THE RELATIONSHIP OF SUPERORDINATE AND SUBORDINATE GENDER TO THE PERCEPTIONS OF LEADERSHIP BEHAVIORS OF FEMALE SECONDARY PRINCIPALS

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ABSTRACT

The purpose of this study was to investigate the perceptions of teachers and supervisors toward the principal leadership behaviors of female secondary principals in Ohio. Principal self-perceptions were also included to complete the study. The literature shows that women continue to be underrepresented in a field in which the majority of professionals are women, therefore the reasons for underrepresentation warrant investigation. Although women are beginning to move into such ranks more frequently, line administrative positions continue to be dominated by males, and few women hold the positions of high school principal and school district superintendent, positions which continue to be particularly resistant to the advancement of females.

Randomly selected school districts in Ohio were involved in this investigation, the participants of which completed a copy of Philip Hallinger's Principal Instructional Management Rating Scale (PIMRS), a scale which afforded the opportunity to compare the perceptions of superordinates, principals, and subordinates. The results indicated significant differences between principal gender and the responses of others on most of the subscales of the PIMRS. The mean subscale results were much higher for female principals than for male principals as well.

The conclusions of this study indicate that there is significant difference in perceptions of principal leadership behavior regarding gender. Principals also judge their own leadership behavior significantly differently based on gender.

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Finally, I wish to dedicate the completion of this work to my mother--Margaret Howe--who always believed in me, and knew she would some day refer to her eldest daughter as a doctor.

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CHAPTER I

THE PROBLEM

Introduction

No one person is more important to the climate and culture of the school than the building principal. Organizational climate is critical to education, and little shapes our behavior more than our perception of climate, which is dependent on the behavior and skills of the leader (Conrath, 1987). One of the primary differences between effective and ineffective schools is the principal (Swoboda & Vanderbosch, 1986). Effective principals make a conscious choice for leadership, recognizing that leadership options, participative or autocratic, represent alternatives which produce different organizational cultures. A critical factor in schools is whether teachers perceive the principal to be an effective instructional leader (Lee, Dedrick, & Smith, 1991), a term defined by Andrews and Basom (1990) as a person possessing behavior that is highly connected to positive growth in students' academic performance.

The continued absence of females from line administrative positions (building principalships and district superintendencies) in the nation's schools (American Association of School Administrators, 1992; National Center for Education Statistics, 1994) and the persistent barriers to their advancement in such positions (Edson, 1988; Shakeshaft, 1987) have been well documented. Research has indicated that women want to be administrators and are preparing themselves for such positions (Edson, 1988; Pavan, 1985). Although women are

beginning to move into such ranks more frequently (Mertz & McNeely, 1990a), line administrative positions continue to be dominated by males, and few women hold the positions of high school principal or school district superintendent. Jones and Montenegro (1985), as well as Mertz and McNeely (1990a), found these positions to be particularly resistant to the advancement of females, resulting in disproportionately few females serving as high school principals and district superintendents. As of June, 1993, female representation was only 16.0% in the high school principalship and 7.1% in the superintendency, far behind the percentage of females in the teaching ranks in general (NCES, 1994; Swaboda & Vanderbosch, 1986).

A significant factor impacting the principal's ability to effect change as an instructional leader is the set of perceptions, of teachers as well as superintendents, about the principal's role. Batsis (1987) found that leadership characteristics of vision, presence, communication, expectation, and technical knowledge are important in shaping the climate of the school. Rallis and Highsmith (1986) discovered that a sense of vision, an ability to clearly enunciate expectations, skill in building a series of two-way communication channels, and high visibility were important factors in the perception and eventual realization of leadership capabilities.

As the instructional leader, the principal has the responsibility of seeking, modeling, shaping, developing, rewarding and institutionalizing norms of collegiality and mutual respect while fostering professional development and shared ownership (Barth, 1990). Teachers' views of the principal have a significant effect on their attitudes toward the workplace (Lee, Dedrick, & Smith,

1991). The teachers' positive evaluation of the principal's leadership contributes to the teachers' efficacy and sense of satisfaction (Lee, Dedrick, & Smith, 1991). Both male and female teachers are less inclined to accept the authority of a female principal (Nieva & Gutek, 1982; Shakeshaft, 1987), and men not only find it particularly hard to work for females but are even prejudiced against female administrators (Cioci, Lee, & Smith, 1991; Ortiz & Marshall, 1988). Cioci, Lee, and Smith (1991) found that male and female teachers experience different levels of empowerment depending on whether they work with a female or male principal. Women were found to feel greater empowerment working for female principals; men were found to feel greater empowerment working for male principals. Chen and Addi (1992) found that perceptions of teachers are significantly related to the principal's gender.

The Statement of the Problem

Efforts to define and assess instructional leadership have received increasing attention (Ahadi, Scott, & Krug, 1990). Early attempts to understand how principals affect the instructional process first focused on various structural characteristics of the environment or school setting and later on personal characteristics of the principal. The perceptions of all participants in school settings regarding the effectiveness of the leader can shape the school climate. Pace, Hartley, and Davenport (1992) determined that future research should include superordinate and subordinate perceptions to assess leader characteristics and behaviors. Although principal self-reports and supervisory

ratings have been used, it would appear that the use of teacher ratings of instructional leadership have also become an effective method (Ahadi, Scott, & Krug, 1990). The gender of participants influences what is communicated, and how the communication proceeds. Gender and gender expectations may partially determine how supervisors and others perceive behaviors (Shakeshaft, 1989b).

The purpose of this study was to investigate the perceptions of teachers and supervisors toward the principal leadership characteristics of female secondary principals in Ohio. Principal self-perceptions were also included to complete the study. Teacher ratings are important because they correlate with school productivity (Ahadi, Scott, & Krug, 1990), representing a valid diagnostic appraisal of the school's level of functioning. Several researchers have studied the importance of teacher ratings of principals, among them Hallinger and Murphy (1987) and Short and Spencer (1989). Teacher ratings can be prescriptive in the sense that they can provide valid diagnostic appraisal (Ahadi, Scott, & Krug, 1990). Others' ratings serve as a "reality check" on self-appraisals.

Self-perception is also an important variable in the determination of leadership behavior (Cimperman, 1986). Hersey and Blanchard (1982) write that self-perception is one part of the leadership event, the other being the perception of others. The value of examining self-perceptions lies in the humanistic-social-psychological orientation to human behavior which holds that behavior of an individual is consistent with his or her concept of self (Cimperman, 1986). Self-ratings of managerial performance hold promise as a means for expanding the scope of research on effective leadership (Heneman, 1974). After examination of

self, examination by others should follow (Crates, 1992). Leaders ultimately encounter success or failure during the myriad of exchanges they have with followers and other leaders. Therefore, both of these groups are critical to leadership appraisal (Gougeon, 1991a). Learning how to communicate with subordinates and superordinates provides principals with a valuable leadership tool.

In view of the literature cited regarding gender, communication style, numbers of female administrators, and prospects for women, it was hypothesized that same-gender pairings would result in perceptions of greater effectiveness, and cross-gender pairings would result in perceptions of lesser effectiveness. Interactions between the following pairings were analyzed: superintendent-principal (both same-gender and cross-gender) and teacher-principal (both same-gender and cross-gender). To study leadership behaviors, the appropriate form of the Principal Instructional Management Rating Scale (PIMRS), developed by Hallinger in 1983, was completed by each participant. The PIMRS examines instructional leadership within the dimensions of defining a school mission, managing the instructional program, and promoting a positive school learning climate.

In a meta-analysis of dissertations on educational administration written during a thirty-year period, Grady and O'Connell (1993), found that women had more education, completed more advanced degrees, and acquired more professional certificates than their male counterparts. Women had more teaching experience before entering administration, were older, and preferred teaching as their first career choice. Of the 179 dissertations examined, only five

studied high school principals, and only ten were conducted on women administrators in general. The suggestions raised by Grady and O'Connell's study, as well as by others (Crates, 1992; Pavlicko, 1985), included further analysis of female secondary principals from the perspectives of behavior, attitude, style, and career path.

Women are underrepresented in a field in which the majority of professionals are women (Schmuck, Charters, & Carlson, 1981). Traditional leadership has been defined from the view of the white males who constitute the majority of the respondents in surveys conducted to date. Jacobson (1989), reporting on data from the *Executive Educator/State University of New York Annual Survey of School Administrators*, found that of 1,509 administrators surveyed, only 254 respondents (16.8%) were women. A total of 425 superintendents responded to the survey, represented by 21 (5%) women. Of the 254 women who responded, 51.6% were elementary principals and 5.5% were secondary principals. Considering that a secondary school principalship is a more common path to the superintendency than is an elementary school principalship, it would appear the male/female balance in the highest levels of school administration is unlikely to shift markedly in the near future.

Certain expected and desired behaviors of principals have been documented repeatedly (Rosenholtz, 1985; Rutherford, 1985). These include emphasis on achievement for both students and teachers, defining the mission for the school which is then translated into specific expectations and goals, intervention to help teachers improve teaching, coordination and integration of the instructional programs with overall school goals, and promoting a positive

school climate. The limited research completed on teachers' perceptions of effective leadership suggests that teachers' opinions of what constitutes effective leadership are very similar to this list (Cioci, Lee, & Smith, 1991; Crates, 1992).

Perceptions of leadership vary not only among schools, but also within schools. The few studies which have specifically examined female and male teachers' perceptions of female and male principals (Cioci, Lee, & Smith, 1991; Shareatpanahi, 1982) suggest that male and female teachers react quite differently to female principals. Non-education research suggests similar results regarding subordinate preference for managerial characteristics (Schein, 1992). Little research has been completed regarding gender differences in teachers' attitudes toward secondary female principals, leaving researchers to suggest addressing the topic further (Braddy, 1991; Cimperman, 1986; Crates, 1992). The majority of research in educational administration is completed from a male viewpoint, which limits its applicability to female-dominated workplaces (Lieberman, 1988; Shakeshaft, 1986), such as American schools.

Research Questions

For this study, the research questions were the following:

1. To what degree do teachers' perceptions of the leadership in their schools relate to the gender of both the teacher and the principal when assessing the subscales of framing school goals, communicating goals, supervising and evaluating instruction, coordinating the curriculum, monitoring student progress, protecting instructional time, maintaining high visibility, providing

incentives for teachers, promoting professional development, and providing incentives for learning?

2. To what degree do superintendents' perceptions of the leadership in their high schools relate to the gender of both the principal and the superintendent when assessing the same subscales?

3. How do principals' perceptions of their own leadership behaviors relate to gender when assessing the same subscales?

Each group completed ratings of high school principals, providing the researcher with data from the perspective of the principal, the principal's superintendent, and members of the principal's teaching staff.

Significance of the Study

Gaining increased understanding of the interactions between leaders and teachers and leaders and their supervisors will enable educators to increase the effectiveness of the nation's schools. Current conceptualizations of leadership are typically defined by traditional, androcentric male criteria, which include such descriptors as strong, aggressive, domineering, and formidable. It is important to the progress of females in administration to develop a more applicable set of norms.

Research conducted largely at the elementary level has documented some differences in leadership characteristics and style between male and female principals as perceived by their teaching staffs and subordinates. It has already been found that female elementary principals spend more time in classrooms,

are more concerned with teaching, and have greater interest than men in encouraging, gaining positive reactions from teachers and superiors, working with teachers and community, and evaluating learning (Fauth, 1984; Shakeshaft, Nowell, & Perry, 1991).

Women enter the school organization in great numbers as teachers (Ortiz & Marshall, 1988). This should be a positive feature for the encouragement of women to advance within the organization; but instead, a division of labor limiting females to teaching has developed, while fostering upward mobility for males. Relatively routine tasks, such as instructing students and administering adults, become symbols of gender. Teaching, nurturing, and caring for students are considered female roles; managerial behaviors and decision-making are seen as generally male characteristics (Loden, 1985). Because men are in a minority in the public schools, because their ranks are rapidly depleted by those leaving for other careers (Vindicator, 1994), and because men are advanced into administrative posts far more frequently than women, the men who simply persist in the occupation have a high probability of moving up the leadership ladder. Sheer perseverance seems to result in the likelihood of assignment not only to the high school principalship, but also the superintendency (Carlson, 1972). Women are judged on different standards and simply do not have the luxury of being mediocre (Edson, 1988). In her research, Edson found that women, to compete with men for similar administrative positions, felt a need to hold a doctorate in situations requiring only master's degrees. Her subjects felt the necessity to overqualify themselves to be afforded initial administrative opportunities.

The principal is expected to lead teachers in accomplishing the mission, vision, goals, and objectives of the school community (Mitchell, Ortiz, & Mitchell, 1987), while establishing a positive learning climate (Hallinger & Murphy, 1987). Communication of these goals and ideals greatly influences the effectiveness of the leader. Given that the differences between males' and females' conceptions of effective leadership differ (Helgesen, 1990; Tannen, 1990), a more precise picture of leadership communication patterns by gender should be useful to principals, teachers, and superintendents in contemporary schools.

Although research regarding women and gender has increased during the last fifteen years, Schmuck (1986) noted that research conducted in the 1970s and 1980s leaves a contradiction of roles at the secondary level concerning gender perceptions. In the context of leadership in high schools, gender carries a great deal of meaning. Those who most disapprove of female principals are men who have taught only for male principals (Ortiz & Marshall, 1988). Societal role expectations of women may have a great deal to do with the occupational roles they have been able to assume. The manner in which women perform becomes strategically important when they must function in roles not customarily assigned to, or expected of, women. Leadership roles also tend to fit this description (Kanter, 1977; Morrison, White, & Van Velsor, 1987).

Since school effectiveness is closely related to principal effectiveness, the leadership behaviors that promote effective schools needed to be the focus of this study. The leadership behaviors of male and female secondary principals, as perceived by male and by female subordinates, superordinates, and themselves, were compared. As previously noted and documented, several researchers have

advocated that ratings of leadership behaviors should include those of subordinate, superordinate, and self.

Beck (1987) concluded that the principalship, as perceived by practicing principals, is a complex, multi-faceted role, best described as multi-dimensional. Isherwood (1983) found that teachers' perceptions of principals' leadership styles were significantly related to the interpersonal relationship between teachers and principals, as well as to leadership effectiveness. Principals need reliable assessments of teachers' perceptions to capitalize on the strengths within their own organizations.

In summary, this study examined potential differences between the leadership behaviors of women and men as perceived by both the superordinates and subordinates of the administrators. Increased understanding of the differences and behavioral styles of female secondary principals resulted in recommendations for practice including mentoring, affirmative action hiring practices, and inservice training for practicing administrators. Results also suggested recommendations for further study on a broader geographic base, involving the inclusion of more demographic variables to search for reasons for differences. This study helped to identify the obstacles to administrative positions on the secondary school level for women and suggested opportunities for encouraging equal representation among the leaders of our nation's schools. Valid and reliable instrumentation, Philip Hallinger's Principal Instructional Management Rating Scale (PIMRS), was used to collect and analyze the data received from survey participants.

Limitations of the Study

The PIMRS, the instrumentation selected for this study, by its nature, limited the study. As with any self report, there is little control for participants' giving what they might feel are socially desirable answers, for answers which may be distorted because of personal bias about the topic of the questionnaire, or for results which must rely heavily on the willingness of people to participate (Fowler, 1993; Fuqua, Hartman, & Brown, 1977). Hallinger and Murphy (1985) found that self-report data are often idiosyncratic and should be carefully analyzed. Another limiting factor was the response rate, which is often affected by numerous variables (Miller, 1991). Through randomization, appropriate question structure, and suitable follow-up, the consequences of these limiting factors were minimized (Boe, 1990).

Delimitations of the Study

The study assessed the perceptions of the leadership behaviors of female high school principals in Ohio. Schools included were randomly selected from the Ohio Department of Education Directory for 1994-1995 and included the superintendents, principals, and samples of the high school teaching staffs in the selected school districts. The information provided by the participants represented their perceptions at the time of the survey. The small population of female secondary school principals in Ohio is acknowledged as a delimitation.

The sample included a total of 38 high schools having female principals in the selected geographic area and an equal number of schools led by male

principals, to provide comparison for the desired gender interactions. Each participant was asked to complete the Principal Instructional Management Rating Scale (PIMRS), developed differently for self-appraisal and appraisal by others.

Definition of Terms

The following definitions were used in this study:

Leadership Behavior refers to the specific behavior of a secondary administrator while in the process of directing and controlling the activities of a work unit. Leadership is personal and behavioral, and is a set of learned and practiced skills (Conrath, 1987). Behavior is a pattern of action.

The ***Principal*** is the administrator in charge of an educational unit, as recognized by contractual agreement with a school district (Crates, 1992).

Gender refers to the biological sex of an individual, regardless of the outward manifestation of such characteristic. For the purposes of this study, individuals were described as female or male.

Instructional Leadership is defined as behavior that is highly connected to positive growth in academic performance, exhibited by interaction, communication, and visibility (Smith & Andrews, 1989).

The ***Principal Instructional Management Rating Scale (PIMRS)***, used to obtain data, is the survey instrumentation originally developed by Philip Hallinger in 1983 (Hallinger & Murphy, 1985).

School Climate, the organizational personality of a school, is the mediating variable between inputs and outcomes of schooling, otherwise known

as student satisfaction and productivity (Lindelow, Mazzarella, Scott, Ellis, & Smith, 1988). School climate is the "feel" an individual gets from his or her experience within a school's social system (Lindelow, Mazzarella, Scott, Ellis, & Smith, 1988).

School Mission, as defined by Hallinger and Murphy (1985), refers to the purpose of the school.

A ***Subordinate*** is any person supervised by a principal in the study (Bartol & Wortman, 1975). For the purposes of this study, subordinate refers to any certificated person whose major assignment is to implement instruction (Crates, 1992).

A ***Superordinate*** is any person who supervises another. For the purposes of this study, this term refers to superintendents of school districts participating in the intended study.

Secondary Principals, for the purposes of this study, are those administrative leaders in traditional high schools, grades nine through twelve or ten through twelve, as recognized by contractual arrangement with the individual school districts (Crates, 1992).

The ten dimensions contained in the Principal Instructional Management Rating Scale (Hallinger, 1983) used for this study are described as follows:

Framing School Goals refers to a principal's role in determining the areas in which school staff focus their attention and resources during a given school year.

Communicating School Goals is a function concerned with the ways in which the principal communicates the school's important goals to teachers,

parents, and students.

Supervising and Evaluating Instruction describes ensuring that school goals are translated into classroom practice by coordinating classroom objectives with those of the school, providing instructional support to teachers, and monitoring instruction.

Coordinating Curriculum describes ensuring that curricular objectives are aligned with course content and achievement tests, through continuity across grade levels.

Monitoring Student Progress describes the emphasis placed on assessment and evaluation of the school's instructional program through multiple assessment techniques.

Protecting Instructional Time refers to limiting interruptions in classroom instruction, resulting in optimal opportunity for student achievement.

Maintaining High Visibility describes increasing interactions with students and teachers to provide effective opportunities for communicating priorities for the school.

Providing Incentives for Teachers describes creating a positive learning environment by rewarding and recognizing staff achievements.

Promoting Professional Development refers to providing support for teachers' personal efforts to improve instruction.

Providing Incentives for Learning describes creating a positive school learning climate which rewards and recognizes student achievements.

Organization of the Dissertation

This dissertation is organized into five chapters. The first chapter, the introduction, describes the purpose and significance of the study as well as its limitations and delimitations. It presents definitions of terms and a brief description of selected instrumentation. Chapter two presents a review of the literature related to the research problem and includes the following sections: introduction; history of female representation in administration; women and leadership in education; impediments to administrative entry; career path; the myth of female leadership; leadership studies; gender, leadership, and the connection to business; leadership behaviors; gender and communication; perceptions of leadership; leadership, school climate, and effective schools; the dimensions of instructional leadership; and a summary.

Chapter three describes the methodology employed for the study. It includes a complete description of the sample, data collection procedures and instrumentation, and the data analysis procedures applied in arriving at the findings. Chapter four presents the complete results of the data collection and the data analysis with accompanying tables. Finally, chapter five summarizes the study and presents conclusions, implications, and recommendations for both practice and further study. Following chapter five are a Bibliography and Appendixes containing supporting material for the study.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

In a society that does not treat females and males the same, the impact of gender on behavior is worthy of study. Gender, a cultural term (Shakeshaft, 1989a), affects both supervisory style and outcome (Shakeshaft, Nowell, & Perry, 1991). It describes the characteristics we ascribe to people because of their sex--the ways we believe they behave or the characteristics we believe they possess, based on our cultural expectations of what is male and what is female. One's biological identification as male or female has little to do with the work people do in schools. However, one's gender identification has a great influence on behavior, perceptions, and effectiveness (Shakeshaft, 1989a; Shakeshaft, Nowell, & Perry, 1991). The way we are treated from birth onward, because we are either female or male, helps to determine how we both see and navigate the world. However, little definitive research has been completed on the impact of gender on successful supervision (Harris, 1991; Garfinkel, 1987; Wrolstad, Hazucha, Huff, & Halperin, 1992).

The history of women in education reflects a continuing under-representation of the gender in positions of leadership while the majority of teachers in the nations' schools are female. As this chapter will show, leadership behaviors are represented by a composite, and at times mystifying, accumulation of interactions and relationships, the complexity of which are

intensified by the variable of gender. Throughout the chapter, the role of women in educational leadership will be presented through discussion of a historical perspective, presentation of impediments to advancement, and an exploration of the typical female career path. The impact of gender on educational leadership as compared to business leadership will be presented, and the effect of gender on communication and the mythology surrounding expected female behaviors will be examined. A discussion of specific leadership behaviors and the studies completed on them will be presented for a comparison of male and female leadership styles. School climate and its relationship to leadership will also be examined for gender interactions. A discussion of dimensions of instructional leadership, and their connection to the perceptions of leadership behaviors as identified by others and by self-disclosure, will be the impetus for the study which follows.

History of Female Representation in Administration

Ella Flagg, who in 1905 became the first female superintendent of a large, urban school district when selected as the superintendent of Chicago's public schools, thought women were destined to govern school districts in every city (Mertz & McNeely, 1990a). She looked for a majority of big cities to follow the lead of Chicago and believed that more women than men would be in charge of schools in the near future. Flagg felt it was a natural field for women who no longer were satisfied teaching without having opportunity to lead. Ninety years later, males continue to dominate school administration.

From 1910 to 1930, women administrators held more than half of the educational administration and supervisory positions in public schools (Schmidt, 1992). The decline in that ratio was steady from 1930 until the mid 1980s (Cioci, Lee, & Smith, 1991; Jones & Montenegro, 1990), as the number of women principals at all levels dropped from 55% to 18% (Schmidt, 1992). As an upward turn commenced, women comprised 75% of all teachers in 1990, but only 34% of elementary principals, 12% of high school principals, and 5% of the public school district superintendencies (Jones & Montenegro, 1990). Data from May and June of 1993 showed some improvement, with women holding nearly 41% of the elementary school principalships, 16% of the high school principalships, and 7% of the superintendencies (Montenegro, 1993). Table 1 presents the historical data.

Table 1

Women in Administrative Positions

	1973	1980	1983	1990	1993
Superintendent	0.1%	1.0%	1.8%	5.0%	7.1%
Assist. Superintendent	5.0%	8.0%	9.0%	21.0%	24.3%
High School Principal	0.6%	*	7.0%	12.0%	16.0%
Elementary Principal	34.1%	*	34.2%	34.0%	40.7%

* Individual Statistics not kept between 1973 and 1983.
(Sources: Jones & Montenegro, 1990; Mertz, 1988; Montenegro, 1993)

Although the increases from the 1980s to 1990 and then 1993 appeared significant, the data were very equivocal--any increase from a small initial percentage still leaves women's representation grossly disproportionate. Affirmative action policies, federal and state legislation, and an increase in the

number of women obtaining advanced degrees in school administration have not made a dramatic impact on the number of female high school principals (Calabrese, 1987), as the number of women in educational administration remains disproportionately low (Valverde, 1980).

A pattern is demonstrated by the types of positions filled by women, during the years of their least representation. Large prestigious high schools are not generally led by females, as shown by data compiled by Coursen, Mazzarella, Jeffress, and Hadderman (1989). In 1978, 75% of female principals worked in schools with enrollment of 745 or less, when only 37% of males were similarly employed. Fourteen percent of the male principals were in schools of 2000 or more, but only 1% of women held positions in these larger schools.

The absence of a reliable national data base, or of systematic processes for gathering the data on a national or state level, limits the potential for establishing good baseline information or a means to effectively track female progress (Mertz & McNeely, 1990a). The manner of presenting and interpreting statistics adds to the difficulty of comparing research results in a meaningful way. Each study's statistics show slightly different results, based on the data base used. Various sources, depending on the agency representing the research, may state slightly different statistics, but the percentages are still quite close.

Flagg's predicted dominance of females appears as elusive and unattainable as it must have seemed to everyone in the early part of the century except for Superintendent Flagg. Male hegemony in school administration continues to persist, as the accepted norm for administrative leadership continues to be the "old boys club," overwhelmingly male, over 45, and

predominantly white (Feistritzer, 1988). Minor improvements in the status of women as administrators only serve to elevate the issue into prominence.

Women and Leadership in Education

The identity of school administrators can impact the socialization process of children in our schools, and that can determine how children identify with, and see, adults and their own opportunities. Some of the problems of women in leadership are presented in this section as principal identity, organizational structure, and acceptance are examined. The organizational structure of schools, the fact that they are mostly led by males, inhibits the number of women represented in school leadership. Acceptance in the group called "administrators" is difficult for women once they are appointed, because they are often the only female in the group. These issues and others can negatively impact aspiring females' upward mobility.

Conventional belief holds that problems of women and minorities in educational administration were solved years ago by societal approaches to equity issues. This statement, however, is superficial and inaccurate (Coursen, Mazzarella, Jeffress, & Hadderman, 1989). The ideal of equitable representation is far from being realized, and in educational administration, ability does not seem to be the most important factor in the hiring process (Fishel & Pottker, 1975). Because schools educate children not only by what is taught in the classroom, but also by what is shown about how the world operates, children need to see equitable representation in the positions of leadership in schools.

The dearth of female role models in educational administrative positions contributes to an unfortunate cycle--fewer women applicants, fewer women administrators, an increase in the number of males joining the administrative pool, and ultimately fewer positions available for females (Schmidt, 1992).

