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Donna Braun

*Rhode Island Instructional Leadership Academy*, [dbraun@riasp.org](mailto:dbraun@riasp.org)

Robert Gable

*Johnson & Wales University - Providence*, [Robert.Gable@jwu.edu](mailto:Robert.Gable@jwu.edu)

Stacey Kite

*Johnson & Wales University - Providence*, [Stacey.Kite@jwu.edu](mailto:Stacey.Kite@jwu.edu)

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# **The Relationship Among Leadership Preparation Practices and Leader, School, and Student Outcomes in K-8 Schools<sup>1</sup>**

Donna Braun  
Rhode Island Instructional Leadership Academy

Robert K. Gable  
Stacey L. Kite  
Johnson & Wales University

## **Abstract**

This study examined the relationships among leader preparation practices and leader, school, and student outcomes through hierarchical regression analysis of questionnaire (N = 88) and state data. The findings suggest that, after controlling for demographics, a significant ( $p < .05$ ) positive relationship was found between preparation practices and leader behavior ( $\Delta R^2 = .05$ ); preparation practices and student achievement ( $\Delta R^2 = .05$ ); preparation practices and leaders' instructional knowledge ( $\Delta R^2 = .06$ ); and leaders' instructional knowledge and instruction practices in schools ( $\Delta R^2 = .05$ ). These findings suggest the further inclusion of the essential practices into preparation programs.

## **Introduction**

Research suggests that there exists a positive relationship among school leadership behaviors, student achievement (Waters, Marzano, & McNulty, 2003), and the school learning environment (Hallinger & Heck, 1998). Thus, successful school improvement necessitates the preparation of highly effective leaders to guide schools through the challenging, modern educational landscape (Davis, Darling-Hammond, LaPoint, & Meyerson, 2005; Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004). However, despite efforts to incorporate new practices into existing leadership preparation programs (Murphy, 1999), many in the field continue to criticize the quality of current programs as inadequate to prepare leaders for today's schools (Davis et al.; Elmore, 2006, 2006a; Jackson & Kelly, 2002; Levine, 2005). These

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concerns contribute to the current crisis the nation is facing: a shortage of willing and qualified school leaders (Roza, Celio, Harvey, & Wishon, 2003).

In responding to the leadership crisis, many leadership preparation programs have developed and utilized what the literature refers to as *essential leader preparation practices*. While there is widespread agreement around essential preparation practices (Davis et al., 2005), more research is needed on the relationships between essential practices and outcomes for school leaders, the school learning environment and student achievement (Smylie, Bennett, Konkol, & Fendt, 2005).

To add to the research, quantitative survey research was used in this study to investigate the relationships between essential leadership preparation practices, leader behavior, the school learning environment, and student achievement. Data were collected through a questionnaire distributed to Rhode Island (RI) elementary and middle school principals and through school and student achievement data obtained from state databases.

## **Background of Study**

### **Changing School Context and Leader Roles**

**Changing Contexts for Schools.** The context that schools operate within is undergoing tremendous change due to a myriad of forces: the new knowledge-based economy for which students must be prepared to participate in (Levine, 2005); the continued trend of inequitable access amongst racial groups to high quality education (Darling-Hammond, 2007); the growing numbers of students with minority backgrounds in public schools (Darling-Hammond); mandates and trends in accountability practices (Meier, 2004); and educational funding (Darling-Hammond).

As we move further into the 21<sup>st</sup> century toward a knowledge-based economy, the need for students to develop advanced skills and knowledge continues to grow (Darling-Hammond, 2007;

Levine, 2005). In the U.S., undereducated individuals have a greatly diminished ability to join the labor market (Darling-Hammond). The lack of access is felt unequally amongst racial groups in the U.S., due to structural inequalities in place in public education (Darling-Hammond). Access to resources and high stakes assessment practices are large contributors to the structural inequities that maintain the unequal opportunity among racial groups. Ultimately, because the minority racial groups are not being given equal access to high quality education, the achievement of students from minority backgrounds is far lower than that of students from non-minority backgrounds (Darling-Hammond). This trend threatens the economic viability of the country because students from many minority groups are increasing in number throughout the U.S., while many students from non-minority backgrounds are decreasing (Darling-Hammond).

