

# Principal Leadership and Student Achievement

Findings of a two-year study in Seattle elementary schools suggest that the principal plays a crucial role in the academic performance of students, particularly low-achievers.

Far from being unwanted but unavoidable bit players in the educational drama (as some recent critics suggest), principals command the leading role. An emerging database suggests that the school principal is critical in ensuring academic achievement, especially for black and low-income students.

Our data derive from a two-year study of the relationship between principal leadership and student academic achievement. This study was part of a collaborative effort of the University of Washington College of Education and the Seattle School District to improve the district's 67 elementary and 20 secondary schools. As discussed elsewhere (Andrews and Soder 1985, Andrews et al. 1985, Soder and Andrews 1985), the effort identified 12 organizational characteristics of schools, including staff perceptions of principal leadership, hypothesized to relate to improved academic achievement.

## Study Background

The researchers administered a questionnaire to all district instructional staff designed to measure 18 strategic interactions between principals and teachers in terms of the principal as (1) resource provider, (2) instructional resource, (3) communicator, and (4) visible presence. In brief, the questionnaire yielded the following information.

As *resource provider*, the principal takes action to marshal personnel and resources within the building, district, and community to achieve the school's vision and goals. These resources may be seen as materials, information, or opportunities, with the principal acting as a broker.

As *instructional resource*, the principal sets expectations for continual improvement of the instructional program and actively engages in staff development. Through this involvement, the principal participates in the im-

provement of classroom circumstances that enhance learning.

As *communicator*, the principal models commitment to school goals, articulates a vision of instructional goals and the means for integrating instructional planning and goal attainment, and sets and adheres to clear performance standards for instruction and teacher behavior.

As *visible presence*, the principal is out and around in the school, visiting classrooms, attending departmental- or grade-level meetings, walking the hallways, and holding spontaneous conversations with staff and students.

Using standard psychometric techniques to ensure reliability and validity of resulting data, practicing teachers, administrators, and the research team collaboratively developed the instrument (Andrews and Soder 1985). Administration occurred during spring 1984 (69 percent return rate) and again during spring 1985 (74 percent).

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**Table 1**  
**Reading and Math Two-Year Gain Scores**  
**(1982-1984) by Group**

Group	Leader Group				F-Test Significance
	All Schools (n=33)	Strong Leader (n=11)	Average Leader (n=11)	Weak Leader (n=11)	
Total Reading Gain 1982-1984					
All Students	2.7	4.8	1.6	1.8	.02*
Ethnic Groups					
White	2.5	4.3	1.8	1.5	.10
Black	2.4	4.8	1.5	.9	.06
Surrogate SES					
No Lunch	2.9	4.8	1.9	2.1	.09
Free Lunch	3.0	5.9	2.0	1.1	.00**
Total Math Gain 1982-1984					
All Students	1.8	4.5	-.41	1.2	.04*
Ethnic Groups					
White	1.1	3.5	-1.9	1.5	.04*
Black	1.2	4.4	1.3	-2.3	.01**
Surrogate SES					
No Lunch	1.5	3.8	-.93	1.60	.14
Free Lunch	2.2	6.0	.83	-.09	.01**

\* = Significant beyond .05 level.  
\*\* = Significant beyond .01 level.

The researchers used gains in individual student normal curve equivalent scores on the California Achievement Test as a measure of improved academic performance. Year-end 1982 test data served as baseline, with individual gains computed on the basis of year-end 1984 test scores. To be considered as a subject in the study, a student had to be enrolled in the same school during 1983 and 1984. Data were aggregated within schools for all students and by ethnicity and free-lunch status.

The researchers were able to obtain sufficient achievement data to allow for reliable and valid conclusions in 33 of the elementary schools. They divided the schools into three groups based on staff perceptions of the principal as an instructional leader. They classified the 11 highest scoring principals as strong leaders, the middle 11 as average leaders, and the lowest scoring 11 as weak leaders.

### Findings

Table 1 presents results of analyses of variance, with leader group as the independent variable and total reading and total mathematics average gain scores as the dependent variable. (For an extended discussion of the statistical treatment, see Soder et al. 1986.)