The identity of administrators is important in determining how schools socialize their students. Women or men in authority may become role models, or figures to emulate, for girls or boys, respectively. Students come to feel that it is normal for the kinds of people they see directing schools to fill all executive positions. Female students who see women only as teachers supervised by male principals may become convinced that this is natural and inevitable, and that the most they can hope for are positions subordinate to men.

The overall success of the women's movement would seem to indicate that discrimination against women in school administration is no longer serious and even rapidly disappearing (Restine, 1993; Coursen, Mazzarella, Jeffress, & Hadderman, 1989). However, such optimism is deceptive. The situation for women administrators is dismal. The total numbers are small, and most positions are filled in middle management rather than in superintendencies and high school principalships (Montenegro, 1993; Lee & Smith, 1990). In her book of interviews with female administrative aspirants, Edson (1988) interviewed administrators as well as educational administration students. One female educational administration student, in the following excerpt discussing opportunities for women in leadership, sharply sums up the perceptions of many administrative candidates:

> I think there are precious few opportunities for women in educational administration. On the surface, the field looks as if it is opening up a lot, but it's not. It's only opening up a little. In the systems I know of, they are putting women with twenty years of teaching experience in as assistant principals or principals in elementary schools, and they think that is making great progress! (Edson, pg. 115)

Pavan (1987) found that although women are increasingly well prepared, are obtaining necessary certification, are applying for positions, and often are among the last two or three candidates, they are, nonetheless, unsuccessful at securing the jobs. Rather, women are successful in obtaining the lowest ranking jobs, and women who get those jobs have been, at least in the recent past, somewhat older than men working at comparable levels (Gips, 1989; Montenegro, 1993).

Administrative leadership is an important and often central factor in a school's educational effectiveness (Quintugua, 1990; Gougeon, 1991b). The principal's importance in influencing the performance and attitudes of faculty and support of staff is well documented (Chen & Addi, 1992; Cioci, Lee, & Smith, 1991; Restine, 1993). Teachers, students, and administrators all function within both the school and larger social contexts where the aspects of role and self influence actions, reactions, beliefs, and values. The school principal's actions and responses are an integral part of, and an indicator of the cultural experience within, a school's social and bureaucratic system. These actions and responses make the principal more conscious of power relations and more aware of surrounding roles and experiences. Women experience the resulting power

structures and their own gender quite differently than do men. The literature documenting principal effectiveness often neglects issues of race, class, gender, and grade level.

The vast majority of secondary schools are led by male principals (American Association of School Administrators, 1985), while women comprise half of these schools' teaching forces (Bell & Chase, 1993; Jones & Montenegro, 1990; Mertz & McNeely, 1990a, 1990b). The organizational structure of educational institutions, the very fact that they are mostly male-led, makes it easier for men to act on their aspirations for leadership and harder for women to act on theirs (Schmuck & Wyant, 1981; Kanter, 1977; Shakeshaft, 1987). A comparison of pre-administration experience illustrates the point. Males teach five to seven years before crossing from the classroom to administration, while females teach fifteen years or more before the same career move (Gross & Trask, 1976; Pigford & Tonnsen, 1993). The strongest indicator of success in school organizations is the acquisition of a high level administrative position, and because of the traditional organizational structure of schools, those typically go to white males at both the high school and superintendent levels (Ortiz, 1982).

The female leader is an anomaly (Kuhn, 1970). One may say that the term is an oxymoron, that the two concepts are mutually exclusive. For every female who has successfully secured an administrative job, there are hundreds who are not achieving positions of status within their school communities, not because of lack of skill, but because of lack of opportunity (Ortiz & Covel, 1987). Due to misconceptions others may have about their leadership qualities, women are seldom given true consideration for administrative positions. Women conclude

that they must be far superior to male candidates just to be considered for an administrative position and, even then, that school boards still show a preference for hiring men (Bell & Chase, 1993; McGrath, 1992). Opportunities are becoming more available, but most of the decisions are still made by men favoring men. Women who wish to establish administrative careers must change cultural expectations for women, while continuing to behave under certain conditions as women.

In an era of affirmative action, and of renewed interest in "instructional leadership," one would question why there are so few women successful in attaining top positions in education. Shakeshaft (1987) concluded that women possess excellent instructional leadership skills, but meet many difficulties not generally encountered by men. To gain access to a new group composed only of administrators, women become alienated from teachers, radically changing their interpersonal orientation. Based on observation alone, females can anticipate obstacles to entry and difficulty in being recognized as effective, valuable administrators (Marshall, 1988; Bell & Chase, 1993), as they become more isolated. While males move from reference group inclusion to reference group inclusion, females move from inclusion to exclusion (Marshall, 1988). Lacking female administrators as role models, or lacking experiences with them, the stereotyped notion among some observers that men are simply better principals, and more a part of the "group," is reinforced.

Impediments to Administrative Entry

Among the documented impediments to administrative entry for women are gender stratification, a supposed lack of qualifications, standards and expectations which are apart from those for men, hiring practices which tend to be discriminatory, late-age entry into the field, and career choices which may limit growth possibilities.

Gender stratification in schools, maintained by differential access to opportunities for advancement, demonstrates one impediment (Edson, 1988). This occurs because elementary teachers, 80% of whom are female, are less likely to have access to opportunities through which vertical promotion occurs (Jacobson, 1989; Pigford & Tonnsen, 1993). While the elementary principalship is the administrative position that women are most likely to occupy, this position rarely leads to further promotion.

A reason given for not considering women candidates for leadership positions is often their supposed lack of qualifications, defined by a track record lacking diverse administrative experience. Women cannot get qualified without experience, and cannot get experience without qualification. Research data on the differences between men and women principals is not abundant, and what there is indicates that the perceived effectiveness of women is at least as high as that of men (Grambs, 1976; Gross & Trask, 1976; Whitaker & Lane, 1990). Studies indicate the need for a more systematic investigation of the variable of gender and how it impacts leadership ability and qualifications at all educational levels (Hallinger & Murphy, 1985).

Equitable access to administrative positions is blocked by other variables as well, among them different expectations for women and men, and different standards for judging management decisions (Andrews & Basom, 1990; Bach, 1976; Bolman & Deal, 1992; Chen & Addi, 1992). In comparable positions, women are often treated differently from men, even if equally qualified. For instance, it is assumed that a young woman is unable to accept a new job if it means relocating her family, but that a man is free to move. Women who are overlooked are seen as less trustworthy or enthusiastic team players, less likely to commit totally to the organization (Coursen, Mazzarella, Jeffress, & Hadderman, 1989). Women's decisions are judged by male-dominated gender standards, rather than by the issues themselves.

Some would suggest that the gates to positions in educational leadership have been flung wide open for women, yet the existing evidence does not support this claim. This represents another impediment, that the "gatekeepers" of educational administration are predominantly men (Cioci, Lee, & Smith, 1991). Gatekeepers, those who make decisions about access to administrative positions, include superintendents, consultants, professors of educational administration, and school board members. Desirable schools or districts are seen as the province of experienced white males (Edson, 1988), who are selected by the gatekeepers. Findings from the American Association of School Administrators (Jones & Montenegro, 1988) strengthen the position that women are not given equal opportunity for selection by those who make personnel decisions.

Persistence of both subtle and obtrusive forms of sex discrimination describe another impediment (Grambs, 1976; McGrath, 1992; Ozga, 1993). This

discrimination can range from the relatively benign neglect of not gaining help in finding internships or being ignored during their graduate education, to conspicuously sexist or racist attitudes and overt discrimination in hiring. Bell and Chase (1993) found that even when school boards hired female administrators at top levels, board members reported that their deliberations included discussion about whether their communities would accept a woman as leader, and whether women could assert the authority necessary for such positions. In a 1975 study, Estler investigated whether men are appointed to positions because there are no qualified women applicants, or because the decision makers are biased against women applicants, qualified or not. There did not appear to be a scarcity of equally or better qualified women at the various filter points leading to the high school principalship or superintendency, and her data suggested that discriminatory practices were at work. The stereotypical view of women, which includes descriptors belying an emotional, frivolous, irrational, or jealous behavior (Restine, 1993), adds to women's difficulty of securing positions.

Few women are being hired for administrative positions at the local, state, and national levels, even though women always have held the majority of teaching positions (Whitaker & Lane, 1990). Edson (1988), in her research on female administrative aspirants, found that women were forced to undergo lengthier apprenticeships to establish their ability, especially when the decisions were made by men. As policy makers and persons who make final appointments to the administrative positions in their institutions, men continue to appoint other men to key positions.

Some additional documented barriers to women's advancement in administration include the age of initial departure from teaching, occupying those positions not providing opportunities for upward mobility, losing out to white males in the competition for line positions, and making the wrong career decision (Asbury, 1993; McKee, 1988; Ortiz, 1982; Shea, 1983). To illustrate the point of questionable career choices, Gips (1989) found that although 54% of female administrators hold staff positions, such as curriculum supervisor, before appointment to a line position, such as principal, men hold the same positions at a rate of only 16%. These middle management positions often hinder the career path of women (Ortiz, 1982). The women studied by Gips indicated more years of experience in education on the whole than did the men, having demonstrated their leadership capacity more fully before movement to any leadership position.

Documentation shows that the number of males entering all areas of education within the last several decades increased greater than the number of females (AASA, 1985; Lee & Smith, 1990; NCES, 1992). It was once believed, at a time in American history when males were perceived as more cerebral or scientific, that boys needed a strong male role model to maximize academic potential. This resulted in large numbers of men entering the field of education. The resulting administrative applicant pool grew gender-imbalanced with male applicants far outnumbering females, a condition which further impedes female advancement.

The impediments to career advancement for women are at once concrete and abstract, illustrating the problem of any study focused on assessing characteristics of effective leadership. The study of female administrators, and

those aspiring to become them, needs to address as many of the barriers to promotion as possible while providing increased knowledge about how females lead.

Career Path

The success of women administrators is shaped by the career paths they choose. Studies of women's career patterns, although rare, identify some explanations for minimal advancement (Shakeshaft, 1987). A majority of women administrators usually spend many years teaching before entering either an elementary principalship or a central office staff position. Because this typical educational career path has a limited number of steps, yet is slow in process, women are excluded from those upper management positions which require more diversity of experience.

Any discussion of the career path of women administrators must include a description of what is documented as the typical female administrator. She is white, in her mid to late forties, an elementary principal, and previously spent 15 years in the classroom. She is a first born or only child, was reared in a two-parent home, her mother was a homemaker, and her father a farmer. She is married to a college graduate, and likely to be a parent. Female administrators generally hold master's degrees and are enrolled in doctoral programs, intending to continue their careers past the position they presently hold (Pigford & Tonnsen, 1993).

Edson (1988) found that women follow their chosen career paths through to the end, in spite of other demands for time, such as family, business, or

continuing education. She also found that advanced degrees seem to be necessary for successful females. One of her interviewees related:

> We have to have a doctorate where a man with a master's would get the same job without it. If we don't overqualify ourselves, we won't even get in the door. And women definitely have a harder time just getting in that door. (Edson, pg. 267)

Edson's study found that women continue to be subjected to difficult interviews, including questions about sexuality, family responsibility, having children, age, physical stature, and feminine appearance. Men are seldom exposed to such exhaustive inquiry. The need to correct inaccurate perceptions about females in educational administration, in order to accelerate the careers of aspirants, remains. Impressions continue to shape educators' perceptions about women as administrative candidates and limit women's career opportunities (Edson, 1980). It must be shown that there is strength in a diversity of leadership styles (Rosener, 1990), which may be unfamiliar to those who select leaders.

Gross and Trask (1976) found that women considered and decided to become teachers at a much earlier age than men and that men gave serious consideration to becoming principals at a much earlier age. Most men reported no strong motivation to become teachers. Teaching was the first-choice vocation for the great majority of women, but for only half the men, with both genders reporting very different methods of encouragement or discouragement. Men reported, at a rate of 25%, encouragement by coaches to enter teaching, and another 7% reported that they viewed teaching as a way to continue their

interest in athletics. No women reported either of these reasons when asked about motivation to enter teaching. More than 50% of the men in the survey were tapped by their superiors for administrative jobs, while only 37.5% of the women reported similar conditions. Men were more likely (47%) to get their first administrative position in their own district than women (37%). Regarding administrative career paths and professional preparation, Beck (1987) found that female principals were more likely to be located closer to the university where they got their administrative certificate, and more likely to continue studying at that university once they were hired as an administrator.

The literature suggests that length of time in one district and motivation for teaching as a career choice both identify significant differences in men's and women's careers. In a 1989 survey, Gips found that 20% of the male respondents had been in one district for their entire career, as compared to only 4% of the women. The path to the administrative job for women, from the same data, shows that 9% were administrative assistants or interns for three years, 35% were specialists or supervisors for four years, 15% had been directors for over one year, 16% were assistant principals for nearly three years, and 1% had been teaching principals for a year. As previously noted, the majority of women who are in educational administration hold central office staff positions, or are elementary school principals (Fansher & Buxton, 1984; Ortiz, 1982; McGrath, 1992). Women who do achieve top-level positions have career paths that more closely resemble those of males than those of females, serving as secondary teacher, high school principal, assistant superintendent, and finally superintendent (Shakeshaft, 1989a).

Contemporary top women executives grew up in the 1960s when women were either not expected to have careers or at least to have different careers from those of men. Therefore women's career paths have usually not included long tenure in positions with formal authority and ultimate control of resources. This lack of experience has resulted in the development of a less-formal, power-sharing leadership style, a style likely to gain a firm foothold in organizations that thrive on change or are growing quickly (McGrath, 1992). Lamentably, this does not presently describe the traditional high school setting.

Career patterns of male and female administrators vary widely. As women attempt to achieve success in finding an upper level administrative position, they often take a job which frustrates their opportunity for further upward mobility. The most successful women follow career paths more similar to those of traditional males than of creative females, serving as contradictions to the aspirations of women still on the outside of the management ranks.

The Myth of Female Leadership

Examination of traditional feminine styles and the attitudes attributed to them gives the study of leadership another perspective. In research there have been a number of findings which indicate that women's behaviors are seen in a stereotypical, almost mythical manner, and that there are certain behaviors, characteristics, or styles which will probably always be construed as typically feminine. How these beliefs impact the perceptions of leadership behavior is worthy of comment.

Myths about women as leaders are manifested in commonly held tenets that can make successful appointment to leadership a distant goal (Restine, 1993). Among those common beliefs are that women are under-qualified, uninterested in furthering their careers, guilty of prioritizing their own children to the detriment of their jobs, willing to take career breaks which result in loss of impetus, tied to a spouse's career, and unwilling to give time outside the work day because of family commitments. Due to family constraints, it is believed that only single women progress well. In reality, neglecting family in favor of career has long been acceptable for men, but society still identifies it as forbidden for women. Women often experience the anxiety of juggling multiple responsibilities, guilt about children, and hours away from home. Compensating and making sacrifices become daily strains (Adler, Laney, & Packer, 1993).

According to the mythology surrounding women and leadership, to become a boss a woman must shed her femininity. She can no longer be gentle, docile, accommodating, or emotional. It is often said that women nurture learners and men run schools (Pigford & Tonnsen, 1993). Most of the women who enter teaching, particularly at the elementary level, where nurturing and gentleness are strongly supported, appear to be uninterested in career advancement (Fishel & Pottker, 1975). This only reinforces a pervasive climate favorable to male advancement and unfavorable to female promotion.

Traditional feminine characteristics, and their impact on the myth surrounding female entry into administration, warrant mention. Society often sees women in only the traditional roles of mother and caretaker, and as long as

women confine themselves to the role of teacher, or caretaker, they are readily accepted into education. When they attempt to enter the ranks of administration, they step out of the traditional role and acceptance generally decreases. How this impacts the leadership behaviors, and eventual success, of principals is an issue worthy of study (Chapman, 1975; Shakeshaft, 1989b; Shakeshaft, Nowell, & Perry, 1991).

Attitudes of teachers toward their principals are significantly related to the principals' gender and accepted norms (Chen & Addi, 1992). Shakeshaft (1987) found that teachers, regardless of gender, generally prefer working for male principals. Linton (1974) and Petty and Lee (1975) found that male teachers, particularly those who had never worked with female principals, preferred working with male principals. But those males who eventually had experience working with a woman supervisor became more favorable toward such an arrangement. Ortiz and Marshall (1988) demonstrated that some men find it difficult to work for women due to the unconventionality of such an arrangement. Because men experience a change from something familiar to something unfamiliar, they tend to not like working for women. In Petty and Lee's 1975 study, male subordinates working with female supervisors were found to be less satisfied with their work situation than any other combination of male and female authority interaction.

Loden (1985) and Andrews and Basom (1990) reported finding differing standards for male and female leaders. A businessman is considered aggressive and a woman considered pushy in similar situations. When attention to detail means a businessman is effective, attention to detail for a woman means she is

critical. A businessman loses his temper because he is so involved; she is irritable because she is tired. He knows how to follow through; she does not know when to quit. One might exercise authority diligently and be a stern taskmaster; the other is power hungry and difficult to work for. Absentminded, scatterbrained; planners, schemers; managers, manipulators...the terminology of discrimination is itself instructive. Rather than trying to make women clones of men, we need to look at the strengths of both and determine how those strengths can help both men and women become the instructional leaders our schools and organizations need in a contemporary world (Shakeshaft, 1989b; Tibbetts, 1980).

Some characteristics which make women so different also give them a depth of abilities which is worthy of study. The need to integrate workplace and private responsibilities makes women's lives more complex, but also gives them a certain perception of leadership which is not generally present in the male experience. For example, as mothers, women learn to expect some lack of dominion over their schedules. The same lack of schedule control in a school setting becomes inconsequential. Men see unscheduled encounters as serious interruptions, but women, seeing their tasks as cyclical and not lending themselves to closure, are less concerned with interruptions. Women have a process orientation, while men are anxious to preserve autonomy and complete tasks (Cimperman, 1986).

Pre-defined characteristics of female behavior add to the mythology surrounding females and leadership and fuel the argument that women are not as effective as men in leading schools. The myths become part of the stereotypes which continue to impede the progress of females into the upper levels of

administration in America's schools and need to be addressed.

Leadership Studies

The views regarding leadership style in general, and female leadership specifically, vary widely in past research. In sharp contrast to the Cimperman (1986) and Formisano (1987) studies which suggested that successful female managers adopted a genderless, or androgynous style, Rosener, in a 1991 study, found that many women who have succeeded often exhibit a far different leadership behavior style than men in comparable positions. The examination of studies previously completed on leadership styles from many perspectives allows comparison of findings, and presents opportunity for developing strategies for future research.

In an attitudinal study by Hein in 1988, women scored higher than men in most categories that are necessary in effective administration, including practicality, flexibility, forthrightness, ability to give constructive criticism, and ability to exercise strong educational leadership. It was also found that men tended to be preoccupied with the extrinsic rewards received in an employment situation and identified themselves with their jobs. Women displayed effort to do a job for the intrinsic rewards received and their belief in human worth and ability, seeing their identities as complex and multi-faceted, only partly related to their positions.

High School and Beyond, a general survey of America's high schools conducted by Moles (1988), was used to gather data regarding student and

teacher perceptions. Part of the study included the Administrator and Teacher Survey (ATS). Moles found that for every dependent measure regarding male and female leadership style, the male teacher mean was lower than the female teacher mean, in female-led schools. Males perceived female leadership as ineffective, but females assessed such leadership above average. Female teachers liked working where their directions came from females, while males did not. The question of why this was true remained unanswered.

In Moles' survey, male and female leadership styles, the significant determinants of subject satisfaction, were found to be quite different. Women were more interested in the lives of their staffs, more visible in the hallways, more invested in the details of daily occurrences in schools, and more personally involved in affairs related to the educational program of the school. Women were determined to be more democratic than autocratic, and more active, interested, and involved in classrooms. Female teachers interpreted these characteristics as supportive, but males characterized them as intrusive. Although leadership styles were different, the perceptions of them were clearly aligned with the gender of the perceiver.

Gilligan (1987) studied characteristics of administrators and the connection of those characteristics to job satisfaction. She found that women are more tolerant of rules, more willing to make exceptions, more willing to accept innovation, and less competitive. These findings were substantiated by the results of Cline, Richardson, Wallman, and Prickett (1990), who found that the strengths of women administrators result from the ability to determine staff abilities and weaknesses and act accordingly. Coursen and Mazzarella (1985)

found that teachers experience more job satisfaction with a female principal, largely due to the female's ability to more accurately assess strengths and provide appropriate responses.

Shakeshaft (1989a) studied relationships between leaders and followers and concluded that individuals are the most important link in effective managerial associations. Although there appears to be little difference between men and women principals in the amount of support given to teachers in conflict with pupils, and little difference between men and women principals in the emphasis on school discipline, female administrators tend to be more democratic (Eagly & Johnson, 1990). Females display greater respect for the dignity of the teachers in the school and are more effective at resolving disharmony with staff members or reconciling conflicting demands (Cioci, Lee, & Smith, 1991). Females have better and more effective communication with teachers, resulting in better teacher morale, higher teacher ratings, and more staff productivity (Shakeshaft, 1989a). Women tend to speak and act more often as representative of the group, sustaining a more closely knit organization (Morsink, 1970).

Studies conducted between 1956 and 1985 concluded that women principals were considered by their superiors and subordinates to be equal to or better than male principals in terms of overall leadership and administrative capabilities (Smith & Piele, 1989). Women show outstanding ability to create supportive building climates, perceive and solve problems, take appropriate action, and facilitate improved human relations in school communities. Seen as highly competent in terms of specific leadership characteristics relating to organizational skills, persuasiveness, integrity, and enthusiasm, women get good

marks during evaluations. They are also seen as effective in demonstrating the ability to cope with difficult situations, to control their emotions, and to handle personal and organizational power effectively. They are rated highly both by teachers and supervisors for their ability to manage school finance, handle disciplinary problems and manage effectively (Morsink, 1970).

In Eagly, Karau, and Johnson's (1992) meta-analysis of studies comparing the leadership styles of principals of public schools, evidence was found for behavior differences between the genders. Researchers who studied differences in leadership behaviors between males and females examined several variables and demographics of administrators, finding interesting results. The studies in this group consisted of 112 dissertations, with a median publication year of 1980, describing male and female leadership characteristics. Studied were 93 elementary schools and 7 high schools, with the mean age of principals in the studies being 47. In 55 studies the principals rated themselves, with teachers rating principals in 62. The types of instruments utilized in the studies were the Leader Behavior Description Questionnaire, or LBDQ, (60 studies), Leadership Effectiveness and Adaptability Description, or LEAD, (26 studies), Organizational Climate Description Questionnaire, or OCDQ, (10 studies), the Organizational Climate Survey, or OCS, (4 studies), and the Least Preferred Co-Worker scale, or LPC, (5 studies).

The results were consistent with earlier work on corporate and business leadership studies (Eagly & Johnson, 1990). Female principals were identified as more task oriented and more interpersonally oriented. The researchers found that gender differences were easily identified in laboratory settings, while field

settings were much less likely to produce easily identifiable gender differences. An interesting consensus from the study was the belief that a female manager would behave differently than a male manager, causing females to be chosen cautiously because of uncertainty about how a corporation would fare with a leader who uses a less familiar style.

The types of studies, and the number of them completed to date, on leadership in general and women administrators in particular, demonstrates the need for additional knowledge about women, perceptions, attitudes, and characteristics of leadership behavior. Until perceptions of leadership behaviors mirror real practiced behaviors, women will continue to be subjected to scrutiny as potential leaders. The field of education needs to take the lead from the business world in beginning to address the specific problems encountered by women administrative aspirants.

Gender, Leadership, and the Connection to Business

Although business leadership is somewhat different from educational leadership, there are some remarkable similarities which provide clues to successful styles. Studies of business leadership have occasionally been completed regarding the variable of gender, with conflicting, yet interesting, results. From the studies have come advice, suggestions, and prescriptions for behavior meant to encourage female entry. Some of the suggestions are applicable to education, some are not, and the gains reported for women in both environments have ranged from minimal to moderate.

Gender as an independent variable produced significant results in some studies of leadership in business (Eagly & Johnson, 1990; Loden, 1985). Bartol and Wortman (1975) found that the addition of the gender of the subordinate as a variable suggests rejection of the hypothesis that this variable has no effect on perceptions of leader behavior. Their study documented that female subordinates in business described their leaders, regardless of leader gender, significantly higher than did male subordinates on several subscales of leader characteristics.

Women were given advice on how to present themselves in leadership positions, to insure their acceptance into a male-dominated environment. In business, advice to women aspiring to management was to adopt a style more like that of a masculine leader to insure success (Loden, 1985). Incongruities between the advice offered to women aspiring to managerial positions and the actual situations they faced as leaders were described. The complexity of the problems women face is understated, and proposed solutions largely ignore the potential for added value brought to the managerial function by women (Loden, 1985). While there are certainly more women executives than ever before (Adler, Laney, & Packer, 1993), their influence on the way organizations function is not noteworthy (Loden, 1985). The majority of successful women managers are clones of the traditional male executive, affirming a discomfort with the traditional managerial roles they are expected to play in order to succeed (Loden, 1985). Traditional roles may force them to behave in ways that limit their effectiveness as leaders, because female style is contrary to traditional leadership standards.

Traditional management style, consisting of interactions between one boss and many subordinates, although the most acceptable, may not be totally effective for women (Loden, 1985). The need for accommodation, or adapting to other designs, has shaped women managers' styles for decades, as a means of effectively dealing with the traditional model. After introduction to a masculine culture, women are granted conditional membership to an "executive club," with only a select few becoming successful top level executives. Those few learned to adapt to their environment by accommodating rather than challenging the values of masculinism (Helgesen, 1990). Formisano (1987) concurred, finding that women who succeed tend to adopt an accommodating rather than an independent management style. Shakeshaft (1987) found that schools, antithetical to the ways in which women work best, force accommodation to gain success.

The data available do not demonstrate widespread gains for women in business leadership. Women increasingly hold responsible leadership positions in a variety of career fields (Weddle, 1992), and have made management gains in the business world (Morrison, White, & Van Velsor, 1987), but still are rarely found at the top of America's largest corporations. The overall percentage of women promoted to CEO at large companies remains proportionately small (Morrison, White, & Van Velsor, 1987). In 1986, of the top 6,700 managers at IBM, only 500 (7.4%) were women; at AT&T, 26 (3%) of the top 880 were women; and at Chemical Bank, only 165 (15%) of 1,100 vice presidents were women. In spite of many new opportunities for women based on their overall capabilities, there is still a contrast between expected promotion and actual advancement.