**Schools, Leaders, and Student Achievement.** While the political, social, and economic contexts that schools in the U.S. operate within have a dramatic impact on student achievement, the correlation of school-level practices to student achievement cannot be underestimated (Marzano, 2003). Further, though teacher quality and other factors play an immense role in this relationship (Darling-Hammond, 2007; Marzano), research has shown that a school leader also plays an integral role in influencing the school learning environment (Hallinger & Heck, 1998; Hallinger, Blickman, & Davis, 1996) and student achievement (Waters et al., 2003). In light of the intense need for reform facing schools nationwide, it is important to identify leader behaviors that can help guide schools through the change process. The Waters et al. study found seven distinct leader behaviors and responsibilities that are highly correlated with deep levels of change and reform for student achievement (intellectual stimulation of faculty and staff, change agent, monitor and evaluate practice, operate with ideas and beliefs, knowledgeable of curriculum, instruction, and assessment, flexibility, and optimizer). Therefore, to meet the goal of high levels

of achievement for all students, the role of school leaders must shift with everything else that is influencing schools (i.e., the economy, demographics). Many in the field advocate for school leader's to primarily focused on improving instruction for schools to provide equitable experiences that open up access to successful pathways for all students (Bottoms & O'Neill, 2001; Brown, 2005; Elmore, 1999, 2006a; Fink & Resnick, 2001; Lambert, 2005; Murphy, 2002).

**Shifting Role of School Leaders.** In the last 30 years, principals have been called on to be instructional leaders by focusing on teaching and learning; and, transformational leaders by focusing on changing their schools by empowering teachers as partners in decision making to reform the school (Marks & Printy, 2003). Recent findings suggest that neither of these conceptions of leadership is enough to impact student achievement, rather it is a combination of a transformational role and a *shared* instructional role that can impact school and student performance (Marks & Printy). This notion represents a turning point in the conceptualization of the role of school leaders in moving from a centrist (Pitre & Smith, 2004) view of the principal to one in which the school leaders role is to guide the distribution of leadership (Elmore, 1999) among stakeholders, which is illustrated in current thinking about the role of school leaders.

The focus described above truly re-situates the role of school leaders far from the center of leadership (Pitre & Smith, 2004) and much closer to the classroom (Brown, 2005) for the purpose of improving instructional quality and student performance collaboratively with the school community (Elmore, 2006). Knowing that the focus on instructional leadership has been expected of school leaders for a long time, it would be expected that school leaders today engage in a high degree of instructional leadership. Unfortunately, this is not so (Elmore, 1999). Analysis of a national federal survey found that school leaders engage in management-related

activities far more than often than they do in providing instructional leadership (Archer, 2004). Many constraints contribute to this reality.

School leadership has increased in complexity over the years to a point of role overload (Brown, 2005) as leaders are called on to lead enormously complex organizations (Archer, 2004; Brown; Pitre & Smith, 2005). Further, leaders face constraints such as those posed by lack of autonomy in guiding their schools due to the district locus of decision-making (Elmore, 1999) and those posed by collective bargaining agreements (Resnick & Glennan, 2002; VanHorne, in press). Amidst these challenges, school leaders also face cultural resistance to changing their roles and reforming their schools due to the inertia of past practice. The reasons for the resistance are myriad: schools and teachers still operate in a high degree of isolation which makes a culture of collaboration difficult (Elmore); past leader roles are steeped in hierarchical structures of positional authority which have been deeply engrained in school communities' conception of a leader (Brown); and increased accountability demands for results put pressure on leaders to attend to short-term management solutions rather than long-term, collaborative growth solutions (Hargreaves, 2005).

Paradoxically, the implementation of the new conception of a school leader as a facilitator and capacity-builder to enable shared instructional leadership throughout the school would mitigate some of the constraints above. For example, distributed leadership reduces role overload. Also, shared instructional leadership builds ownership and empowerment over the change process, therefore, building support throughout the educational community for more school-level autonomy (Brown, 2005; Elmore, 2006a). So, what else can explain why leaders are not embracing a new role? A large body of research suggests they do not feel prepared by pre-service preparation programs or professional development to enact the new role described above

(Archer, 2004; Brown; Elmore). The next section will describe the issues that surround the problem with preparing effective school leaders.

