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ABSTRACT

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PRINCIPAL LEADERSHIP IN URBAN HIGH SCHOOLS: ANALYSIS OF VARIATION IN LEADERSHIP CHARACTERISTICS

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The role of the principal as leader has been a subject of considerable debate and research in education. This study examines the extent of variation in leadership behavior and activities among urban high school principals. Data were collected through interviews with principals and teachers in national samples of urban comprehensive high schools and magnet high schools. The findings show that the extent of principal leadership varies widely among both comprehensive and magnet high schools. Comprehensive high school principals tend to provide more leadership in "administrative" areas than in "educational" areas; only a small minority are highly rated on all of the measures. Almost half of the magnet high school principals provide strong leadership in all areas. The extent of principal leadership is also analyzed by differences in school and district contexts.

PRINCIPAL LEADERSHIP IN URBAN HIGH SCHOOLS: ANALYSIS OF VARIATION IN LEADERSHIP CHARACTERISTICS

Introduction

This paper describes a study of principal leadership in two types of urban high schools--magnet high schools and comprehensive high schools. The study includes analyses of the extent of principal leadership on six leadership variables and analyses of differences in leadership by school and district characteristics.

Education research on school organization and administration has recently been dominated by the concept of "principal as leader." One body of research utilizing this concept has been the studies of "school effectiveness" (Edmonds, 1979; Brookover, 1979; Rutter, 1979; Phi Delta Kappa, 1980). Initial studies of school effectiveness identified the "principal as instructional leader" as one of several critical factors in effective schools. This research led to succeeding studies that further defined and described the characteristics of "effective school leadership" (Wellisch, 1978; Sweeney, 1982; Blumberg and Greenfield, 1980; Yukel, 1982; De Bevoise, 1984).

A second category of education research which focuses on the "principal as leader" is the recent research on high schools (Boyer, 1983; Lightfoot, 1983; Grant, 1982; Coleman, et al, 1981; Sizer, 1984). These studies have been characterized as contributing to a "high school reform movement" (D'Amico, 1982). A common finding of these studies is the critical role of the principal as a leader in creating school conditions that lead to higher student academic performance--conditions such as setting high standards and goals, planning and coordination with staff, orientation toward innovation, frequent monitoring of staff and student performance, and involving parents and the community.

Current research on the principal's role as leader is examining the relationship between specific characteristics of principal leadership and school conditions for academic improvement (e.g., Daresh and Liu, 1985; Smith and Muth, 1985; Wilson and Firestone, 1985), as well as the effects of principal leadership on student achievement (Glasman, 1984; Spade, et al, 1985). The principal as leader has also become a major topic in research and writing in educational administration that addresses the improvement of educational quality in elementary and secondary schools (Bossert, et al, 1982; Cohen, 1983; Sergiovanni, 1984; Murphy, et al, 1985). The principal as leader may have become the predominant way to characterize the role of the principal in the organization of a school.

As De Bevoise (1984) and others (Greenfield, 1982; Rutherford, et al, 1983) have pointed out, the notion of principal as leader, or instructional leader, is a relatively new concept in the literature on principals. But, with the importance being placed on the leadership role of the principal recently, two questions should be considered: a) How is this concept of the principal related to other definitions of the role of the principal?, and b) To what extent does the "principal as leader" concept accurately describe the current role and behavior of school principals, and particularly in schools with high academic performance of students?

Change in Principal Role Definition

The emphasis on "principal as leader" may have added a new dimension to the traditional distinction between the dual roles of "principal as educator" and "principal as administrator". Early American schools had "principal teachers" who were elected, but the position evolved toward greater attention to administrative matters (Boyer, 1983). A major review of research on the "school as a formal organization" written in 1965 described the central problem of the principal as balancing the inherent conflict between attention

to teachers (role as educator) and attention to the central office (role as administrator) (Bidwell, 1965; also see Becker and Geer, 1960). In reviewing twenty years of research on the the principal, Glasman (1984) concluded that the various roles could best be grouped into two categories: educator and administrator.