This may suggest an interaction between gender expectations and personal style. A pressing need exists to learn more about the potential contribution of women as change-oriented leaders and the impact of their leadership styles on traditionally male-dominated organizations.

The characteristics of women who find success in business leadership suggest a set of styles and behaviors not unlike those which are suggested as important in school leadership. Women managers who have broken the glass ceiling in medium-sized, nontraditional organizations have proven that effective leaders do not all come from one mold (Hersey & Blanchard, 1982; Rosener, 1990). Men use "transactional" leadership, where job performance is a series of transactions with subordinates. Women use an interactive form of leadership, where job performance is a series of personal interactions with subordinates. This results in a win-win situation, which is good for the employee and for the organization (Rosener, 1990). Female managers encourage participation, believing that inclusion is important. They value group identity and provide special forums for people to interact. This participatory style increases support for decisions which might otherwise be viewed as suspect. Women energize others, creating enthusiasm for work, which makes work challenging and exhilarating. Using enthusiasm as a dominant theme, women get others excited about the organization and its goals (Rosener, 1990). What is critical about the findings is their striking similarity to successful educational leadership profiles.

Women leaders of the last few decades radically changed the way we view the roles of men and women within our society and our organizations. They redefined the very language we use to speak of leadership--sharing vision,

personal commitment, risk taking, and empowerment--and influenced the way we work for social and organizational change. In the process, a new vision of leadership emerged.

Business continues to be the barometer that may be used to indicate leadership trends in other environments. Gender and culture play an important role in determining the style and success of a business, and likewise become integral parts of the leadership picture. The merit of studying business and extracting from the findings those pieces of information which particularly influence educational leadership is beneficial.

Leadership Behaviors

Identification of those behaviors considered effective leadership events is a complex task. Among the discussions regarding leadership behaviors are the specifics of gender-related capabilities, how professional preparation develops leaders, how the performance of women indicates certain effective qualities, and what the literature demonstrates as effective leadership behaviors in past research. Comparison of observed leadership behaviors provides a starting point for developing a model of effective management skills.

The literature demonstrates that the criteria currently used to recruit and hire principals are not all related to characteristics needed for effective performance as a principal, but many are related to gender (Calabrese, 1987; Schmidt, 1992; Fishel & Pottker, 1975). Promotions into administrative positions are more frequently associated with gender, political clout, and district visibility

than with ability (Hallinger & Murphy, 1987). Even though the performance of male principals may at times be inferior to that of women principals, male teachers continue to receive the overwhelming number of appointments to administrative positions, particularly at the high school level.

In a study of 1,000 principals in Texas, Beck (1987) compared males' and females' professional preparation, career path, skill development, and interpersonal skills, in an effort to prioritize effective leadership behaviors. The findings showed that males were perceived as better prepared in interpersonal relations, campus leadership skills, and physical plant management skills; females were perceived as having a higher level of expertise in curriculum development, instructional management, and teacher evaluation.

Although the predominance of men in administrative positions is frequently justified on the grounds that men perform better as educational leaders than do women (Tibbetts, 1980), evidence to the contrary indicates that women administrators may be just as capable as men, and frequently better (Cirincione-Coles, 1975; Fishel & Pottker, 1975). The performance of women elementary principals was found to be superior to that of men in tasks such as curriculum development, representing the school, and positive communication (Frasher & Frasher, 1979).

Bennis (1984) identified one of the qualities of an effective leader as the ability to read the soul of others in a fashion that raises human consciousness, builds meaning, and inspires human intent. A collaborative approach to leadership, focusing on the long term, tends to strengthen organizations. Politeness, empathy, and focusing upon listeners are all good management

characteristics. Women more often exhibit such behaviors and show a talent for building strength by empowering others.

A strong school leader takes initiative, has confidence, tolerates ambiguity, has a clear vision for the school, and communicates that vision to teachers, students, and community groups. Such a leader sets goals and evaluates them, uses a democratic-participatory style, focuses effectively on people, and establishes an open, warm, and supportive school environment. Fansher and Buxton (1984) compiled a list of traits for successful leaders including fairness, honesty, working with parents, friendliness, caring, intelligence, emotional stability, understanding people, and skill in communications. Needed for leader satisfaction were concern for staff, encouraging growth of staff, a personal sense of accomplishment, personal recognition and prestige, and having respect for others. These desirable leadership behaviors parallel styles attributed to women administrators by those who examine the role of gender in educational leadership (Smulyan, 1993).

What makes a good leader? Popular opinion holds that the answer is simple--white Protestant males (Mazzarella & Grundy, 1989). Prized leadership traits include dominance, achievement, autonomy, and aggression, all considered to be healthy male characteristics in other circumstances (Andrews & Basom, 1990). Corresponding characteristics, those of timidity, emotionalism, deference, self-abasement, and passivity, are seen as the antithesis of the first group, and are often considered female. Characteristics such as innovation, enthusiasm, creativity, and concern for student welfare and learning, are all considered effective administrative characteristics (Moles, 1988), and it is quite possible they

also are gender related (Chen & Addi, 1992). Women are more likely to move in new and original directions, creatively personalizing their experience as individuals (Kushell & Newton, 1986).

Women tend to be less rigid than men in their response to changing situations (Hoyle, 1969; Morsink, 1970). More women frequently review the results of actions they have taken, exercising stronger leadership and the use of more effective administrative techniques in addressing a variety of situations (Fishel & Pottker, 1975). Valued attributes of female administrators include concern for others, a greater focus on teaching and learning, a more democratic and participative style, greater effectiveness in representing the organization, and excellent efforts in working with communities (Cirincione-Coles, 1975; Sadker, Sadker, & Klein, 1991). Female administrators evaluate their own performance more on supervising instruction than do men, exert greater control over teachers' professional activities, and associate more with members of the faculty outside school. Women involve parents more and support teachers in conflicts more (Whitaker & Lane, 1990). In school communities, parents are more favorable toward schools run by women, and are more involved in school life (Fauth, 1984; Gross & Trask, 1976; Pitner, 1981).

Gross and Trask (1976) found that teacher and student morale in buildings with female principals is generally high. Pupils' learning and teachers' performance were both higher in female-run elementary schools (Shakeshaft, 1987). Bach (1976) determined that women administrators have gentleness, understanding, and strength, and are therefore effective in handling discipline.

Some behaviors of men are inappropriate for women, and some

behaviors of women are inappropriate for men. If a diagrammatic representation of leadership consists of two separate spheres of behaviors, one decidedly male and the other female, it is possible to visualize certain behaviors which are completely appropriate to one gender or the other. When the spheres are brought close enough to intersect, an acceptable and narrow band of overlap exists comprised of those characteristics, actions, and behaviors considered appropriate for either gender. The narrow band of acceptability means that women must be effective and stronger than the stereotypical view of women, finding a way to fit into the acceptable area. Successful women are at least as good as the best men available for the job, but there is less leeway for inaccuracy with such high visibility.

Gender and Communication

Communication, the sum of interactions and connections we have with each other, consists of verbal, non-verbal, and often perceived sets of characteristics which have the ability to empower givers and receivers. The styles of communication used by principals are differentially perceived by teachers, and it appears that each gender, as well, perceives communication styles differently. Women may have specific communication styles which either inhibit or expand their opportunities for interaction with subordinates as well as superordinates.

Gender and gender expectations may partially determine how supervisors interact with those they supervise. Men and women communicate

differently and they listen for different information (Borisoff & Merrill, 1985). Because of different listening capabilities, women administrators may have to work harder to get male teachers to "hear" them. Men receive more, and more diversity in, feedback than do women, from both male and female supervisors (Shakeshaft, 1987). Women are more likely to get nonevaluative feedback, or relatively neutral responses, and are often partially evaluated less favorably than equally competent men. Sadker and Sadker (1986) described similar patterns throughout K-12 schooling, focused mainly on elementary and middle schools, where male students receive more feedback and a wider range of feedback than female students.

Communication can indicate power in organizational settings (Hutton & Gougeon, 1993). Women share power and information more readily than men by encouraging open communication in all directions (Rosener, 1990). In contemporary workplaces, employees no longer accept being dictated to but want to be treated as individuals with minds of their own. Sharing power and information permits individualism to develop, but it may have risks, by allowing the possibility that people will reject, criticize, or otherwise challenge what the leader has to say or, more broadly, the leader's authority. Employees become frustrated when leaders listen to, but ultimately reject, their ideas. Women may be less likely to allow this to happen (Shakeshaft, 1987).

Personal characteristics of communication and collegiality tend to differ between males and females (Morrison, White, & Van Velsor, 1987). Female teachers view male principals as being significantly more negative communicators than female principals (Gougeon, 1991b) and experience male

principals as being more discouraging, manipulating, and isolating. They experience female principals as being significantly more mentoring, supporting, and recognizing. Male teachers do not report experiencing male or female principals' communication styles differently to a statistically significant degree, but they perceive other segments of management style, including use of time, use of power, and use of relationships, quite differently.

Female teachers experience male principals as using negative power communication significantly more frequently than female principals. Female teachers also experience differences in communication patterns between male and female principals which are identified as authoritarian. When Beck (1987) studied nineteen schools in Texas, cross gender communication effects between principals and teachers appeared to exist. More male than female principals tended to discourage, manipulate, and isolate female teachers to achieve social control in schools. More female principals than male principals mentored, gave recognition to, and supported female teachers. Such findings are instructive to teachers and principals in their search for better styles of professional communication.

During the work day, women have a higher percentage of contacts with people and spend less time on desk work than do men (Chen & Addi, 1992; Cioci, Lee, & Smith, 1991; Gougeon, 1991a). Women's styles of communication are informal, allowing others to assume leadership positions during meetings, which provides more opportunity for cooperative planning. Women principals, raised to be more affiliative and passive, use democratic practices more often than men to involve the group in policy making decisions (Fishel & Pottker,

1975; Grobman & Hines, 1956), fostering two-way communication between the leader and the group (Garfinkel, 1987; Hare, 1966). Pitner (1981) found that male administrators utilize communication for the purpose of politicking with community leaders to gain exposure and visibility, while females use their communication time networking with professional peers.

In a study of gender effect on speech patterns, female speech was characteristically open and self-revealing (Scott, 1989), desirable qualities for perceptive managers and administrators. Females also used appropriate grammatical form more often than males, and their speech was more often perceived as friendly, gentle, enthusiastic, and smooth. The same study identified male speech as closed and self-protective.

Inclusion and connection are desirable leadership qualities (Helgesen, 1990), and become positive results of communication. Females strengthen interconnections among their staff and draw others close, fostering and engaging human spirit. They facilitate interaction and information flow, placing high priority on listening down the ladder as well as up. The most common place of the brief principal-teacher interactions which characterize a large part of a school day, is in the principal's office, where principals, regardless of gender, initiate interactions more often than do teachers, and more often with male teachers. The most popular topics of the interactions, according to Helgesen, concern organizational matters, and this is more true for male than for female principals. Female principals concern themselves more with student affairs, initiating such interactions more readily.

Individuals are the most important link in effective managerial

communication. People who communicate effectively and who interact with group members are seen as effective leaders. Women administrators spend more time with people, communicate more in more effective ways, and use communication as a motivational tool more often. Being more interactive and participative, women communicate more with their staffs in developing the goals for a school and its students (Charters & Jovick, 1981). Shakeshaft (1987) concluded that female principals spend more of their day seeking interactions which connect them to students and teachers, building a strong communication network.

Perceptions of Leadership

Perceptions of self and perceptions of others have strong correlation to leadership behavior. The attitudes of observers toward abstract characteristics of others, such as leadership skills, are determined by their own observations and the surrounding environment at the time of the observations. The value of studying the perceptions of those impacted by a person's leadership behaviors rests with the relationship such perceptions have to the success of an organization.

An important variable in the determination of leadership behavior is self-perception, described as one factor in leadership behavior by Hersey and Blanchard (1982). Another factor influencing leadership behavior is the perception of others who work for and with the leader. Even leaders vary in their perceptions of their own leadership behavior. The value in examining these

self-perceptions lies in the humanistic-social-psychological orientation to human behavior, which holds that behavior of an individual is consistent with his or her concept of self (Cimperman, 1986). Examination of the perceptions of others, both superordinate and subordinate, should be the next stage in research to determine a total leadership style (Babcock, 1991; East, 1981; Griffin, 1993; Hutton, 1992).

Male attitudes toward female ambitions are changing, although not as quickly as many women would like. A survey of women in managerial positions (Collins, Gilbert, & Nycum, 1988) found that women, in their perception of their comparisons to males, felt that they were not taken seriously, received less compensation, and were assigned to more routine jobs. They felt their skills were not fully utilized, felt overprotected, and felt they were seldom given credit for projects pioneered. Their ideas were passed over in favor of the same ideas from men, and they were often interrupted in meetings. Men's opinions of managerial women included perceptions of difficulty with time management and poor response to the team concept. Perceptions further included poor informal communication skills, inadequate skill in team building and human relations, unwillingness to use established lines of authority, and erratic responses.

Krug (1986) suggested that investigations of leadership effectiveness should include evaluations by teachers, principals, and superordinates. Wrolstad, Hazucha, Huff, and Halperin (1992) investigated leadership from the perceiver's point of view, looking at the relationship between the leaders' personality and skills and the rankings they received from peers in an interactive group. The

authors found that people who communicate effectively and who interact with group members are seen as effective leaders across a variety of situations. The results also suggest that leaders should adjust their behavior according to the situation and the gender of the followers.

Ortiz (1982) reported that institutional norms exist in which women are perceived to follow, nurture, and teach, and men are perceived to lead, direct, and administer. The majority of existing research in educational administration is based on an androcentric bias or male view (Hutton & Gougeon, 1993), limiting application to the female workplace (Shakeshaft, 1986). Because there have been relatively few women in educational leadership, Kushell and Newton (1986) reported that they encountered difficulties in studying female leaders effectively. In Hein's 1988 study, women were seen as assuming more responsibility, demonstrating greater tact, and using more effective communication than was the case for men. Although women were perceived to be more capable by both males and females, males were still recommended more than females for administrative positions. Since schools are predominantly female workplaces with male leadership (Lieberman, 1992), much of the leadership research completed to date has little applicability to gender issues.

Perceptions, because they are such an integral part of our reactions to the world around us, can shape the reality of how successful leaders can be. Perception determines what we accept as norms for behavior, characteristics of strength and adequacy, and ultimately the qualities of leadership.

Leadership, School Climate, and Effective Schools

School climate, and its relationship to effective schools, is an issue which warrants mention at this point, particularly because of the connection of effective schools to the assessment of leadership behaviors. Successful principals make a conscious choice to lead and to promote positive school climate. School climate is discussed as it relates to effective leadership, achievement, staff and student morale, positive improvement, and community satisfaction.

The principal has the responsibility, as instructional leader, of modeling, shaping, developing, and rewarding norms of mutual respect and collegiality while fostering professional development and shared ownership in the organization (Barth, 1990). Teachers' views of the principal have a significant effect on their attitudes toward the workplace (Chen & Addi, 1992). Leaders need to be aware of the importance of team building and climate enhancement (Kirby & Blase, 1991), and the impact that both have on team members' attitudes.

Effective principals make a conscious choice for leadership. No one is more important to the climate and culture of the school than the principal (Andrews & Basom, 1990), male or female, who is the lead player in the institutional drama played out each day in an American school. Smith and Andrews (1989) defined instructional leadership as behavior that is highly connected to positive growth in academic performance, and concluded that principals exhibit this behavior by interacting with teachers as resource providers, instructional resources, communicators, and visible presences.

Eicholtz (1984) found that school climate is the key to excellence and effectiveness in our schools, regardless of the socioeconomic or ethnic composition of the student population. All aspects of the school are affected by school climate, including achievement, attendance, faculty and student morale, school pride, confidence of parents in the school, student and faculty self-image and self-esteem, and even curriculum and instruction. School climate is the catalyst that encourages people to help the institution reach its objectives. Positive school climate results in the commitment of everyone in the institution to be winners and to produce winners (Eicholtz, 1984), and in high motivation for students and staff.

Building community is an essential part of a woman administrator's style (Shakeshaft, 1986). The more democratic and participatory manner of women encourages inclusiveness, necessary for a sense of community. Women elementary principals involve themselves more with staff and students, and staffs working with women principals, being more engaged in their work, have higher job satisfaction. Elementary teachers receive a great deal of support from female administrators, adding to the collegiality of the school climate (Fauth, 1984; Cioci, Lee, & Smith, 1991).

Principals of schools where effective leadership behavior is identified are found to emphasize achievement while conveying to teachers their commitment to academic success (Short & Spencer, 1989). Women more than men set instructional strategies and accept responsibility for facilitating their accomplishment, providing an orderly atmosphere to ensure that the school's climate is conducive to learning. Women also evaluate student progress in light

of performance expectations, coordinate instructional programs consistent with the overall goals of the program and the school, and support teachers with regard to staff development more than men (Shakeshaft, 1986; Short & Spencer, 1989). According to Wyatt (1992), managers of successful organizations pay attention to creating a good working climate, attend to the human factor on a regular basis, display sensitivity to subtle variations in conditions, have good crisis management aptitude, and are excellent team players. Women tend to exhibit these characteristics more than men (Moles, 1988).

Administrators can initiate or inhibit, build or erode, expand or contain norms that bear critically upon school success (Little & Bird, 1984). Leadership strategies can range from the bureaucratic to the charismatic. Administrators of effective schools spend more time in curriculum and instruction, taking more control of the tasks associated with teaching. A smoothly running school is a by-product of "letting good teachers teach." Such leaders require and support improvement, concentrating on cultivating relations among the staff that increase their collective capacity to help one another to improve. These leaders also encourage communication, employing a team-building strategy that searches for a common educational ground. Again, these characteristics may be identified with women administrators more than with men on the elementary level (Chen & Addi, 1992; Cioci, Lee, & Smith, 1991).

Short and Spencer (1989) identified strong instructional leadership by the principal as a characteristic associated with effective schools. Studies of schools identified as effective focus on the principal as the essential factor in establishing and promoting improvement in the schools (Hallinger & Murphy, 1987;

Isherwood, 1983; Krug, Ahadi, & Scott, 1990; Short & Spencer, 1989), and demonstrate the important connection between the person in the principal's office and the outcomes of schooling. Researchers suggest that instructional leadership, particularly that of women leaders (Moles, 1988), can impact classroom practices and teaching through the establishment of belief structures and school policies that promote an "academic press."

School leadership is currently moving from a strict hierarchical structure to a more supportive, inclusive arrangement (Helgesen, 1990). Leaders must conform to the demands of the workplace, understand the need for listening, and let go of traditional ordered structures. For women, these qualities come more easily than for men (Cioci, Lee, & Smith, 1991), as they more naturally espouse inclusive and supportive relationships. A positive interpersonal climate is associated with teachers' positive perceptions of principals' effectiveness (Quintugua, 1990). Isherwood (1983) found that teachers' perceptions of female principals' leadership styles were significantly related to the interpersonal relationship between teachers and principals, instructional climate, and leadership effectiveness.

The most critical factor in school climate is the principal (Eicholtz, 1984; Lindelow, Mazzarella, Scott, Ellis, & Smith, 1988), whose personality can strongly impact the positive or negative climate of the school. Through effective management style and skills, the principal serves as the instructional leader, the motivator, and the molder of school climate. The principal must be firm, fair, and understanding, while showing enthusiasm, a sense of humor, and affection to staff and students when appropriate. Those around the principal need to see

the leader as a real person (Little & Bird, 1984), with sincere consciousness and genuine emotion. Shakeshaft (1989a) identifies such characteristics more closely with women than with men.

Each school has its own feel, or personality, that can be recognized soon after entering the doors. This characteristic has often been identified as the school climate (Lindelow, Mazzarella, Scott, Ellis, & Smith, 1988). School climate is a summation of the perceptions of how school personnel and students behave and interact. The environment has a profound effect on the satisfaction and achievement of students (Keefe, Kelley, & Miller, 1985). A healthy school climate is important because it is associated with higher student achievement, better behavior, and better attitudes. Moles' research in 1988 identified such variables as showing up more often in female leaders' profiles.

As reported in research, the structures of social interaction and behavior in schools influence student outcomes (Lindelow, Mazzarella, Scott, Ellis, & Smith, 1988; Weber, 1989). Schools with positive climates are places where people respect, trust, and help one another, and where the school projects a feeling that fosters both caring and learning. Principals who are perceived as exerting strong leadership are invariably those whose schools are perceived as having positive school climates, and Eagly and Johnson (1990) found evidence for women exhibiting such characteristics more often than men.

Does it really matter whether a school has a healthy climate? Although favorable climate does not guarantee school effectiveness, it is a necessary ingredient for such effectiveness, and improving school climate is a worthwhile undertaking. There are as many ideas on what a healthy climate is and how to

achieve it as there are ideas on what, in individuals, constitutes a healthy personality and how to achieve it. Lack of any hard data concerning the relationship between school climate and leadership behaviors, particularly between the genders, may not be a problem which is easily solved, but it is one with possibly important outcomes for school districts (Lindelow, Mazzarella, Scott, Ellis, & Smith, 1988).

The Dimensions of Instructional Leadership

Instructional leadership can be reliably assessed along several broad dimensions, including defining the school mission, managing the instructional program, supervising teaching, monitoring students and their progress, and promoting the school learning climate. Each dimension contains specific job functions. The studies of Krug (1990) and Hallinger and Murphy (1985, 1987) resulted in identification of the dimensions of instructional leadership and their related job functions.

Effective leaders describe themselves, and are described by teachers, as administrators who frequently discuss school goals, purposes, and mission with staff. They look for opportunities to stress and communicate school goals. They try to make themselves visible in the school building and they communicate excitement about education to staff and students. By discussing and reviewing goals with staff on a regular basis throughout the school year, especially in the context of instructional and curricular decisions, principals can ensure that the importance of the school's goals is understood.

Effective administrators work to ensure a good fit between curriculum objectives and school outcomes and actively support curriculum development. A primary emphasis for an effective administrator is with instructional rather than administrative issues (Levine, 1982). Administrators meet often with their staffs concerning areas specifically related to the evaluation, development, and implementation of curriculum and instruction. Research on effective schools and school improvement indicates, however, that principals should pay equal, if not greater, attention to two other related instructional management functions, coordinating the curriculum and monitoring the progress of students (Hallinger & Murphy, 1987).

The most effective leaders spend time working with teachers on improving instructional skills, on observing classes, and on encouraging staffs to perform their best (Lipham, 1981). By coaching and counseling teachers in a supportive manner, principals can build staff morale. They critique teachers as though they were a mentor rather than an evaluator. They encourage teachers to evaluate their own performance and to set goals for their own professional growth (Levine, 1982).

Effective leaders set high standards for student achievement, providing teachers with easy and timely access to student assessment information used in planning and setting goals. Used to diagnose programmatic and student needs, to evaluate the results of instructional change, and to assist in making classroom assignments, assessment information has a clear function in schools. Principals play a key role in this area by providing teachers with test results, by discussing test results with staff, and by providing interpretive analyses for teachers

regarding the data (Purkey & Smith, 1982).

Effective leaders nurture learning in a variety of ways. They encourage teachers to innovate and they recognize staff members' efforts. They write letters of commendation for positive performance, encouraging community members to praise teachers for achievements. Principals shape the learning climate by maintaining high visibility and by creating a reward system that reinforces academic achievement. They establish clear, explicit standards that encompass the school's expectations of students. Protecting time for learning and monitoring the quality of available time for instruction are both affected by principal leadership (Hallinger & Murphy, 1987; Weber, 1989). Effective principals also select and participate in high quality staff development which addresses the goals of the school.

The connection of these dimensions of leadership, perceptions of teachers, superintendents, and principals, and the relationship of the leadership dimensions to effective leadership behaviors, formed the focus of this study.

Summary

The high school principalship is truly a coveted position. Until the issue of gender in school administration becomes insignificant, female aspirants will continue to face difficulty in achieving their goal of high school administration. Although some women benefit from male encouragement and attempt to advance in the field through established male networks, others lack that sponsorship and must create their own compensating support systems. Women

possess as many or more of the abilities and skills needed to be as successful in administrative positions, if given an opportunity, as their male counterparts. By changing society's misconceptions about women in leadership roles, we have occasion to enhance our educational system. The negative image of female administrators is not corrected by the occasional successful female.

The available literature regarding women in education, in leadership, and in the connection of business to management style was examined in this chapter. The presence of women in leadership presents a complex model which involves such issues as communication style, impediments to ascendancy, perceptions, mythology, and career path. The historical picture underscores the importance of addressing the disappearance of women from management positions which were once so well represented by females.

Research in educational administration needs to continue to examine the lives and work of the women involved in schools to understand how lists of traits, roles, and skills of effective administrators translate into responses to children, teachers, parents, other administrators, and curriculum. Also worthy of study is how such characteristics might be translated into ideas and actions, and into school practice in a context that may lead to effective change. The study of such behaviors as they impact the various social aspects of organizational segments of public schooling can be helpful in improving the status of women in administration.

Women suffer from stereotypes, and promotions into administrative positions continue to be more frequently associated with gender, political clout, and district visibility than with instructional leadership potential. Much has been

written to attempt a classification of male and female characteristics of leadership behaviors. Theoretical significance regarding male and female leadership behaviors may well emerge from a growing body of observational study. Therefore it is important that research continues to examine and report findings in a manner that provides beneficial information. Research needs to reverse the pattern of white "male-defined" study that contributes to discrimination. The problem of underrepresentation of women in positions of educational leadership will cease only when gender is irrelevant in hiring, and when qualified women are as routinely included in the decision-making process as white males are today.

The literature indicated the importance of investigating many variables, among them gender, and their influence on the leadership perspective. The historical data demonstrated a dramatic shift in the number of women represented in leadership since the early part of the century and stressed the importance of investigating reasons for the change. Women and their present role in education and leadership were examined as a way of presenting information regarding their advancement.