### **Preparing Effective Leaders**

In light of the vital and complicated role principals play in helping students prepare for the new challenges they face, the notion of a shortage of effective principals is a serious concern. With 40% of school principals eligible for retirement soon (USDOE, 2004), a new crop of effective leaders to take the helm is needed. Even without this potential future shortage, schools are faced with the difficult task of finding quality leaders. Current research indicates that the quality of available candidates for school leadership vacancies is a more serious problem than the quantity of candidates (Roza et al., 2003). Developing school leaders who are able to adapt their practice and lead effectively in a changing school context has never been more important (Lashway, 2003; Levine, 2005) to enable students to access the labor market (Darling-Hammond, 2007). Unfortunately, the university-based programs that prepare 88% of school leaders (Levine) have not kept up with the changing world (Brown, 2005; Levine). Through the use of insufficient practices, they have failed to provide schools with the highly skilled leaders that are needed (Elmore 2006a; Levine; Lashway). A majority (89%) of participants of conventional programs claim that the conventional leadership preparation programs failed to prepare them for the rigors of real practice (Levine).

In contrast, program participants often report that the practices employed by alternative preparation programs were effective in helping them to feel prepared for their role as school leaders (Milstein & Krueger, 1997; SREB, 2005). Also, once in a leadership position, participants of alternative programs report engaging in a high degree of leadership practices that are associated with effective leadership (Milstein & Krueger; LaPoint, Meyerson, & Darling-

Hammond, 2005). The retention and placement rate of leaders trained in alternative programs is also much higher than those trained in conventional programs (USDOE, 2004; LaPoint et al.).

Most alternative preparation programs implement a high degree of what the literature refers to as *essential preparation practices* (Darling-Hammond, LaPointe, Meyerson, Orr, & Cohen, 2007). Many conventional preparation programs have also begun to implement these essential practices (Murphy, 1999). While there is widespread agreement on what these essential practices are (Davis et al., 2005) (see Table 1), there is a paucity of research that links these promising practices to leader, school and student outcomes (Murphy & Vriesrenga, 2006; Smylie et al., 2005).

### **Need for Research on Preparation Practices and Programs**

Though the body of research on leadership preparation programs and practices has grown in the last three decades (Murphy, & Vriesenga, 2006), the majority of studies lack empirical support and theoretical background (Smylie et al., 2005). Many studies describe the structural, content, and delivery practices of leadership preparation programs (Davis et al., 2005; USDOE, 2004), yet fail to link these variables to outcomes such as leadership behavior, the school learning environment, and student achievement (Darling-Hammond et al., 2007; Murphy & Vriesrenga, 2006; Smylie et al.; Levine, 2005). Decision-makers need this information to prioritize the inclusion of essential practices in preparation programs that have the greatest relationship with effective leader behavior, improvement in the school learning environment and an increase in student achievement (Davis et al.).



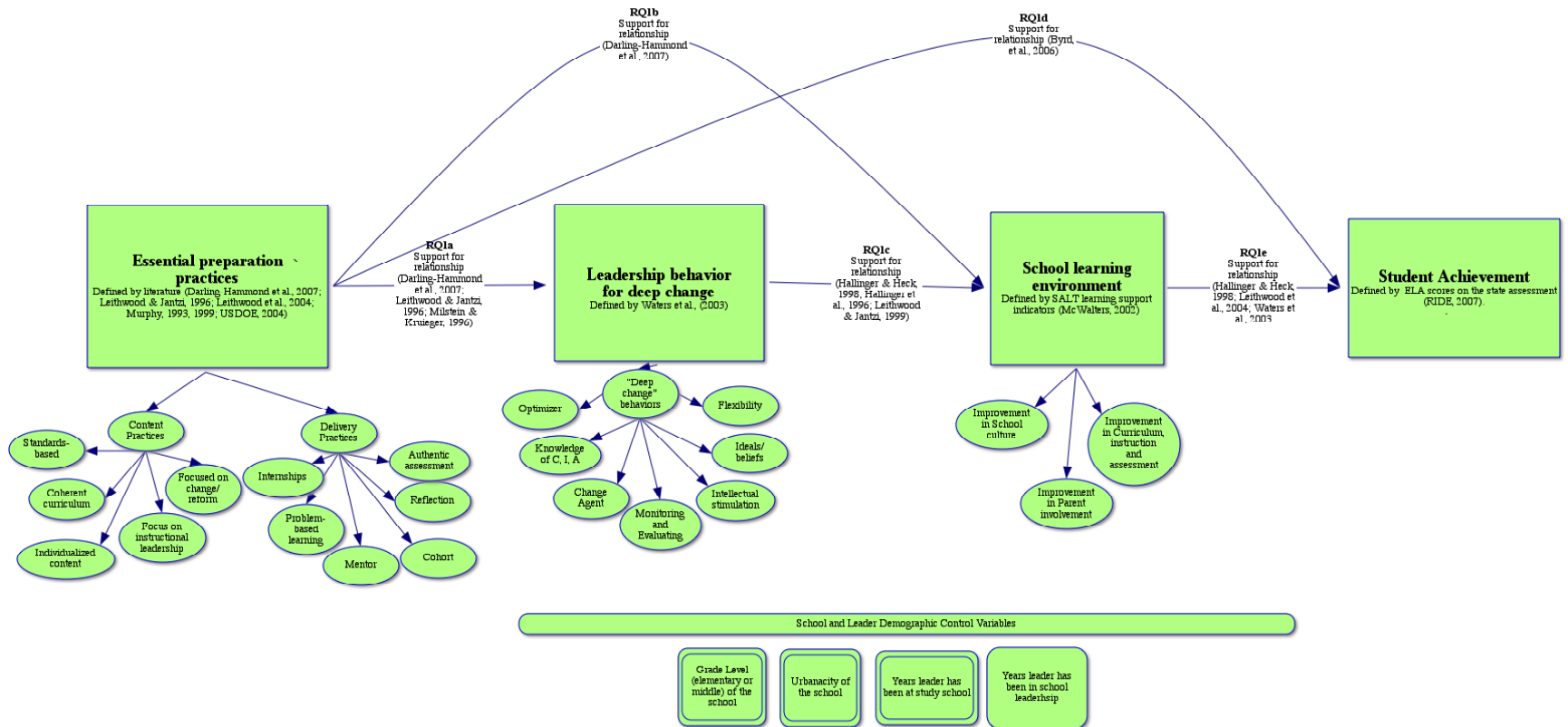
**Table 1**  
**Essential School Leader Preparation Practices and Supporting Literature**

