed next.

**Measurement of Instructional Leadership**

School effectiveness research supports the need for school leaders to exhibit strong instructional leadership (Edmonds, 1979; Brookover and Lezotte, 1977; Purkey and Smith, 1983; Murphy, 1990; Chripeels, 1992; Weber, 1996; Sheppard, 1996; Blasé and Blasé, 1998). However, few empirically tested measures are available to determine when a principal is demonstrating instructional leadership and having an impact on the school organization.

For instance, one empirically tested instrument that does exist is Hallinger and Murphy’s Principal Instructional Management Rating Scale (1985). This scale is composed of 71 items across 11 sections or job descriptors of the instrument. The 11 principal job descriptors include: framing the school goals, communicating the school goals, supervising and evaluating instruction, coordinating the curriculum, monitoring student progress, protecting instructional time, maintaining high visibility, providing
incentives for teachers, promoting professional development, developing and enforcing academic standards, and providing incentives and learning. However, this rating scale is far too cumbersome to use in the current research and lacks the psychometric properties needed.

In order to measure the instructional leadership construct, it was necessary to create a reliable, valid, and parsimonious instrument. Working from Hallinger & Murphy’s (1985) theoretical dimensions, a new, more concise instrument was created (see chapter 3 for a thorough description of the development process and pilot results).

The pilot and current research showed support for a reliable and valid instrument of instructional leadership. Principal axis factoring of the sample data, both in the pilot and full study, supported that instructional leadership was composed of three highly correlated reliable factors: promoting school-wide professional development (alpha .94), developing and communicating shared goals (alpha .97), and monitoring and providing feedback on the teaching and learning process (alpha .93). A second-order factor analysis demonstrated that the three factors were dimensions of one underlying general factor known as instructional leadership (alpha .92).

To address issues of multicollinearity among the three factors, an instructional leadership index was created by computing an average score for each factor and then adding the average of each factor together. The instructional leadership index provided a reliable, valid, and parsimonious measure of instructional leadership known as the Instructional Leadership Inventory.

A critical analysis of the Instructional Leadership Inventory demonstrates how Hallinger and Murphy’s (1985) 11 principal job descriptors were pared down and
measured by the new instrument. All but one of the job descriptors are represented in the more concise instrument. The Instructional Leadership Inventory is composed of 23 items representing the three highly correlated dimensions instead of the 71 items representing the 11 job descriptors. Table 5.1 shows comparisons between the two instruments.

The Instructional Leadership Inventory should be seen as a work in progress. To date, the empirical tests of the instrument have been encouraging. Two separate tests of versions of the instrument have been quite consistent. Three highly interrelated factors have emerged in spite of attempts to force independent dimensions. Moreover, the three dimensions of leadership are clearly aspects of the more general construct of instructional leadership. One predicted behavior of instructional leadership, protecting instructional time, failed to emerge as an aspect of principal behavior.

Although the factor structure of the instrument seems reasonably stable, the measure should be tested in other school organizations and in larger samples. Does the factor structure hold in middle schools and high schools? These are two questions that merit further investigation. The work on the instrument to this point has been largely exploratory in spite of the fact that a conceptual framework guided the development of the measure. Further work should refine and elaborate the measure and subject the measure to confirmatory factor analysis.
<table>
<thead>
<tr>
<th>Job Descriptor</th>
<th>Instructional Leadership Dimension</th>
<th>Item(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing the School Goals</td>
<td>Defines and Communicates Shared Goals</td>
<td>• Develops data-driven academic goals in collaboration with teachers</td>
</tr>
<tr>
<td>Communicating the School Goals</td>
<td>Defines and Communicates Shared Goals</td>
<td>• Communicates the school’s academic goals in collaboration with teachers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Uses data on student achievement to guide faculty discussions on the instructional program</td>
</tr>
<tr>
<td>Supervising and Evaluating Instruction</td>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>• Evaluates teachers to improve instructional practice</td>
</tr>
<tr>
<td>Coordinating the Curriculum</td>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>• Monitors classroom practices for alignment to district curriculum</td>
</tr>
<tr>
<td>Monitoring Student Progress</td>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>• Works with students on academic tasks</td>
</tr>
<tr>
<td>Protecting Instructional Time</td>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>No items in the final instrument</td>
</tr>
<tr>
<td>Maintaining High Visibility</td>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>• Stays in the office all day *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* reverse-scored item</td>
</tr>
<tr>
<td>Providing Incentives for Teachers</td>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>• Provides private feedback of teacher effort</td>
</tr>
<tr>
<td>Promoting Professional Development</td>
<td>Promotes School Wide Professional Development</td>
<td>• Plans professional development around teacher needs and wants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Supports individualized professional development plans</td>
</tr>
<tr>
<td>Developing and Enforcing Academic Standards</td>
<td>Defines and Communicates Shared Goals</td>
<td>• Develops school goals that promote high standards and expectations for all students</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sets high but achievable standards for all students</td>
</tr>
<tr>
<td>Providing Incentives and Learning</td>
<td>Monitors and Provides Feedback on the Teaching and Learning Process</td>
<td>• Provides private feedback of student effort</td>
</tr>
</tbody>
</table>