Impediments to administrative entry were identified in the literature as roadblocks to female promotion. A survey of females' career paths uncovered factors which may impede the progress of women as they strive for success in leadership. Female traits, mythological and real, were identified in an effort to demonstrate their effect on perceptions of leader behaviors. To delineate previous findings, and search for usable advice, completed leadership studies were reviewed in the fields of education and business. Characteristics of

acceptable leadership behaviors, from the perspective of scholarly study results, were examined for comparisons to gender issues.

Finally, an examination of perceptions and their relationship to leadership behaviors was completed, connecting both to communication style, effective schools literature, and the dimensions of instructional leadership.

CHAPTER III

METHODOLOGY

Introduction

Few studies have investigated what principals do to manage curriculum and instruction. Even less research has examined the organizational and personal factors that influence principal instructional leadership. Examining leadership behavior of selected Ohio secondary school principals was the purpose of this study. The focus was on leadership behavior of female secondary principals as perceived by the principals' superordinates, by selected members of the principals' teaching staffs or subordinates, and by the principals themselves. Since the research shows that gender and gender expectation may partially determine how supervisors interact with those they supervise (Shakeshaft, 1989a), superordinate and subordinate gender were noted in the study.

For this study, the research questions were the following:

1. To what degree do teachers' perceptions of the leadership in their schools relate to the gender of both the teacher and the principal when assessing the subscales of framing school goals, communicating goals, supervising and evaluating instruction, coordinating the curriculum, monitoring student progress, protecting instructional time, maintaining high visibility, providing incentives for teachers, promoting professional development, and providing incentives for learning?

2. To what degree do superintendents' perceptions of the leadership in their high schools relate to the gender of both the principal and the superintendent when assessing the same subscales?

3. How do principals' perceptions of their own leadership behaviors relate to gender when assessing the same subscales?

Sample

Principals in the Study

A 1994-1995 directory of the Ohio State Department of Education was used to identify a sample. From the directory, all female secondary principals, principals of high schools composed of grades nine through twelve or grades ten through twelve, were identified. Since only 38 female secondary principals were identified, they were all selected in random order and a data base was constructed for them and the schools they represented. By design, the principals' superordinates and samples of their subordinates were also included for each identified school. In districts having more than one secondary school, only one principal and building were included in the sample.

Thirty-eight male secondary principals were chosen at random from the Ohio Department of Education directory using Rand Corporation's *A Million Random Digits with 100,000 Normal Deviates*. This selection procedure did not seek to stratify the sample in any way, except to insure that those selected fit the definition of secondary principals for this study. The resulting sample consisted of 76 secondary principals from Ohio, 38 female and 38 male.

Superordinates and Subordinates

The superintendent of the district of each selected high school was identified as the superordinate of the principal, and included in the study. After the principals were identified, the Information Retrieval Numbers (IRN) of the selected schools were sent to the Educational Management Information Services (EMIS) department of the Ohio Department of Education with a request to generate a list of teachers, at the researcher's expense. A faculty list, including ten male and ten female members of the teaching staff, was selected at random by the EMIS department. The researcher used the resulting list of 20 names from each district to randomly select five female teachers and five male teachers for inclusion in the study. In any staff including fewer than five of either gender, the sample was adjusted to produce a total of ten subordinates. In some instances, when the teacher list for the school was fewer than ten total, or if the generated EMIS list was less than ten, all teachers on the list were included in the sample. The Human Subjects Research Committee of Youngstown State University, after review of the proposal, determined the study to be exempt for the present research. Verification is found in Appendix J.

The state directory identified all districts with female secondary principals and female superintendents, those with female superintendents and male secondary principals, those with male superintendents and female secondary principals, and those with both positions filled by males. Two Ohio districts were found to have female superintendents and female secondary principals. Both of these districts were included in the study as well. Table 2 shows the gender

distribution of participants selected for the study.

Table 2

Survey Participants in Ohio

Position	Number
Female Principals	38
Male Principals	38
Female Superintendents	7
Male Superintendents	69
Female Teachers	367
Male Teachers	367

Data Collection

After the sample was identified, a data base of all selection subjects was prepared. Each subject was sent a letter, describing the purpose of the study, a copy of the appropriate survey, and an addressed, stamped envelope for return of the completed survey instrument. Refer to Appendixes A, B, and C for copies of the survey instruments.

Each subject was assigned a four-digit code to assist in follow-up. The first digit indicated the gender ("1" for female and "2" for male). The last three digits indicated the identification number of the participant. Digits of "001" to "076" were assigned to superordinates, "081" to "156" were assigned to principals, and "161" and above were assigned to the teachers in the study.

Youngstown State University stationery was used for the cover letter and mailing envelopes, with permission of the university, at the researcher's expense. Reminder cards were sent to non-respondents two weeks after the first mailing,

and a second letter and survey were sent to non-respondents four weeks after the first mailing. Copies of all correspondence, including the cover letters and postcard, are in Appendix D.

Instrumentation

The instrument selected for use in this study was the Principal Instructional Management Rating Scale (PIMRS), developed by Philip Hallinger (1983). The survey, of a Likert type, consisted of three separate forms, one each for the superordinate, the principal, and the subordinate. Each survey asked for demographic data and included a list of 50 questions referring to the perceived leadership behaviors of the principal in question. Although the questions depended on the perceptions of spectators rather than on concrete observed behavior, numerous studies indicated that such perceptions provide reliable, valid data on managerial behavior (Latham & Wexley, 1981). Because the stated purpose of this study was to determine the degree teachers', superintendents', and principals' perceptions of leadership behaviors relate to the gender of the participants, this instrument, based on items dealing with perceptions, was selected as the survey method for data collection.

The PIMRS is divided into ten subscales, each of which includes five questions measuring a different instructional leadership function. In Hallinger's model, instructional leadership consists of three dimensions of leadership activity: those of defining the school mission, managing curriculum and instruction, and promoting the school climate. Each of these dimensions is

further identified as having specific functions as follows:

Defining the School Mission. The principal frames goals in a manner which articulates the vision of the school to staff, students and the community and communicates the goals on a regular basis.

Managing Curriculum and Instruction. The principal is knowledgeable about curriculum and instruction, coordinates the curriculum for maximum learning, supervises and evaluates instruction, and monitors progress.

Promoting School Climate. The principal sets academic standards for the school, sets expectations for students and staff, protects instructional time, and promotes educational improvement (Hallinger & Murphy, 1987).

The use of appraisal methods that assist principals in their professional development and serve accountability purposes should be a goal of school districts. Principals are called on to be strong and diverse leaders. However, today, more than ever, that is unlikely to happen unless several conditions are met. Barriers to high performance of instructional management roles need to be removed, instructional leadership should be defined in terms of observable practices and behaviors that principals can implement, and assessment methods utilized must generate valid and reliable data on leadership behavior while providing usable information (Hallinger & Murphy, 1987). The PIMRS has been developed to meet these criteria which provide assessment of leadership behaviors based on perceptions. Thus it was chosen as the instrumentation for this study.

Instrument Development

In the development of the PIMRS, Hallinger focused on three goals to meet the above criteria. The first focus was on developing an instrument based on specific job-related behaviors. Next, the behavioral components of the instrument were to be drawn from research related to principal effectiveness as well as from current practice. The instrument was also expected to be useful for a variety of purposes including assessment of principal leadership behavior, staff development, research, and district policy analysis.

This model derives from the premise that the high school principal's instructional leadership role differs from the centralized leadership role portrayed in the literature of effective elementary schools. In the world of secondary schools, principals assume direct responsibility for selected instructional leadership functions, but must delegate partial or full responsibility for other functions to subordinates. The resulting diffusion of the leadership role within the school promotes a team atmosphere.

The methodology used to develop an instrument for measuring instructional leadership behavior of principals followed steps prescribed by Latham and Wexley (1981) for constructing Behaviorally Anchored Rating Scales (BARS). BARS rely upon descriptions of critical job-related behaviors for the development of scale items. The items are "behaviorally anchored" in the sense that they are statements of critical job-related behaviors on which raters can place their appraisal of an individual's performance within a given dimension of a particular job. The strength of the BARS approach lies in its specificity, as the

scales make it clear to both the appraiser and the appraisee exactly what is expected and what must be observed with respect to job behavior.

The PIMRS evolved through several phases. The first step in development of the rating scales was to analyze carefully the principal's role as instructional manager. This job analysis drew heavily from effective schools research, focusing on schools in which students succeeded beyond what would be expected given their socio-economic background (Bossert, Dwyer, Lee, & Rowan, 1982; Purkey & Smith, 1983). Eleven job functions which reflect the areas of responsibility of the principal in the role of instructional manager were abstracted from research on effective schools and formed the basis of the initial instrument. The eleven areas of responsibility in the original construction of the PIMRS are the following: framing the school's goals, communicating the school's goals, supervising and evaluating instruction, coordinating curriculum, monitoring student progress, protecting instructional time, maintaining visibility, providing incentives to improve teaching, promoting instructional improvement and professional development, developing academic standards, and providing incentives for learning. It should be emphasized that PIMRS ratings measure perceptions of leadership activity, not quality of instructional leadership. The ratings are compiled into a profile that can assist in diagnosing areas of need and determining areas for practical intervention and professional improvement.

Item evaluation resulted in a final form of the PIMRS including ten of the subscales listed above: 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, and providing incentives for learning. Developing academic standards was eliminated as a subscale in the final draft. Detailed descriptions of the subscales of the instrument used for this study are found in Appendix E.

The initial study utilizing the PIMRS to assess leadership behaviors involved ten elementary school principals in a single school district in 1984. The primary goal of the research was to describe the leadership behavior of principals by defining specific job behaviors. As part of the research, the initial form of the rating scale was developed and piloted for validity. A significant result of this research was that the personal variable that discriminated best between two groups was that of gender. The similarity of findings concerning the gender variable in the study and previous studies suggested to the authors that gender be studied in the future (Hallinger & Murphy, 1985). These results suggested the use of the PIMRS for the present study.

Item Construction

Hallinger constructed items for the PIMRS in a series of steps. He reviewed the literature on instructionally effective schools to develop the job functions comprising instructional management. He used the opinions of superintendents, staff assistants and principals, both male and female, to generate a list of critical job-related behaviors within each of the job functions (Hallinger, 1995). Hallinger supplemented the list developed with behaviors he identified to fall within each of the job functions. In some cases, other research

findings were included if they were pertinent to the critical behaviors constituting a particular job function. The resulting list of critical job-related behaviors contained 60 behavioral statements concerning the principal's role as instructional manager. The author rewrote behavioral statements to describe discrete behaviors for use as questionnaire items. Within the three general dimensions and 11 functional categories, 89 critical job-related behaviors were identified. For this study, the final form of the questionnaire varies from the initial construction in number of items and number of subscales, a result of the initial pilot studies conducted by the author. Three separate forms of the final PIMRS instrumentation may be found in Appendixes A, B, and C.

Assessing the Validity and Reliability of the Instrument

Any instrument used for appraisal must provide data which meet certain standards of validity and reliability. "A valid measure should yield consistent data about what it is concerned with regardless of the time of day, week, or month the measures are taken, and regardless of who takes the measure" (Latham & Wexley, 1981, p. 65). The PIMRS was thus judged for adequacy as an appraisal instrument by the author and by professionals familiar with the instructional management functions of school principals.

Content Validity. The degree to which the instrument's subscale items are appropriate measures of the various job functions determines the content validity. The procedures used to assess content validity of the instrument followed those outlined by Latham and Wexley (1981). Hallinger identified a

group of professionals familiar with the instructional management functions of school principals, including practicing principals, but not involved in the development of the list of job-related behaviors, to assist in the content validation of the instrument. These professionals agreed to anonymously assess the instrument. After completing a procedure involved in placing the 89 items in columns based on the 11 job functions, 81 items remained within the categories. After review by the participating professionals, ten of the items were subsequently discarded to decrease the number of items in certain categories and the overall length of the questionnaire. The 11 categories and their assigned items, 71 in total, formed the rating scale.

Reliability. Reliability is the degree to which the rating scales measure the targeted phenomenon consistently. In this study, the internal consistency of the instrument was chosen as the appropriate form of reliability. Internal consistency is the degree to which items grouped together conceptually as subscales correlate with each other. Latham and Wexley (1981) indicate that a minimum standard of reliability for behaviorally anchored rating scales should be set at .80 when assessing the internal consistency of the instrument. Ten of the 11 functional categories or subscales met the .80 criterion. The size of the Cronbach's alpha coefficients for the subscales ranged from a low of .78 for the subscale *Incentives to Improve Teaching*, to a high of .90 on three different subscales, *Supervision and Evaluation of Instruction, Curricular Coordination*, and *Monitoring Student Progress*. Table 3 shows the reliability estimates for the management subscales.

Table 3

Reliability Estimates for the Management Subscales

Subscale	Reliability[a]	Sample Size
Frame Goals	.89	77
Communicate Goals	.89	70
Supervision/Evaluation	.90	61
Curricular Coordination	.90	53
Monitors Student Progress	.90	52
Protects Instructional Time	.84	70
Visibility	.81	69
Incentives for Teachers	.78	70
Professional Development	.86	58
Academic Standards	.83	76
Incentives for Learning	.87	61

[a] Reliability estimates are Cronbach's Alpha

Discriminant Validity. This measure assesses the ability of the instrument to discriminate among the performances of the persons being rated. An appraisal instrument is of little value to users if it is unable to differentiate among the ratees' performances on the various job functions. The ability of the PIMRS to discriminate among the principals' performances was tested by measuring the variance in teacher ratings of principals between and within the schools on each of the subscales. If the variance in ratings of principals between schools is significantly greater than the variance in principal ratings within schools on a given subscale, it is an indication that the instrument is able to measure differences in behavior among the principals.

The test used to determine the discriminant validity of the instrument was a one-way ANOVA. This test compares the within school variance in ratings

with the between school variance in ratings. Eight of the 11 subscales yielded greater between school than within school variance with statistical significance at the .01 level and nine at the .05 level. Only the subscales *Professional Development* and *Academic Standards* were unable to meet these levels of statistical significance. Appendix F shows the Analysis of Variance by subscale.

Construct Validity: Subscale Intercorrelations. The criterion described here provides an assessment of the degree to which the persons being evaluated demonstrate the quality or construct presumed to be reflected in the performance instrument. Construct validity compares the intercorrelation between each pair of subscales with each subscale's reliability coefficient. The purpose of the test is to examine the extent to which the subscales measure different aspects of a principal's behavior. The intercorrelations among subscales should be low. This confirms the test of discriminant validity that the subscales are measuring discrete job functions. In addition, the intercorrelation between subscales measuring different job functions should be lower than the subscale reliability coefficients. The results will indicate that items within each subscale correlate more strongly with each other than with the groups of items in other subscales. Appendix G presents the subscale intercorrelations based on the responses of the test sample of 104 teachers. The data support earlier evidence suggesting that the items grouped conceptually as subscales belong together and are measuring different job functions.

Construct Validity: School Document Analysis. The final test of the instrument's validity was accomplished through a comparison of the data collected by the instrument with information related to the principals'

instructional management behavior contained in school documents. Document analysis served as an independent check on the perceptions collected by the rating instrument. Documents of various types from several schools, such as newsletters, handbooks, goal statements, bulletins, and written evaluations, were analyzed by Hallinger. The documents were analyzed on a subscale by subscale basis, resulting in an independent check on the validity of the performance ratings with the instructional management rating scales. The document analysis generally supported the construct validity of the subscales, although each to varying degrees.

Scoring the PIMRS

The final form of the Principal Instructional Management Rating Scale provides a profile of principal performance on ten instructional leadership job functions associated with principal leadership in effective schools. The PIMRS has been used successfully at the elementary and secondary levels, and with both principals and assistant principals (Hallinger & Murphy, 1987). The instrumentation has been designed so that it can be easily scored by the principal at his or her site, or in this case, by the researcher upon return of the survey instruments. It is suggested by Hallinger that the researcher not mix the scores from different role groups, keeping separate principal responses, teacher responses, and superintendent responses. Analysis is intended for subscale scores only.

Each instructional leadership subscale in the PIMRS consists of five items.

Each item is scored on a "1" to "5" scale ("Almost Never" to "Almost Always"), denoting the frequency with which the specific behavior is demonstrated. The scoring manual suggests that in addition to general statistical analyses, graphic representation on bar graphs may be useful in practical applications. Averages of each subscale are the most useful forms of data from the survey. Researchers are encouraged not to consider whole scale single scores as a valid use of the PIMRS, but to gain information from subscales, across role group or state comparisons. It is important to note that the PIMRS does not measure an administrator's effectiveness. Rather, it assesses the degree to which a principal is perceived as providing instructional leadership in his or her school.

Data Analysis

Data for this research consisted of responses to the 50 questions on the PIMRS for each participant and some additional demographic information. Demographic information collected for the superintendent included age, number of years the superintendent had worked with the principal in question, number of visits to the principal's school, and gender. Demographic information for the principal included age, gender, total years as a principal, total years in the present position, school level, years of teaching experience, and grade levels taught. Demographic information collected for the teachers in the survey included age, gender, years working with the principal in question, years of experience as a teacher, and grade level of present assignment. Data collected from the PIMRS instruments returned were analyzed by ANOVA and related statistical

procedures using the SPSSX mainframe statistical computer program at Youngstown State University. Measures of central tendency were computed for each group (male principals, female principals, male teachers, female teachers, male superintendents, and female superintendents). Independent t-tests and reliability indices were completed for each group to determine validity and reliability of responses. Statistical comparisons were performed on the subscales rather than the individual items, as suggested by Hallinger.

Presentation of the results and discussion of the significance and implications of the findings are discussed in the next two chapters of this dissertation. Chapter four presents the results of the data collection and analysis and chapter five discusses significance of the findings, implications for further study, and recommendations to future researchers.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

The data analysis accords with the procedures set forth in Chapter III and is reported in this chapter, which presents the findings of the study. The focus of the research was to determine the degree to which teachers' and superintendents' perceptions of the leadership behaviors of principals was related to the gender of the perceivers and the gender of the principals. School districts in Ohio, randomly selected from the Ohio Department of Education Directory, were involved in this investigation. The sample consisted of 38 traditional (grades 9-12 or 10-12) high schools with female principals and 38 similar high schools with male principals, each school district's superintendent, and a sample of the teaching staff of each school. Although the original intent was to use 40 schools with female principals and 40 schools with male principals, only 38 schools with female principals fit the study's definition of a traditional high school with grades 9-12 or 10-12. An equal number of male-led schools was used for comparison, resulting in a sample size of 76 schools. This chapter includes a summary of the demographic information gathered, a summary of the results of the PIMRS for each of the three categories of respondents, and a statistical analysis of the data relating to the questions posed in the study.

Each respondent in the study completed a copy of the Principal Instructional Management Rating Scale (PIMRS). The PIMRS included

demographic items which were also analyzed. The use of the scale with three groups afforded the opportunity to compare the perceptions of superordinates (superintendents), principals (self-perceptions), and subordinates (teachers). The Youngstown State University Computer Center was used for all analyses, using the SPSSX program. Data were entered into a mainframe account by independent data entry personnel with no specific interest in the results obtained. The ten subscales of the PIMRS, each containing five questions, are as follows:

Framing School Goals, Subscale 1, refers to a principal's role in determining the areas in which school staff will focus their attention and resources during a given school year.

Communicating School Goals, Subscale 2, is a function concerned with the ways in which the principal communicates the school's important goals to teachers, parents, and students.

Supervising and Evaluating Instruction, Subscale 3, ensures that school goals are translated into classroom practice by coordinating classroom objectives with those of the school, providing instructional support to teachers, and monitoring instruction.

Coordinating Curriculum, Subscale 4, ensures that curricular objectives are aligned with course content and achievement tests, and are continuous across grade levels.

Monitoring Student Progress, Subscale 5, describes the emphasis placed on assessment and evaluation of the school's instructional program through multiple assessment techniques.

Protecting Instructional Time, Subscale 6, ensures that interruptions to classroom instruction are limited, resulting in optimal opportunity for student achievement.

Maintaining High Visibility, Subscale 7, increases interactions with students and teachers to provide effective opportunities for communicating priorities for the school.

Providing Incentives for Teachers, Subscale 8, creates a positive learning environment by rewarding and recognizing achievements.

Promoting Professional Development, Subscale 9, supports teachers' personal efforts to improve instruction.

Providing Incentives for Learning, Subscale 10, creates a positive school learning climate which rewards and recognizes student achievements.

The research questions for this study were:

1. To what degree do teachers' perceptions of the leadership in their schools relate to the gender of both the teacher and the principal when assessing the subscales of framing school goals, communicating goals, supervising and evaluating instruction, coordinating the curriculum, monitoring student progress, protecting instructional time, maintaining high visibility, providing incentives for teachers, promoting professional development, and providing incentives for learning?

2. To what degree do superintendents' perceptions of the leadership in their high schools relate to the gender of both the principal and the superintendent when assessing the same subscales?

3. How do principals' perceptions of their own leadership behaviors relate

to gender when assessing the same subscales?

Return Rate

Table 4 presents the return rate of the instruments distributed to the 76 schools selected for the study. After an initial mailing of 886 questionnaires, 76 to superintendents, 76 to principals, and 734 to teachers, a second mailing, consisting of 520 questionnaires with new cover letters, was sent to non-respondents. Between the first and second mailings a reminder postcard was sent. Because the return rate was above 60% with the first two mailings, a third mailing was considered unnecessary. The results are summarized in Table 4.

Table 4

Return Rates

	First Mailing	Second Mailing
Number Sent	886	520
Number Returned	366 (41.9%)	167 (60.16%)[a]

[a]Indicates cumulative percent.

Demographic Information

Position

Of the 533 respondents, 48 were superintendents, 61 were high school principals, and 424 were teachers. Table 5 summarizes the respondents by position.

Table 5

Respondents by Position

Position	Number Sent	Returned[a]
Superintendent	76	48 (63.16%)
Principal	76	61 (80.26%)
Teacher	734	424 (57.77%)
Total	886	533 (60.16%)

[a]Percent return by position.

Reliability Indices

Reliability indices were calculated for each category of respondents using the SPSSX computer program which generated an index of internal consistency, Cronbach's alpha. If a survey or test is reliable, all the items should tend to measure the same concept and should correlate positively with one another (Nunnally, 1972). The higher the survey items correlate with one another, the more reliable the test. If all the items within the survey correlate highly with one another, the survey will correlate highly with another form of the same survey. The higher the coefficient alpha, the closer it is to 1.00, the higher the internal-consistency reliability of the survey.

Cronbach's alpha has several interpretations. It can be viewed as the correlation between one survey and all other possible surveys containing the same number of items that might be constructed from a hypothetical universe of items, measuring the same characteristic of interest (Norusis, 1990). Coefficient alpha indicates how much correlation we expect between our scale and all other

possible 50-item scales measuring the same items. It also estimates the reliability based on the observed correlations or covariances of the items with each other. The value of coefficient alpha ranges from zero to one, with numbers closer to one indicating higher reliability. Table 6 presents the reliability coefficients.

Table 6
Reliability of Full Scale and Subscales for Superintendent, Principal, and Teacher Groups

	Superintendent	Principal	Teacher
	n = 48	n = 61	n = 424
Full Scale	.97	.93	.98
(1) Frame Goals	.83	.86	.93
(2) Commun. Goals	.87	.80	.90
(3) Sup. & Eval.	.80	.60	.86
(4) Coor. Curr.	.91	.83	.91
(5) Mon. Stu. Prog.	.85	.72	.89
(6) Prot. Inst. T.	.83	.67	.85
(7) High Visib.	.86	.74	.86
(8) Teach. Incent.	.75	.72	.91
(9) Prof. Devel.	.85	.71	.90
(10) Learn. Incent.	.87	.72	.88

The reliability coefficients calculated from the returned surveys show a full scale value of .93 for the principals, .97 for the superintendents, and .98 for the teachers. For the ten subscales of the PIMRS, the reliability coefficients ranged from .83 to .91 for the superintendent group, from .60 to .86 for the principal group, and from .85 to .93 for the teacher group.

Gender

Each category of respondents was identified by gender, resulting in totals of 46 male superintendents, 2 female superintendents, 33 male principals, 28 female principals, 212 male teachers, and 212 female teachers. Table 7 summarizes the gender identification of the respondents.

Table 7

Gender of Respondents by Category

Category	Male	Female
Superintendent	46 (95.8%)	2 (4.2%)
Principal	33 (54.1%)	28 (45.9%)
Teacher	212 (50.0%)	212 (50.0%)
Total	291 (54.6%)	242 (45.4%)

Additional Demographic Variables

Each group of respondents was also asked a list of questions regarding age, number of years working with the principal of the high school, number of years as a current or former teacher, and grade level of current or former teaching experience. Each survey instrument had a different set of demographic questions, therefore the information in tables 8, 9, and 10 summarizes the results separately for the different groups of respondents.

Table 8

Superintendent Demographics

	n	Mean Age
Total Group	48	49.6
Male	46	49.5
Female	2	51.0

Years Superintendent Worked with Principal[a]	1=7; 2-4=21; 5-9=13; 10-15=5; more than 15=2
Years Principal has been at the School[a]	1=8; 2-4=16; 5-9=15; 10-15=7; more than 15=2
Number of Visits to Principal's School[a]	1=1; 2-4=5; 5-9=8; 10-15=10; more than 15=24

[a]Indicates frequency of responses.

Table 9

Principal Demographics

	n	Mean Age
Total Group	61	47.9
Male	33	48.0
Female	28	47.8

Years Experience at the School[a]	1=9; 2-4=23; 5-9=22; 10 or more=7
Years Experience as a Teacher[a]	1=0; 2-4=10; 5-9=18; 10-15=16; more than 15=17
Grade Level Formerly Taught[a]	K-6=1; 7-9=11; 9-12=29; other=20

[a]Indicates frequency of responses.

Table 10

Teacher Demographics

	n	Mean Age
Total Group	424	42.1
Male	212	46.1
Female	212	38.1
Years Work With Principal[a]	1=85; 2-4=175; 5-9=85; 10-15=55; more than 15=24	
Years Experience as a Teacher[a]	1=10; 2-4=33; 5-9=94; 10-15=61; more than 15=226	
Grade Level Presently Taught[a]	K-6=1; 7-9=68; 9-12=345; other=10	

[a]Indicates frequency of responses.

Subscale Results

Subscale means and standard deviations were calculated for each of the three categories of respondents, superintendents, principals, and teachers. The data are presented in Table 11.