Practices	Supporting Research and Reviews of Literature
<u>Content</u>	
• Standards-based content	Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Orr, 2006; SREB, 2006; USDOE, 2004
• Coherent and relevant curriculum	Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Milstein & Krueger, 1997; SREB, 2006; USDOE, 2003
• Individualized content	Jackson & Kelly, 2002; Lauder, 2000; Leithwood & Jantzi, 1996; Murphy, 1993
• Focus on shared instructional leadership	Elmore, 1999; Jackson & Kelly, 2002; LaPoint et al., 2005; Leithwood & Jantzi, 1996; McCarthy, 1999; Murphy, 1999, 1999a; Orr, 2006; SREB, 2006
• Focus on school reform/social justice	Jackson & Kelly, 2002; LaPoint et al., 2005; Leithwood & Jantzi, 1996; McCarthy, 1999; Murphy, 1999, 1999a; Orr, 2006; SREB, 2006
<u>Delivery</u>	
• High quality field experience/internship	Bredeson, 1999; Hart & Pounder, 1999; Jackson & Kelly, 2002; LaPoint et al., 2005; Lauder, 2000; Leithwood & Jantzi, 1996; Leithwood et al., 2004; Milstein & Krueger, 1997; Murphy, 1993, 1999, 2006; SREB, 2006; USDOE, 2004
• Problem-based learning	Darling-Hammond et al, 2007; Hart & Pounder, 1999; Jackson & Kelly, 2002; Kelly & Jackson, 2002; Lauder, 2000; Leithwood & Jantzi, 1996; Leithwood et al., 2004; McCarthy, 1999; Murphy, 1993, 1999, 1999a; Orr, 2006; SREB, 2006
• Mentoring/coaching	Darling-Hammond et al., 2007; Jackson & Kelly, 2002; Lauder, 2000; Leithwood & Jantzi, 1996; Milstein & Krueger, 1997; Murphy, 1993; SREB, 2006
• Cohort structure	Darling-Hammond et al., 2007; Hart & Pounder, 1999; Jackson & Kelly, 2002; Leithwood & Jantzi, 1996; McCarthy, 1999; Milstein & Krueger, 1997; Murphy, 1999a; USDOE, 2004
• Habit of Reflection	LaPoint et al., 2005; Lauder, 2000; Leithwood & Jantzi, 1996; Milstein & Krueger, 1997; Murphy, 1999; SREB, 2006
• Performance assessments	Hart & Pounder, 1999; Jackson & Kelly, 2002; Lauder, 2000; Leithwood & Jantzi, 1996; Murphy, 1999; Orr, 2006; SREB, 2006; USDOE, 2004