Table 5.1 Comparison of Principal Instructional Management Rating Scale and the Instructional Leadership Inventory Created in This Research
Instructional Leadership and Student Achievement

Although it was hypothesized that instructional leadership had a direct effect on student achievement, the data did not support this hypothesis. Hallinger and Heck suggest that “although it is theoretically possible that principals do exert some direct effect on students’ learning, the linkage between principal leadership and student learning (as measured by school outcomes) is inextricably tied to the actions of others in the school” (p.24, 1996). Principals generally do not work directly with students; with this being said it is understandable why the data did not support a direct relationship. However, one longitudinal study has shown that strong leadership may directly impact student achievement (Andrews & Soders, 1987). The bivariate correlations in this study, also indicated that instructional leadership has a significant positive relationship with student achievement, specifically mathematics. Thus, leading to the question, does the direct effects of instructional leadership need longitudinal studies to determine its significance?

Academic Press and Student Achievement

Academic press refers to “the extent to which the school is driven by a quest for academic excellence. High but achievable academic goals are set for students, the learning environment is orderly and serious, teachers believe in their students to achieve, and students work hard and respect those who do well academically” (Hoy & Hannum, 1997, p.294). The findings of this research support earlier studies that climate variables, such as academic press, have a positive significant effect on student achievement even controlling for socioeconomic status (Goddard, Sweetland, & Hoy, 2000; Hoy and Sabo, 1998; Hoy, Hannum, and Tschanen-Moran, 1998). Specifically, academic press
significantly had a positive correlation with mathematics (partial r =.33, p<.01) and reading achievement (partial r =.25, p<.01) controlling for SES. Using structural equation modeling, it was also found that academic press had a positive, significant direct effect on mathematics (beta .20, p<.05) and reading achievement (beta .16, p<.05).

It makes theoretical sense that schools that focus on academic press will have higher levels of student achievement. A school climate characterized by high levels of academic press provides clearly articulated high expectations for all students and teachers and provides an orderly and safe environment where students can concentrate on academics and teachers have instructional time free from discipline and managerial distractions. Additionally, the principal has considerable influence with superiors which leads to significant resource support for classroom materials. These climate characteristics are consistent with the descriptions of schools that are considered to be effective from the school effectiveness literature (Edmonds, 1979a,b; Pukey & Smith, 1983; Brookover & Lezotte, 1979).

*Instructional Leadership, Academic Press and Student Achievement*

Bossert and colleagues (1982) argue that the principal effect on student learning is geared toward the leader’s role in shaping the school’s instructional climate and organization. The current research supported the conclusion that instructional leadership indirectly affects student achievement through academic press. Instructional leadership provided an antecedent for academic press to affect student achievement. The path model of student achievement (mathematics and reading), supported in this study, showed a clear, significant strong relationship between instructional leadership and academic press (beta = .52, p< .05).
This linkage between instructional leadership and academic press is quite important. Academic press has been shown to impact student achievement at middle schools (Hoy, Hannum, & Tschannen-Moran, 1998), high schools (Hoy, Tarter, Kottkamp, 1991), urban elementary schools (Goddard, Sweetland, Hoy, 2000) and now elementary schools in suburban and rural areas. Ways to foster a climate of high academic press is of prime importance especially in this age of accountability. Knowing that instructional leadership and academic press share a strong relationship, it is essential that principals demonstrate behaviors associated with instructional leadership.

The partial bivariate correlations indicate that all three dimensions of instructional leadership share a strong, positive relationship with academic press: promoting school-wide professional development and academic press (partial r = .55, p<.01), developing and communicating shared goals and academic press (partial r = .53, p<.01), and monitoring and providing feedback on the teaching and learning process (partial r = .47, p<.01). These strong correlations, controlling for SES, demonstrate that schools with principals which actively engage in instructional leadership behaviors can create climates with high levels of academic press and thus, affect student achievement.