Table 11

Means, Standard Deviations and Sample Sizes for Superintendents, Principals, and Teachers on Ten Subscales

	Superintendent		Principal		Teacher	
	n = 48		n = 61		n = 424	
	Mean	SD	Mean	SD	Mean	SD
Frame Goals	18.1	3.4	18.4	3.6	16.9	5.1
Commun. Goals	18.3	3.7	17.5	3.7	15.8	5.2
Sup. & Eval.	19.3	3.4	20.4	2.5	15.8	5.2
Coor. Curr.	18.9	3.9	19.2	3.4	15.6	5.2
Mon. Stu. Prog.	18.0	4.0	18.7	3.2	15.2	5.3
Prot. Instr. T.	19.4	3.2	20.6	2.6	16.7	5.0
High Visib.	19.5	4.0	19.9	3.4	15.5	5.4
Teach. Incent.	19.7	3.1	20.6	2.7	15.8	5.8
Prof. Devel.	19.5	3.5	19.9	3.0	17.0	5.3
Learn. Incent.	20.5	3.5	21.0	2.9	17.9	5.1

Gender and Subscale Responses

District profiles were determined for each of the 76 districts included in the data collection. Appendix H identifies each district by number and presents the means for each subscale for the responding superintendents, principals, female teachers, male teachers, and total teachers. An asterisk (*) in Appendix H indicates a female superintendent or female principal. Table 12 presents the subscale means by category and gender, for the categories of all superintendents, all principals, and all teachers responding to the PIMRS.

Table 12

Subscale Means by Gender for Superintendents, Principals, and Teachers

	Superintendent		Principal		Teacher	
	Male	Female	Male	Female	Male	Female
	n = 46	n = 2	n = 33	n = 28	n = 212	n = 212
Frame Goals	18.1	18.0	18.1	18.6	17.1	16.8
Comm. Goals	18.2	20.0	17.3	17.7	16.1	15.4
Sup. & Eval.	19.2	22.0	20.0	20.8	16.2	15.3
Coor. Curr.	18.7	22.5	18.8	19.8	16.0	15.1
Mon. Stu. Prog.	17.9	22.0	18.6	18.8	15.6	14.8
Prot. Instr. T.	19.2	23.5	20.4	20.7	16.6	16.8
High Visib.	19.4	22.5	19.1	20.8	15.7	15.4
Teach. Incent.	19.6	22.5	20.0	21.3	16.3	15.3
Prof. Devel.	19.5	21.0	19.6	20.3	17.4	16.5
Learn. Incent.	20.4	23.5	20.2	22.0	18.2	17.7

Gender data were further analyzed to determine the relationship between principal gender and the responses of male and female teachers, and male and female superintendents. Interactions were noted for each of the possible combinations between teachers and principals, and between superintendents and principals, and means were compared. The possible combinations of interactions for this study regarding teachers and principals were: male teacher-female principal, male teacher-male principal, female teacher-female principal, female teacher-male principal. For each subscale, except Subscale 6, *Protecting Instructional Time*, the highest mean was found for the interaction between male teachers and female principals. The lowest mean for every subscale, except Subscale 6, was for the interaction between female teachers and male principals.

For Subscale 6, the results were reversed, with the highest mean falling in the female teacher-male principal interaction and lowest mean in the male teacher-female principal interaction. Table 13 presents these data.

Table 13
Subscale Means of Teachers by Gender for Male and Female Principals

Teachers	Male Principals		Female Principals	
	Male	Female	Male	Female
	n = 100	n = 106	n = 112	n = 106
Frame Goals	16.4	16.2	17.7	17.4
Commun. Goals	15.5	15.0	16.7	16.0
Sup. & Eval.	15.9	15.1	16.5	15.6
Coor. Curr.	15.6	14.6	16.4	15.7
Mon. Stu. Prog.	15.4	14.5	15.8	15.2
Prot. Instr. T.	16.9	17.1	16.3	16.5
High Visib.	15.1	14.9	16.2	15.9
Teach. Incent.	15.8	14.5	16.7	16.0
Prof. Devel.	16.7	16.0	18.0	17.1
Learn. Incent.	17.8	17.2	18.5	18.3

The following were the possible combinations of interactions for this study regarding superintendents and principals: male superintendent-female principal, male superintendent-male principal, female superintendent-female principal, female superintendent-male principal. For every subscale the highest mean was found for the interaction between the female superintendent and female principal. The lowest mean for five of the subscales was for the interaction between male superintendents and male principals. The interactions between male superintendents and female principals shared low subscale means

with the interaction of male superintendents and male principals for two subscales. Table 14 presents these data.

Table 14
Subscale Means of Superintendents by Gender for Male and Female Principals

Superintendents	Male Principals		Female Principals	
	Male	Female	Male	Female
	n = 22	n = 1	n = 24	n = 1
Frame Goals	17.3	17.0	18.8	19.0
Commun. Goals	17.3	20.0	19.0	20.0
Sup. & Eval.	19.5	21.0	18.9	23.0
Coor. Curr.	18.4	22.0	19.0	23.0
Mon. Stu. Prog.	17.5	19.0	18.2	25.0
Prot. Instr. T.	19.2	22.0	19.2	25.0
High Visib.	19.8	20.0	19.0	25.0
Teach. Incent.	19.6	20.0	19.6	25.0
Prof. Devel.	19.2	19.0	19.7	23.0
Learn. Incent.	20.0	22.0	20.8	25.0

Teacher Data

Analysis of Variance (ANOVA) tests were used to analyze the relationship between the various teachers' perceptions of the leadership behaviors of male and female principals. The results of the ANOVAs of teacher data are given in tables 15 through 24. In all ANOVA tables, source indicates gender, SS indicates the sum of squares, df indicates degrees of freedom, MS is the mean square, F is the F-ratio, and p represents the probability of the F-ratio.

Table 15

ANOVA for Framing School Goals

Source	SS	df	MS	F	p
Respondent Gender	6.8	1	6.8	.26	.61
Principal Gender	164.1	1	164.1	6.28	.01*

n = 424
*p < .01

The data in Table 15 indicate a statistically significant difference in responses for the subscale *Framing School Goals* based on the gender of the principal. The F ratio of 6.28 was significant at the .01 level.

Table 16

ANOVA for Communicating School Goals

Source	SS	df	MS	F	p
Respondent Gender	34.8	1	34.8	1.25	.26
Principal Gender	129.1	1	129.1	4.66	.03*

n = 424
*p < .05

The data in Table 16 indicate a statistically significant difference in responses for the subscale *Communicating School Goals* based on the gender of the principal. The F ratio of 4.66 was significant at the .05 level.

Table 17

ANOVA for Supervising and Evaluating Instruction

Source	SS	df	MS	F	p
Respondent Gender	99.2	1	99.2	3.64	.05*
Principal Gender	22.9	1	22.9	.84	.36

n = 424
*p < .05

The data in Table 17 indicate a statistically significant difference in responses for the subscale *Supervising and Evaluating Instruction* based on the gender of the respondent. The F ratio of 3.64 was significant at the .05 level.

Table 18

ANOVA for Coordinating Curriculum

Source	SS	df	MS	F	p
Respondent Gender	83.3	1	83.3	3.31	.07
Principal Gender	103.6	1	103.6	3.90	.05*

n = 424
*p < .05

The data in Table 18 indicate a statistically significant difference in responses for the subscale *Coordinating Curriculum* based on the gender of the principal. The F ratio of 3.90 was significant at the .05 level. There is also a strong relationship between the gender of the teacher and the rating of the principal, although it is not statistically significant.

Table 19

ANOVA for Monitoring Student Progress

Source	SS	df	MS	F	p
Respondent Gender	65.3	1	65.3	2.27	.13
Principal Gender	26.9	1	26.9	.94	.33

n = 424
*p < .05 Indicates significance

The data in Table 19 indicate that there is no statistically significant difference in responses for the subscale *Monitoring Student Progress* when the respondents are grouped according to gender.

Table 20

ANOVA for Protecting Instructional Time

Source	SS	df	MS	F	p
Respondent Gender	4.3	1	4.3	.17	.68
Principal Gender	41.4	1	41.4	1.60	.20

n = 424
*p < .05 Indicates significance

The data in Table 20 indicate that there is no statistically significant difference in responses for the subscale *Protecting Instructional Time* when the respondents are grouped according to gender.

Table 21

ANOVA for Maintaining High Visibility

Source	SS	df	MS	F	p
Respondent Gender	9.4	1	9.4	.33	.57
Principal Gender	105.6	1	105.6	3.66	.05*

n = 424
*p < .05

The data in Table 21 indicate a statistically significant difference in responses for the subscale *Maintaining High Visibility* based on the gender of the principal. The F ratio of 3.66 was significant at the .05 level.

Table 22

ANOVA for Providing Incentives for Teachers

Source	SS	df	MS	F	p
Respondent Gender	103.4	1	103.4	3.0	.08
Principal Gender	148.3	1	148.3	4.4	.03*

n = 424
*p < .05

The data in Table 22 indicate a statistically significant difference in responses for the subscale *Providing Incentives for Teachers* based on the gender of the principal. The F ratio of 4.4 was significant at the .05 level. There is also a strong relationship between the gender of the teacher and the rating of the principal, although it is not statistically significant.

Table 23

ANOVA for Promoting Professional Development

Source	SS	df	MS	F	p
Respondent Gender	72.9	1	72.9	2.6	.11
Principal Gender	156.8	1	156.8	5.5	.02*

n = 424
*p < .05

The data in Table 23 indicate a statistically significant difference in responses for the subscale *Promoting Professional Development* based on the gender of the principal. The F ratio of 5.5 was significant at the .05 level.

Table 24

ANOVA for Providing Incentives for Learning

Source	SS	df	MS	F	p
Respondent Gender	19.4	1	19.4	.75	.39
Principal Gender	88.0	1	88.0	3.40	.05*

n = 424
*p < .05

The data in Table 24 indicate a statistically significant difference in responses for the subscale *Providing Incentives for Learning* based on the gender of the principal. The F ratio of 3.40 was significant at the .05 level.

Superintendent Data

Analysis of variance of the superintendent data yielded results indicating a strong relationship, although not statistically significant, between the gender of the superintendent and the rating of the principals in Subscale 6, *Protecting Instructional Time*. Table 25 presents this analysis. No other subscales indicated statistically significant differences or strong relationships between gender and response regarding superintendents and principals.

Table 25
ANOVA for Protecting Instructional Time

Source	SS	df	MS	F	p
Superintendent Gender	35.20	1	35.20	3.60	.06*
Principal Gender	.14	1	.14	.01	.90

n = 48
*p < .05

Principal Data

Principal data resulted from self-reported responses of 61 principals, 38 male and 23 female. The female principal means were higher than the male principal means on every subscale of the Principal Instructional Management Rating Scale. Table 26 presents the means and standard deviations for each of the subscales for principal responses.

Table 26

Means and Standard Deviations for Principal Self-Reported Responses

	Male		Female	
	n = 33		n = 28	
	Mean	SD	Mean	SD
Frame Goals	18.1	2.9	18.6	4.2
Commun. Goals	17.4	3.0	17.7	4.5
Sup. & Eval.	20.1	2.4	20.8	2.6
Coor. Curr.	18.8	3.0	19.8	3.9
Mon. Stu. Prog.	18.6	3.0	18.8	3.5
Prot. Instr. T.	20.4	2.5	20.7	2.7
High Visib.	19.1	3.3	20.8	3.3
Teach. Incent.	20.0	2.7	21.3	2.5
Prof. Devel.	19.6	2.7	20.3	3.4
Learn. Incent.	20.2	2.9	22.0	2.7

Analysis of variance tests completed on principal data and the effects of gender on response yielded statistically significant differences for the subscales *Maintaining High Visibility* (Subscale 7), *Providing Incentives for Teachers* (Subscale 8), and *Providing Incentives for Learning* (Subscale 10). The data are presented in Table 27.

Table 27

ANOVA Results for Subscales 7, 8, and 10

Source	SS	df	MS	F	p
Maintain High Visib.	41.7	1	41.7	3.9	.05*
Teacher Incentives	27.7	1	27.7	4.0	.05*
Learning Incentives	48.1	1	48.1	6.1	.01**

n = 61; *p < .05; **p < .01

Table 28 summarizes all ANOVA data from the study.

Table 28

Summary of ANOVA Procedures for All Groups

	Super.	Prin.	Teacher	Prin. S-R
Frame Goals		x		
Comm. Goals		x		
Sup. & Eval.			x	
Coor. Curr.		x	x[a]	
Mon. Stu. Prog.				
Prot. Instr. T.	x[a]			
High Visib.		x		x
Teach. Incent.		x	x[a]	x
Prof. Devel.		x		
Learn. Incent.		x		x

Note. Super. = Superintendent; Prin. = Principal; Prin. S-R = Principal Self-Report; x = Statistically Significant Difference; x[a] = Strong Relationship

Summary

The questions posed by the research were designed to assess the perceptions of superordinates, principals, and subordinates regarding the leadership behaviors of male and female principals on the ten subscales of the Principal Instructional Management Rating Scale. Demographic variables were also analyzed using tests of central tendency including means and standard deviations.

The data in this study were submitted to statistical or quantitative analysis and the findings presented in this chapter. Statistical procedures used included

the calculation of reliability indices, analyses of variance, and the calculation of means and standard deviations for the various subscales according to position of respondents.

Reliability coefficients were within acceptable psychometric limits (Anastasi, 1972; Nunnnally, 1972), ranging from .67 to .98, across the three respondent groups. The rate of return for the identified sample was 60.16%, with 63.16% of all superintendents responding, 80.26% of all principals responding, and 57.77% of all teachers responding.

Of the ten subscales of the survey instrument, seven were found to demonstrate significant differences based on the teachers' responses and the gender of the principals being rated. The seven included *Framing School Goals, Communicating School Goals, Coordinating Curriculum, Maintaining High Visibility, Providing Incentives for Teachers, Promoting Professional Development, and Providing Incentives for Learning.* One subscale, *Supervising and Evaluating Instruction,* was found to demonstrate a significant difference between the gender of the teachers responding and the principals being rated. On two subscales, *Coordinating Curriculum* and *Providing Incentives for Teachers,* a strong relationship was demonstrated between the gender of the teachers and the principals being rated, although the relationships were not statistically significant. For each of the statistically significant differences, the principal means were significantly higher than the teacher means. For the interactions which demonstrated strong relationship which was not statistically significant, the principal means were higher than the teacher means as well.

Superintendent data analysis resulted in one subscale, *Protecting*

Instructional Time, demonstrating strong difference of response for the interaction based on superintendent gender and the principal being rated, with the principal mean being significantly higher than the superintendent mean. Only two female superintendents responded to the survey, with only one of them working with a female principal, therefore other data analysis was problematic.

Principal self-reported data demonstrated statistically significant differences in response based on the gender of the principals and their responses to the questions of the subscales *Maintaining High Visibility, Providing Incentives for Teachers, and Providing Incentives for Learning*. For each of the ten subscales, the female principal mean was higher than the male principal subscale mean.

The findings of the present investigation have been presented in Chapter IV. A summary of this study is contained in Chapter V, in addition to the investigator's conclusions and recommendations based on the findings.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter presents a summary of the problem addressed, the research methodology implemented in this research, and the results, conclusions, implications, and recommendations relative to the findings.

Summary

Like many other professional fields, education has been slow to open up its managerial ranks to women. Despite a hiring pool replete with competent female educators, and despite legislation aimed at correcting past inequities in the field, school leadership in the 1990s remains predominantly male. Clearly, many forms of discrimination are difficult to prove; however, when a profession such as education has a large number of female employees at the lower levels, one would expect that a representative group of qualified and experienced women would move up into the managerial ranks. The fact that they do not, and that men do, points to a continuing problem in the field. Although more women are in administrative positions than in any decade since the 1950s (Montenegro, 1993), progress has been minimal when the types of position, the age of the female administrator, and the career paths are investigated and compared to those of males.

A review of personnel in school administration reveals a persisting scarcity of females in administrative positions (Shakeshaft, 1990). This puzzling underrepresentation of females in administrative positions demonstrates the need to examine the variables which influence the leadership opportunities for women. With female representation in the two most coveted positions in school administration, the high school principalship and the superintendency, at only 16.0% and 7.1% respectively (NCES, 1994), study of the factors impeding female progress promises to be beneficial.

The issues of defining and assessing instructional leadership continue to draw attention (Ahadi, Scott, & Krug, 1990) as researchers probe for the behaviors associated with successful leadership profiles. Recent research places importance on assessing such behaviors through perceptions of superordinates and subordinates, while comparing them to self-perceptions in attempts to form prescriptive models for behavior (Hallinger & Murphy, 1987). Perceptions of self and of others have been shown to be viable means of data assessment that can provide valid feedback on dimensions of leadership (Crates, 1992; Short & Spencer, 1989).

Research on the perceptions of leadership behaviors and how they are influenced by gender has been limited (Cioci, Lee, & Smith, 1991; Shareatpanahi, 1982). Researchers recommend a need for further investigation of the variable of gender and its effect on perceived leadership behaviors (Braddy, 1991; Crates, 1992). Therefore, the intent of this study was to add to the knowledge base regarding gender, perceived leadership behaviors, and the high school principalship.

Research Questions

For this study, the research questions, based on the ten subscales of the Principal Instructional Management Rating Scale (PIMRS), were the following:

1. To what degree do teachers' perceptions of the leadership in their schools relate to the gender of both the teacher and the principal when assessing the subscales of framing school goals, communicating goals, supervising and evaluating instruction, coordinating the curriculum, monitoring student progress, protecting instructional time, maintaining high visibility, providing incentives for teachers, promoting professional development, and providing incentives for learning?

2. To what degree do superintendents' perceptions of the leadership in their high schools relate to the gender of both the principal and the superintendent when assessing the same subscales?

3. How do principals' perceptions of their own leadership behaviors relate to gender when assessing the same subscales?

Each group completed ratings of high school principals, providing the researcher with data from the perspective of the principal, the principal's superintendent, and members of the principal's teaching staff.

The limitations and delimitations of this research need to be reiterated. First, the effectiveness of leadership was not measured directly in this study; rather, leadership behaviors were assessed by the dimensions of perceived leadership on the PIMRS. Second, the small population of female secondary school principals in Ohio, only 38 fitting the definition of the study, was an

obvious delimiting factor of the research. Third, the information provided by the participants represented their perceptions at the time of survey completion. And last, as with any survey instrument, the results are limited by the willingness of people, whose personal agendas may include bias, to participate.

Research Methodology

The purpose of this study was to investigate the perceptions of teachers and superintendents regarding the principal leadership behavior characteristics of female high school principals in Ohio. Principal self-perceptions were also included. It was hypothesized that same-gender pairings would result in perceptions of greater effectiveness, and cross-gender pairings would result in perceptions of lesser effectiveness. Differences between the following pairs were analyzed: superintendent-principal (both same-gender and cross-gender) and teacher-principal (both same-gender and cross-gender). The self-perceptions of principals were analyzed to determine the relationship of gender differences in responses.

The subscales of the PIMRS were used to study the relationship of gender to the perceptions of leadership behaviors. The ten subscales are as follows:

1. Framing School Goals.
2. Communicating School Goals.
3. Supervising and Evaluating Instruction.
4. Coordinating Curriculum.
5. Monitoring Student Progress.

6. Protecting Instructional Time.
7. Promoting Professional Development.
8. Maintaining High Visibility.
9. Providing Incentives for Teachers.
10. Providing Incentives for Learning.

A total of 76 high schools in Ohio were identified as the sample for this research. Thirty-eight high schools having a traditional grade arrangement (9-12 or 10-12) and female principals were identified. An equal number of high schools with male principals, randomly selected, completed the sample. The high school principal, the district superintendent, and a representative sample of the high school teaching staff of each identified district comprised the final sample. Superintendent and principal names were obtained from a copy of the 1994-1995 Ohio Department of Education (ODE) Directory. Teacher lists from each school were purchased from the EMIS Department of the ODE.

Each identified principal, superintendent, and teacher was sent a copy of the PIMRS, a cover letter, and a return envelope. After an initial mailing of 886 surveys, a reminder postcard, and a follow-up request, a total of 533 usable surveys, 48 from superintendents, 61 from principals, and 424 from teachers, were returned. This constituted a cumulative return rate of 60.16%.

The responses to the surveys were tabulated, summarized, and analyzed using the SPSSX statistical package on the mainframe computer at Youngstown State University. Analysis of the data involved a series of 2x2 ANOVA procedures for each subscale to determine the relationship between gender of respondents and their perceptions of male and female leadership behaviors.

Measures of central tendency were computed for each group of respondents, yielding means and standard deviations for each subscale of the PIMRS by group and by gender. Demographic information also yielded means and frequencies for the demographic variables of the survey.

Summary of the Results

Of the ten subscales, a statistically significant difference was obtained regarding the relationship of principal gender and teacher response, regardless of gender, on seven of the subscales. Those subscales with statistically significant differences were *Framing School Goals* ($p < .01$), *Communicating School Goals* ($p < .05$), *Coordinating Curriculum* ($p < .05$), *Maintaining High Visibility* ($p < .05$), *Providing Incentives for Teachers* ($p < .05$), *Promoting Professional Development* ($p < .05$), and *Providing Incentives for Learning* ($p < .05$). On one subscale, *Supervising and Evaluating Instruction*, a statistically significant difference ($p < .05$) was found regarding the gender of the teacher when rating principals' leadership behavior, regardless of gender. Strong differences were also noted regarding teacher gender on the subscales *Coordinating Curriculum* and *Providing Incentives for Teachers*, although they were not statistically significant differences.

Superintendent data yielded a strong, though not statistically significant, difference on one subscale, *Protecting Instructional Time*, regarding superintendent gender when rating principal leadership behavior, regardless of gender. Because only one female superintendent-female principal interaction was observable, any analysis regarding superintendent gender must be guarded.

Lack of female superintendent data made the four types of interactions (male superintendent-female principal, male superintendent-male principal, female superintendent-female principal, female superintendent-male principal) problematic to analyze. For each statistically significant difference, the principal mean was higher than the teacher or superintendent means.

Three of the ANOVAs of principal data revealed statistically significant differences regarding principal self-reported perceptions and gender. Those three subscales are *Maintaining High Visibility* ($p < .05$), *Providing Incentives for Teachers* ($p < .05$), and *Providing Incentives for Learning* ($p < .01$). For all of the subscales of the PIMRS, the female principal means were significantly higher than the male principal means.

Teacher subscale means for the four types of interactions (male teacher-female principal, male teacher-male principal, female teacher-female principal, female teacher-male principal) were compared to determine the extent to which same-gender and cross-gender pairings compared. In all but one subscale, *Protecting Instructional Time*, the highest interaction mean was for the male teacher-female principal pairing. For *Protecting Instructional Time*, the highest interaction mean was for the female teacher-male principal pairing.

Conclusions

Based on the findings of this study, it appears warranted to conclude that significant differences do exist in the perceptions of leadership behavior based on gender. Responses regarding leadership behaviors based on respondent group

also differed. Each subscale and the associated findings are described here:

1. *Framing School Goals,* referring to the principal's role in determining the areas in which the school will focus its resources during a given school year, appeared to be influenced by principal gender ($p < .01$), but not by teacher or superintendent gender. Teachers' responses indicated that they perceived female principals as better at framing the school's goals than male principals. An analysis of subscale means demonstrated that female principals received significantly higher ratings on this subscale than male principals from both genders of teachers.

2. *Communicating School Goals,* concerning the ways in which the principal communicates the school's most important goals to teachers, parents, students, and the community, appeared to be influenced by principal gender ($p < .05$), but not by teacher or superintendent gender. Teachers' responses indicated that they perceived female principals as more effective at communicating school goals than male principals. An analysis of subscale means demonstrated that female principals received significantly higher ratings on this subscale than male principals from both genders of teachers.

3. *Supervising and Evaluating Instruction,* the principal's responsibility to ensure that the goals of the school are being translated into practice at the classroom level, appeared to be influenced by teacher gender ($p < .05$), but not by principal or superintendent gender. Teachers' responses indicated that male teachers perceived female principals as more effective at supervising and evaluating instruction than male principals. An analysis of subscale means demonstrated that female and male principals both received higher ratings on

this subscale from male teachers than from female teachers.

4. *Coordinating Curriculum*, the responsibility for making certain that course content, assessment, and instruction are aligned with school curricular objectives, appeared to be influenced by the principal gender ($p < .05$), somewhat influenced by teacher gender, and not influenced by superintendent gender. Teachers' responses indicated that they perceived female principals as more effective at coordinating curriculum than male principals. An analysis of subscale means demonstrated that female principals received significantly higher ratings on this subscale than male principals from both genders of teachers.

5. *Monitoring Student Progress*, the process of using appropriate criteria to diagnose and assess student strengths and weaknesses, did not appear to have any statistically significant relationship to the gender of any of the respondents, although female principals received the highest rating of any interaction pair. An analysis of subscale means demonstrated that both female and male principals received higher ratings on this subscale from male teachers than from female teachers.

6. *Protecting Instructional Time*, providing teachers with blocks of uninterrupted work time through policy and procedure, appeared to be somewhat influenced by the gender of the superintendents, but not by the gender of the principals or the teachers. An analysis of the subscale means also demonstrated that male principals received the highest ratings on this subscale from both genders of teachers.

7. *Maintaining High Visibility*, which increases interactions among principals, students, and staff members, appeared to be influenced by the gender

of the principal ($p < .05$), but not by the genders of the teachers or the superintendents. Teachers' responses indicated that they perceived female principals as more effective in maintaining visibility than male principals. An analysis of the subscale means demonstrated that female principals received the highest interaction means from both male and female teachers. This particular subscale also yielded significant differences ($p < .05$) in the principal self-reported responses when analyzed by gender, indicating that female principals perceive themselves as significantly more effective in maintaining high visibility in the school community.

8. *Providing Incentives for Teachers*, positively praising and commending teacher achievement, appeared to be significantly influenced by the gender of the principal ($p < .05$) when rated by teachers, somewhat influenced by the gender of the teachers, and not influenced by superintendent gender. Teachers' responses indicated that they perceived female principals as more effective in providing incentives for teachers than male principals. An analysis of the subscale means demonstrated that female principals received the highest mean ratings from both genders of teachers. This particular subscale also yielded significant differences ($p < .05$) in the principal self-reported responses when analyzed by gender, indicating that female principals perceive themselves as significantly more effective in providing incentives for teachers.