Research in the 1980's on principal leadership has generally cross-cut the educator-administrator distinction. For example, a recent study of principal instructional leadership behavior employed a 30-item questionnaire which contained five scales: staff development, teacher supervision and evaluation, instructional facilitation, resource acquisition and building maintenance, and student problem resolution (Daresh and Liu, 1985). These five scales include both the "educator" and "administrator" roles categorized by Glasman (1984). The concept of principal leadership may be subsuming earlier distinctions in principal roles.*

Another possible effect of the increased use of the principal as leader concept is greater emphasis on the principal as a key actor in the educational effectiveness of the school. At the same time there has been increased attention on the school as the level at which significant and lasting educational improvement takes place, as opposed to the district or classroom. The school effectiveness movement has reasserted the need for school-based leadership for improving student academic performance. Sergiovanni (1984) maintains that the principal's key function in effective schools is establishing goal consensus among staff and developing an institutional identity, and he cites classic studies on organizational leadership that

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*This shift in concepts and terminology may be analogous to Peters and Waterman's (In Search of Excellence, 1982) eight "themes" for explaining the activities and behavior of successful business executives, which tend to merge traditional organization leadership and management concepts.

support this view of the role of the principal (e.g., Barnard, 1938; Selznick, 1957; Bennis, 1984). Murphy, et al (1982) view the principal of an effective school as having an instrumental role in "coupling" the school through supervision of the core curriulum, and thus descreasing the typically "loosely-coupled" organization of schools (Weick, 1976).

Both the school effectiveness research and the high school studies place responsiblity for sustained effects of educational quality innovations at the school level. From this perspective, the district level is viewed as important for support of school-level reform efforts (Purkey and Smith, 1982; Goodlad, 1983; Boyer, 1983; Sizer, 1984). Against the perspective of other recent models, the concept of the principal as the source of educational leadership, and the school as the relevant level of organization for change, may signify an important shift. Analyses of leadership in public schools have until recently focused on the superintendent or the school board (Bidwell, 1965; Corwin, 1974). The school district, in these models, was viewed as "the organization" with schools being the equivalent of organization "branches" or "divisions," and principals being the "middle managers." However, other organization analysts have pointed out the problems of applying organization theories to analyzing schools (March, 1978; Cohen, et al, 1972; Weick, 1976).

In sum, the development and expansion of the concept of principal as leader may describe a new set of expectations for school principals. Previous models for principal behavior which tended to focus on the educator or administrator roles of the principal now appear to be less relevant. The current definition of a principal appears to require leadership behavior as both an educator and an administrator, including responsiblity for the basic school curriculum. The principal as leader also implies a redefinition of the relationship between the school and the school district.

Assessing the Current Status of Principal Leadership

Many school districts have introduced programs to increase school effectiveness, including greater principal instructional leadership. The development of principal leadership skills has become a major thrust of district staff development, and about 30 states now have academies for administrator leadership training (Mann, 1985). If principal leadership is a high priority in improving public education, what evidence is available on the kinds of leadership development that are needed? What is known about leadership being provided by principals currently? Is there research evidence on the extent of principal leadership and its effects, or research which outlines the barriers to further development of principal leadership in elementary and secondary schools?

School effectiveness research has examined the role of principals as instructional leaders and the findings are not conclusive. Although some studies show positive effects of principal instructional leadership on the academic success of a school, other studies have found similar patterns of principal leadership activities and behavior in both effective and ineffective schools (with effectiveness being measured by student achievement test scores) (Phi Delta Kappa, 1980; State of New York, 1974; Wellisch, et al, 1978).

The effects of principal leadership may be related to other variables. For example, some studies have found that principal "styles" differ among principals of effective schools (Blumberg and Greenfield, 1982; Dwyer, et al, 1983; Hall, et al, 1983). From reviewing differences in principal leadership of effective schools, several researchers have concluded that leadership must be considered in relation to other principal characteristics, and to the school context, functions, and organization (Dwyer, et al, 1983; Ralph and Fennessey, 1983; Sizer, 1984).

Most of the research on principal leadership in effective schools has been

done with elementary schools. Principal instructional leadership and other "school effectiveness factors" may need to be adapted to the different organization structure, functions, and conditions of secondary schools (Brookover, 1981; Neufield, et al, 1983). Firestone and Herriott (1982) maintain that principal instructional leadership is more applicable to the elementary school because it has a more bureaucratic, rational model of organization than the secondary school, which better fits the "loosely-coupled" model described by Weick (1976). For example, any expansion of the principal's role as instructional leader may be opposed by high school department heads and teachers who would view it as an infringement upon their professional domain.