Hoy, Hannum, and Tshannen-Moran suggest “the impact of a school’s climate is relatively enduring. The influence of climate on achievement continues over time. The climate patterns that predict high student achievement in the first year also predict school achievement levels two years later” (1998, p.35). Said in another way, if principals want a sustained, scientifically researched way of affecting student achievement, one good strategy is to focus efforts on establishing a climate characterized by high levels of academic press.
Socioeconomic Status

Coleman’s (1966) research and Jenck’s (1972) follow-up study illustrate the significant impact socioeconomic status has on student achievement. In the current study socioeconomic status was used as a control variable impacting the full model. A discussion of each relationship is presented below.

Socioeconomic Status and Instructional Leadership

The hypothesized path model indicated that SES directly affected instructional leadership. This proposed relationship has been supported in research and the instructional leadership literature (Rowan and Denk, 1984; Hallinger and Murphy, 1986; Hallinger, Bickman, and Davis, 1996). However, analysis of the bivariate correlations from this study did not support the relationship between socioeconomic status and instructional leadership ($r = .11$, $p> .05$). It may be that today’s educational world is vastly different. No Child Left Behind (ESEA, 2002) and Ohio’s Senate Bill 1 (ODE, 2001) have legislated an assessment system that holds principals and teachers accountable for all students, regardless of their socioeconomic status, perhaps muting the effect socioeconomic status might have had in years past on instructional leadership.

Another aspect of Senate Bill 1 (ODE, 2001), related to socioeconomic status and instructional leadership, is the mandate for every school to create and implement a continuous improvement plan (CIP). This plan helps principals both to develop and communicate shared school goals and to align professional development plans to district and school goals. Both, behaviors of instructional leadership, enable the CIP to become a
vehicle for instructional leadership to be exercised regardless of the school’s urban, suburban, or rural demographics.

*Socioeconomic Status and Student Achievement*

As expected, socioeconomic status had both a direct and indirect effect on student achievement. The current research supported the argument that socioeconomic status has a direct effect (mathematics beta = .68, p<.05; reading = beta .73, p<.05) and an indirect effect, through academic press (beta = .34, p<.05), on student achievement. The effects of socioeconomic status on student achievement have been well-documented (Coleman, 1966; Jencks, 1972). Students who come from homes with low socioeconomic status may not receive early literacy experiences or other experiences that establish the prior knowledge needed to aid in reading comprehension and problem-solving skills.

It is also likely that schools in low socioeconomic communities have less of a press for academics. Academic press is comprised of three dimensions: resource support, principal influence, and academic emphasis. Schools in communities with prevalent low SES seem more likely to have fewer resources and materials and have less confidence and expectations in students to succeed at high levels. Principals may have little to no influence over district superintendents that are fiscally restricted.
Implications

The last section of this chapter presents the implications of the study. Theoretical, practical, and research implications will be discussed. The section ends with questions for future research.

Theoretical Implications

Leadership theories, such as trait, behavior, contingency, charismatic, and transformational, provide an overview of instructional leadership. Instructional leadership puts into practice many of these theories into an educational organization. For instance, effective instructional leaders demonstrate behavior theory as they initiate structure through behaviors that develop and communicate shared goals with staff, students and community. Instructional leaders provide consideration for staff as they monitor and provide feedback on the teaching and learning process, as well as, working closely with staff when promoting school-wide professional development. In addition, instructional leaders possess specific traits and behaviors, such as charisma, which can be applied in different situations and environments. The very essence of instructional leadership is to transform a school organization into an environment where teachers and students may reach their full potential.

The current research furthers instructional leadership theory by proposing a new, concise model of instructional leadership. The new model was developed by synthesizing three predominate models of instructional leadership and was undergirded by sound goal-setting theory.
The new instructional leadership framework consists of three, highly correlated dimensions: developing and communicating shared goals, monitoring and providing feedback on the teaching and learning process, and promoting school-wide professional development.

One instructional leadership behavior, protecting instructional time, did not emerge as a consistent aspect within the instructional leadership model used in the study. This aspect was considered an important principal behavior by Hallinger and Murphy (1985) and Murphy (1990). Protecting instructional time did not emerge because it may be an imbedded aspect within each of the three dimensions of instructional leadership. For instance, an instructional leader may protect instructional time through the academic goals he develops and communicates.