9. *Promoting Professional Development*, supporting teachers with opportunities for staff and teacher-leader skill development, appeared to be significantly influenced by the gender of the principal ($p < .05$), but not by the gender of the teachers or the superintendents. Teachers' responses indicated

that they perceived female principals to be more effective at promoting professional development than male principals. An analysis of the subscale means demonstrated that female principals received the highest mean ratings from both male and female teachers.

10. *Providing Incentives for Learning,* recognizing students for academic achievement and improvement, appeared to be significantly influenced by the gender of the principal ($p < .05$) when rated by teachers, but not by the gender of the teachers or the superintendents. Teachers' responses indicated that they perceived female principals as being more effective in providing incentives for learning than male principals. An analysis of the subscale means demonstrated that female principals received the highest mean ratings from both male and female teachers. This particular subscale also yielded significant differences ($p < .01$) in the principal self-reported responses when analyzed by gender, indicating that female principals perceive themselves as significantly more effective in providing incentives for learning.

When each group's mean responses were compared, regardless of gender, it was found that principals rated themselves higher than superintendents rated them, on nine of the ten subscales, and higher than teachers' ratings on all ten subscales. Gender analysis demonstrates that female principals rated themselves higher than male principals on all ten subscales. Male teachers rated their principals higher than female teachers did on nine of the ten subscales, regardless of principal gender. The two female superintendents responding rated their principals higher on all but one subscale than their male counterparts, regardless of principal gender.

Implications

The results of this study of the perceptions of leadership behaviors of female and male high school principals lend support to previous research which indicated that certain relationships exist between the gender of leaders and the perceived effectiveness of their leadership. The study further adds to the knowledge base of gender research by demonstrating that the gender of principals significantly influences the responses of teachers and superintendents regarding principal effectiveness. Previous studies using the PIMRS found similar results (Babcock, 1991; Miller, 1991; Schoch, 1992), although not with as many significant findings, nor with the particular parameters studied here. The subscales of the Principal Instructional Management Rating Scale suggest that the gender of the principal bears more relationship to teachers' and superintendents' attitudes regarding leadership behaviors than do the genders of teachers themselves. Women principals tended to be regarded as more effective in nearly all aspects of leadership behaviors studied with the PIMRS.

Cross-gender pairings generated more positive relationships, with higher subscale and ANOVA values than same-gender pairings, contrary to the hypothesis stated early in this study. The literature had suggested that same-gender pairings would show significantly more strength; however, the results of the present study do not support this notion. This further indicates that gender may indeed have a significant relationship to the perceptions of leadership behavior and suggests the need for further study to see why cross-gender pairings were more effective, contrary to the body of literature presently

available.

The perception of leadership behaviors and how those behaviors are exhibited in schools indicates a complex relationship. Gender, the focus of this study, is but one of the variables which influences the leadership behaviors of principals. Because leadership events are so complex, it is important not to over-emphasize the importance of gender, although the results of this study significantly demonstrate the influence gender has on behavior. Because female teachers consistently had lower subscale response means as a group regarding principal behaviors, regardless of the gender of the principal, women teachers may be more critical of leadership qualities, or may have higher expectations for the behavior of their leaders, than do male teachers. Neither of these possibilities is generally supported by the study's results.

Superintendent responses were much higher, when rating principals' leadership behaviors, than were teacher responses for all ten subscales. Their responses were also higher than principal self-ratings on all but one subscale. Superintendents appeared to be more favorable in their responses regarding principals' behaviors, perhaps because they all had some empathy for the position, having "come through the ranks" themselves before assignment as superintendents. Such a suggestion is not generally indicated by the scope of the present study.

Recommendations

Clearly, the results of this study and previous studies leave unanswered many questions regarding the relationship of gender and perceived leadership

behaviors. However, the study's results do answer some questions, while presenting some new questions regarding gender differences which appear to warrant further investigation:

1. Do the perceived leadership behaviors of principals relate to the gender of subordinates on all levels of schooling?

2. Do the perceived leadership behaviors of principals relate to the gender of superordinates on all levels of schooling?

3. Do students' perceptions of the leadership behavior of their principals relate to the gender of the students?

4. Do students' perceptions of the leadership behavior of their principals relate to the gender of the principals?

5. Do specific dimensions of leadership, as identified by the PIMRS, evoke different responses from male and female principals on all levels of schooling?

6. What influence do the variables of age and career path have on the perceived leadership behaviors of principals?

7. What influence do the variables of age and career path have on the self-reported perceptions of leadership behaviors of principals?

It should be emphasized that other studies, as well as this one, suggest that the differences in perceptions of leadership behaviors are significant enough to warrant further examination and possible application to the development of solutions to female career advancement obstacles. It remains to be seen what actions might be taken by school boards and schools of administrative education to address the fact that even though women seem to be rated higher than men in comparable positions, by superordinates, subordinates, and by themselves,

they continue to meet resistance to career advancement.

The following recommendations for practice are made based on the results of this study:

1. Women administrators need to mentor women aspirants, assisting their development of effective leadership behaviors.

2. Schools of educational administration should develop courses which specifically address the issues of women and administration.

3. Case studies involving women administrators should be developed and used in educational administration classes to better prepare female administrative aspirants to address skewed perceptions of their leadership capabilities.

The following recommendations are made to extend the present research:

1. Replication of this study in schools in different geographic areas and at different levels (i.e., elementary, middle school) is needed to determine if the gender-related differences revealed in this study characterize schools in general. This replication should include the use of the PIMRS as it relates to perceived leadership behaviors. Comparative studies are suggested across grade levels of schools to ascertain if there are differences between male and female principal leadership behaviors relating to level.

2. Because only two female superintendents responded to this study, only one of them working with a female principal, more studies should be done regarding the relationship of female superintendents-female principals to ascertain if there are significant differences in how male and female superintendents regard female principals at any school level. The number of

such pairings including high school principals is extremely small, therefore the geographic area would need to be expanded.

3. There is need to explore the relationships among leadership team members in school districts where female administrators are represented.

4. School districts should consider leadership differences relating to gender in developing administrative teams, the members of which complement each other's strengths and limitations.

5. Studies should be considered which explore the relationship between gender differences and leadership behaviors and their influence on school outcomes.

6. Further study is needed to explore the reasons for continued underrepresentation of women in two of the highest administrative positions in schools.

7. Finally, additional study is needed regarding a larger pool of demographic variables, including study of factors affecting career path and age of first administrative appointment, which may explain or moderate the statistically significant differences observed in this study.

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APPENDIXES

APPENDIX A

Superintendent PIMRS

THE PRINCIPAL INSTRUCTIONAL MANAGEMENT RATING SCALE

PART I: Please provide the following information:

(A) District name: _____

(B) Your position in the district: _____

(C) High School name: _____

(D) Number of years he/she has been principal at the school:
_____ 1 _____ 5-9 _____ more than 15
_____ 2-4 _____ 10-15

(E) Years you have worked with this principal at the end of this school year:
_____ 1 _____ 5-9 _____ more than 15
_____ 2-4 _____ 10-15

(F) Number of visits greater than 20 minutes in length to the principal's school this year:
_____ 1 _____ 5-9 _____ more than 15
_____ 2-4 _____ 10-15

(G) Your gender:
_____ M _____ F

(H) Your age:
_____ Years of age

PART II: This questionnaire is designed to provide a profile of principal instructional leadership. It consists of 50 behavioral statements that describe principal job practices and behaviors. You are asked to consider each question in terms of the principal's job-related behavior over the past school year.

Read each statement carefully. Then circle the number that indicates the extend to which you feel the principal has demonstrated the specific job behavior or practice during the past school year. For the response to each statement:

5 represents ***Almost Always;***
4 represents ***Frequently;***
3 represents ***Sometimes;***
2 represents ***Seldom;***
1 represents ***Almost Never.***

In some cases, these responses may seem awkward; use your judgment in selecting the most appropriate response to such questions.

Please circle only one number per question. Try to answer every question. Thank you.

To what extent does the principal ...?	ALMOST NEVER				ALMOST ALWAYS
I. FRAME THE SCHOOL GOALS					
1. Develop a focused set of annual school-wide goals	1	2	3	4	5
2. Frame the school's goals in terms of staff responsibilities for meeting them	1	2	3	4	5
3. Use needs assessment or other systematic methods to secure staff input on goal development	1	2	3	4	5
4. Use data on student academic performance when developing the school's academic goals	1	2	3	4	5
5. Develop goals that are easily translated into classroom objectives by teachers	1	2	3	4	5
					I. _____
II. COMMUNICATE THE SCHOOL GOALS					
6. Communicate the school's mission effectively to members of the school community	1	2	3	4	5
7. Discuss the school's academic goals with teachers at faculty meetings	1	2	3	4	5
8. Refer to the school's academic goals when making curricular decisions with teachers	1	2	3	4	5
9. Ensure that the school's academic goals are reflected in highly visible displays in the school (e.g. posters or bulletin boards emphasizing reading or math)	1	2	3	4	5
10. Refer to the school's goals in student assemblies	1	2	3	4	5
					II. _____
III. SUPERVISE & EVALUATE INSTRUCTION					
11. Ensure that the classroom priorities of teachers are consistent with the stated goals of the school	1	2	3	4	5
12. Review student work products when evaluating classroom instruction	1	2	3	4	5
13. Conduct informal observation in classrooms on a regular basis (informal observations are unscheduled, last at least 5 minutes, and may or may not involve written feedback or a formal conference)	1	2	3	4	5

To what extent does the principal ...?	ALMOST NEVER				ALMOST ALWAYS
14. Point out specific strengths in teachers' instructional practices in post observation feedback (e.g. in conferences or written evaluations)	1	2	3	4	5
15. Point out specific weaknesses in teacher instructional practices in post observation feedback (e.g. in conferences or written evaluations)	1	2	3	4	5

III._____

IV. COORDINATE THE CURRICULUM

16. Make clear who is responsible for coordinating the curriculum across grade levels (e.g. the principal, vice principal or teacher-leader)	1	2	3	4	5
17. Draw upon the results of school-wide testing when making curricular decisions	1	2	3	4	5
18. Monitor the classroom curriculum to see that it covers the school's curricular objectives	1	2	3	4	5
19. Assess the overlap between the school's curricular objectives and the school's achievement tests	1	2	3	4	5
20. Participate actively in the review of curricular materials	1	2	3	4	5

IV._____

V. MONITOR STUDENT PROGRESS

21. Meet individually with teachers to discuss student academic progress	1	2	3	4	5
22. Discuss the item analysis or tests with the faculty to identify curricular strengths and weaknesses	1	2	3	4	5
23. Use test results to assess progress toward school goals	1	2	3	4	5
24. Inform teachers of the school's performance results in written form (e.g. in a memo or newsletter)	1	2	3	4	5
25. Inform students of school's test results	1	2	3	4	5

V._____

To what extent does the principal ...?	ALMOST NEVER				ALMOST ALWAYS
VI. PROTECT INSTRUCTIONAL TIME					
26. Limit interruptions of instructional time by public address announcements	1	2	3	4	5
27. Ensure that students are not called to the office during instructional time	1	2	3	4	5
28. Ensure that tardy and truant students suffer specific consequences for missing instructional time	1	2	3	4	5
29. Encourage teachers to use instructional time for teaching and practicing new skills and concepts	1	2	3	4	5
30. Limit the intrusion of extra- and co-curricular activities on instructional time	1	2	3	4	5
					VI._____
VII. MAINTAIN HIGH VISIBILITY					
31. Take time to talk with students and teachers during recess and breaks	1	2	3	4	5
32. Visit classrooms to discuss school issues with teachers and students	1	2	3	4	5
33. Attend/participate in extra- and co-curricular activities	1	2	3	4	5
34. Cover classes for teachers until a late or substitute teacher arrives	1	2	3	4	5
35. Tutor students or provide instruction to classes	1	2	3	4	5
					VII._____
VIII. PROVIDE INCENTIVES FOR TEACHERS					
36. Reinforce superior performance by teachers in staff meetings, newsletters, and/or names	1	2	3	4	5
37. Compliment teachers privately for their efforts or performance	1	2	3	4	5
38. Acknowledge teachers' performance by writing memos for their personnel files	1	2	3	4	5
39. Reward special efforts by teachers with opportunities for professional recognition	1	2	3	4	5

To what extent does the principal ...?	ALMOST NEVER				ALMOST ALWAYS
40. Create professional growth opportunities for teachers as a reward for special contributions to the school	1	2	3	4	5

VIII._____

IX. PROMOTE PROFESSIONAL DEVELOPMENT

41. Ensure that in-service activities attended by the staff are consistent with the school's academic goals	1	2	3	4	5
42. Actively support the use of skills acquired during in-service training in the classroom	1	2	3	4	5
43. Obtain the participation of the whole staff in important in-service activities	1	2	3	4	5
44. Lead or attend teacher in-service activities concerned with instruction	1	2	3	4	5
45. Set aside time at faculty meetings for teachers to share ideas or information from in-service activities	1	2	3	4	5

IX. _____

X. PROVIDE INCENTIVES FOR LEARNING

46. Recognize students who do superior academic work with formal rewards such as an honor roll or mention in the principal's newsletter	1	2	3	4	5
47. Use assemblies to honor students for academic accomplishments or for behavior or citizenship	1	2	3	4	5
48. Recognize superior student achievement or improvement by seeing students in the office with their work	1	2	3	4	5
49. Contact parents to communicate improved or exemplary student performance or contributions	1	2	3	4	5
50. Support teachers actively in their recognition and/or reward of student contributions to and accomplishments in class	1	2	3	4	5

X. _____

APPENDIX B

Principal PIMRS

THE PRINCIPAL INSTRUCTIONAL MANAGEMENT RATING SCALE

PART I: Please provide the following information about yourself:

(A) School name: _____

(B) Years of experience as a principal at the end of this school year:

_____ 1 _____ 5-9 _____ more than 15

_____ 2-4 _____ 10-15

(C) Years of experience as a principal at this school at the end of this year:

_____ 1 _____ 5-9

_____ 2-4 _____ 10 or more years

(D) School level:

_____ Preschool _____ Middle or Junior High _____ Alternative School

_____ Elementary _____ High School _____ District Office

(E) Years of experience as a teacher:

_____ 1 _____ 5-9 _____ more than 15

_____ 2-4 _____ 10-15

(F) Grade level(s) you taught:

_____ K-6 _____ 9-12

_____ 7-9 _____ Other

(G) Your gender:

_____ M _____ F

(H) Your age:

_____ Years of age

PART II: This questionnaire is designed to provide a profile of principal instructional leadership. It consists of 50 behavioral statements that describe principal job practices and behaviors. You are asked to consider each question in terms of your instructional leadership behavior over the past school year. Read each statement carefully. Then circle the number that indicates the extend to which you feel you have demonstrated the specific job behavior or practice during the past school year. For the response to each statement:

5 represents ***Almost Always;***
4 represents ***Frequently;***
3 represents ***Sometimes;***
2 represents ***Seldom;***
1 represents ***Almost Never.***

In some cases, these responses may seem awkward; use your judgment in selecting the most appropriate response to such questions. Please circle only one number per question. Try to answer every question. Thank you.

To what extent do you...?	ALMOST NEVER				ALMOST ALWAYS
I. FRAME THE SCHOOL GOALS					
1. Develop a focused set of annual school-wide goals	1	2	3	4	5
2. Frame the school's goals in terms of staff responsibilities for meeting them	1	2	3	4	5
3. Use needs assessment or other systematic methods to secure staff input on goal development	1	2	3	4	5
4. Use data on student academic performance when developing the school's academic goals	1	2	3	4	5
5. Develop goals that are easily translated into classroom objectives by teachers	1	2	3	4	5
					I. _____
II. COMMUNICATE THE SCHOOL GOALS					
6. Communicate the school's mission effectively to members of the school community	1	2	3	4	5
7. Discuss the school's academic goals with teachers at faculty meetings	1	2	3	4	5
8. Refer to the school's academic goals when making curricular decisions with teachers	1	2	3	4	5
9. Ensure that the school's academic goals are reflected in highly visible displays in the school (e.g. posters or bulletin boards emphasizing reading or math)	1	2	3	4	5
10. Refer to the school's goals in student assemblies	1	2	3	4	5
					II._____
III. SUPERVISE & EVALUATE INSTRUCTION					
11. Ensure that the classroom priorities of teachers are consistent with the stated goals of the school	1	2	3	4	5
12. Review student work products when evaluating classroom instruction	1	2	3	4	5
13. Conduct informal observation in classrooms on a regular basis (informal observations are unscheduled, last at least 5 minutes, and may or may not involve written feedback or a formal conference)	1	2	3	4	5

To what extent do you ...?	ALMOST NEVER				ALMOST ALWAYS
14. Point out specific strengths in teacher's instructional practices in post observation feedback (e.g. in conferences or written evaluations)	1	2	3	4	5
15. Point out specific weaknesses in teacher instructional practices in post observation feedback (e.g. in conferences or written evaluations)	1	2	3	4	5

III._____

IV. COORDINATE THE CURRICULUM

16. Make clear who is responsible for coordinating the curriculum across grade levels (e.g. the principal, vice principal or teacher-leader)	1	2	3	4	5
17. Draw upon the results of school-wide testing when making curricular decisions	1	2	3	4	5
18. Monitor the classroom curriculum to see that it covers the school's curricular objectives	1	2	3	4	5
19. Assess the overlap between the school's curricular objectives and the school's achievement tests	1	2	3	4	5
20. Participate actively in the review of curricular materials	1	2	3	4	5

IV._____

V. MONITOR STUDENT PROGRESS

21. Meet individually with teachers to discuss student academic progress	1	2	3	4	5
22. Discuss the item analysis or tests with the faculty to identify curricular strengths and weaknesses	1	2	3	4	5
23. Use test results to assess progress toward school goals	1	2	3	4	5
24. Inform teachers of the school's performance results in written form (e.g. in a memo or newsletter)	1	2	3	4	5
25. Inform students of school's test results	1	2	3	4	5

V._____

To what extent do you ...?	ALMOST NEVER				ALMOST ALWAYS
VI. PROTECT INSTRUCTIONAL TIME					
26. Limit interruptions of instructional time by public address announcements	1	2	3	4	5
27. Ensure that students are not called to the office during instructional time	1	2	3	4	5
28. Ensure that tardy and truant students suffer specific consequences for missing instructional time	1	2	3	4	5
29. Encourage teachers to use instructional time for teaching and practicing new skills and concepts	1	2	3	4	5
30. Limit the intrusion of extra- and co-curricular activities on instructional time	1	2	3	4	5
					VI._____
VII. MAINTAIN HIGH VISIBILITY					
31. Take time to talk with students and teachers during recess and breaks	1	2	3	4	5
32. Visit classrooms to discuss school issues with teachers and students	1	2	3	4	5
33. Attend/participate in extra- and co-curricular activities	1	2	3	4	5
34. Cover classes for teachers until a late or substitute teacher arrives	1	2	3	4	5
35. Tutor students or provide instruction to classes	1	2	3	4	5
					VII._____
VIII. PROVIDE INCENTIVES FOR TEACHERS					
36. Reinforce superior performance by teachers in staff meetings, newsletters, and/or names	1	2	3	4	5
37. Compliment teachers privately for their efforts or performance	1	2	3	4	5
38. Acknowledge teachers' performance by writing memos for their personnel files	1	2	3	4	5
39. Reward special efforts by teachers with opportunities for professional recognition	1	2	3	4	5

To what extent do you ...?	ALMOST NEVER				ALMOST ALWAYS
40. Create professional growth opportunities for teachers as a reward for special contributions to the school	1	2	3	4	5

VIII._____

IX. PROMOTE PROFESSIONAL DEVELOPMENT

41. Ensure that in-service activities attended by the staff are consistent with the school's academic goals	1	2	3	4	5
42. Actively support the use of skills acquired during in-service training in the classroom	1	2	3	4	5
43. Obtain the participation of the whole staff in important in-service activities	1	2	3	4	5
44. Lead or attend teacher in-service activities concerned with instruction	1	2	3	4	5
45. Set aside time at faculty meetings for teachers to share ideas or information from in-service activities	1	2	3	4	5

IX. _____

X. PROVIDE INCENTIVES FOR LEARNING

46. Recognize students who do superior academic work with formal rewards such as an honor roll or mention in the principal's newsletter	1	2	3	4	5
47. Use assemblies to honor students for academic accomplishments or for behavior or citizenship	1	2	3	4	5
48. Recognize superior student achievement or improvement by seeing students in the office with their work	1	2	3	4	5
49. Contact parents to communicate improved or exemplary student performance or contributions	1	2	3	4	5
50. Support teachers actively in their recognition and/or reward of student contributions to and accomplishments in class	1	2	3	4	5

X. _____

APPENDIX C

Teacher PIMRS

THE PRINCIPAL INSTRUCTIONAL MANAGEMENT RATING SCALE

PART I: Please provide the following information about yourself:

(A) District name: _____

(B) Your position in the district: _____

(C) School name: _____

(D) Years working with the current principal at the end of this school year:

_____ 1 _____ 5-9 _____ more than 15

_____ 2-4 _____10-15

(E) Years experience as a teacher at the end of this school year:

_____ 1 _____ 5-9 _____ more than 15

_____ 2-4 _____ 10-15

(F) Grade level you teach:

_____ K-6 _____ 9-12

_____ 7-9 _____ Other

(G) Your gender:

_____ M _____ F

(H) Your age:

_____ years of age

Part II: This questionnaire is designed to provide a profile of principal instructional leadership. It consists of 50 behavioral statements that describe principal job practices and behaviors. You are asked to consider each question in terms of your principal's job-related behavior over the past school year.

Your particular responses are anonymous and will be kept confidential. At no time will the original individual questionnaires be shared with your principal. Your responses will be combined with those of other teachers in order to develop the profile.

Read each statement carefully. Then circle the number that indicates the extent to which you feel your principal has demonstrated the specific job behavior or practice during the past school year. For the response to each statement:

5 represents ***Almost Always;***
4 represents ***Frequently;***
3 represents ***Sometimes;***
2 represents ***Seldom;***
1 represents ***Almost Never.***

In some cases, these responses may seem awkward; use your judgment in selecting the most appropriate response to such questions.
Please circle only one number per question. Try to answer every question.
Thank you.

To what extent does your principal...?	ALMOST NEVER				ALMOST ALWAYS
I. FRAME THE SCHOOL GOALS					
1. Develop a focused set of annual school-wide goals	1	2	3	4	5
2. Frame the school's goals in terms of staff responsibilities for meeting them	1	2	3	4	5
3. Use needs assessment or other systematic methods to secure staff input on goal development	1	2	3	4	5
4. Use data on student academic performance when developing the school's academic goals	1	2	3	4	5
5. Develop goals that are easily translated into classroom objectives by teachers	1	2	3	4	5
					I. _____
II. COMMUNICATE THE SCHOOL GOALS					
6. Communicate the school's mission effectively to members of the school community	1	2	3	4	5
7. Discuss the school's academic goals with teachers at faculty meetings	1	2	3	4	5
8. Refer to the school's academic goals when making curricular decisions with teachers	1	2	3	4	5
9. Ensure that the school's academic goals are reflected in highly visible displays in the school (e.g. posters or bulletin boards emphasizing reading or math)	1	2	3	4	5
10. Refer to the school's goals in student assemblies	1	2	3	4	5
					II. _____
III. SUPERVISE & EVALUATE INSTRUCTION					
11. Ensure that the classroom priorities of teachers are consistent with the stated goals of the school	1	2	3	4	5
12. Review student work products when evaluating classroom instruction	1	2	3	4	5
13. Conduct informal observation in classrooms on a regular basis (informal observations are unscheduled, last at least 5 minutes, and may or may not involve written feedback or a formal conference)	1	2	3	4	5

To what extent does your principal ...?	ALMOST NEVER				ALMOST ALWAYS
14. Point out specific strengths in teacher's instructional practices in post observation feedback (e.g. in conferences or written evaluations)	1	2	3	4	5
15. Point out specific weaknesses in teacher instructional practices in post observation feedback (e.g. in conferences or written evaluations)	1	2	3	4	5

III._____

IV. COORDINATE THE CURRICULUM

16. Make clear who is responsible for coordinating the curriculum across grade levels (e.g. the principal, vice principal or teacher-leader)	1	2	3	4	5
17. Draw upon the results of school-wide testing when making curricular decisions	1	2	3	4	5
18. Monitor the classroom curriculum to see that it covers the school's curricular objectives	1	2	3	4	5
19. Assess the overlap between the school's curricular objectives and the school's achievement tests	1	2	3	4	5
20. Participate actively in the review of curricular materials	1	2	3	4	5

IV._____

V. MONITOR STUDENT PROGRESS

21. Meet individually with teachers to discuss student academic progress	1	2	3	4	5
22. Discuss the item analysis or tests with the faculty to identify curricular strengths and weaknesses	1	2	3	4	5
23. Use test results to assess progress toward school goals	1	2	3	4	5
24. Inform teachers of the school's performance results in written form (e.g. in a memo or newsletter)	1	2	3	4	5
25. Inform students of school's test results	1	2	3	4	5

V._____

To what extent does your principal ...?	ALMOST NEVER				ALMOST ALWAYS
VI. PROTECT INSTRUCTIONAL TIME					
26. Limit interruptions of instructional time by public address announcements	1	2	3	4	5
27. Ensure that students are not called to the office during instructional time	1	2	3	4	5
28. Ensure that tardy and truant students suffer specific consequences for missing instructional time	1	2	3	4	5
29. Encourage teachers to use instructional time for teaching and practicing new skills and concepts	1	2	3	4	5
30. Limit the intrusion of extra- and co-curricular activities on instructional time	1	2	3	4	5
					VI._____
VII. MAINTAIN HIGH VISIBILITY					
31. Take time to talk with students and teachers during recess and breaks	1	2	3	4	5
32. Visit classrooms to discuss school issues with teachers and students	1	2	3	4	5
33. Attend/participate in extra- and co-curricular activities	1	2	3	4	5
34. Cover classes for teachers until a late or substitute teacher arrives	1	2	3	4	5
35. Tutor students or provide instruction to classes	1	2	3	4	5
					VII._____
VIII. PROVIDE INCENTIVES FOR TEACHERS					
36. Reinforce superior performance by teachers in staff meetings, newsletters, and/or names	1	2	3	4	5
37. Compliment teachers privately for their efforts or performance	1	2	3	4	5
38. Acknowledge teachers' performance by writing memos for their personnel files	1	2	3	4	5
39. Reward special efforts by teachers with opportunities for professional recognition	1	2	3	4	5

To what extent does your principal ...?	ALMOST NEVER				ALMOST ALWAYS
40. Create professional growth opportunities for teachers as a reward for special contributions to the school	1	2	3	4	5

VIII._____

IX. PROMOTE PROFESSIONAL DEVELOPMENT

41. Ensure that in-service activities attended by the staff are consistent with the school's academic goals	1	2	3	4	5
42. Actively support the use of skills acquired during in-service training in the classroom	1	2	3	4	5
43. Obtain the participation of the whole staff in important in-service activities	1	2	3	4	5
44. Lead or attend teacher in-service activities concerned with instruction	1	2	3	4	5
45. Set aside time at faculty meetings for teachers to share ideas or information from in-service activities	1	2	3	4	5

IX. _____

X. PROVIDE INCENTIVES FOR LEARNING

46. Recognize students who do superior academic work with formal rewards such as an honor roll or mention in the principal's newsletter	1	2	3	4	5
47. Use assemblies to honor students for academic accomplishments or for behavior or citizenship	1	2	3	4	5
48. Recognize superior student achievement or improvement by seeing students in the office with their work	1	2	3	4	5
49. Contact parents to communicate improved or exemplary student performance or contributions	1	2	3	4	5
50. Support teachers actively in their recognition and/or reward of student contributions to and accomplishments in class	1	2	3	4	5

X. _____

APPENDIX D

Letters and Postcard

Superintendent Letter - First Mailing
Principal Letter - First Mailing
Teacher Letter - First Mailing

Reminder Postcard

Superintendent Letter - Second Mailing
Principal Letter - Second Mailing
Teacher Letter - Second Mailing

YSU

Superintendent Letter - First Mailing

Youngstown State University / Youngstown, Ohio 44555-0001

March, 1995

Miss Susan Smith
Anytown High School
100 School Street
Anytown, Ohio 44444

Dear Miss Smith,

May we ask your help? Your school district has been randomly selected to participate in a study of the leadership behaviors of high school principals as perceived by their superintendents and teachers. To assure meaningful results, your participation will be critical and greatly appreciated.

