10-2003

Gender, Professional Orientation, and Student Achievement: Elements of School Culture

Teresa White
Springfield Public School District (Missouri)

Barbara N. Martin
University of Missouri, bmartin@ucmo.edu

Judy A. Johnson
University of Arkansas at Little Rock

Follow this and additional works at: http://digitalcommons.unl.edu/jwel
Part of the Educational Administration and Supervision Commons, and the Women's Studies Commons


This Article is brought to you for free and open access by the Educational Administration, Department of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Journal of Women in Educational Leadership by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
Gender, Professional Orientation, and Student Achievement: Elements of School Culture

Teresa White, Barbara N. Martin, & Judy A. Johnson

Abstract

This study explored the relationships between professional orientation (defined as how the principal sees his or her role in the organization) and school culture, the influence of gender on professional orientation, and the relationship between school culture and the academic achievement of students. One hundred principals were surveyed. Two instruments, the Professional Orientation and the School Culture Survey were completed. The results were analyzed using linear regression statistics to determine (a) gender and professional orientation effect on the factors of school culture, and (b) if factors of school culture had an effect on student success in the elementary school. Findings of this study suggested that the professional orientation of the principal does appear to have a significant effect on school culture. In addition, professional orientation choices do vary in ways that can be connected to gender. Of the six school culture factors, only learning partnership appears to have any significant effect on student achievement.

Introduction to the Study

School culture is a widely differentiated, intricate, and enigmatic phenomenon. According to Dalin, Rolff, and Kleekamp (1993), the ethos of one school can be substantially different from that of another school, even though on the surface both have the same professional purpose. Culture is an amazingly complex entity with facets influencing what people do, say and even feel. Chrispeels (1992) suggested that culture is more than just a component of the school, it is the school. Chrispeels also suggested "the elements of culture are aspects that in large measure can be shaped by the principal" (p. 13). Blase and Kirby (1992) contended that the principal performs a strategic role in school culture, one that can transform essentially all facets of school life. Indeed Peterson (1997) purported that the principal is the most powerful determinant of school culture. In investigating the
About the Authors

Dr. Teresa White has been a classroom teacher, an elementary principal and currently is the Director of Research and Assessment for the Springfield Public School District in Springfield, Missouri. She has presented at national conferences on the topics of the principalship and gender issues.

Dr. Barbara N. Martin has been a classroom teacher, a Director of Special Education, a building level principal, and a professor of Educational Administration. She has experience in research, presentation, and publication in the areas of cultural diversity, gender issues, rural education, and educational leadership. Dr. Martin is a Professor in Educational Administration and the Doctoral Coordinator of the collaborative doctorate from the University of Missouri-Columbia and Southwest Missouri State University in Springfield, Missouri.

Dr. Judy A. Johnson has been a classroom teacher, special services and federal programs director, and a building level principal. She has presented and published in the areas of special needs, leadership and school improvement, and was the founding Director of the Post-Secondary component of the Kentucky Center for School Safety at Murray State University. Dr. Johnson is an Assistant Professor in Educational Leadership at the University of Arkansas in Little Rock, Arkansas.

professional orientation of the principal, Chauvin and Ellett (1993) found that personal preferences that determine the leadership behaviors shown by principals may be beneficial in describing and explaining administrative behavior and organizational effectiveness. The determination of priorities and personal role discernment on the part of the principal likely influences and interacts with the organization in terms of school culture and ultimately school effectiveness. Schein (1997) asserted that the leader of an organization is the primary source of influence on organizations and that leaders create and manage culture through actions. Dufour (2001) further argued that when principals focus on creating schools environment through their actions in which people are working towards a shared vision, the lives
of students are positively influenced. Bolman and Deal (1997) suggested, “events and processes are more important for what is expressed than what is produced. They form a cultural tapestry . . . to help people find meaning, purpose, and passion” (pp. 216-217). Leithwood and Jantzi (1997) further submitted that these activities communicate and buttress significant cultural norms and values in the school. In this respect, principals are the repositories of the values for the school and their actions, as shapers of culture, will vary from principal to principal as culture varies from school to school.