The instructional leadership model developed in this research was shown to be an antecedent for creating an elementary school climate characterized by academic press. This important finding may demonstrate the dynamic between instructional leadership and organizational properties that effect student achievement at the elementary level. For instance, the student achievement path model in the current research supported the indirect effect of instructional leadership on student achievement through academic press.

Another theoretical implication for instruction leadership may be an additional aspect that includes principal behaviors around the use of data and data analysis. The standards movement has developed an atmosphere of accountability for all educators. Specifically, legislators, superintendents, and parents are requesting evidence to support effective leadership and instruction is taking place within the schools. The use of data-based decision-making is important across all dimensions of instructional leadership.
Principals need to frame school goals around data, use data to provide feedback to teachers on the teaching and learning process, and use data to develop professional development plans for staff.

*Practical Implications*

In today’s educational milieu of standards and “No Child Left Behind,” there is an increased emphasis on holding schools accountable for all students achieving at high levels. This accountability is filtering down to the individual school and classroom levels (Sanders, 1998). Leading a school to meet these rigorous standards is becoming an imperative, not an exception. Principals need concrete activities they can implement to foster a climate for achievement to flourish. This study provides principals with several suggestions for implementing instructional leadership behaviors and cultivating a climate of academic press.

Principals may start, in collaboration with staff, students, and community, to develop and communicate shared goals (Murphy, 1990). These goals need to be data-driven, demonstrate high expectations for all students and provide a focus for all stakeholders. According to Locke and Latham’s goal-setting theory (1984, 1990), defining challenging goals help motivate individuals to increase performance toward those goals. Locke and Latham (1984,1990) also suggest that feedback is crucial to maximize the motivating force of the goals.

To provide this feedback, the principal needs to monitor and provide feedback about the teaching and learning process. To accomplish this, the principal should be visible throughout the school, should talk with students and teachers about academics and progress toward goals, and should visit classrooms to ensure alignment of instruction to
the school’s academic goals. Blasé & Blasé (1998, 1999a) research indicates that teachers who have principals that monitor and provide feedback about the teaching and learning process are more reflective, focused on the instructional process, motivated, and confident.

Through this practice of monitoring the teaching and learning process, principals may work with teachers to identify professional development needs. This study indicated that principals who promote professional development impact the academic press of the school and have a positive effect on student’s reading and mathematics achievement. Additionally, Sheppard (1996) and Chrispeels (1992) found that leaders who promote professional development build a culture of collaboration and learning that also fosters innovative instructional strategies through increased use of new resources.

Practicing the three dimensions of instructional leadership will provide a good foundation for creating a climate that presses for academic rigor. However, principals will also need to provide resource support, influence with superiors, and a sustained emphasis on academics to sustain a climate conducive to academic press.

Creating a climate characterized by high levels of academic press is pivotal in student achievement of high standards. Principals can foster this academic press by providing resource support. This means ensuring, through monitoring and informal discussions, that teachers have materials and classroom supplies to teach the curriculum effectively. This may also mean that the principal may need to maintain or to “make inroads” with his superiors to ensure financial support. Encompassing all these actions is the principal’s focus on academics and raising the bar for all students.
A school’s academic press should be a main consideration in all decision-making and policy-making at the school. An overriding theme should be that academic excellence is expected and respected.

*Research Implications*

The current study supported previous research about academic press. Academic press is a climate variable that is both under the control of the school and that can be accentuated to enhance student achievement (Hoy, Tarter, Kottkamp, 1991; Hoy, Hannum, and Tschannen-Moran, 1998; Goddard, Sweetland, and Hoy, 2000). The current study furthered the research about principal leadership by offering a valid, reliable, and parsimonious instrument for measuring instructional leadership: The Instructional Leadership Inventory. The student achievement model (mathematics and reading) hypothesized in this study was supported through the use of structural equation modeling; hence, it suggests a path for practitioners to follow to enhance student achievement. The current study gave rise to many questions for future research:

1. To what extent will instructional leadership behaviors have a positive, direct effect on other organizational properties that improve student achievement, such as faculty trust, trust in parents, and collective efficacy?
2. To what extent can leadership training programs positively affect the instructional leadership behaviors of future principals?
3. Under what conditions are instructional leadership behaviors affected by the SES of the school?
4. To what extent will longitudinal studies support a positive, direct effect of instructional leadership on student achievement? For example, is instructional leadership related to value added outcomes?

5. Do instructional leadership behaviors differ depending on the school level, that is, high schools, middle schools, and elementary schools?

