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ABSTRACT
        The perceptions of school climates at high- and
low-performing schools were studied in 11 elementary schools from a
large, multicultural urban school district selected for their high or
low achievement. The sample consisted of 151 teachers from the 5
high-performing schools and 146 from the low-performing schools.
School performance was determined by administrator recommendation and
scores on standardized tests. Teacher attitudes were determined
through the School Climate Survey for Teachers developed for this
study. Teacher qualifications and experience were essentially the
same in both groups. In all the schools, teachers generally thought
positively of their school climates. Most had favorable perceptions
of teacher-student relations, school standards, instructional
materials, and feedback to students. Teachers from high-performing
schools reported a greater academic emphasis or orientation and a
greater use of innovative instructional strategies. They also felt
that they had better facilities and resources than teachers in
low-performing schools. Teachers in low-performing schools reported
more discipline problems and more involvement in nonteaching
activities. One figure and three tables present survey findings.
(Contains 30 references.) (SLD)

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Comparing School-Based Environment of High- and Low-Performing Inner City Schools

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Comparing School-Based Environment of
High- and Low-Performing Inner City Schools

In recent years, there has been an increased emphasis on investigating the school climate or school-level environment in order to understand and improve the productivity of schools. School climate has often been identified as one of the most important aspects of an effective school (Clift & Waxman, 1985; Keefe, Schmitt, Kelly, & Miller, 1993). It involves a teacher's relationship with students, other teachers, parents, school administrators, and the principal. It has been found to be associated with the professional development of teachers, teacher morale, and teacher's sense of efficacy in the classroom (Ascher, 1992; Creemers, Peters, & Reynolds, 1989; Fisher & Fraser, 1991a; Teddlie & Stringfield, 1993).

The theoretical base for the school climate research paradigm rests on viewing the school as a formal organization and school climate as one of the most significant indicators for organizational strength. Some researchers have focused on how to change the school work environment and investigated the organizational work characteristics of schools that are associated with teachers' career dissatisfaction. Lack of resources, for examples, has been found to create stress among teachers (Corcoran, Walker, & White, 1988). Other school-level factors such as poor collegial relations have been found to negatively impact teachers' commitment to teaching and consequently lead to teacher burnout (McLaughlin, 1993). In addition to teacher perspectives, a few research studies have inferred that a good school environment is linked with student achievement (Fisher, Fraser, Wubbels & Brekelmans, 1993). Student academic achievement is strongly affected by school culture (Purkey & Smith, 1985).

Research on school climates has predominantly focused on: (a) the development of instruments (Fisher & Fraser, 1991b, 1992; Rentoul & Fraser, 1993), (b) the use of school climate data to evaluate school programs and/or improve schools (Docker, Fraser, & Fisher, 1989; Moos, 1979; Fraser, Williamson, & Tobin, 1987), (c) describing how exemplary teachers perceive their school environment or comparing their perceptions with other groups of teachers (Templeton &

Jensen, 1993; Huang, Waxman, & Houston, 1993; Huang & Waxman, 1995), and (d) examining the relations between school climate and several variables like teacher-student relationships in classrooms (Fisher al, 1993), teacher career dissatisfaction (Conley, Bacharach, & Bauer, 1989), teacher efficacy (Hoy & Woolfork, 1990; 1993), and organizational commitment (Tarter, Hoy, & Kottkamp, 1990).

One area of research that has not been widely examined with the school climate paradigm is investigating differences between high- and low-performing schools. It is important to examine the school climates between different types of schools because it may help us uncover important and alterable aspects of schools that can be improved and possibly impact the students' overall academic performance. It may be especially important to examine such differences in urban public schools where many of the most serious academic and disciplinary problems are occurring. The high percentage of students at risk of failure and teacher burnout raise an urgent issue challenging educators. Consequently, the objective of the present study is to investigate high- and low-performing school teachers' perceptions of their school climates. More specifically, the purpose of this study is to provide information to help assess the similarities and differences in school-level work environments as perceived by teachers from the two types of schools and thereby design strategies to enhance school quality and productivity.

Methods

Subjects

This study was conducted in 11 elementary schools from a large, multicultural urban school district located in the south central region of the United States. These schools were selected because they represented either a high- or low-performing inner-city school within the district. The sample consisted of 297 teachers from these schools who responded to a school climate survey. Of the 297 teachers, 151 were from five high-performing schools and 146 were from six low-performing schools. About 30% of these teachers had less than five years of teaching experience, whereas nearly 50% of them had ten or more years of teaching experience.