In studying effective leadership behaviors, Yukl (1994) identified 14 managerial practices derived from research that suggested that these practices bolster leadership efficacy. The practices Yukl identified included: “Planning and Organizing, Problem Solving, Clarifying Roles and Objectives, Informing, Monitoring, Motivating and Inspiring, Consulting, Delegating, Supporting, Developing and Mentoring, Managing Conflict and Team Building, Networking, Recognizing, and Rewarding” (p. 69).

The intensity of focus on some components of the job over other components, as identified by Yukl (1994), impact the culture of the school in differing ways. The professional orientation of the principal determines the prioritization and completion of tasks in an individual manner. Devoting a substantial amount of time and energy to specific aspects may influence the development of a high-success culture for the school. According to Peterson and Deal (1998), as professional choices reflect the values of the principal, they simultaneously articulate the values of the school. As a result these personal choices, about which aspects to concentrate limited principal time and resources, likely have an effect on school culture and, ultimately, student success.

In a study of gender and work orientation, Kanthak (1991) concluded that the professional orientation of the principal is a potent determiner of school culture and that there are gender-related differences in the way men and women orient themselves to their role in the school. Literature has also suggested that gender may influence the professional behaviors the principal utilizes most often. Historically, conventional wisdom has held that in order to be a successful leader, women should adopt effective, masculine leadership styles (Brunner, 1998). Other popular advice to women has suggested a more androgynous, or gender-less approach, to leadership (Shum & Cheng, 1997). In studying successful women school leaders, Brunner (1998) asserted that “Women administrators need to
develop the ability to remain ‘feminine’ in the ways they communicate and at the same time be heard in a masculinized culture” (p. 27). Shakeshaft (1989) delineated the differences in the ways men and women orient themselves in approaching their professional role. Through extensive study into gender and leadership, Shakeshaft found that although the job responsibilities may be identical, there are significant “differences in the ways they spend their time, in their day-to-day interactions, in the priorities that guide their actions, in the perceptions of them by others, and in the satisfaction they derive from their work” (p. 170). Citing differences in when and how each gender completes similar tasks, Shakeshaft suggested that men and women assign a dissimilar level of significance to specific role requirements. Although both may attend to and complete all of the job responsibilities, some aspects of the work receive more thoroughness in a manner that is gender-related. However, research studies thus far have contributed few detailed pictures of how a culture of student success in the school is influenced by the principal’s professional choices or gender.

As previously stated, literature has supported the existence of an integral link between school leadership and culture. The principal does appear to influence the culture through the interactions and processes he or she sets in place and in the interpretations of that conduct by the members of the school community. Literature has also suggested that gender may influence the professional behaviors the principal utilizes most often. These factors of professional orientation and gender may work to impact the culture of the school and the perceptions of the members of the school community. Ultimately, these factors may also influence the effectiveness of the school as measured by student achievement. However since little research exists that examines the relationship between the factors of gender and professional orientation of the principal to the formation and preservation of a school culture of success and because the essence of school culture is operationalized by leadership choices of the principal, further study of the relationship of gender and professional orientation of the elementary principal on an organizational culture of student achievement was needed.

Therefore, this study, using the elementary principal as a unit of analysis, was intended to explore the premise that the gender and professional orientation (defined as how the principal sees his or her role in the organization) of the elementary school principal has an effect on school culture. Three research questions were explored.
1. Does the professional orientation of the principal impact the six school culture factors of professional development, collaborative leadership, teacher collaborative, unity of purpose, collegial support, and learning partnership in the elementary school?

2. Does gender change the effect of professional orientation on the six school culture factors of professional development, collaborative leadership, teacher collaborative, unity of purpose, collegial support, and learning partnership in the elementary school?