6. To what extent is instructional leadership behaviors hindered by large, urban bureaucracy?

7. What are other antecedent variables that are related to academic press?

8. To what extent can a new principal (to a building) affect the academic press of a school?

9. How long does it take for a principal to establish academic press of a school that makes an impact on student achievement?

10. What is the relationship between academic press, trust, and teacher efficacy?

11. To what extent will annual testing (mandated by No Child Left Behind) of students grade 3-8 in reading and mathematics have an impact on the academic press of elementary and middle schools?

12. To what extent will the adoption of state standards in reading, mathematics, science, and social studies have on instructional leadership and academic press?

These are only a few of the questions generated by this research. The current study is a beginning not an end. It is a modest step trying to connect the leadership behavior of the principal with the achievement of students.
Conclusion

Schools are under increased scrutiny to educate all students to high levels of achievement. The call for accountability by federal and state legislation is apparent in schools across the United States. Principals and teachers are under extreme pressure to raise student achievement scores. Nonetheless, the findings of this research suggest that principals can make a difference in meeting these challenges by exhibiting behaviors consistent with instructional leadership and by developing a climate that demonstrates academic press.

In sum, this study adds to the understanding of the social dynamics within the school and its effect on student achievement. Principals do indirectly impact student learning; therefore, it is important that principals practice instructional leadership and understand its effect on the academic press of a school’s climate. Only with informed practice will we be able to meet the needs and challenges associated with leaving “no child left behind.”
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APPENDIX A

A STUDY OF SOCIAL PROCESSES IN SCHOOLS

Research Prospectus

IRB Protocol Number 00E0009

Wayne K. Hoy
Jana Alig-Mielcarek
Mike Nicholson
James Sinden

The Ohio State University

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I. **Problem Statement**

The purpose of this research is to explore the relationships between organizational health, school structure, principal leadership, and faculty trust. Additionally, we will investigate the extent to which organizational climate, leadership, and structure are related to feelings of efficacy among the faculty and student achievement. This study makes important theoretical advances in the measurement of, and interrelationships among, these constructs, as well as important contributions to our knowledge of school effectiveness and equity. This study is a replication and follow-up to a research project completed in 50 elementary schools in Columbus.

II. **Procedures**

**A. Design:** This study is a quantitative investigation using three survey instruments that have been developed as a part of this project. In addition, principals will be asked to respond to a principal questionnaire. Data will be collected from a diverse sample of schools in Ohio representing urban, suburban, and rural districts throughout the state.

**B. Data and Collection:** Once approval has been received from building principals, we will request 15 minutes of time at a regularly scheduled faculty meeting or early release professional development date during November through April, 2002 to administer the surveys to faculty. The researcher administering the surveys will explain the purpose of the study, assure confidentiality, and request that teachers complete the surveys in as candid a manner as possible. Faculty will be advised that they do not need to respond to any item that they are not comfortable answering. There are three alternating forms of the questionnaire. One-third of the teachers present will respond to each. Splitting the faculty into three groups insures that the data collection will be done in 15 minutes. The responses to the questionnaires will be anonymous; no identifying marks will indicate which teachers have completed which questionnaires. Questions concerning demographic information about the school, such as number of students, racial and socioeconomic characteristics of the students (but not the school's name or address), will be included for the principal to complete along with a principal questionnaire. A sample of one of the questionnaires is attached.
C. Data Analysis: We are interested in the collective; the patterns, practices, and processes of interpersonal relationships within a school. Data on structure, climate, leadership, efficacy, and achievement will thus be aggregated at the school level. Our interest is in the relationships between the constructs. Individual school scores in most cases will not be calculated. If they were calculated, results will be kept strictly confidential.

D. Time Schedule: We intend to begin data collection in November 2001. Faculty questionnaires will be administered in November through April. Data analysis will begin in May. A general report of the results will be available in September.

III. Reporting and Dissemination.

This research project will provide the foundation for several doctoral student dissertations in the College of Education at The Ohio State University. The dissertations will focus on the relationships between leadership and efficacy as well as to student achievement. Executive summaries of the results will be provided to schools for dissemination to the professional staff. Additionally, the data obtained in this study will also be used to produce manuscripts for publication in scholarly journals. The findings of these studies will also be presented at professional meetings. The Human Subjects Institutional Review Board at The Ohio State University has reviewed the research application and has given approval to conduct research.

IV. Personnel

This study is being conducted by Dr. Wayne K. Hoy, Fawcett Professor of Educational Administration at The Ohio State University. Jana Alig-Mielcarek, Mike Nicholson and Jim Sinden will assist with data collection and analysis. Dr. Hoy and the other researchers working on this project can be reached at 614-292-4672. The study will involve the faculty members and principals of over 100 schools in Ohio.