Over 55% of the teachers had taught less than five years at the current school and less than 20% of them had taught ten years or longer at the current school. Slightly less than 40% of the teachers had master's or higher degree and over 80% of the teachers were certified in the field in which they were teaching.

The schools were considered "high performing" or "low performing" based on two criteria: (a) they were nominated by school district administrators, and (b) they also outperformed or under performed other similar schools on state-wide and national achievement tests over a two-year period. In other words, the present study used both the outlier approach (Purkey & Smith, 1983) and nomination approach to categorize schools as high- or low-performing. The school district evaluated schools according to their performance and progress in standardized test scores. Test scores must improve from 2 to 8 percent, depending on how well or poorly the school was performing. The school district then rated schools as exemplary, recognized, acceptable, or unacceptable schools. The "high performing" schools were the schools in the exemplary category and the "low performing" schools were the schools in the unacceptable category. The mean scores on student achievement tests for the high-performing schools were above 40 (norm curve equivalent scores) for the past two years and for the low-performing schools were below 40. Furthermore, the initial population of schools that were chosen through this selection process were required to have predominantly (i.e., > 70%) minority students (i.e., African American or Latino) from low-income families. At least 50% of students in these schools were eligible for free lunch.

Although the outlier and nomination approaches have both been criticized by some researchers, their concurrent use in the present study adds support to the validity of the current selection criteria. Furthermore, criticisms of the outlier approach have often been made based on the problems of (a) failing to account for socioeconomic status (SES) and/or ethnicity, and (b) failing to include multiple measures of student learning (Levine, 1990). In the present study, however, both concerns were addressed by statistically controlling for both SES and ethnicity and

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by including both national standardized achievement tests and state-wide standardized tests that assess progress in state adopted curriculum objectives.

Instrument

The instrument used in the present study was the School Climate Survey for Teachers (Freiberg, Stein, Waxman, & Wang, 1992) which was developed specifically for this study. Researchers in the Center initially examined a number of related school climate surveys like the School Learning Environment Questionnaire (Fisher & Fraser, 1991a, 1991b; Moos, 1979), the Comprehensive Assessment of School Environments (Keefe, Schmitt, Kelly, & Miller, 1993), the Organizational Climate Perception Questionnaire (Hoy, Tarter, Kottkemp, 1991), and the National Educational Longitudinal Survey (Ingels, Abraham, Karr, Spencer & Frankel, 1990). They then developed the instrument to include similar constructs, but primarily focused on important aspects of inner-city school environments.

The instrument includes 15 scales and 75 items. The following figure lists the scale and an example of each scale.

Figure 1. Teachers' School Climate Survey Scales and Examples

Scale	Example
Student Academic Orientation	Students are interested in learning new things.
Teacher-Student Relations	The teacher encourages students to do their best.
Teacher-Colleague Relations	The teacher feel accepted by other teachers.
Participatory Decision Making	Teachers are frequently asked to participate in decisions concerning administrative policies and procedures.
Curriculum Innovation	Teachers are encouraged to be innovative in this school.
Facilities and Resources	Video equipment, tapes and films are readily available.
Teacher-Parent Relations	Teachers think of parents as partners in educating children.
Principal Leadership	The principal tries to improve teachers' working condition.
School Standards	The standards set by the school are realistic.
Instructional Materials	In this class, instructional materials are provided to stimulate varied student interest.
Feedback	The teacher regularly provides information to students about their performance.
Cooperative Learning	In this class, students tutor other students.
Teaching Activities	Time spent daily on planning and preparing for teaching.
Non-Teaching Activities	Time spent on performing routine administrative tasks.
Discipline Problems	Student cutting class.