The organization of a school district also may affect the role of the principal as leader. In his study of high schools, Boyer (1983) found that principal leadership and school autonomy characterized some effective schools, but he observed that there is now a strong trend toward centralization of decision-making and greater requirements of school reporting and accountability, which tends to decrease opportunities for principal leadership. Lortie (1975) observed that the principal leadership role is typically poorly defined in most schools, and that the principal often takes on tasks and roles that are not otherwise defined for teachers or district administrators.

Principal leadership may be an in important and influential concept for improving schools. But there is relatively little information available on the current role of principals, particularly in high schools. Considering the current emphasis placed on leadership by principals, it would be useful to have a better understanding of the current status of principals as leaders.

Study Design

This study was designed to analyze differences in principal leadership in high schools, and to test the relationship of school and district conditions to principal leadership. There were three main research questions:

1. To what extent do high school principals differ in leadership activities and behavior?
2. How does principal leadership differ among high schools that vary in function and organization?
3. What effect do school context and district conditions have on principal leadership?

The variables used to measure principal leadership were adapted from Glasman's (1984) typology of principal roles and the measures of principal leadership behavior employed in several recent studies (Wilson and Firestone, 1985; Daresh and Liu, 1985). The six leadership variables are listed below--the first three measure "educator roles" and the latter three measure "administrator roles." (The roles outlined by Glasman are in parentheses.)

1. Leading instructional or program innovation (Instructional)
2. Developing educational goal consensus in the school (Man-in-the-middle)
3. Acting as change agent for the school with the district and community (Change agent)
4. Selecting school staff (Authority)
5. Involving staff in planning and evaluation (Planning and evaluation)
6. Making decisions of central importance to the school, e.g. core curriculum decisions (Managing).

From the review of literature on principal leadership, the study hypothesis related to the first research question was that leadership activities and behavior, as measured by the six variables, would differ widely across a sample of high schools. High school principals would not be predicted to exhibit high leadership on all six variables, but it might be

e ected that leadership would be higher with "administrator" roles than "educator" roles.

To test the second question, the study included high schools with different types of function and organization, specifically comprehensive high schools and magnet high schools. The hypothesis was that magnet high school principals would exhibit a high degree of leadership, and particularly in "educator" roles. This hypothesis was based on a review of research on the development, function, and organization of magnet schools (McMillan, 1980; Fleming, et al, 1982; Blank, et al, 1983). The research findings indicate that the unique educational program or theme of magnet schools would attract principals with strong leadership abilities, and school districts are likely to organize magnet schools to allow flexibility for principals.

The study hypothesis related to the third research question was that the school and district context would affect the extent of principal leadership. Larger high schools were predicted to have a lower degree of principal leadership in educational areas than smaller schools because the principal's potential involvement would be delegated to others. High schools that have a high proportion of students from low socio-economic backgrounds were predicted to have lower principal leadership, based on existing knowledge of differences in expectations for schools according to the socio-economic status of parents and communities. High schools in districts with a high degree of centralized decision-making at the district level were predicted to have lower principal leadership, according to previous research on school and district relations.

Method

The study hypotheses were tested with national data on high schools from two surveys conducted for the U.S. Department of Education. One dataset is from a survey of 32 urban comprehensive high schools conducted in the 1984-85 school year. School sampling began with selection of sixteen cities from the

161 cities in the U.S. with more than 100,000 population. The cities were stratfied into five regions of the country and four categories of city size. Two high schools were randomly selected in each of the 16 selected cities from the list of public comprehensive high schools with a minimum of 30 percent minority and low-income students (to ensure selection of representative urban high schools). On-site interviews were conducted in each school with the principal and four teachers--the English and mathematics department heads and one teacher from each of these departments. School data were collected from district and school records. (See Yin, et al, 1984, for further explanation of the sampling and data collection methods.)

The second dataset is from a national survey of magnet schools conducted in the spring of 1983. The survey sample of forty-five schools, including 34 high schools and 11 elementary or middle schools, was selected by district. Fifteen urban districts were randomly selected from the group of 138 urban school districts operating magnet schools. The universe was identified through a telephone survey with officials in 350 urban districts. Selection of districts was within five regional strata, and selected districts had at least one magnet high school. Three magnet schools were purposively selected in each district to maximize variation in program themes and school neighborhood characteristics. On-site interviews were conducted with the principal, an average of six teachers per school, and district administrators, and school data were collected from school and district records. (See Blank, et al, 1983, for further explanation of the sampling and data collection methods.)