## Research Questions

In an attempt to add to the research on the relationship between leadership preparation practices and leader behavior, the school learning environment and student achievement, this study used the conceptual framework depicted in Figure 1 to guide an inquiry into an overarching research question: **To what extent and in what manner is there a relationship between leadership preparation practices, leader behavior, the school learning environment, and student achievement?** The relationship between each variable was guided by the following sub-questions: After controlling for school and leader demographic variables, to what extent and in what manner can the variation in:

- a. leader behavior for deep change be explained by the variation in essential leadership preparation practice?
- b. improvement in the school learning environment be explained by the variation in essential leadership preparation practices?
- c. the school learning environment be explained by variation in leader behavior for deep change and the variation in essential leadership preparation?
- d. student achievement be explained by the variation in essential leadership preparation?
- e. student achievement be explained by variation in leader behavior for deep change, the variation in the school learning environment, and the variation in essential leadership?



Organization of this framework influenced by Hallinger et al. (1996); Leithwood et al. (2004); Pitner (1988); Riehl & Firestone (2005)

Figure 1. Conceptual Framework

## Methodology

### Sample

The total number of principals practicing in Rhode Island is small ( $N = 341$ ) and the number of Kindergarten through eighth (K-8) grade principals even smaller ( $N=273$ ) (Rhode Island Department of Education (RIDE), 2006). Therefore, a census of the target population, defined as K-8 leaders practicing as principals at the same Rhode Island public school during the 2004/05, 2005/06 and 2006/07 school years ( $N=140$ ) (Garipey, 2004, 2005, 2006), were invited to participate in the study. Of those principals mailed questionnaires, 63% ( $N=88$ ) completed and returned the questionnaire.

### Instrumentation

The *School Leadership Preparation* questionnaire (see Appendix A) was developed to collect data on the variables of (a) essential leadership preparation practices (items 1-3k), (b) leadership behavior (items 5a-5bb), and the following control variables: (c) the professional development experiences (items 4a-4f), (d) the number of years a respondent has been practicing as a school leader (section 3, item d), and (e) the number of years respondents were a leader in the school they lead during the 2004-2007 school years (section 3, item c). Permission was obtained to use and adapt items from the Darling-Hammond et al. (2007) *School Leadership Study* questionnaire to measure the leadership preparation practices (items 1-3k) and from the Marzano et al. (2005) questionnaire to measure the seven leader behaviors for deep change (items 5a-5bb). The content validity of the questionnaire was supported by the literature sources described in Table 1. Further, to assure the survey items represent the literature-derived constructs, the instrument underwent content reviews by experts ( $N = 3$ ) and educational leaders

( $N = 4$ ). As described below, factor analysis and alpha reliability calculations confirmed that the data from *School Leadership Preparation Questionnaire* were appropriate to use for the analysis.

**Deriving Leadership Preparation Variables.** A factor analysis revealed that the data from all the leadership preparation items of the *School Leadership Preparation* questionnaire (items 3a-k) were found to be one factor with high reliability ( $\alpha = .95$ ). Further, the data on the literature-derived (Darling-Hammond et al, 2007) subsets of leadership preparation items, essential preparation *content* (items 3a-3f,  $\alpha = .91$ ) and *delivery* (items 3g-3k,  $\alpha = .89$ ) practices were deemed reliable.

**Deriving Leader Behavior Variables.** The leader behavior variables were created using the literature base and factor analysis reported by Marzano et al. (2005). The response data from the total set of 28 items (items 5a-5bb) that represent all the leadership behaviors was found to be reliable ( $\alpha = .94$ ). Further, the data on the following five literature-derived leadership behavior types were found to be reliable: (a) knowledge of curriculum, instruction, and assessment ( $\alpha = .81$ ); (b) change agent ( $\alpha = .79$ ); (c) ideals and beliefs ( $\alpha = .79$ ); (d) monitoring and evaluation ( $\alpha = .84$ ); and (e) intellectual stimulation ( $\alpha = .81$ ).