Most of the scales contain four to five individual items that are measured on a five-point Likert-type scale. The first 12 scales asked teachers to indicate their degree of agreement to individual item with 5 (strongly agree) being the highest point and 1 (strongly disagree) being the

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lowest point. The Teaching Related Activities and Non-Teaching Related Activities scales asked teachers how much time on the average they spent daily in different types of activities, from "less than an hour" (1 point) to "four or more hours" (5 points). The Disciplinary Problems scale asked teachers to rate the degree of various disciplinary problems at school from "not a problem" (1 point) to "serious problem" (4 points). To test the reliability of the instrument, internal consistency reliability coefficients were computed. The Cronbach Alpha reliability coefficients for the final 15 scales are, in descending order, Principal Leadership, .82; Disciplinary Problem, .77, Instructional Materials, .76; Cooperative Learning, .75; Student Academic Orientation, .73; Teacher-Student Relations, .72; School Standards, .70; Teacher-Parent Relations, .63; Non-Teaching Activities, .61; Feedback, .59; Teaching Activities, .58; Participatory Decision Making, .57; Teacher-Colleague Relations, .56; Facilities and Resources, .51; and Curriculum Innovation, .47. Discriminant validity analysis was performed by computing the correlation between scales. Scale intercorrelation coefficients ranged from .00 to .56, suggesting adequate discriminant validity. Table 1 presents Cronbach alpha reliability (internal consistency) and discriminant validity of the 15 scales.

Procedures and Analyses

Prior to the end of the school year, a trained researcher contacted the principal and arranged a time to conduct the teacher survey during a school faculty meeting. Teachers answered the survey questions anonymously and they were also assured of the confidentiality of their responses. Consequently, 151 of the 175 teachers in high performance schools, and 146 of the 168 teachers in low performance schools returned useful responses. The overall response rate from all teachers in the 11 schools was 86.6%

Chi-square tests were calculated to determine whether the two groups of teachers differed from each other on some professional variables. Descriptive statistics reported the means and standard deviations of the school environment variables by teacher groups. A multivariate analysis of variance (MANOVA) was performed to test for significant differences in the perceived school climates by teachers from the two school groups.

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Results

Table 2 presents the chi-square results. The results revealed that there were no significant differences between the two groups of teachers on their highest degrees and certifications earned, years of teaching experience, years of teaching in the current school, plans to remain teaching, plans to teach in their current school, and subject areas currently teach. Nevertheless, chi square results indicate there were significant differences between the two teacher groups in the improving programs they perceived would be most beneficial to their schools ($x^2=33.52$, $p<.001$). Over 40% of the teachers in the low performance schools rated that parent involvement as the most beneficial program for their schools, and 25% rated critical thinking, teaching and learning strategies as the most beneficial program. On the other hand, 35% of teachers in high performance schools rated critical thinking/ teaching and learning strategies as the most beneficial program, and 25% of them rated effective strategies for at-risk students as the most beneficial program.

The overall descriptive findings for both types of schools were similar and revealed that the most highly rated scales were Teacher-Student Relations, Instructional Materials, Feedback, and School Standards. The scales that had the lowest ratings were Teaching Activities, Non-Teaching Activities, and Disciplinary Problems.

Table 3 presents the multivariate analysis results. The results indicated that there was an overall significant difference between the two school groups on teachers' perceptions of their school climates ($F(15, 281)=4.17$, $p<.001$). Follow-up univariate analysis of variance (ANOVA) tests revealed that there were significant differences between the two groups on six scales. Teachers from high-performing schools rated significantly higher than teachers from low-performing schools for three scales: Student Academic Orientation ($F=13.07$, $p<.001$), Curriculum Innovation ($F=7.69$, $p<.01$), and Facilities and Resources ($F=4.49$, $p<.05$). On the other hand, teachers from low-performing schools rated significantly higher for Affiliation ($F=8.03$, $p<.01$), Non-Teaching Activities ($F=3.90$, $p<.05$), and Student Discipline Problems ($F=12.54$, $p<.01$) than teachers from high-performing schools. There were no significant

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differences in Teacher-Student Relations, Participatory Decision Making, Teacher-Parent Relations, Principal Leadership, School Standards, Instructional materials, Feedback, Cooperative Learning, or Teaching Related Activities between the two teacher groups.

Discussion

The results of the present study indicate that elementary school teachers in the inner-city generally thought positively of their school climates. The mean values for all except three scales were above 3.0. On the average, these teachers spent over one hour each day on teaching related activities and less than one hour on non-teaching activities. They had favorable perceptions of their teacher-student relations, school standards, instructional materials, and feedback to students. Most teachers believed that the school places a high priority on learning and that the standards set by the school are realistic. Teachers often encouraged students to do their best and made students feel important. Their instructional materials were student-centered and individualized. They regularly reviewed, corrected, and discussed student homework. However, their ratings on participatory decision making and facilities and resources were relatively lower than other scales.