The survey instrument employed for the research is the *Principal Instructional Management Rating Scale*, developed by Dr. Philip Hallinger of Vanderbilt University, which requires responses to questions regarding leadership perceptions based upon the author's identification of specific leadership dimensions. The questionnaires take about fifteen minutes to complete.

In your district, only you as the superintendent, your high school principal, and ten teachers randomly selected from the high school faculty will be asked to complete the survey. At no time will the identity of respondents be revealed, nor will the responses be shared with other participants. The code on the questionnaire will be used only to facilitate follow-up when necessary. The sole purpose of the survey is to generate the statistical data needed for our research.

Thank you for your contribution to expanding our knowledge about educational leadership. Should you wish, the College of Education will be pleased to send you a summary of the study's results. Please return your survey by April 3, 1995; a stamped envelope is included for your convenience.

Sincerely yours,

K. H. Nogay

K. H. Nogay
Principal Researcher

YSU

Principal Letter - First Mailing

Youngstown State University / Youngstown, Ohio 44555-0001

March, 1995

Miss Susan Smith
Anytown High School
100 School Street
Anytown, Ohio 44444

Dear Miss Smith,

May we ask your help? Your school district has been randomly selected to participate in a study of the leadership behaviors of high school principals as perceived by their superintendents and teachers. To assure meaningful results, your participation will be critical and greatly appreciated.

The survey instrument employed for the research is the *Principal Instructional Management Rating Scale,* developed by Dr. Philip Hallinger of Vanderbilt University, which requires responses to questions regarding leadership perceptions based upon the author's identification of specific leadership dimensions. The questionnaires take about fifteen minutes to complete.

In your district, only you as the high school principal, your district superintendent, and ten teachers randomly selected from the high school faculty will be asked to complete the survey. At no time will the identity of respondents be revealed, nor will the responses be shared with other participants. The code on the questionnaire will be used only to facilitate follow-up when necessary. The sole purpose of the survey is to generate the statistical data needed for our research.

Thank you for your contribution to expanding our knowledge about educational leadership. Should you wish, the College of Education will be pleased to send you a summary of the study's results. Please return your survey by April 3, 1995; a stamped envelope is included for your convenience.

Sincerely yours,

K. H. Nogay

K. H. Nogay
Principal Researcher
«NEXT»

YSU

Teacher Letter - First Mailing

Youngstown State University / Youngstown, Ohio 44555-0001

March, 1995

Miss Susan Smith
Anytown High School
100 School Street
Anytown, Ohio 44444

Dear Miss Smith,

May we ask your help? Your school district has been randomly selected to participate in a study of the leadership behaviors of high school principals as perceived by their superintendents and teachers. To assure meaningful results, your participation will be critical and greatly appreciated.

The survey instrument employed for the research is the *Principal Instructional Management Rating Scale,* developed by Dr. Philip Hallinger of Vanderbilt University, which requires responses to questions regarding leadership perceptions based upon the author's identification of specific leadership dimensions. The questionnaires take about fifteen minutes to complete.

In your district, only your high school principal, your district superintendent, and nine other teachers randomly selected from the high school faculty will be asked to complete the survey. At no time will the identity of respondents be revealed, nor will the responses be shared with other participants. The code on the questionnaire will be used only to facilitate follow-up when necessary. The sole purpose of the survey is to generate the statistical data needed for our research.

Thank you for your contribution to expanding our knowledge about educational leadership. Should you wish, the College of Education will be pleased to send you a summary of the study's results. Please return your survey by April 3, 1995; a stamped envelope is included for your convenience.

Sincerely yours,

K. H. Nogay

K. H. Nogay
Principal Researcher

Dear Colleague,

Recently you received a request from Youngstown State University to assist with research. To assure meaningful results, your participation is critical and appreciated. The sole purpose of the survey is to generate data for our research. Thank you for your contribution to expanding our knowledge about educational leadership. Please consider returning your survey by April 10, 1995. Thank you for your assistance.

K. H. Nogay, Principal Researcher

YSU

Superintendent Letter - Second Mailing

Youngstown State University / Youngstown, Ohio 44555-0001

April, 1995

Mr. John Smith
Anytown School District
100 School Street
Anytown, Ohio 44444

Dear Mr. Smith,

About three weeks ago you received a request to assist us with educational research. Your school district has been randomly selected to participate in a study of the leadership behaviors of high school principals as perceived by their superintendents and teachers. To assure meaningful results, your participation continues to be critical and greatly appreciated.

In your district, only you as the district superintendent, your high school principal, and several teachers randomly selected from the high school faculty will be asked to complete the survey. At no time will the identity of respondents be revealed, nor will the responses be shared with other participants. The code on the questionnaire will be used to facilitate follow-up and our requests for school and district name are optional. The sole purpose of the survey is to generate the statistical data needed for our research.

Thank you for your contribution to expanding our knowledge about educational leadership. Should you wish, the College of Education will be pleased to send you a summary of the study's results. A new copy of the survey is included in case your original has been misplaced. Please return your survey by April 21, 1995; a stamped envelope is included for your convenience.

Sincerely yours,

K. H. Nogay

K. H. Nogay
Principal Researcher

YSU

Principal Letter - Second Mailing

Youngstown State University / Youngstown, Ohio 44555-0001

April, 1995

Mr. John Smith
Anytown High School
100 School Street
Anytown, Ohio 44444

Dear Mr. Smith,

About three weeks ago you received a request to assist us with educational research. Your school district has been randomly selected to participate in a study of the leadership behaviors of high school principals as perceived by their superintendents and teachers. To assure meaningful results, your participation continues to be critical and greatly appreciated.

In your district, only you as the high school principal, your district superintendent, and several teachers randomly selected from the high school faculty will be asked to complete the survey. At no time will the identity of respondents be revealed, nor will the responses be shared with other participants. The code on the questionnaire will be used to facilitate follow-up and our requests for school and district name are optional. The sole purpose of the survey is to generate the statistical data needed for our research.

Thank you for your contribution to expanding our knowledge about educational leadership. Should you wish, the College of Education will be pleased to send you a summary of the study's results. A new copy of the survey is included in case your original has been misplaced. Please return your survey by April 21, 1995; a stamped envelope is included for your convenience.

Sincerely yours,

K. H. Nogay
Principal Researcher

YSU

Teacher Letter - Second Mailing

Youngstown State University / Youngstown, Ohio 44555-0001

April, 1995

Mr. John Smith
Anytown High School
100 School Street
Anytown, Ohio 44444

Dear Mr. Smith,

About four weeks ago you received a request to assist us with an educational research project. Your school district was randomly selected to participate in a study of the leadership behaviors of high school principals as perceived by their superintendents and teachers. To assure meaningful results, your participation is critical and will be greatly appreciated.

In your district, only your high school principal, your district superintendent, and several other teachers randomly selected from the high school faculty were asked to complete the survey. At no time will the identity of respondents be revealed, nor will the responses be shared with other participants. The code on the questionnaire is being used only to facilitate follow-up. Our request for school and district name are optional. The sole purpose of the survey is to generate the statistical data needed for our research.

Please complete the questionnaire at your earliest convenience. Thank you in advance for your contribution to expanding our knowledge about educational leadership. At your request, the College of Education will be pleased to send you a summary of the study's results. A new copy of the survey is included in case your original has been misplaced. Please return this survey by April 21, 1995; a stamped envelope is included for your convenience.

Sincerely yours,

K. H. Nogay

K. H. Nogay
Principal Researcher

APPENDIX E

PIMRS Subscales

The Subscales of the PIMRS

Framing School Goals. This refers to the principal's role in determining the areas in which the school will focus its resources during a given school year. Instructionally effective schools have a clearly defined mission or set of goals which focus on student achievement. Staff and parent input during the development of the school's goals is important. These performance goals should be expressed in measurable terms (Bossert, Dwyer, Lee, & Rowan, 1982; Clark, 1980).

Communicating School Goals. This function is concerned with the ways in which the principal communicates the school's most important goals to teachers, parents, students, and the community. By discussing and reviewing goals with staff on a regular basis during the school year, especially in the context of instructional, curricular, and budgetary decisions, principals can ensure that the importance of the school's goals is understood. Both formal communication channels and informal ones can be used to communicate the school's primary purpose (Hallinger & Murphy, 1987).

Supervising and Evaluating Instruction. A central task of the principal is to ensure that the goals of the school are being translated into practice at the classroom level. This involves coordinating classroom objectives with those of the school and regularly evaluating classroom instruction. It also includes providing instructional support to teachers and monitoring classroom instruction

through classroom observations (Levine, 1982; Lipham, 1981).

Coordinating Curriculum. Instructionally effective schools are characterized by a high degree of curricular coordination (Brookover, Beamer, Efthim, Hathaway, Lezotte, Miller, Passalacqua, & Tornatzky, 1982). Achievement tests used by the school and course content need to be closely aligned with school curricular objectives. Curricular coordination is often supported by interaction among teachers within and across grade levels on instructional and/or curricular issues (Levine, 1982).

Monitoring Student Progress. Instructionally effective schools place a strong emphasis on both norm-referenced and criterion-referenced testing. Used to diagnose programmatic and student weaknesses, to evaluate the results of instructional changes, and to assist in making classroom assignments, such tests have a clear function in schools. The principal can play a key role in this area by providing teachers with test results in a timely fashion, by discussing test results with the staff as a whole, and by providing interpretive analyses for teachers regarding the test data (Hallinger & Murphy, 1987; Purkey & Smith, 1982).

Protecting Instructional Time. Studies have identified the importance of providing teachers with blocks of uninterrupted work time and the effect of learning time on student achievement. If teachers are frequently interrupted by announcements, tardy students, and requests from the office, classroom management and instructional skills are not used to the greatest effect. The

principal has control over this area through development of policy and procedure (Bossert, Dwyer, Lee, & Rowan, 1982).

Maintaining High Visibility. The principal's visibility increases interactions among principal, students, and staff. Although a significant portion of the principal's time may be taken up by meetings and mandatory functions, the principal can set priorities for how the remaining time is spent. Visibility can have positive effects on student and teacher behavior and attitudes (Brookover et al., 1982).

Providing Incentives for Teachers. Few discretionary rewards are available to principals for use with teachers because of the manner in which teachers are generally compensated. However, it has been found that monetary reward is not the only motivator but that praise is an effective motivator as well. The principal should make use of both formal and informal means of providing praise and commendations (Latham & Wexley, 1981).

Promoting Professional Development. The principal has several ways of supporting teachers in the effort to improve instruction. Teachers can be provided with relevant opportunities for staff development and with opportunity to develop teacher-leader skills. The principal can encourage staff development which is closely linked to the school goals and district vision (Clark, 1980; Little, 1982).

Providing Incentives for Learning. The last function of the principal is the area of promoting incentives for learning. A school learning climate in which academic achievement is highly valued by students and provides frequent opportunities for students to be rewarded and recognized for their academic achievement and improvement should be created. Students should have opportunities to be recognized for their achievements and principals are key in seeing that reward systems are appropriate (Brookover et al., 1978; Hallinger & Murphy, 1987).

APPENDIX F

ANOVA, PIMRS Construction

Analysis of Variance by Subscale, PIMRS Construction

Subscale	F Value	Significance
Frame Goals	6.01	.0001
Communicate Goals	6.12	.0001
Evaluate Instruction	2.23	.0266
Coordinate Curriculum	3.13	.0024
Monitor Progress	2.66	.0087
Protects Time	2.84	.0052
Visibility	3.12	.0025
Incentives for Teachers	3.49	.0010
Professional Development	1.46	.1729
Academic Standards	1.78	.0829
Incentives for Learning	4.18	.0001

APPENDIX G

Intercorrelation Matrix
PIMRS Construction

Subscale Intercorrelation Matrix, PIMRS Construction

Subscale	FG	CG	EI	CC	MP	PT	Vi	IT	PD	AS	IL
Fr Go	(.89)[a]	.85	.47	.60	.54	.43	.39	.28	.45	.43	.46
Comm Go		(.89)	.55	.71	.63	.49	.52	.41	.57	.54	.57
Ev Inst			(.90)	.57	.65	.50	.60	.37	.69	.59	.47
Coor Inst				(.90)	.73	.52	.60	.43	.64	.53	.58
Monit Prog					(.90)	.65	.57	.40	.67	.60	.49
Prot Time						(.84)	.57	.40	.67	.60	.49
Visible							(.81)	.47	.69	.60	.57
Incen Teach								(.78)	.61	.53	.39
Prof Devel									(.86)	.69	.57
Acad Stand										(.83)	.54
Incen Learn											(.87)

[a]All coefficients in parentheses are reliability estimates (Cronbach's Alpha)

APPENDIX H

District Profiles

Appendix H

Subscale means are given for each numbered district. "S" indicates superintendent responses, "P" indicates principal responses, "MT" indicates male teacher responses, "FT" indicates female teacher responses, and "All T" indicates responses for all teachers responding to the survey. An asterisk (*) indicates a female superintendent or principal. Blank lines indicate missing data.

District	Sub 1	Sub 2	Sub 3	Sub 4	Sub 5	Sub 6	Sub 7	Sub 8	Sub 9	Sub 10
1 S	20.00	17.00	20.00	21.00	17.00	17.00	19.00	21.00	20.00	20.00
*P										
MT	17.70	16.30	19.70	16.00	20.00	21.00	18.70	20.30	19.30	21.00
FT	15.75	14.75	13.25	16.50	15.75	16.75	12.75	15.75	16.25	17.50
All T	15.67	14.00	14.89	14.67	15.44	17.33	13.22	15.56	17.22	16.33
2 S										
P	17.00	18.00	21.00	19.00	24.00	20.00	18.00	21.00	21.00	18.00
MT	15.00	13.75	13.00	12.50	12.00	14.25	12.25	9.75	13.50	12.50
FT	10.00	7.00	10.33	7.33	10.33	13.67	9.33	13.00	7.67	11.67
All T	14.25	10.38	12.00	10.63	13.50	15.75	12.75	12.50	12.00	14.38
3 S	15.00	12.00	13.00	13.00	11.00	16.00	21.00	18.00	19.00	14.00
*P	21.00	18.00	24.00	22.00	22.00	24.00	23.00	22.00	25.00	21.00
MT	19.17	16.50	15.83	17.00	14.70	17.10	14.00	13.40	19.00	17.40
FT										
All T	19.17	16.50	15.38	17.00	14.70	17.10	14.00	13.40	19.00	17.40
4 *S	17.00	20.00	21.00	22.00	19.00	23.00	20.00	20.00	19.00	22.00
P	17.00	19.00	20.00	19.00	17.00	23.00	14.00	21.00	19.00	20.00
MT	15.00	15.00	15.00	16.00	16.00	16.00	12.00	14.00	16.70	18.30
FT	14.33	14.00	14.33	11.00	15.33	16.67	10.67	13.00	15.00	20.00
All T	14.67	14.50	14.67	13.50	15.67	16.33	11.33	13.50	15.83	19.17
5 S										
*P										
MT	13.70	17.00	17.70	15.70	14.70	15.00	19.70	19.70	12.30	19.70
FT	22.00	18.25	21.00	18.50	19.50	21.75	19.25	19.75	14.50	20.25
All T	20.71	17.71	19.57	17.29	17.43	18.86	19.43	19.71	13.57	20.00
6 S										
P	19.00	16.00	19.00	17.00	15.00	22.00	17.00	17.00	17.00	20.00
MT	15.75	13.75	12.75	13.00	12.00	14.50	11.00	9.50	13.00	14.25
FT	8.00	5.50	7.00	6.50	7.00	10.00	6.00	5.50	8.00	7.00
All T	13.17	11.00	11.67	10.83	10.33	13.00	9.33	8.00	11.33	11.83
7 S	10.00	11.00	20.00	17.00	14.00	18.00	19.00	18.00	12.00	12.00
P										
MT	14.00	14.67	14.30	15.00	15.30	16.70	14.00	11.00	13.70	13.30
FT	16.25	14.75	14.75	17.25	17.25	19.00	17.75	14.75	18.50	16.25
All T	15.29	14.71	14.57	16.29	16.43	18.00	16.14	13.14	16.43	15.00
8 S	16.00	15.00	13.00	14.00	11.00	14.00	15.00	16.00	12.00	16.00
*P	18.00	15.00	19.00	7.00	10.00	13.00	17.00	19.00	20.00	14.00
MT	13.60	14.60	15.20	14.40	12.40	11.80	12.40	15.60	16.00	16.00
FT	15.50	6.00	14.00	7.00	8.00	8.00	9.50	10.50	13.50	14.50
All T	14.14	14.57	14.86	12.29	11.14	10.71	11.57	14.14	15.29	15.57
9 S	22.00	21.00	22.00	23.00	23.00	23.00	20.00	22.00	23.00	20.00
*P	10.00	9.00	19.00	21.00	17.00	21.00	21.00	21.00	18.00	20.00
MT	19.67	19.67	20.67	20.33	17.33	13.67	15.33	16.67	21.33	22.00
FT	17.25	17.50	21.00	16.75	14.00	13.75	15.00	18.50	18.00	21.25
All T	18.29	18.43	20.86	18.29	15.43	13.71	15.14	17.71	19.43	21.57
10 * S										
*P	18.00	16.00	17.00	20.00	16.00	23.00	19.00	20.00	22.00	25.00
MT	14.00	10.00	13.00	15.00	10.00	17.00	11.00	7.00	11.00	13.00
FT	19.50	16.50	13.75	17.50	16.50	18.75	15.75	11.00	17.00	16.75
All T	18.40	15.20	13.60	17.00	15.20	18.40	14.80	10.20	15.80	16.00

11 S	20.00	22.00	22.00	22.00	19.00	23.00	21.00	23.00	23.00	24.00
P	16.00	13.00	18.00	21.00	20.00	22.00	18.00	25.00	23.00	22.00
MT	11.00	13.00	12.00	6.00	9.00	17.00	10.00	11.00	14.00	14.00
FT	14.00	15.00	12.00	13.00	11.00	17.00	9.00	12.00	16.00	15.00
All T	12.50	14.00	12.00	9.50	10.00	17.00	9.50	11.50	15.00	14.50
12 S	20.00	23.00	21.00	21.00	24.00	22.00	23.00	19.00	21.00	22.00
*P	22.00	25.00	25.00	22.00	21.00	23.00	24.00	24.00	25.00	24.00
MT	17.75	16.75	17.25	18.00	15.00	18.50	18.75	16.75	16.00	17.00
FT	24.00	23.00	15.00	21.00	20.00	19.00	17.00	23.00	22.00	21.00
All T	19.00	18.00	16.80	18.60	16.00	18.60	18.40	18.00	17.20	17.80
13 S										
P	19.00	20.00	20.00	20.00	19.00	19.00	21.00	20.00	21.00	22.00
MT	17.00	17.50	18.50	16.00	16.50	17.50	22.00	16.50	15.00	18.50
FT	21.50	21.50	19.50	19.50	18.00	21.50	21.50	20.00	21.00	22.00
All T	19.25	19.50	19.00	17.75	17.25	19.50	21.75	18.25	18.00	20.25
14 S	23.00	23.00	19.00	21.00	22.00	20.00	19.00	22.00	24.00	23.00
*P	17.00	21.00	22.00	20.00	20.00	25.00	25.00	24.00	20.00	25.00
MT	23.67	22.67	22.33	21.00	21.67	22.00	22.67	22.67	20.33	25.00
FT	18.00	15.00	17.00	19.00	19.00	21.00	21.00	20.00	18.00	20.00
All T	22.25	20.75	21.00	20.50	21.00	21.75	22.25	22.00	19.75	23.75
15 S	22.00	25.00	22.00	15.00	16.00	17.00	25.00	23.00	25.00	25.00
*P	24.00	22.00	22.00	24.00	25.00	19.00	24.00	23.00	25.00	24.00
MT	18.00	17.00	5.00	15.00	10.00	11.00	15.00	13.00	20.00	11.00
FT	24.00	25.00	22.00	25.00	25.00	12.00	22.00	23.00	25.00	25.00
All T	21.00	21.00	13.50	20.00	17.50	11.50	18.50	18.00	22.50	18.00
16 S										
P	19.00	18.00	19.00	12.00	16.00	22.00	13.00	20.00	22.00	17.00
MT	18.50	15.00	18.50	15.00	14.00	20.00	16.00	20.00	24.50	24.00
FT	25.00	24.00	19.00	23.00	20.00	23.00	15.00	18.00	25.00	18.00
All T	20.67	18.00	18.67	17.67	16.00	21.00	15.67	19.33	24.67	22.00
17 S	17.00	17.00	10.00	19.00	7.00	21.00	7.00	14.00	15.00	21.00
*P										
MT	18.67	17.00	15.00	16.67	12.67	15.33	16.00	14.00	19.33	18.67
FT	15.50	12.00	6.00	10.00	13.50	9.50	10.50	7.00	16.00	14.00
All T	17.40	15.00	11.40	14.00	13.00	13.00	13.80	11.20	18.00	16.80
18 S										
*P										
MT	17.80	17.00	15.40	14.60	14.60	15.80	14.40	18.60	20.80	16.80
FT	15.00	14.00	11.50	11.00	8.00	10.50	7.00	9.00	14.50	8.00
All T	17.00	16.14	14.29	13.57	12.71	14.29	12.29	15.86	19.00	14.29
19 S	19.00	17.00	20.00	15.00	19.00	20.00	21.00	19.00	18.00	17.00
P	24.00	21.00	21.00	19.00	23.00	24.00	22.00	25.00	19.00	25.00
MT	18.00	17.50	14.25	15.25	18.75	17.25	16.25	17.25	17.75	17.00
FT	19.00	22.00	20.00	18.00	14.00	22.00	23.00	25.00	23.00	25.00
All T	18.20	18.40	15.40	15.80	17.80	18.20	17.60	18.80	18.80	18.60
20 S	21.00	20.00	20.00	22.00	25.00	23.00	25.00	15.00	17.00	23.00
*P	24.00	23.00	20.00	24.00	22.00	19.00	25.00	23.00	25.00	25.00
MT	18.67	18.67	16.33	21.33	20.33	15.67	16.33	17.33	17.33	19.30
FT	23.00	24.00	23.00	22.00	20.00	17.00	17.00	25.00	25.00	24.00
All T	19.75	20.00	18.00	21.50	20.25	16.00	16.50	19.25	19.25	20.50
21 S	19.00	18.00	16.00	14.00	15.00	17.00	12.00	17.00	17.00	17.00
*P										
MT	19.00	13.00	12.00	17.00	8.00	11.00	8.00	7.00	19.00	9.00
FT	23.67	22.33	15.67	22.67	14.33	17.00	10.33	13.33	19.33	20.67
All T	22.50	20.00	14.75	21.25	12.75	15.50	9.75	11.75	19.25	17.75