In each of the surveys, data were collected on the six principal leadership variables being analyzed here. However, the survey questions and coding methods differed between the two surveys, and thus, the variable indicators differ slightly.

For the comprehensive high schools, structured interview questions were used. The questions asked about specific principal activities or behavior to measure each leadership variable. For example, the variable on leading instructional innovation was measured by the following item: "Can you give an example of a curriculum or instructional innovation which the principal led or initiated?" Responses were coded and then summed for the five respondents per school. (See, Miller, 1983, for a discussion of measures based on aggregate individual responses.) On the question above, a score of 1 indicates that only one respondent could name an innovation by the principal, while 5 shows that all five named an innovation. A list of the items used as variable indicators is in Appendix A. The variable on district centralization of decision-making was measured by the sum of the responses on the district role in eight areas of decision- making affecting the school. These items are also listed in Appendix A. Data on two indicators of school context--size of enrollment and proportion low-income students--were obtained from school and district records.

In the magnet schools survey, responses to semi-structured interview questions on school leadership were aggregated by school, and ratings were assigned for each variable. A rating of 1 (low) to 5 (high) represents the aggregate responses from the principal and an average of six teachers per school. The response analysis and coding process were standardized across study sites and schools. The district role in decision-making variable was coded in a similar manner, with the addition of responses from district adminis- trators. Data on school enrollment were obtained from school and district records. (The proportion of low-income students was not collected in the magnet schools study.)

Findings

Comprehensive High Schools. The data on principal leadership in a national sample of 32 comprehensive urban high schools provide very useful information on the current role of principals. Analyses of the six leadership variables show that these principals differ considerably in areas and degree of leadership. The results show support for the hypothesis that principals of comprehensive high schools provide less leadership in educational areas than in administrative areas.

The distribution of principal leadership scores in Table 1 shows that three of the measures have a high degree of variation. On the "instructional innovation" variable, five schools had low principal leadership scores (0 or 1) while 12 schools had high scores (4 or 5). The scores for "developing education goal consensus" have a bimodal distribution--12 schools with a score of 2 and 11 schools with a score of 4. The scores for "planning with staff" are also highly varied, with almost even distribution above and below the medium score of 3.

The scores on the other three leadership variables show more consistency in degree of principal leadership among the 32 schools. Two-thirds (21) of the schools had high scores (4 or 5) on the measure of "principal as change agent." Conversely, 25 of the schools had low principal leadership scores of 0, 1, or 2 on the measure of "making decisions about the core curriculum. The measure of principal leadership in staff selection received a score of 3 in eighteen of the 32 schools, which may indicate that the principal does not have a strong leadership role in hiring teachers in a majority of high schools.

The analysis of leadership variable scores by school in the bottom portion of Table 1 provides an assessment of the degree of overall principal leadership. If a principal is a strong leader in all areas, there should be a high score (4 or 5) on all six leadership variables. The data show, however,

that none of the comprehensive high schools had high scores on either five or six of the variables, and only three schools had high scores on four of the variables. Eleven schools (about one-third of the sample) had high principal leadership scores on half of the variables (three of six). These data indicate that in the majority of comprehensive high schools the principal has a strong leadership role in two or three of the six areas measured in this study.

Three variables that measure direct principal involvement in curriculum or instruction--instructional innovation, goal consensus, and core curriculum decisions--have low or moderate leadership scores in a majority of the comprehensive high schools. The highest consistency in principal leadership is in serving as a change agent with the district and community. This area of leadership may directly affect education in the school, but the principal generally is acting more as a manager representing the school. Two variables that measured administrator roles--selecting staff and plannning with staff--had moderate leadership scores in the majority of schools.

Magnet High Schools. The data from the national sample of 34 magnet high schools indicate support for the hypothesis that principals are stronger leaders in this type of high school. The leadership ratings in Table 2 show that five of the variables have a mean rating of 3.3 or higher, and the sixth, "instructional innovation," has a rating of 2.9. The results indicate that many magnet schools in this sample generally receive fairly strong leadership from their principals.