### **Data Collection**

The questionnaire was sent via United States mail to respondents. Rhode Island Department of Education databases (RIDE, 2007) were used to collect data on the dependent variables for the first set of research questions, school learning environment and student achievement outcomes for the school years of 2005/2006 and 2006/2007, and the following control variables: (a) grade-level of school, (b) percent of students with high poverty status, (c) percent of minority students, and (d) the urbanicity of school. The student achievement data was represented by the mean of the index proficiency scores for all students in a school on the English Language Arts (ELA)

New England Common Assessment Program (NECAP) 2006/2007 exams (RIDE, 2007). The school learning environment data was represented by three Learning Support Indicators (LSI): (a) research/standards-based instruction; (b), parental engagement and involvement; and (c) school climate for each school in the study for the 2006/07 school year compiled through a state-sponsored survey (NCPESP, 2007; NCPESP, 2007a).

### **Data Analysis**

Descriptive statistics were compiled for the independent and dependent variables to allow an analysis of the degree to which the data appropriately met the assumptions of hierarchical regression regarding skewness and kurtosis. Further, standardized residual scatterplots were examined for degrees of homoscedasticity and linearity. Finally, to address another assumption, multicollinearity, a Pearson correlation was computed for each variable against every other variable used in the regression analyses. For each pair of variables with a correlation above .5, it was determined that those two variables would not be used as independent variables in the same regression analysis. Once the best way to represent the data was determined, a series of hierarchical regression analyses were performed to answer the overarching and sub-research questions.

### **Results**

The results of the hierarchical regression analyses revealed statistically significant relationships between all the variables represented in the conceptual framework and investigated through the sub-research questions. However, the following four analyses proved to be the most noteworthy. First, after controlling for demographic variables, the set of essential preparation practices measured through the *School Leadership Questionnaire* (mean of items 3a-3k) accounted for a significant increase in the amount of variation ( $\Delta R^2 = 5\%$ ,  $F=4.28$ ,  $p<.05$ )

explained in the set of leader behaviors for deep change (mean of items 5a-5bb) (see Table 2, Block 3). These findings support results of two national-level studies by Darling-Hammond et al. (2007) and Leithwood and Jantzi (1996) regarding the relationship between the essential preparation practices employed by many alternative certification preparation programs and leader behavior.

**Table 2**  
**Hierarchical Regression Analysis: Demographic and Preparation Practices Predicting the Mean of the Leader Behavior Items**

Variable	$R$	$R^2$	$\Delta R^2$	$\Delta F$	$\beta$
Block 1: School Demographic	.24	.06	.06	2.37	
Urbanacity					-.20
Grade level					.00
Block 2: Leader Demographic	.26	.07	.01	.29	
Years as principal in study school					-.09
Years in school leadership					.19
Block 3: Preparation Practices	.34	.12	.05	4.28*	
All Preparation Items					.25*

Note. \* $p < .05$ ,  $N = 80$ .

Another notable finding was that, after controlling for demographic variables, the essential preparation practices accounted for significant increase ( $\Delta R^2 = 5\%$ ,  $F=7.63$ ,  $p<.05$ ) in the amount of variation explained in student achievement measured by mean English Language Arts (ELA) scores on the state assessment (see Table 3, Block 3). Though it was expected that the learning environment variable would account for a significant degree of variation in ELA scores, it was surprising that the preparation practices accounted for as high of degree of variation. Linking preparation practices to student achievement is an area in the literature that has been described as a challenging gap (Smylie et al., 2005); however, a recent study of the degree to which the type of superintendent preparation program explained significant variance in the district-wide student achievement found that the type of preparation explained 10% of the

variance in achievement (Byrd, Slater, & Brooks, 2006). Though the variation in the leader behaviors (Table 3, Block 4) did not contribute significantly to the amount of variation in ELA scores, two school learning environment variables, instruction and climate (Table 3, Block 5), did significantly increase the amount of variation explained in the ELA scores ( $\Delta R^2 = 5\%$ ,  $F=3.58$ ,  $p<.05$ ).

**Table 3**  
**Hierarchical Regression Analysis: Demographic, Preparation Practice, Leader Behavior, and School Learning Environment Variables Predicting Schoolwide ELA Scores**

Variable	$R$	$R^2$	$\Delta R^2$	$\Delta F$	$\beta$
Block 1: School Demographic	.66	.43	.43	58.91*	
Urbanacity					-.67*
Block 2: Leader Demographic	.67	.45	.02	1.22	
Years as principal in study school					.14
Years in school leadership					.05
Block 3: Preparation Practices	.70	.50	.05	7.63*	
All Preparation Items					.29*
Block 4: Leader Behaviors	.71	.50	.01	.91	
All Leader Behaviors					-.07
Block 5: Learning Environment	.74	.55	.05	3.58*	
Instruction LSI 06/07					-.11
Climate LSI 06/07					.24