V. Implications and Benefits

The problems schools face are difficult and complex. This is a large study with important implications as schools seek to adapt to changing sets of expectations in a diverse and rapidly changing world. This research concerns the quality of the social relationships in schools, and attempts to identify factors related to well-functioning
schools. This study contributes to an understanding of the dynamics of school climate, structure, leadership, and efficacy in schools and the implications these have for student achievement. It is hoped that greater understanding of the human dynamics in schools will lead to better training of future administrators and the cultivation of greater productivity in schools.
APPENDIX B

Directions For Administering Social Processes Surveys

Please distribute the questionnaires and pencils. Give ONE questionnaire to each teacher. There are three separate questionnaires, but each teacher should complete only one. Completing these questionnaires should only take about ten minutes. The principal will also be asked to complete a questionnaire while the teachers are completing theirs.

Please read the following statement to the faculty:

The surveys you are about to complete are part of a study of elementary schools in Ohio. This research concerns the quality of the social relationships in schools and how they are related to each other. The study attempts to identify factors related to well-functioning schools. It is hoped that greater understanding of the human dynamics in schools will lead to better training of teachers and administrators and the cultivation of greater productivity in schools.

This research is being conducted through the School of Education at The Ohio State University. All teachers’ responses are anonymous. Data gathered about the school will be completely confidential. Data will be compiled at the school level and will be used for a statistical analysis of the relationships between the variables. We are not interested in ranking or rating individual schools.

Your participation is voluntary. You may decline to complete the survey or you may skip any item that you feel uncomfortable answering. Your refusal to participate will have no negative repercussion from the school. The purpose of this research is to gather information regarding the perceptions of educators about their schools. There are no correct or incorrect answers, the researchers are interested only in your frank opinion.

Several different forms of the questionnaire have been distributed, about a third of the faculty have received each form. Each teacher needs to complete only one form.

Your time, insights, and perceptions are valuable resources. Thank you for sharing them with us! If you have any questions, you may reach Dr. Wayne K. Hoy at The Ohio State University.

When the teachers have all the completed questionnaires, please return them to us. Thank you for your participation. Please feel free to call if you have any questions. Jim Sinden, Mike Nicholson, and Jana Alig-Mielcarek (614-292-4672).
**APPENDIX C**

**Instructional Leadership Inventory**

23 Items

<table>
<thead>
<tr>
<th>Promotes School-Wide Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Encourages teachers to attend professional development activities that are aligned to school goals</td>
</tr>
<tr>
<td>• Provides for in-house professional development opportunities around instructional best practices</td>
</tr>
<tr>
<td>• Plans professional development around teacher needs and wants</td>
</tr>
<tr>
<td>• Supports individualized professional development plan</td>
</tr>
<tr>
<td>• Plans professional development in-service with teachers</td>
</tr>
<tr>
<td>• Furnishes useful professional materials and resources to teachers</td>
</tr>
<tr>
<td>• Schedules time on in-service for collaboration among teachers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Defines and Communicates Shared Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Uses data on student achievement to guide faculty discussions on the instructional program</td>
</tr>
<tr>
<td>• Encourages teachers to use data analysis of student academic progress</td>
</tr>
<tr>
<td>• Develops data-driven academic goals in collaboration with teachers</td>
</tr>
<tr>
<td>• Communicates the school’s academic goals to faculty</td>
</tr>
<tr>
<td>• Works with teachers to interpret assessment data for instructional implications</td>
</tr>
<tr>
<td>• Uses school goals when making academic decisions</td>
</tr>
<tr>
<td>• Develops school goals that promote high standards and expectations for all students</td>
</tr>
<tr>
<td>• Sets high but achievable standards for all students</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitors and Provides Feedback on the Teaching and Learning Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Visits the classroom to ensure classroom instruction aligns with school goals</td>
</tr>
<tr>
<td>• Monitors classroom practices for alignment to district curriculum</td>
</tr>
<tr>
<td>• Works with students on academic tasks</td>
</tr>
<tr>
<td>• Stays in the office all day {Reversed score}</td>
</tr>
<tr>
<td>• Observes teachers for professional development instead of evaluation</td>
</tr>
<tr>
<td>• Evaluates teachers to improve instructional practice</td>
</tr>
<tr>
<td>• Provides private feedback of teacher effort</td>
</tr>
<tr>
<td>• Provides private feedback of student effort</td>
</tr>
</tbody>
</table>