However, the data in Table 2 show a high degree of variation in leadership ratings. Variation is fairly consistent for the six variables, with standard deviations from 1.2 to 1.6. This means that the leadership ratings for the different measures vary similarly between schools. The pattern is confirmed by the analysis in the bottom portion of Table 2. Seventeen of the magnet

Table 1

Extent of Principal Leadership on Six Leadership Variables, Sample of 32 Urban Comprehensive High Schools

Leadership Variable	Principal Leadership Score[a]						Total	Mean Score	Std. Dev.
	0	1	2	3	4	5			
Instructional innovation	3	2	6	9	7	5	32	2.8	1.5
Education goal consensus	0	1	12	6	11	2	32	3.0	1.1
Change agent with district/ community	0	2	3	6	12	9	32	3.8	1.2
Staff selection	1	1	4	18	6	2	32	3.0	1.0
Planning with staff	0	5	7	9	6	5	32	3.0	1.3
Makes core curriculum decisions	4	15	5	5	1	2	32	1.7	1.3

Number of Variables per School with the Same Score

Number of Variables	Score			
	0-1	2	3	4-5
None	7	3	3	4
1	16	21	13	6
2	6	6	8	8
3	3	2	6	11
4	0	0	2	3
5	0	0	0	0
6	0	0	0	0
Total	32	32	32	32

[a] Score on each leadership variable: sum of individual responses of principal and four teachers per school to survey item (See Appendix A).

Table 2

Extent of Principal Leadership on Six Leadership Variables, Sample of 34 Urban Magnet High Schools

Leadership Variable	Principal Leadership Rating[a]					Total[b]	Mean Rating	Std. Dev.
	1	2	3	4	5			
Instructional innovation	8	4	9	8	5	34	2.9	1.4
Education goal consensus	4	4	10	6	7	31	3.3	1.2
Change agent with district/ community	6	4	5	5	12	32	3.4	1.6
Staff selection	5	4	9	7	9	34	3.4	1.2
Planning with staff	5	4	4	7	11	31	3.5	1.4
Makes core curriculum decisions	5	5	7	6	10	33	3.3	1.4

Number of Variables per School with the Same Rating

Number of Variables	Rating		
	1-2	3	4-5
None	14	9	7
1	8	13	7
2	1	7	2
3	2	3	1
4	4	2	6
5	4	0	5
6	1	0	6
Total	34	34	34

[a] Rating on each leadership variable: aggregate of interview responses of principal and six teachers per school.

[b] Missing data on some variables for the 34 schools.

high schools have a high leadership rating (4 or 5) on four or more variables. Conversely, nine of the magnet schools have a low rating (1 or 2) on four or more variables. These results indicate that magnet schools fall into categories by the overall degree of leadership of the principal, with about half showing strong leadership on a majority of the areas measured.

Although direct comparisons of average leadership scores between the comprehensive high schools sample and the magnet high schools sample are not appropriate (due to the differences in data collection), the relative distributions of scores for the two samples should be noted. The scores on principal leadership in "instructional innovation" are very similar for the two samples. But, a higher proportion of magnet school principals had high leadership ratings on "staff selection" (18 with a score of 4 or 5) than the proportion of comprehensive school principals with high ratings (8 with a score of 4 or 5). A higher proportion of magnet school principals also had high ratings on "planning with staff" (18 with a 4 or 5 versus 11 principals of comprehensive high schools) and on "making core curriculum decisions" (16 with a 4 or 5 versus 3 principals of comprehensive schools). More principals of comprehensive high schools were highly rated as a "change agent" (21 with a score of 4 or 5) than magnet school principals (17 with a 4 or 5). In general, more of the magnet school principals received high leadership ratings on more variables than did the principals of comprehensive high schools.

Relationship of Leadership to School and District Characteristics. To test the hypotheses concerning differences in principal leadership, analysis of variance was conducted for the six principal leadership variables by the school and district context variables. Analyses of variance were conducted for three contextual variables with the comprehensive high schol data and two variables with the magnet high school data.