*Note.* \* $p < .05$ ,  $N = 81$ . The variable, Grade Level and Parent LSI 06/07 were removed from the regression because of a high degree of multicollinearity with the variable, Climate LSI 06/07

The other two noteworthy findings emerged from regression analyses that investigated the seven leader behaviors separately, rather than a whole set as was used in the analyses represented in Table 2 and Table 3. The leader behavior, knowledge of curriculum, instruction, and assessment (the mean of questionnaire items 5a, 5i, 5p, and 5v), was found to have a significant relationship with the essential preparation practices (Table 4, Block 3) and with the school



learning environment indicator that measured school instructional practice (Table 5, Block 4). Specifically, after controlling for the demographic variables, the variation in essential preparation practices accounted for a significant increase in the amount of variation ( $\Delta R^2 = .6\%$ ,  $F=5.09$ ,  $p<.05$ ) explained in principals' knowledge of curriculum, instruction, and assessment (Table 4, Block 3). This finding corroborates with those of Darling-Hammond et al. (2007) that linked essential preparation practices to increased knowledge of curriculum, instruction and assessment.

**Table 4**  
**Hierarchical Regression Analysis: Demographic and Preparation Practices Predicting the Mean of the Leader Behavior, Knowledge of Curriculum, Instruction, and Assessment**

Variable	$R$	$R^2$	$\Delta R^2$	$\Delta F$	$\beta$
Block 1: School Demographic	.21	.04	.04	1.68	
Urbanacity					-.16
Grade level					.01
Block 2: Leader Demographic	.21	.04	.00	.01	
Years as principal in study school					-.02
Years in school leadership					.11
Block 3: Preparation Practices	.32	.10	.06	5.09*	
All Preparation Items					.28*

Note. \*  $p < .05$ ,  $N = 80$ .

Finally, the variation in principals' knowledge of curriculum, instruction, and assessment accounted for a significant increase in the amount of variation ( $\Delta R^2 = .5\%$ ,  $F=3.87$ ,  $p<.05$ ) explained in the measure of instructional practices employed at respondents' schools (Table 5, Block 4). These findings support the body of research that has shown that significant indirect relationships are observable through a path of influence from leaders' practice to variables related to the school learning environment, including teacher quality and instruction (Hallinger & Heck, 1998; Hallinger et al., 1996).

**Table 5****Hierarchical Regression Analysis: Demographic, Preparation Practice, and Leader Behavior Variables Predicting Instruction LSI 06/07**

Variable	$R$	$R^2$	$\Delta R^2$	$\Delta F$	$\beta$
Block 1: School Demographic	.38	.15	.15	5.78*	
Urbanacity					-.13
Grade level					-.37*
Block 2: Leader Demographic	.44	.19	.04	1.79	
Years as principal in study school					.20
Years in school leadership					-.06
Block 3: Preparation Practices	.47	.22	.03	2.48	
All Preparation Items					.11
Block 4: Leader Behaviors	.51	.26	.05	3.87*	
Leader Behaviors – Knowledge of Curriculum, Instruction, and Assessment					.23*

*Note.* \*  $p < .05$ ,  $N = 75$ .

### Educational Implications

The relationships between the variables represented in the conceptual framework were supported by the findings of this study. As such, a positive and significant relationship was found between the essential leader preparation practices, leader behavior, the school learning environment, and student achievement. Notably, after controlling for demographic variables, the literature-derived essential leader preparation practices accounted for a significant increase in the amount of variation explained in both leader behavior and student achievement. These findings build support for the further inclusion of the identified essential preparation practices into leader preparation programs to assist aspiring principals to strengthen their leadership behavior, improve the school learning environment, and contribute to increases in student achievement.

Further, the relationships revealed among the essential preparation practices; principals' knowledge of curriculum, instruction and assessment; and schools' instructional practices

suggest that the essential preparation practices may play an important role in developing instructional leaders for schools. The literature has shown significant agreement as to the importance of a principal's role involving high degrees of instructional leadership (Bottoms & O'Neill, 2001; Brown, 2005; Elmore, 1999, 2006a; Fink & Resnick, 2001; Lambert, 2005; Murphy, 2002) to lead schools through the improvement and change called for in the modern educational context. For this reason, the results of this study support both further implementation of essential practices and continued research on the essential preparation practices and their relationship to leader, school and student outcomes.