The findings from this study reveal that there are several significant differences in school climates between high- and low-performing urban schools. Although the descriptive and correlational nature of this data prevents us from making any causal inferences, the findings raise several important issues that need future exploration. In particular, the finding that teachers in high-performing schools reported a greater academic emphasis or orientation and also tried more innovative instructional strategies than teachers from low-performing schools is quite noteworthy. Similarly, the finding that teachers in high-performing schools indicated that they had better facilities and resources than teachers in low-performing schools also needs to be examined because it suggests that there may be inequitable resource allocations in these two groups of schools and/or less utilization of resources in low-performing schools . Low-performing schools may consider the adoption of Fisher and Fraser's recommendations for improving resource allocation (1992). On the other hand, the finding that teachers in low-

performing schools reported that they had more disciplinary problems and they were involved in more non-teaching activities also needs to be further explored because these are two alterable variables that have been previously found to be improved through staff development and administrative scheduling.

Teachers' rating of the most beneficial programs to their school reflects their school climates. Low performing school teachers tended to focus on more parental involvement since parental involvement has normally been considered to be very helpful in reducing student disciplinary problems as well as enhancing student academic performance. On the other hand, high performance school teachers emphasized more on critical thinking, teaching and learning strategies and effective strategies to assist at-risk students. In their review of school effectiveness literature, Wang, Haertel, and Walberg (1993) noted instructional strategies and practices as a proximal variable related to changes in student and school level performance. The findings of the present study provide some evidence. Teachers in high performance schools valued critical thinking higher than their counterparts. They also tried more innovative teaching strategies and materials to help students learn. Their effort and emphasis may contribute partially to their students' higher academic performance.

References

Ascher, C. (1992). Retaining good teachers in urban schools. Washington, DC: ERIC Clearinghouse on Teacher Education.

Clift, R. T., & Waxman, H. C. (1985). Some neglected elements of effective schools research: A review of literature. Journal of Classroom Interaction, 20(2),2-11.

Conley, S. C., Bacharach, S. B., & Bauer, S. (1989). The school work environment and teacher career dissatisfaction. Educational Administration Quarterly, 25, 58-81.

Corcoran, R., Walker, L. J., & White, J. L. (1988). Working in urban schools. Washington, DC: The institute for Educational Leadership.

Creemers, B. Peters, T., Reynolds, D. (eds.). (1989). School effectiveness and school improvement. Lisse, Netherlands: Swet and Seitlinger.

Docker, J. G., Fraser, B. J., & Fisher, D. L. (1989). Differences in psychosocial work environment of different types of schools. Journal of Research in Childhood Education. 4. 5-17.

Fisher, D. L., & Fraser, B. J. (1991a). School climate and teacher professional development. South Pacific Journal of Teacher Education, 19, 17-13.

Fisher, D. L., & Fraser, B. J. (1991b). Validity and use of the school-level environment. Journal of Classroom Interaction, 26(2), 13-18.

Fisher, D. L., & Fraser, B. J. (1992). Validity and use of Work Environment Scale and School-Level Environment Questionnaire. In H. C. Waxman & C. D. Ellett (Eds.), The study of learning environments (Vol. 5, pp. 114-130). Houston: University of Houston.

Fisher, D., Fraser, B., Wubbels, T., & Brekelmans, M. (1993). Association between school learning environment and teacher interpersonal behavior in the classroom. In D. L. Fisher (Ed.), The Study of Learning Environments, (Volume 7, pp. 32-41). Perth, Western Australia: Curtin University of Technology.

Fraser, B. J., Williamson, J. C., & Tobin, K. (1987). Use of classroom and school climate scales in evaluating alternative high schools. Teaching and Teacher Education. 3. 219-231.

Freiberg, J., Stein, T., Waxman, H. C., & Wang, M. C. (1992). The School Climate Survey for Teachers. Houston: Center for Education in the Inner Cities.

Hoy, W. K., & Tarter, C. J. (1992). Measuring the health of the school climate: A conceptual framework. NASSP Bulletin, 76(547), 74-79.

Hoy, W. K., Tarter, C. J., & Kottkamp, R. B. (1991). Open schools/Healthy schools: Measuring organizational climate. Newbury Park. CA: Sage.

Hoy, W. K., & Woolfork, A. E. (1990). Socialization of student teachers. American Educational Research Journal, 27, 279-300.

Hoy, W. K., & Woolfork, A. E. (1993). Teachers' sense of efficacy and the organizational health of schools. Elementary School Journal, 93(4), 355-372.