Table 3 shows the results of analysis of variance of the six leadership

Table 3

Analysis of Variance in Principal Leadership By School Size (N = 30 Urban Comprehensive High Schools)

Leadership Variable	School Size (Enrollment)[a,b]						F Stat.
	Small (n=10)		Medium (n=10)		Large (n=10)		
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	
Instructional innovation	2.9	1.6	2.6	1.8	2.9	1.6	.10
Education goal consensus	3.1	1.0	2.8	1.1	3.3	1.0	.54
Change agent with district/ community	3.7	1.2	3.6	1.2	3.9	0.9	.41
Staff selection	2.7	.6	2.6	1.0	3.8	0.9	5.50**
Planning with staff	2.6	1.1	3.1	1.4	3.2	1.4	.58
Makes core curriculum decisions	2.4	1.6	1.1	0.5	1.6	1.3	2.53

[a] Small urban comprehensive high school = Less than 1400 students
Medium = 1400 to 1900 students
Large = More than 1900 students.

[b] School enrollment data available for 30 comprehensive high schools.

**$p < .01$

Table 4

Analysis of Variance in Principal Leadership By Proportion of Low-Income Students in the School (N = 30 Urban Comprehensive High Schools)

Leadership Variable	Proportion Low-Income Students[a,b] Low (n=7)		Medium (n=11)		High (n=12)		F Stat.
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	
Instructional innovation	1.7	1.2	3.3	1.1	3.3	1.4	3.24*
Education goal consensus	3.7	1.5	3.4	.7	2.7	1.2	7.64**
Change agent with district/ community	3.4	1.2	3.5	1.3	4.1	.9	.92
Staff selection	3.6	.6	3.2	.6	2.6	1.3	2.47
Planning with staff	3.6	.8	3.0	1.3	2.6	1.4	1.20
Makes core curriculum decisions	1.6	1.2	1.4	.7	2.0	1.7	.50

[a]Low-income is defined as students eligible for free or reduced school lunch program. Proportion low-income: Low = 1 - 40 percent; Medium = 41 - 60 percent; High = 61 - 100 percent.

[b]Data on proportion low-income students available for 30 comprehensive high schools.

*$p < .05$

**$p < .01$

Table 5

Analysis of Variance in Principal Leadership By
District Role in Decisions
(N = 32 Urban Comprehensive High Schools)

Leadership Variable	District Role in Decisions[a]						F Stat.
	Small (n=10)		Medium (n=11)		Large (n=11)		
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	
Instructional innovation	3.1	1.8	2.8	1.4	2.9	1.3	.10
Education goal consensus	3.0	1.1	2.8	1.0	3.3	.8	.42
Change agent with district/ community	3.4	1.3	3.8	.9	3.9	1.2	1.00
Staff selection	3.6	1.0	2.4	1.2	3.1	.2	4.10*
Planning with staff	3.7	1.3	2.8	1.2	2.7	.6	2.63
Makes core curriculum decisions	1.4	1.2	1.4	.9	2.2	1.6	1.30

[a] District role in decisions: sum of responses of principal and four teachers on eight items on decision- making affecting the school (see Appendix A). Total possible score = 40; range = 3 through 30. District role: Small = sum of 3 - 13; Medium = sum of 14 - 19; Large = sum of 21 - 30 05

*$p < .05$

variables by school size for the comprehensive high schools. The hypothesis was that small high schools would have stronger principal leadership. The results show that the only significant difference in leadership by school size is in staff selection. There is a trend toward greater principal leadership in making core curriculum decisions among small schools, although it is only a relative difference since the overall average is low for this variable (1.7). The results showing that principals of larger comprehensive high schools tend to have a greater leadership role in selection of staff than principals of smaller schools indicate that in larger urban high schools the principal has greater autonomy in this particular area of leadership.

The analysis of variance in principal leadership by the proportion of low-income students in the school is shown in Table 4. The hypothesis was that leadership is inversely related to the proportion of low-income students. Significant differences were found in two measures of leadership. In comprehensive high schools with over 40 percent low-income students (medium and high categories), principals tend to be stronger leaders in instructional innovation (means of 3.3 and 3.3 vs. 1.7 for the low category). Conversely, in high schools with a lower proportion of poor students, principal leadership scores are higher on the goal consensus variable (3.7 for low, 3.4 medium, and 2.7 for high). Although the differences are not significant, there is a similar trend for two other variables--staff selection and planning with staff. One possible explanation for the differences in instructional innovation (based on other data from the comphehensive high schools study) is that districts and schools with more poor students may be placing greater emphasis on the role of the principal in instructional leadership as a strategy for academic improvement. But, it is interesting to note that principals in these schools have lower leadership scores in other areas.