3. Do factors of school culture result in differences in student achievement?

**Conceptual Organizers**

**Culture**

School culture offers a distinct conceptual lens for observing administrative practice and ascertaining its impact on the school. Peterson (1997) suggested that an internal analysis of the organizational and cultural factors that enhance or inhibit the efficacy of leadership efforts for change is essential to practitioner success. Gruenert (1998) asserted that examining distinctive cultural behaviors in the school allows leaders to differentiate between the courses of action and practices that facilitate or hinder performance. Cummingham and Cresso (1993) advised that culture establishes the parameters for how participants respond to each other and expectations of the tasks that are to be accomplished. Schein (1997) contended that leadership and culture are intricately subjoined. It is the understanding of the culture that advances desired change. Schein further argued that leaders shape culture through focusing their attention on the important aspects of the organizational vision that emphasize key values. Gruenert (1998) concurred that factors of the school culture inherently include a common vision for the school, which he described as a unity of purpose, collaborative leadership, teacher collaboration toward school goals, professional development, collegial support among teachers and staff, and a learning partnership between teachers, students, and parents. Numerous researchers therefore have documented that school culture is a complex entity with facets influencing what people do, say and even feel.

Reavis, Vinson and Fox (1999) found that the components of a success culture related to student achievement. A high-success school culture was enabled by the efforts of a strong principal (Leonard & Leonard, 1999). Evidence exists that the professional choices of the school principal play an integral role in culture formation. Peterson and Deal (1998) purported that
principals sculpt a culture of achievement by articulating and reflecting the core values of the school. Leadership's role in carving the ethos of the school is ubiquitous. Acknowledging the elusive nature of the principal's effect on school outcomes, Davis (1998) concluded that principals wield positive influence on outcomes, but he suggested that the extent to which the principal's professional practices influence the development of a positive school culture and student achievement is unclear.

Many principals concentrate on affecting the ways in which its inhabitants live and learn together (Wincek, 1995). According to Hudson (1993), this yearning to influence the school's sense of community is a commonly attributed feminine leadership characteristic. Kanthak (1991), however, found that "new guard males" (defined as male principals hired since 1985) exhibited an orientation toward collaboration and community building.

**Gender**

Gender is an important individual difference variable in leadership that has been largely ignored. Until recently, our knowledge base about educational administration had been derived predominantly from research on male administrators with the role of the principal evolving from a male-defined conceptual base (Mertz & McNeeley, 1998; Shakeshaft, 1989). Current research has suggested that significant differences exist in the ways men and women face the job of leadership (Aburdene & Naisbitt 1993; Shakeshaft, 1989; Shakeshaft & Nowell, 1992). Davia (2000) reported the need to measure the quality of interactions in a school setting and to study different styles and their effects on achievement. As a result, scholars have urged increased empirical focus on the role of gender differences.

Mertz and McNeely (1998) noted that the "increasing presence of women in administration has fueled the debate about whether females and males lead differently, see the situations in which they find themselves differently, and/or think differently about the work and the people with whom they work" (p. 197). Shakeshaft (1989) noted, "research in educational administration is weak both on research on women in organizations and research on the impact of gender on behavior" (p. 326). Gender may influence the professional behaviors the principal utilizes most often. Historically, conventional wisdom has held that in order to be a successful leader, women should adopt effective, masculine leadership styles (Brunner, 1998). Other popular advice to women has suggested a more androgynous or gender-less approach to leadership (Shum & Cheng,
1997). In studying successful women school leaders, Brunner (1998) found that “Women administrators need to develop the ability to remain ‘feminine’ in the ways they communicate and at the same time be heard in a masculinized culture” (p. 27). Shakeshaft (1989) delineated the differences in the ways men and women orient themselves in approaching their professional role. Through extensive study about gender and leadership, Shakeshaft found that although the job responsibilities may be identical, there are significant “differences in the ways they spend their time, in their day-to-day interactions, in the priorities that guide their actions, in the perceptions of them by others, and in the satisfaction they derive from their work” (p. 170). Citing differences in when and how each gender completes similar tasks, Shakeshaft suggested that men and women assign a dissimilar level of significance to specific role requirements. Dyer-Molnar (1988) purported that women perceive themselves as leaders differently than men, significantly influencing their professional behavior. Suggesting a relationship between the gender aspects of the principal and the culture of the school, Shakeshaft (1989) found that schools led by women tend to be characterized by a different focus than schools led by men. Shakeshaft further suggested that the findings in this limited arena have been supported by current empirical research but indicated a need for further study into the impact of gender on school leadership.