22 S										
P	16.00	17.00	18.00	16.00	19.00	18.00	16.00	18.00	18.00	20.00
MT										
FT	19.67	16.00	13.33	15.67	17.33	12.67	13.67	11.67	18.33	16.00
All T	19.67	16.00	13.30	15.67	17.33	12.67	13.67	11.67	18.33	16.00
23 S										
*P	16.00	14.00	17.00	16.00	19.00	20.00	22.00	20.00	19.00	21.00
MT	16.50	20.00	19.00	15.50	15.00	15.50	19.00	20.00	18.00	22.50
FT	17.00	14.00	7.50	13.50	14.50	16.50	15.50	16.50	15.50	17.00
All T	16.75	17.00	13.25	14.50	14.75	16.00	17.25	18.25	16.75	19.75
24 *S										
P										
MT	13.00	11.75	11.00	9.75	20.50	9.00	10.00	12.50	14.25	15.50
FT	18.33	17.33	15.33	17.33	15.67	16.33	15.00	17.00	16.00	20.67
All T	15.29	14.14	12.86	13.00	12.71	12.14	12.14	14.43	15.00	17.71
25 S										
P	20.00	20.00	20.00	17.00	17.00	19.00	16.00	17.00	19.00	16.00
MT	13.75	16.25	18.50	17.75	15.75	17.75	12.25	17.75	17.50	18.25
FT	20.00	19.33	21.33	20.33	19.00	18.00	18.00	19.33	18.67	21.33
All T	16.43	17.57	19.75	18.86	17.14	17.86	14.71	18.43	18.00	19.57
26 S										
P	24.00	24.00	24.00	25.00	24.00	20.00	17.00	23.00	25.00	24.00
MT	22.75	22.75	23.25	22.25	23.00	23.25	20.25	24.00	23.50	24.25
FT	23.00	20.00	20.00	18.50	17.25	23.25	19.00	19.50	20.25	21.75
All T	22.88	21.38	21.63	20.38	20.13	23.25	19.63	21.75	21.88	23.00
27 S										
*P										
MT	23.00	22.00	17.00	20.00	18.00	13.00	17.00	16.00	19.00	25.00
FT	17.00	13.50	10.75	12.00	11.25	15.50	14.25	12.50	13.00	15.00
All T	18.20	15.20	12.00	13.60	12.60	15.00	14.80	13.20	14.20	17.00
28 S										
*P	17.00	15.00	18.00	20.00	20.00	18.00	16.00	23.00	22.00	19.00
MT	17.00	14.00	12.75	16.50	17.50	16.50	13.25	18.00	17.75	15.25
FT	17.00	16.33	7.33	16.00	11.67	18.33	11.33	20.67	21.33	17.76
All T	17.00	15.00	10.43	16.29	15.00	17.29	12.43	19.14	19.20	16.29
29 S										
*P	20.00	16.00	19.00	19.00	18.00	20.00	19.00	17.00	20.00	18.00
MT	20.50	19.50	18.00	21.50	21.50	18.00	21.50	17.50	21.50	23.00
FT	11.00	10.33	9.00	11.70	11.83	13.50	16.67	9.67	16.17	14.17
All T	13.38	12.63	11.25	13.75	14.25	14.63	17.88	11.63	17.50	16.38
30 S										
*P										
MT	9.50	14.50	11.50	12.50	13.50	12.00	9.50	17.50	15.50	22.00
FT	13.33	16.00	13.67	10.67	15.33	11.33	9.33	15.00	13.00	20.00
All T	11.80	15.40	12.80	11.40	14.60	11.60	9.40	16.00	14.00	20.80
31 S	17.00	15.00	18.00	18.00	19.00	16.00	19.00	17.00	15.00	18.00
P	15.00	13.00	22.00	18.00	18.00	19.00	16.00	19.00	19.00	19.00
MT										
FT	19.50	20.50	15.50	17.00	17.50	18.50	15.00	15.00	18.00	21.50
All T	19.50	20.50	15.50	17.00	17.50	18.50	15.00	15.00	18.00	21.50
32 S										
P	20.00	18.00	23.00	21.00	17.00	24.00	23.00	24.00	21.00	22.00
MT	19.00	17.00	16.25	15.50	16.00	16.25	13.75	14.75	18.00	19.25
FT	18.33	18.67	16.33	13.00	14.33	15.33	15.67	15.33	18.33	18.33
All T	18.71	17.71	16.29	14.43	15.29	15.86	14.57	15.00	18.14	18.86

33	S	20.00	22.00	19.00	16.00	16.00	20.00	10.00	21.00	25.00	22.00
	P	23.00	22.00	24.00	22.00	23.00	23.00	23.00	24.00	23.00	24.00
	MT	17.00	14.25	15.75	15.00	16.75	15.25	11.75	16.75	16.50	20.75
	FT	17.00	15.50	16.50	17.25	18.00	13.25	13.25	16.75	18.25	20.25
	All T	17.00	14.88	16.13	16.13	17.38	14.25	12.50	16.75	17.33	20.50
34	S	21.00	16.00	22.00	18.00	17.00	20.00	22.00	18.00	20.00	21.00
	*P	17.00	18.00	22.00	19.00	20.00	19.00	24.00	20.00	20.00	21.00
	MT										
	FT	18.33	16.67	18.33	13.67	16.00	19.33	17.33	17.33	17.33	16.33
	All T	18.33	16.67	18.33	13.67	16.00	19.33	17.33	17.33	17.33	16.33
35	S	23.00	22.00	24.00	21.00	21.00	23.00	24.00	22.00	23.00	25.00
	P	15.00	15.00	17.00	15.00	15.00	20.00	17.00	17.00	20.00	15.00
	MT	13.33	13.00	10.67	13.33	10.33	17.67	13.67	10.67	16.00	13.33
	FT	16.60	15.40	15.20	15.40	15.00	20.40	17.80	14.00	19.80	17.00
	All T	15.38	14.50	13.50	14.63	13.25	19.38	16.25	12.75	18.38	15.63
36	S	18.00	20.00	19.00	21.00	24.00	17.00	18.00	21.00	20.00	25.00
	*P	17.00	16.00	20.00	17.00	20.00	19.00	16.00	24.00	21.00	21.00
	MT	15.00	11.50	11.00	13.00	8.50	12.50	9.50	13.00	14.50	12.50
	FT	13.00	13.67	16.67	12.33	11.00	17.67	13.30	16.00	14.33	14.33
	All T	13.80	12.80	14.40	12.60	10.00	15.60	11.80	14.80	14.40	13.60
37	S										
	P	20.00	20.00	20.00	14.00	21.00	21.00	23.00	20.00	16.00	25.00
	MT	22.33	19.00	21.33	21.00	22.00	23.33	22.00	19.00	21.00	23.33
	FT	21.33	18.00	20.67	20.00	20.00	21.67	20.33	14.67	15.00	24.00
	All T	21.83	18.50	21.00	20.50	21.00	22.50	21.17	16.83	18.00	23.67
38	S	21.00	21.00	21.00	21.00	19.00	22.00	24.00	22.00	22.00	22.00
	*P	21.00	18.00	20.00	22.00	21.00	24.00	25.00	22.00	18.00	25.00
	MT	18.60	19.20	21.00	19.60	18.60	20.60	21.20	20.80	18.40	22.20
	FT	18.00	15.33	15.33	17.00	15.67	17.00	20.67	19.33	16.00	18.33
	All T	18.38	17.75	18.88	18.63	17.50	19.25	21.00	20.25	17.50	20.75
39	S	20.00	18.00	20.00	19.00	15.00	22.00	23.00	19.00	21.00	19.00
	P										
	MT	15.50	15.00	15.50	16.50	16.00	15.50	14.00	13.00	15.50	13.50
	FT	16.00	14.50	14.00	14.00	13.50	20.50	16.00	14.00	18.00	17.00
	All T	15.75	14.75	14.75	15.25	14.75	18.00	15.00	13.50	16.75	15.25
40	*S										
	P	19.00	20.00	20.00	16.00	19.00	21.00	15.00	21.00	16.00	21.00
	MT										
	FT	9.67	8.67	10.00	10.00	9.33	14.33	10.67	10.33	11.67	9.00
	All T	9.67	8.67	10.00	10.00	9.33	14.33	10.67	10.33	11.67	9.00
41	S	15.00	17.00	20.00	18.00	18.00	20.00	21.00	16.00	19.00	22.00
	P	18.00	18.00	22.00	20.00	20.00	25.00	20.00	18.00	18.00	20.00
	MT	22.25	22.25	22.50	22.25	21.50	24.25	23.75	23.25	21.50	23.00
	FT	21.50	20.50	19.50	18.50	19.00	20.50	19.00	19.50	22.50	19.50
	All T	22.00	21.67	21.50	21.00	20.67	23.00	22.17	22.00	21.83	21.83
42	S										
	P										
	MT	14.00	11.00	14.00	13.00	17.00	14.00	14.00	13.00	14.00	17.00
	FT										
	All T	14.00	11.00	14.00	13.00	17.00	14.00	14.00	13.00	14.00	17.00
43	S										
	*P	24.00	24.00	23.00	25.00	22.00	24.00	21.00	25.00	25.00	23.00
	MT	20.50	18.50	20.50	21.00	16.50	21.00	21.50	23.00	22.00	19.00
	FT	20.50	16.50	14.50	12.50	11.00	19.50	18.00	15.00	21.00	14.00
	All T	20.50	17.50	17.50	16.75	13.75	20.25	19.75	19.00	21.50	16.50

44	S									
	P									
	MT	9.00	10.00	11.00	12.50	9.00	10.00	11.50	9.00	16.00	13.00
	FT	15.50	15.25	15.75	18.25	13.50	17.00	11.25	16.25	16.00	17.75
	All T	13.33	13.50	14.17	16.33	12.00	14.67	11.33	13.83	16.00	16.17
45	S									
	P	18.00	19.00	21.00	20.00	17.00	24.00	21.00	15.00	19.00	15.00
	MT	18.25	19.50	18.75	20.50	17.75	21.25	19.75	16.50	16.75	18.25
	FT	18.60	16.40	20.20	16.00	16.80	21.80	19.80	17.00	18.60	18.60
	All T	18.44	17.78	19.56	18.00	17.22	20.56	19.78	16.78	17.78	18.44
46	S	22.00	21.00	22.00	21.00	22.00	22.00	20.00	22.00	20.00	21.00
	P	16.00	12.00	15.00	20.00	18.00	21.00	18.00	21.00	18.00	18.00
	MT	16.00	12.67	16.67	17.33	14.33	18.33	15.33	12.33	17.00	17.33
	FT	17.00	13.67	11.67	14.00	14.00	16.00	12.33	11.67	11.67	11.33
	All T	16.67	13.17	14.17	15.67	14.17	17.17	13.83	12.00	14.33	14.33
47	S	17.00	14.00	24.00	22.00	19.00	19.00	22.00	23.00	20.00	25.00
	P	18.00	16.00	21.00	18.00	16.00	15.00	22.00	22.00	15.00	21.00
	MT	16.75	16.00	17.50	16.50	17.25	17.00	21.25	19.75	16.75	20.50
	FT	18.33	12.67	15.67	17.00	17.67	18.67	19.33	15.33	12.33	19.33
	All T	17.00	14.57	16.71	16.71	17.43	17.71	20.43	17.86	14.86	20.00
48	S	12.00	11.00	13.00	7.00	11.00	17.00	15.00	14.00	10.00	15.00
	P	20.00	21.00	21.00	20.00	23.00	20.00	24.00	21.00	21.00	21.00
	MT	14.00	12.00	12.00	10.00	7.00	13.00	14.00	13.00	16.00	13.00
	FT	16.60	14.00	11.33	12.33	13.67	14.33	11.67	10.67	13.67	16.00
	All T	13.75	13.50	11.50	11.75	12.00	14.00	12.25	11.25	14.25	15.25
49	S	20.00	22.00	18.00	20.00	18.00	16.00	18.00	23.00	22.00	20.00
	P	21.00	22.00	21.00	22.00	19.00	21.00	22.00	22.00	23.00	21.00
	MT	21.25	21.25	17.25	19.00	18.00	18.50	16.00	23.00	23.00	20.75
	FT	21.25	21.75	16.75	14.75	17.75	20.00	15.50	20.00	22.50	19.25
	All T	21.25	21.50	17.00	17.38	17.88	19.25	15.75	21.50	22.75	20.00
50	S	17.00	17.00	21.00	20.00	18.00	20.00	21.00	24.00	24.00	25.00
	*P	21.00	15.00	18.00	13.00	16.00	22.00	16.00	22.00	21.00	21.00
	MT	20.00	19.00	12.00	10.33	10.33	13.67	12.67	10.67	15.33	16.00
	FT	20.40	19.00	20.80	20.00	19.20	22.00	18.00	20.60	21.80	19.80
	All T	20.25	19.00	17.50	16.38	15.88	18.88	16.00	16.88	19.38	18.38
51	S	20.00	20.00	18.00	17.00	18.00	20.00	21.00	21.00	19.00	24.00
	P	21.00	18.00	20.00	19.00	19.00	19.00	21.00	18.00	19.00	19.00
	MT	20.00	19.00	14.00	19.00	19.00	20.00	17.00	17.00	19.00	16.00
	FT	22.00	24.00	21.00	22.00	21.00	19.00	20.00	24.00	24.00	20.00
	All T	21.00	21.50	17.50	20.50	20.00	19.50	18.50	20.50	21.50	18.00
52	S	16.00	16.00	15.00	15.00	12.00	17.00	11.00	16.00	15.00	15.00
	P	21.00	17.00	23.00	25.00	22.00	21.00	22.00	23.00	23.00	22.00
	MT	11.00	5.00	6.00	10.00	5.00	15.00	5.00	5.00	7.00	5.00
	FT	13.00	12.00	10.50	12.50	9.50	9.50	13.00	7.00	10.00	16.50
	All T	12.33	9.67	9.00	11.67	8.00	11.33	10.33	6.33	9.00	12.67
53	S	13.00	15.00	17.00	16.00	15.00	13.00	17.00	21.00	17.00	16.00
	*P	23.00	24.00	24.00	23.00	21.00	22.00	23.00	23.00	24.00	24.00
	MT	17.00	14.50	17.50	14.50	17.50	20.00	13.00	15.50	17.00	15.50
	FT	25.00	24.00	25.00	24.00	23.00	22.00	24.00	22.00	24.00	24.00
	All T	19.67	17.67	20.00	17.67	19.33	20.67	16.67	17.67	19.33	18.33
54	S	21.00	23.00	23.00	25.00	21.00	23.00	25.00	22.00	25.00	23.00
	P	16.00	14.00	17.00	17.00	16.00	20.00	16.00	16.00	16.00	17.00
	MT	18.00	14.00	14.25	16.00	15.25	14.25	14.75	13.75	14.75	17.00
	FT										
	All T	18.00	14.00	14.25	16.00	15.25	14.25	14.75	13.75	14.75	17.00

55	S	23.00	22.00	23.00	25.00	22.00	21.00	24.00	23.00	21.00	24.00
	*P	17.00	13.00	19.00	19.00	15.00	22.00	20.00	21.00	14.00	19.00
	MT	18.50	17.00	20.00	17.50	20.50	15.50	17.50	18.50	18.00	19.00
	FT	17.67	15.33	16.67	16.00	18.00	12.00	13.00	17.00	17.33	20.33
	All T	18.00	16.00	18.00	16.60	19.00	13.40	14.80	17.60	17.60	19.80
56	S	20.00	19.00	22.00	20.00	20.00	18.00	19.00	24.00	20.00	24.00
	P	14.00	14.00	16.00	15.00	17.00	21.00	15.00	14.00	16.00	19.00
	MT	10.50	10.00	11.50	11.50	14.00	13.50	12.50	16.50	12.50	17.50
	FT	13.00	10.00	14.00	13.00	15.00	14.67	10.67	11.00	9.33	14.67
	All T	12.00	10.00	13.00	12.40	14.60	14.20	11.40	13.20	10.60	15.80
57	S	15.00	16.00	24.00	25.00	19.00	18.00	19.00	22.00	19.00	21.00
	P	16.00	15.00	21.00	22.00	16.00	20.00	19.00	21.00	14.00	24.00
	MT	13.25	12.50	17.25	13.75	12.25	13.00	15.75	16.75	15.00	18.25
	FT	24.00	18.00	20.00	24.00	15.00	18.00	16.00	19.00	20.00	18.00
	All T	15.40	13.60	17.80	15.80	12.80	14.00	15.80	17.20	16.00	18.20
58	S	15.00	15.00	17.00	16.00	14.00	13.00	18.00	20.00	18.00	19.00
	P	18.00	14.00	18.00	17.00	18.00	20.00	16.00	19.00	20.00	22.00
	MT	9.50	10.00	13.50	10.00	13.75	13.00	11.25	16.00	13.50	16.25
	FT	11.50	11.75	12.75	10.50	10.00	14.25	10.25	12.50	13.75	13.25
	All T	10.50	10.88	13.13	10.25	11.88	13.75	10.75	14.25	13.63	14.75
59	S										
	*P	19.00	16.00	22.00	20.00	16.00	19.00	20.00	22.00	18.00	25.00
	MT	23.00	19.00	16.00	19.00	12.00	18.00	20.00	23.00	19.00	24.00
	FT	22.67	19.00	19.67	19.00	18.67	16.67	15.67	19.33	21.00	22.67
	All T	22.75	19.00	18.75	19.00	17.00	17.00	16.75	20.25	20.50	23.00
60	S	11.00	12.00	15.00	16.00	16.00	21.00	19.00	19.00	15.00	23.00
	P	17.00	14.00	14.00	15.00	11.00	13.00	16.00	14.00	13.00	14.00
	MT	5.00	9.00	12.00	12.00	11.00	16.00	12.00	20.00	14.00	16.00
	FT	17.50	17.50	16.50	16.00	18.00	19.50	19.00	16.50	15.00	21.00
	All T	13.33	14.67	15.00	14.67	15.67	18.33	16.67	17.67	14.67	19.33
61	*S	19.00	20.00	23.00	23.00	25.00	25.00	25.00	25.00	23.00	25.00
	*P	5.00	5.00	21.00	21.00	21.00	21.00	14.00	15.00	21.00	20.00
	MT	20.00	21.00	21.50	19.25	21.75	21.50	22.75	21.00	22.25	21.25
	FT	19.00	16.00	19.50	20.00	20.50	23.00	25.00	24.50	24.00	24.50
	All T	19.67	19.33	20.83	19.50	21.33	22.00	23.50	22.17	22.83	22.33
62	S	18.00	17.00	18.00	19.00	18.00	21.00	22.00	20.00	22.00	22.00
	P	22.00	20.00	23.00	23.00	23.00	20.00	24.00	22.00	23.00	22.00
	MT	19.67	20.67	17.67	14.67	19.00	16.00	18.67	17.67	13.33	21.33
	FT	9.67	6.33	6.33	5.00	5.00	7.67	7.00	5.00	5.67	13.00
	All T	14.67	13.50	12.00	9.83	12.00	11.83	12.83	11.33	9.50	17.17
63	S	20.00	21.00	18.00	14.00	14.00	18.00	21.00	18.00	23.00	16.00
	P	20.00	20.00	23.00	23.00	21.00	23.00	24.00	21.00	23.00	23.00
	MT										
	FT	17.17	16.33	16.83	16.67	15.83	19.50	20.67	16.67	20.50	19.50
	All T	17.17	16.33	16.83	16.67	15.83	19.50	20.67	16.67	20.50	19.50
64	S	10.00	10.00	13.00	9.00	11.00	11.00	15.00	11.00	13.00	16.00
	*P	18.00	19.00	20.00	15.00	13.00	19.00	18.00	20.00	20.00	22.00
	MT	17.60	16.20	15.20	14.80	14.00	15.80	14.60	15.20	20.40	19.60
	FT	14.75	15.00	14.25	12.75	10.75	10.75	16.25	14.25	18.25	18.75
	All T	16.33	15.67	14.78	13.89	12.56	13.56	15.33	14.78	19.44	12.22
65	*S										
	P										
	MT	20.00	17.00	19.00	16.00	15.00	18.00	11.00	17.00	14.00	14.00
	FT	10.00	9.00	13.00	9.00	9.00	11.00	12.00	14.00	8.00	17.00
	All T	15.00	13.00	16.00	12.50	12.00	14.50	11.50	15.50	11.00	15.50

66	S	20.00	18.00	22.00	22.00	20.00	17.00	20.00	17.00	20.00	18.00
	*P	19.00	21.00	23.00	17.00	13.00	16.00	25.00	24.00	17.00	25.00
	MT	15.25	14.00	14.25	15.75	14.25	10.75	15.00	15.25	16.75	17.25
	FT	14.33	12.00	13.67	15.67	11.00	13.67	13.67	13.33	15.67	15.00
	All T	14.86	13.14	14.00	15.71	12.86	12.00	14.43	14.43	16.29	16.29
67	*S										
	P										
	MT	10.00	10.00	12.50	14.00	13.50	16.50	16.50	11.50	13.50	17.50
	FT	5.67	6.00	6.33	6.67	6.00	7.33	10.67	5.33	8.00	9.33
	All T	7.40	7.60	8.80	9.60	9.00	11.00	13.00	7.80	10.20	12.60
68	S										
	*P	13.00	16.00	18.00	19.00	22.00	19.00	22.00	17.00	13.00	19.00
	MT	17.00	14.00	13.00	13.00	14.50	13.00	17.50	13.50	17.50	17.00
	FT	16.50	13.50	14.50	16.50	13.25	18.50	21.50	15.75	16.00	19.00
	All T	16.67	13.67	14.00	15.33	13.67	16.67	20.17	15.00	16.50	18.33
69	S	15.00	15.00	18.00	16.00	18.00	16.00	17.00	19.00	20.00	18.00
	P	15.00	14.00	22.00	19.00	16.00	21.00	21.00	20.00	19.00	22.00
	MT	18.20	17.00	19.60	17.40	16.20	18.40	18.00	17.60	16.50	20.80
	FT	14.60	13.00	16.80	14.60	13.80	19.20	13.20	15.20	12.80	19.40
	All T	16.40	15.00	18.20	16.00	15.00	18.80	15.60	16.40	14.70	20.10
70	S	21.00	25.00	21.00	24.00	23.00	25.00	24.00	24.00	24.00	25.00
	*P	19.00	18.00	20.00	23.00	16.00	19.00	20.00	23.00	18.00	23.00
	MT	24.50	23.00	24.50	24.50	23.50	20.00	25.00	24.00	22.50	21.00
	FT	23.00	23.67	20.00	21.00	20.33	19.00	21.00	20.33	17.67	21.00
	All T	23.60	23.40	21.80	22.40	21.60	19.40	22.60	21.80	19.60	21.00
71	S	21.00	19.00	15.00	18.00	20.00	18.00	15.00	23.00	19.00	20.00
	*P	20.00	19.00	22.00	21.00	18.00	21.00	21.00	18.00	17.00	22.00
	MT	15.75	15.75	15.00	14.75	15.00	13.50	12.00	15.75	17.50	18.75
	FT	8.00	7.00	6.00	5.00	15.00	13.00	10.00	11.00	6.00	19.00
	All T	14.20	14.00	13.20	12.80	13.40	13.40	11.60	14.80	15.20	18.80
72	S	20.00	20.00	21.00	24.00	20.00	23.00	17.00	17.00	16.00	23.00
	*P	17.00	18.00	16.00	16.00	17.00	19.00	16.00	19.00	15.00	20.00
	MT	12.00	12.00	8.00	9.00	5.00	11.00	6.50	5.50	7.50	7.50
	FT	15.50	17.00	18.50	11.50	9.50	19.00	8.50	13.00	16.50	16.50
	All T	13.75	14.50	13.25	10.25	7.25	15.00	7.50	9.25	12.00	12.00
73	S										
	*P										
	MT	16.80	14.40	18.20	15.00	12.20	19.20	12.60	17.00	19.40	18.20
	FT	16.00	13.67	16.33	13.67	9.33	18.67	11.33	15.00	14.00	17.67
	All T	16.50	14.13	17.50	14.50	11.13	19.00	12.13	16.25	17.38	18.00
74	S	17.00	18.00	19.00	18.00	19.00	21.00	22.00	20.00	19.00	16.00
	P	10.00	16.00	20.00	18.00	18.00	19.00	19.00	19.00	22.00	20.00
	MT	16.67	14.00	16.33	17.33	15.67	19.50	10.00	18.00	16.33	18.33
	FT	13.00	9.00	7.00	11.00	11.00	12.00	9.00	15.00	18.00	11.00
	All T	15.75	12.75	14.00	15.75	14.50	16.00	9.75	17.25	16.75	16.50
75	S	16.00	22.00	22.00	19.00	20.00	17.00	22.00	21.00	22.00	22.00
	*P	17.00	20.00	24.00	22.00	19.00	24.00	24.00	22.00	19.00	24.00
	MT	19.50	19.75	17.25	17.75	16.50	15.33	21.50	20.50	20.50	21.00
	FT	18.33	17.50	18.67	16.33	18.50	21.00	19.83	19.00	17.00	17.50
	All T	18.80	18.40	18.10	16.90	17.70	20.40	20.50	19.60	18.40	18.90
76	S	17.00	19.00	22.00	21.00	21.00	23.00	22.00	17.00	17.00	19.00
	*P	22.00	18.00	25.00	23.00	22.00	22.00	22.00	20.00	22.00	23.00
	MT	16.67	16.00	16.33	14.00	18.67	15.33	19.33	10.00	15.33	14.33
	FT	11.67	12.33	15.67	13.67	15.00	10.33	17.33	9.33	13.33	18.67
	All T	14.17	14.17	16.00	13.83	16.83	12.83	18.33	9.67	14.33	16.50

APPENDIX I

Permission to use
Principal Instructional Management
Rating Scale

Peabody College
VANDERBILT UNIVERSITY
NASHVILLE, TENNESSEE 37203
TELEPHONE (615) 322-7311

Department of Educational Leadership • Box 514 • Direct phone 322-8000
Fax 615-343-7094

November 7, 1994

Kathy Nogay
Principal
Hickory High School
640 North Hermitage Road
Hermitage, Pennsylvania 16148-3324

Dear Kathy:

Thank you for ordering the **Principal Instructional Management Rating Scale**. I have enclosed master copies of the principal, teacher and supervisor forms of the **PIMRS** as well as associated support materials. For the price of $50.00, you have purchased the right to make unlimited copies of the **PIMRS** for one school(s) as specified in your order. The enclosed back-up materials related to instructional leadership development are ones that you may find useful in your work.

If you have any questions regarding the administration, scoring or interpretation of your **PIMRS** results, please feel free to call me at 615-343-7092. I would be happy to talk with you about your results. I also offer school districts a variety of professional development workshops on instructional leadership as well as on school district administrative evaluation.

I hope that you find the **PIMRS** of use in the development of instructional leadership in your school(s).

Sincerely,

Philip Hallinger
Director
Center for Advanced Study
of Educational Leadership

Enclosure
Pimd2.let

APPENDIX J

Human Subjects Research Committee Exemption

Youngstown State University / Youngstown, Ohio 44555-2377
Office of Grants and Sponsored Programs
(216) 742-2377

March 2, 1995

Kathleen Nogay
Educational Administration
U N I V E R S I T Y

Dear Ms. Nogay:

The Human Subjects Research Committee has reviewed your proposal, "The Relationship of Superordinate and Subordinate Gender on the Perceptions of Leadership Behaviors of Female Secondary Principals," (HSRC #95-24) and determined that it is exempt.

We wish you well in this study.

Sincerely,

Peter J. Kasvinsky
Dean of Graduate Studies

kb

c: R. Beebe, Chair of Educational Administration
S. Ellyson, Chair of HSRC