In Table 5, the results are displayed for the analysis of variance in

principal leadership by the extent of the district role in decisions affecting the school. The differences are significant for only one of the leadership measures--staff selection. The trends for several of the other leadership variables are in opposite directons. Schools with a smaller district role in decisions appear to have somewhat higher scores on principal leadership in planning with staff, but schools with a larger district role have slightly higher leadership scores on the "change agent," "goal consensus," and "curriculum decisions" variables. In general, the district role in decision-making has a smaller relationship to principal leadership than expected.

The findings from analysis of variance of principal leadership in magnet schools by school size are shown in Table 6. With two of the six leadership measures--"change agent" and "curriculum decisions," smaller magnet high schools have significantly greater principal leadership than larger schools. The pattern of small schools having greater principal leadership appears to be similar for the other leadership variables although the differences are not significant. School size appears to be an important factor in the principal leadership role of magnet schools.

Table 7 shows the results of analysis of variance in principal leadership of magnet high schools by the district role in decisions. There are no significant differences in principal leadership by the three categories of district role in decisions. For several of the variables, such as "instructional innovation" and "curriculum decisions," there is a slight trend toward greater leadership with a smaller district role in decisions. However, the general pattern is that the extent of district involvement in decisions affecting the school has little relationship to the degree of principal leadership.

Table 6

Analysis of Variance in Principal Leadership by School Size (N = 34 Urban Magnet High Schools)

Leadership Variable	School Size (Enrollment)[a] Small (n=10)		Medium (n=13)		Large (n=11)		F Stat.
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	
Instructional innovation	3.4	1.2	3.0	1.4	2.4	1.4	1.26
Education goal consensus	3.0	1.5	3.5	1.4	2.8	.8	.86
Change agent with district/ community	4.3	1.0	3.7	1.5	2.3	1.3	6.70**
Staff selection	3.6	1.2	3.6	1.4	2.7	1.2	.40
Planning with staff	3.8	1.5	3.5	1.5	3.1	1.7	.40
Makes core curriculum decisions	4.0	1.4	3.5	1.1	2.5	1.3	1.60**

[a] Small urban magnet high school = Less than 700 students
Medium = 700 - 1400 students
Large = More than 1400 students.

**$p < .01$

Table 7

Analysis of Variance in Principal Leadership By
District Role in Decisions
(N = 34 Urban Magnet High Schools)

Leadership Variable	District Role in Decisions[a]						F Stat.
	Small (n=8)		Medium (n=13)		Large (n=13)		
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	
Instructional innovation	3.5	1.2	2.7	1.7	2.7	1.5	.87
Education goal consensus	3.0	.4	3.2	1.6	3.3	1.5	.19
Change agent with district/ community	3.4	1.3	3.3	1.5	3.5	1.6	.02
Staff selection	3.6	.9	3.3	1.3	3.3	1.3	.14
Planning with staff	4.0	1.5	3.3	1.3	3.3	1.3	.48
Makes core curriculum decisions	3.8	1.3	3.3	1.5	3.0	1.5	.71

[a] District role in decisions: aggregate rating from interview responses of three district administrators, principal, and six teachers.

Conclusions

The analyses in this study provide useful insight into the role of principal as leader in urban high schools. The study results show that only a small minority of principals of comprehensive high schools receive high ratings as leaders, and they are rated as strong leaders only on some of the leadership criteria that were studied. The characteristic of principal leadership that was most consistently found in this high school sample was the principal acting as a change agent with the district and community. The results showed that a majority of the principals provide low or moderate leadership activity in areas related to curriculum and instruction.

The findings on leadership of comprehensive high schools tend to support the common view that high school principals have little time to spend as educational leaders of their schools because they must devote so much attention to managing the school, and in particular relating to other levels of the system. The degree of leadership attributed to the principals of the schools in this study shows that most principals have some role in policies and practices in the six areas that were examined, but their role might be more accurately described as "implementer" or "manager" or these areas rather than as a decision-maker or individual leader.

A good illustration of this view is provided by the results for the measure of leadership in staff selection where over half of the principals received the medium score on staff selection. The leadership scores show that in a majority of the schools the principal is either one of several persons involved in selection of all staff or the person that selects some of the staff, or a combination of the two. The finding is conditional, however, in that principals of larger high schools generally have a stronger role in staff selection than principals of smaller high schools.