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Huang, S. L., & Waxman, H. C. (1995). Beginning and mentor teachers' perceptions of their urban school-level work environment. ERS Spectrum: Journal of School Research and Information, 13(1), 11-17.

Huang, S. L., Waxman, H. C., Houston, R. (1993). Comparing school-level work environment of first-year and experienced-support teachers in inner-city schools. In D. L. Fisher (Ed.), The Study of Learning Environments, (Volume 7, pp. 106-111). Perth, Western Australia: Curtin University of Technology.

Ingels, S. J., Abraham, S. Y., Karr, R., Spencer, B. D., & Frankel, R. R. (1990). National Educational Longitudinal Study of 1988 base year: Student component data file user's manual. Washington, DC: Department of Education.

Keefe, J. W., Schmitt, N., Kelly, E. A., & Miller, S. K. (1993). A comprehensive system for school planning and improvement. In H. J. Walberg (Ed.), Advances in educational productivity: Analytic methods for educational productivity (Vol. 3, pp. 257-284). Greenwich, CN: JAI.

Levine, D. V. (1990). Update on effective schools' findings and implications from research and practice. Journal of Negro Education, 59, 577-584.

McLaughlin, M. W. (1993). What matters most in teachers' workplace context? IN J. W. Little & M. W. McLaughlin (Eds.), Teachers' work: Individuals, Colleagues and Context (pp. 79-103). New York: Teacher College Press.

Moos, R. H. (1979). Evaluating educational environments: Procedures, measures, findings, and policy implications. San Francisco: Jossey-Bass.

Purkey, S., & Smith, M. (1983). Effective schools: A review. Elementary School Journal, 83, 427-452.

Purkey, S., & Smith, M. (1985). Too soon to cheer? Synthesis of research on effective schools. Educational Leadership, 40, 64-69.

Rentoul, A. J., & Fraser, B. J. (1983). Development of a school level environment questionnaire. Journal of educational Administration, 21, 21-29

Tarter, C. J., Hoy, W. K., & Kottkamp, R. B. (1990). School climate and organizational commitment. Journal of Research and Development in Education, 23, 236-242.

Teddlie, C., & Stringfield, S. (1993). School make a difference: Lessons learned from a 10-year study of school effects. New York, Teacher College Press.

Templeton, R., & Jensen, R. (1993). How exemplary teachers perceive their school environments. In D. L. Fisher (Ed.), The Study of Learning Environments, (Volume 7, pp. 94-105). Perth, Western Australia: Curtin University of Technology.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993). Toward a knowledge base for school learning. Review of Educational Research, 63, 245-294.

Table 1

Reliability and Discriminant Validity of the 15 scales

Scale	No.of items	Alpha reiiability	Scale Intercorrelations														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Stud. acad.	5	.73		.40	.29	.38	.47	.30	.41	.27	.43	.20	.10	.12	-.10	-.13	-.32
2. Tch. stud. rel.	5	.72			.48	.29	.47	.19	.49	.34	.53	.16	.11	.08	.02	-.04	-.19
3. Tch. colle. rel..	5	.56				.40	.35	.16	.35	.38	.50	.09	.00	.12	.03	-.10	-.10
4. Part. dec. mak.	5	.57					.45	.38	.27	.55	.54	.25	.00	.07	-.09	-.20	-.29
5. Curri. inovatn	5	.47						.41	.37	.51	.56	.30	.06	.12	.01	-.04	-.21
6. Facil. resour.	5	.51							.20	.34	.35	.31	.12	.07	.00	-.06	-.25
7. Tch. par. rel	5	.63								.30	.47	.26	.19	.14	.03	-.03	-.25
8. Princi. leadsp.	5	.82									.56	.16	-.03	.06	.00	.05	-.07
9. Sch. standards	5	.70										.23	.01	.13	.02	-.06	-.08
10. Instruc. mats.	5	.76											.40	.44	.13	-.03	-.10
11. Feedback	5	.59												.34	.16	.01	-.17
12. Coop. learng.	4	.75													.11	.09	.03
13. Tch. rel. activ.	5	.58														.44	.05
14. Non-tch. activ.	5	.61															.18
15. Discip. probl.	6	.77															

Table 2

Chi-square Results Comparing Demographic and Professional Background
of the Two Teacher Groups