As indicated in the table, the normal equivalent gain scores of students in strong-leader schools were significantly greater in both total reading and total mathematics than those of students in schools rated as having average or weak leaders.

The differences between groups of students are particularly pronounced when considered in terms of ethnicity and free-lunch status. The direction of gain scores, while somewhat inconsistent for white and non-free-lunch students in average- or weak-leader schools, were consistently highest for strong-leader schools. The order of gain scores for black and free-lunch

students was consistent across groups, from highest for strong-leader schools to lowest for weak-leader schools. The greatest differences existed for free-lunch students in reading, and for both black and free-lunch students in mathematics. Thus, for example, free-lunch students' gains in total reading ranged from 5.9 points over the two years in strong-leader schools to 1.1 points in weak-leader schools. Black students' gains in total mathematics ranged from 4.4 points in strong-leader schools, but students in weak-leader schools lost an average of 2.3 points over the same period.

### Policy Implications

The findings suggest that teacher perceptions of the principal as an instructional leader are critical to the reading and mathematics achievement of students, particularly among low-achieving students. Clearly, additional studies are needed to validate our assumptions, and it is too early to generalize since the findings relate only to elementary schools. Nonetheless, the findings suggest general policy implications in four areas: (1) preservice training, (2) selection of principals, (3) continuing education, and (4) evaluation.

**Preservice training.** To the extent that certain behaviors of principals are associated with improved academic achievement of students, these behaviors should provide a primary focus for principal preservice training programs. Districts should examine the predictive validity of admissions criteria in light of study findings. Desired behaviors should be reinforced during training programs and should be an integral part of program exit criteria.

**Selection of principals.** School districts should revise their selection criteria to include those principal behaviors that are linked to student achievement. In addition to making those standards a fundamental part of the selection process, districts should communicate them to everyone responsible for preservice training to ensure a pool of acceptable applicants and to minimize the need for retraining new principals.

Both those in higher education and in the school districts share responsibilities for principal selection, and for

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the delicate process of delineating selection criteria. Districts should not see their task as dictating the specific nature, scope, and procedures of any given principal training program. At the same time, they have an obligation to select principals who meet their needs, and training programs should, within normally accepted professional standards, respond to those needs.

**Continuing education.** Systematic application of relevant selection criteria should, after a few years, result in a high level of congruence between a district's expectations for principals and the principals' performance. However, because virtually all school districts have principals already in place, and turnover rates are relatively low, districts need to examine their continuing education programs to ensure

that the desired principal behaviors are refined and reinforced.

**Evaluation.** Many school districts adopt idealistic goals for principals, but use unrelated criteria to evaluate them. We suggest that districts examine their formal processes for principal evaluation, make explicit their expectations for desired behaviors, and use these expectations as the basis for principal evaluation.

### Teacher Involvement

Beyond these four lies a fifth implication. Administrators have viewed principal selection, development, and evaluation within their exclusive purview. There has been a general reluctance to acknowledge the usefulness of teachers' observations of principals. Our findings tend to confirm what common sense has long since suggested: teachers are a legitimate source of data regarding principal behaviors. Such data reasonably might be incorporated as part of processes for principal selection, development, and evaluation.

Recently, we have extended our work to studies of an additional 40 school districts. When this data base is complete, we should be able to extend current findings beyond the urban sample on which we have based these conclusions. □

### References

- Andrews, R. L., and R. Soder. "University/District Collaboration on Effective Schools." *National Forum of Educational Administration and Supervision Journal* 2 (1985): 33-48.
- Andrews, R. L., A. V. Houston, and R. Soder. "The Search for Excellence and Equity: Seattle's Effective Schools Project." *The Effective School Report* 3, 9 (1985): 1, 6-7.
- Andrews, R. L., R. Soder, and D. Jacoby. "Principal Roles, Other In-School Variables, and Academic Achievement by Ethnicity and SES." Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April 1986.
- Soder, R., and R. L. Andrews. "The Moral Imperatives of Compulsory Schooling." *Curriculum in Context* (Summer 1985): 6-8, 12.

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