Methods

Participants
A stratified random sampling of 100 was selected for participation from the 1,050 elementary school principals in a Midwest state. Schools of the selected principals were located throughout the state, with 25 schools in each of four geographic quadrants. Participants were stratified by gender for each quadrant, resulting in 50 females and 50 males. The response rate was 90% (N = 90) with equal distribution by gender. Ninety-five percent of the participants were Caucasian, 3% were African American, and 2% were Latino. The range of administrative experience for 70% of the participants was more than 10 years; 15% had more than 20 years of experience and 15% under 10 years.

Data Collection
Data for this study were obtained through the surveys of 100 elementary principals in (year needed here). Participants were surveyed with two
instruments, one addressing professional orientation and one addressing school culture. The first survey instrument assessed the professional orientation of elementary principals and was adapted from the taxonomy of leadership behaviors related to effectiveness identified by Yukl (1994). A five-point Likert scale was used by principals reporting their leadership in professional orientation in the school.

The instrument was tested for reliability before distribution. Items were grouped into three scales: interpersonal orientation (representing the leadership behaviors of delegating, recognizing, and rewarding), problem solving orientation (representing managing conflict, problem solving, monitoring, networking, and consulting), and subordinate development orientation (representing developing, supporting, and clarifying roles and objectives). The Cronbach’s Alpha scores for these three principal components were .815, .728, and .732 respectively.

The second instrument depicted the culture in the elementary school. The School Culture Survey (SCS) instrument, developed by Gruenert (1998), evaluated the school culture in terms of six factors found in the culture: collaborative leadership, teacher collaboration, professional development, unity of purpose, collegial support, and learning partnership. A correlational analysis of the SCS established the validity of the instrument (Gruenert, 1998). Reliability was calculated through the use of Cronbach’s Alphas for the instrument. The reliability coefficients reported for the six factors were collaborative leadership (.910), teacher collaboration (.834), unity of purpose (.821), professional development (.867), collegial support (.796), and learning partnership (.658). The four school culture factors of most interest to this study had high reliability coefficients, all of which were greater than .800.

Variables
The variables included in this study were the three areas of focus shown through a principal component analysis to statistically correlate within the 14 professional orientation behaviors: interpersonal orientation, problem solving orientation, and subordinate development orientation (Yukl, 1994), the six factors of school culture as measured by the SCS: collaborative leadership, teacher collaboration, professional development, collegial support, unity of purpose, and learning partnership (Gruenert, 1998) and the four measures of student success: communication arts, mathematics, social studies, and science (taken from standardized achievement test results NEED YEAR HERE).
Data Analysis
The data from participant surveys and aggregated student achievement results for each school were tabulated and analyzed. The data were subjected to different analyses to answer the three research questions. A relationship of the three professional orientation scales to the six school culture factors was determined through bivariate correlation statistical procedures and helped to answer Research Question One. Next the linear regression statistical process was used to determine if gender and professional orientation had an effect on the factors of school culture in exploration of Research Question Two. To explore Question Three, the linear regression process was used to determine if factors of school culture had an effect on student success in the elementary school. All significance was two-tailed.

Limitations
This inquiry was limited in the scope of coverage by the sample that was chosen. The participants selected were all located in one Midwest state; therefore, some error may have been introduced into the findings due to limited sampling. This descriptive study may give accurate measurements of respondents’ perceptions regarding their professional orientation and school culture; however, the descriptions are not necessarily representative of the total school population. In addition the small sample, especially when split by gender, limited the use of some statistical analysis. While the authors indicate only plausible interpretations of the data in the report there may be other explanations for the data that are more accurate, especially due to the limitations as stated.

Findings
Three research questions were answered in this study. Research Question One asked: Does the professional orientation of the principal impact the six school culture factors of professional development, collaborative leadership, teacher collaborative, unity of purpose, collegial support, and learning partnership in the elementary school? The initial results of the study indicated a strong relationship of the professional orientation of elementary principal to school culture (See Table 1). The professional orientation choices of the principal, particularly in the area of problem solving orientation, significantly correlated with the school culture factors of professional development (.442, p < .01), collaborative leadership (.396,
Table 1
Correlation Table for Professional Orientation Scales and School Culture Factors