Variable	High		Low		x^2	p
	f	%	f	%		
Educational background- **Highest degree earned**					7.08	0.13
B.A./B.S.	40	27.59	52	37.96		
B.A./B.S. + course(S)	42	28.97	45	32.85		
M.A./M.S./M.Ed.	34	23.45	19	13.87		
M.A./M.S./M.Ed. + course(S)	27	18.62	19	13.87		
Ed.D./Ph.D.	2	1.38	2	1.46		
Unspecified	6	–	9	–		
Teaching certification earned through					7.65	0.11
College/University program	119	82.64	102	73.91		
Alternative certification	23	15.97	26	18.84		
Others	2	1.39	10	7.24		
Unspecified	7	–	8	–		
Years of teaching experience					8.98	0.06
Less than one year	1	0.69	10	7.19		
1-4 years	36	24.83	36	25.90		
5-9 years	30	20.69	30	21.58		
10-14 years	22	15.17	16	11.51		
15 or more years	56	38.62	47	33.81		
Unspecified	6	–	7	–		
Years of teaching in this school					7.64	0.11
Less than one year	32	22.07	25	18.12		
1-4 years	47	32.41	63	45.65		
5-9 years	33	22.76	31	22.46		
10-14 years	13	8.97	10	7.25		
15 or more years	20	13.79	9	6.52		
Unspecified	6	–	8	–		
Continue to teach					0.55	0.76
Last year to teach	32	22.54	35	25.36		
Will teach another 1-5 years	37	26.06	38	27.54		
Stay in education as career	73	51.41	65	47.10		
Unspecified	9	–	8	–		

Variable	High		Low		x^2	p
	f	%	f	%		
Continue to teach at this school					5.02	0.29
Definitely yes	70	49.65	54	39.42		
Probably yes	33	23.40	41	29.93		
Uncertain	24	17.02	30	21.90		
Probably no	9	6.38	5	3.65		
Definitely no	5	3.55	7	5.11		
Unspecified	10	—	9	—		
Subject area teach currently					7.11	0.13
Language Art/Reading	11	7.64	7	5.19		
Mathematics/Science	9	6.25	11	8.15		
Social Science/History	2	1.39	5	3.70		
All academic subjects	105	72.92	84	62.22		
Others	17	11.81	28	20.74		
Unspecified	7	—	11	—		
Beneficial program for your school					33.52	0.00*
More community involvement	6	4.23	4	2.90		
Parental involvement	23	16.20	56	40.58		
Computer-based instruction	11	7.75	7	5.07		
Classroom & school management	3	2.11	9	6.52		
Counseling approaches for working with at-risk students	14	9.86	14	10.14		
Effective strategies for at-risk students	25	17.61	15	10.87		
Working with students of different cultures	15	10.56	3	2.17		
Restructuring schools	9	6.34	3	2.17		
Critical thinking/teaching/learning strategies	35	24.65	25	18.12		
None of the above would be beneficial for my school	1	0.70	2	1.45		
Unspecified	9	—	8	—		

* $p < .001$.

Table 3
High- and Low -Performing Elementary School Teachers'
Perceptions of Their School-Level Environments

Scales	High Perform. School Teachers (n=151)		Low Perform. School Teachers (n=146)		
	M	SD	M	SD	F
Student Academic Orientation	3.61	0.72	3.31	0.71	13.07***
Teacher-Student Relations	4.21	0.52	4.09	0.57	3.66
Teacher-Colleague Relations	3.65	0.65	3.85	0.54	8.03**
Participatory Decision Making	3.35	0.67	3.28	0.77	0.72
Curriculum Innovation	3.75	0.57	3.56	0.61	7.69**
Facilities and Resources	3.40	0.75	3.21	0.75	4.49*
Teacher-Parent Relations	3.71	0.61	3.76	0.54	0.55
Principal Leadership	3.79	0.73	3.81	0.77	0.07
School Standards	3.95	0.55	3.90	0.55	0.59
Instructional Materials	3.99	0.69	3.91	0.76	0.85
Feedback	3.99	0.64	3.95	0.58	0.31
Cooperative Learning	3.54	0.83	3.65	0.78	1.44
Teaching Activities	2.40	0.59	2.51	0.64	2.13
Non-Teaching Activities	1.69	0.56	1.82	0.62	3.90*
Disciplinary Problems	1.80	0.56	2.03	0.59	12.54***

*$p<.05$.   **$p<.01$.   ***$p<.001$.

Overall MANOVA results of the 15

Scales

df	F	p
15, 281	4.17	.0001