The finding of only a small relationship between the district role in

decisions and the degree of principal leadership is a divergence from a common view of leadership in schools. One possibl interpretation of this finding is that greater principal leadership is not dependent on a smaller district role, i.e., there is no necessary zero-sum between school leadership by the principal vs. the district. It may also mean that principal leadership can be further developed in some areas to improve high school education without reducing the leadership and management role of the district level. In fact, other analyses being conducted with the high school data indicate that more effective urban high schools have successful "co-management" with the combination of principal and district providing strong leadership.

Leadership by school department heads was not examined in this study, but it is likely that some successful principals share · delegate leadership in selected areas to department heads, such as in planning or curriculum decisions. This leadership approach would be consistent with recent evidence on the management of successful corporations (although successful corporate leaders do have a combination of control over central areas and delegation of others, according to Peters and Waterman (1982)). A leadership strategy involving department heads would explain lower principal leadership scores on some of the measures in this study. Further studies should examine the relationship of principal leadership and department head leadership, particularly for schools with records of high academic performance.

The analyses of the two school context variables showed few signficant differences in relation to principal leadership. However, it is noteworthy that principals of schools with a high proportion of low-income students tend to be strong leaders in instructional innovation. This finding may be showing the effects of greater attention to academic improvement in urban high schools serving predominantly poor students. It should be noted that a possible reason for few significant differences in leadership by school context

variables is the relatively small variation in school size and proportion of low-income students in this sample of urban high schools in comparison to the population of American high schools. For example, in this sample, a "small" high school has more than 1000 students, and a school with up to 40 percent of the students from low-income families is a relatively low proportion.

The analysis of leadership in magnet schools shows that a significant proportion have strong principal leadership. This findings is consistent with the process of developing magnet schools in urban districts. To develop an innovative, quality magnet school, many districts appoint a principal who has demonstrated outstanding leadership charcteristics, and often, the principal is knowledgeable in the subject area of the magnet theme. Thus, the finding that some principals of magnet schools are rated as strong leaders in areas such as selecting staff, developing school goals, instructional innovation, and planning with staff is not suprising. Previous analyses of the magnet school data showed that principal leadership was positively related to the educational quality of the magnet school program (Blank, et al, 1983).

The magnet school sample had significant variation in principal leadership, however. A portion of the magnet schools had patterns of low leadership ratings on these measures which indicate that there was no special attention given to appointing or developing strong principal leaders. The hypothesis concerning the relationship of school size and principal leadership was confirmed for magnet schools, but not comprehensive high schools. This may be due to a greater degree of variation in size of the magnet schools. However, like comprehensive high schools, principal leadership of magnet schools is not related to district role in decisions. Apparently, strong principal leadership can be developed under different degrees of district involvement in decisions.

Appendix A

Variable Indicators:
Survey of Comprehensive High Schools

Principal Leadership Variables	Indicator/Item
Instructional innovation	Can you give an example of a curriculum or instructional innovation which the principal led or initiated? (Code 1 = Curriculum or instruction, staff development, awards to teachers or students; 0 = Management, discipline, don't know, none)
Education goal consensus	What are two specific educational goals the principal has emphasized for this year? (Score = number naming same goal, e.g., achievement, attendance, instruction, community involvement)
Change agent with district/community	Can you give an example of a request for district support or resources for a school program or activity made by the principal within the last year? (Code 1 = Staffing/ instruction needs, facilities, curriculum; 0 = Don't know, none)
Staff selection	Who is most involved in making decisions on hiring faculty? (Score = number naming principal adjusted minus 1 for equal number naming district staff as being most involved)
Planning with staff	Can you give an example of a change in school policy or practice over the last year that was initiated by a teacher? (Score = number naming example, e.g., discipline, management, curriculum, staff development, awards; adjusted minus 1 for consensus of less than 3)
Makes curriculum decisions	Who is most involved in making decisions on curriculum design and changes? (Score = number naming principal)

Appendix A
(continued)

District Role in Decision-making Variable	Indicator/Items
	Who is most involved in making decisions on the following? (Score = sum of district responses on all eight indicators) a) Schoolwide goals and objectives b) Departmental spending c) Hiring faculty d) Teacher scheduling and assignments e) Curriculum design and changes f) Rules for student behavior g) Teacher evaluations h) Staff development activities

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