<table>
<thead>
<tr>
<th>Professional Orientation</th>
<th>School Culture Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Professional Development</td>
</tr>
<tr>
<td>Problem solving</td>
<td>.442***</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>.056</td>
</tr>
<tr>
<td>Subordinate Development</td>
<td>.355**</td>
</tr>
</tbody>
</table>

Note. * Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed). ***Correlation significant at the 0.001 level (2-tailed).
Teresa White, Barbara N. Martin, & Judy A. Johnson

In addition, interpersonal orientation was found to significantly correlate with collaborative leadership (.250, p < .05) but not with any of the other five school culture factors. Finally, the subordinate orientation of the principal was found to significantly correlate with professional development (.355, p < .01), collaborative leadership (.417, p < .01), unity of purpose (.377, p < .01), teacher collaboration (.285, p < .05), and learning partnership (.267, p < .05) but not with collegial support.

The data were split by gender to determine the answer to Research Question Two: Does gender change the effect of professional orientation on the six school culture factors of professional development, collaborative leadership, teacher collaboration, unity of purpose, collegial support, and learning partnership in the elementary school? The results are displayed in Table 2. For female principals, the strength of the correlations of the problem solving orientation with the school culture factors of professional development were (.506, p < .05), collaborative leadership (.512, p < .05), unity of purpose (.434, p < .05), and collegial support (.472, p < .05), all higher than for the group as a whole. For the male principals, problem-solving orientation significantly correlated with only one of the school culture factors that of teacher collaboration (.478, p < .05). Although interpersonal orientation correlated with the culture factor of collaborative leadership when data were analyzed as one group (see Table 1), when split by gender, no significant correlation was found for either female or male principals for interpersonal orientation and any of the six school culture factors. Again, when the data were split by gender, the subordinate orientation for females significantly correlated only with the factor of unity of purpose (.356, p < .05). No other correlation was found significant for females. However for males, the subordinate orientation significantly correlated with the factors of professional development (.425, p < .05), teacher collaboration (.541, p < .05), and unity of purpose (.456, p < .05). Although subordinate development orientation was expected to highly correlate with professional development for both genders, the correlation was only significant for male principals. The interpersonal orientation did not significantly correlate with any of the school culture factors. This finding was true not only for the entire sample but as well as for the data when split by gender (see Table 2).

Research Question Three asked: Do factors of school culture result in differences in student achievement? Three analyses were
conducted. The six school culture factors scores and student achievement, as depicted by the state assessment test (MAP) results, were first subjected to a Pearson correlation. The results are displayed in Table 3.

*Learning partnership* was found to be the only school culture factor that significantly correlated with all four measures of student success. The factor of *collegial support* significantly correlated with the student science scores but not with the student scores in the other three content areas. The school culture factors of *professional development, collaborative leadership, teacher collaboration and unity of purpose* did not significantly correlate with any of the four measures of student success (mathematics, communication arts, science, and social studies).

The effect of each of the six school factors on student achievement was then tested using linear regression statistical procedures. In this case, only the school culture factor of *learning partnership* had a significant effect on the areas of mathematics ($R^2 = .092$, $p < .05$), communication arts ($R^2 = .067$, $p < .05$), science ($R^2 = .62$, $p < .05$), or social studies ($R^2 = .101$, $p < .05$).

Finally, the combined effect of four of the six school culture factors (*collaborative leadership, unity of purpose, professional development, and teacher collaboration*) on student achievement measures was assessed through the linear regression procedure. No significant effects were found.

**Conclusions and Implications for Practice**

How principals see themselves in the organization has a significant influence on that school culture resulting in the conclusion that the priorities a principal establishes and the energy focused on those activities are very important for a positive school culture. How principals see themselves treating their teachers and who is involved in the decision-making process in the school setting can have an important effect on the effectiveness of the professional development of all teachers. The gender of principals does appear to determine how principals spend time in a school setting. Male principals saw themselves as more effective at developing teachers and staff, and female principals saw themselves as better problem solvers and decision makers. If female principals desire to impact organizational culture, they should focus on problem-solving. Male principals should focus on development of subordinates. As Davia (2000)
### Table 2
Professional Orientation and School Culture Factors, by Gender

<table>
<thead>
<tr>
<th>Professional Orientation</th>
<th>Professional Development</th>
<th>Collaborative Leadership</th>
<th>Teacher Collaboration</th>
<th>Unity of Purpose</th>
<th>Collegial Support</th>
<th>Learning Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>.506**</td>
<td>.512**</td>
<td>.294</td>
<td>.434**</td>
<td>.472***</td>
<td>.273</td>
</tr>
<tr>
<td>Males</td>
<td>.343</td>
<td>.172</td>
<td>.478*</td>
<td>.132</td>
<td>.154</td>
<td>.052</td>
</tr>
<tr>
<td>Interpersonal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>-.076</td>
<td>.210</td>
<td>-.121</td>
<td>.022</td>
<td>.043</td>
<td>-.053</td>
</tr>
<tr>
<td>Males</td>
<td>.321</td>
<td>.221</td>
<td>.067</td>
<td>.032</td>
<td>-.304</td>
<td>-.218</td>
</tr>
<tr>
<td>Subordinate Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>.312</td>
<td>.317</td>
<td>.107</td>
<td>.356*</td>
<td>.153</td>
<td>.185</td>
</tr>
<tr>
<td>Males</td>
<td>.425*</td>
<td>.510*</td>
<td>.541**</td>
<td>.456*</td>
<td>.147</td>
<td>.376</td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed). ***Correlation significant at the 0.001 level (2-tailed).

### Table 3
Correlation of School Culture Factors and Student Achievement

<table>
<thead>
<tr>
<th>Professional Orientation</th>
<th>Professional Development</th>
<th>Collaborative Leadership</th>
<th>Teacher Collaboration</th>
<th>Unity of Purpose</th>
<th>Collegial Support</th>
<th>Learning Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement scores</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>.138</td>
<td>.056</td>
<td>.095</td>
<td>.094</td>
<td>.155</td>
<td>.304*</td>
</tr>
<tr>
<td>Communication Arts</td>
<td>.134</td>
<td>.032</td>
<td>.084</td>
<td>.113</td>
<td>.236</td>
<td>.259*</td>
</tr>
<tr>
<td>Science</td>
<td>.094</td>
<td>.069</td>
<td>.142</td>
<td>.106</td>
<td>.252*</td>
<td>.250*</td>
</tr>
<tr>
<td>Social Studies</td>
<td>.196</td>
<td>.130</td>
<td>.171</td>
<td>.168</td>
<td>.216</td>
<td>.318*</td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at the 0.05 level (2-tailed).
suggested, the interactions in school settings have an impact on schools, and the gender of the principal appears to affect the types of interactions. This study's data support the concept noted by Mertz and McNeely (1998) that women and men think differently about work and the people with whom they work. Gender does appear to influence the professional behavior that principals use (Shakeshaft, 1989).

Overall, regardless of gender, the more effective principals are at focusing on and solving problems, the greater the chance for them to build and sustain collaborative relationships with teachers and staff. These collaborative relationships ultimately result in teachers working as a unit on the mission of the school. This emphasis on the need for effective problem solving abilities and developing subordinates has significant implications for leadership preparation programs. Reframing leadership preparation programs that allow students to engage in sustained collaborative problem based learning should be a priority for all leadership programs. Additionally, overall the ability of the principal to focus on and solve problems effectively and to develop others professionally appeared to have a greater influence on the school culture than how the other school personnel “liked” or “disliked” the principal. The results appear to support the contention of Leithwood and Jantzi (1997) that principals are the repositories of values of the school and that their actions shape school culture.

Although Leonard and Leonard (1999) found that the principal plays a pivotal role in enacting a school culture of achievement, the results of this study do not clearly substantiate that expectation. Also, while the results of this investigation indicated that problem-solving had an impact on the school culture, those same factors had little impact on student achievement in the school as measured by the Missouri Assessment Program scores. In fact only the school culture factor of learning partnership had a significant effect on student achievement. Although principals play pivotal roles in creating an environment for school success, they cannot do it alone.

In summation, the findings of this study suggest that the professional orientation of the principal does appear to have an overall effect on school culture. Also the gender of the principal does affect the daily decisions made by principals and how they spend their days. Further investigations are warranted to examine more fully the implications of professional orientation and gender on the success of the school as measured by achievement. This linkage has not been clearly established by this investigation.
References