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## APPENDIX A

*School Leadership Preparation Questionnaire***Section 1: Leadership Preparation Experiences**

1. Before assuming a position in school leadership, I experienced an internship that was:

- Full time     Part time     No internship (skip to question #3)

2. My internship lasted for:  1-2 months     3-4 months     5-7 months     8+ months

3. To what extent do the following statements describe your pre-service leadership preparation learning experiences (e.g. courses, internships, workshops)? Circle only one appropriate number using this scale:

Not at all      A little      A moderate extent      A great extent  
1                    2                    3                    4

My leadership preparation learning experiences:					<i>Don't Know</i>	
a.	were aligned with standards of practice (e.g. the ISLLC standards).	1	2	3	4	<input type="checkbox"/>
b.	covered all areas I needed to be successful in my first years of leadership.	1	2	3	4	<input type="checkbox"/>
c.	were adapted to meet my individual needs.	1	2	3	4	<input type="checkbox"/>
d.	emphasized how to lead for instructional improvement.	1	2	3	4	<input type="checkbox"/>
e.	emphasized how to lead to improve the school and student achievement.	1	2	3	4	<input type="checkbox"/>
f.	engaged me in problem-based learning (e.g. action research, case studies).	1	2	3	4	<input type="checkbox"/>
g.	provided me with an excellent mentor.	1	2	3	4	<input type="checkbox"/>
h.	involved me in a group or cohort of learners.	1	2	3	4	<input type="checkbox"/>
i.	required me to reflect on my practice and analyze how to improve it.	1	2	3	4	<input type="checkbox"/>
j.	required me to complete performance assessments of my skill development and leadership competencies (e.g. portfolio, presentations).	1	2	3	4	<input type="checkbox"/>
k.	required me to complete an internship that was an excellent learning experience for becoming a principal.	1	2	3	4	<input type="checkbox"/>

4. In the last *two* years, how many times have you participated in the following kinds of professional development? Please circle your responses below.

a.	Individual university courses related to your role as principal	0	1-2	3-4	5+
b.	Met or interacted with a mentor or coach as part of a formal arrangement	0	1-2	3-4	5+
c.	Participated in a study group, book club, and/or Critical Friends Group	0	1-2	3-4	5+
d.	Participated in meetings/activities of a principal network	0	1-2	3-4	5+
e.	Attended workshops, conferences, or trainings	0	1-2	3-4	5+
f.	Read professional books or articles	0	1-2	3-4	5+

**Section 2: Leadership Behavior**

Circle the most appropriate number using the scale below.

Not at all      A little      A moderate extent      A great extent  
 1                    2                    3                    4

**5. To what extent do the following statements characterize you or the school you were at during the 2004/05, 2005/06, and 2006/07 school year?**

a.	I am very knowledgeable about effective instructional practices.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
b.	I consciously try to challenge the status quo to get teachers to think about changing their practice.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
c.	I try to inspire teachers to accomplish things that might seem beyond their grasp.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
d.	Teachers are aware of my beliefs and vision regarding teaching and learning.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
e.	I continually monitor the effectiveness of our curriculum.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
f.	I attempt to make major changes in how things are done.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
g.	I stay informed of the current research and theory regarding effective schooling.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
h.	In my school, we regularly consider new and better ways of doing things.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
i.	I am very knowledgeable about curricular issues.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
j.	I initiate changes that require people to re-examine their beliefs and values.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
k.	I always portray a positive attitude about our ability to accomplish important initiatives.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
l.	I continually monitor the effectiveness of our instruction practices.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
m.	I encourage people to express opinions that are contrary to my own.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
n.	I continually expose teachers to current ideas about how to be effective.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
o.	I can be highly directive or nondirective as the situation warrants.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
p.	I am very knowledgeable about effective classroom assessment practices.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
q.	I try to be the driving force behind major initiatives.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
r.	I have a well-defined vision and beliefs about schools, teaching, and learning.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
s.	I continually monitor the effectiveness of my school's assessment practices.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
t.	I adapt my leadership style to the specific needs of a given situation.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
u.	In my school, we regularly have discussions about current research and	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>

**5. To what extent do the following statements characterize you or the school you were at during the 2004/05, 2005/06, and 2006/07 school year?**

theory.				
v. I provide guidance for teachers regarding effective classroom practice.	1	2	3	4
w. In my school, we are consistently challenging ourselves to stretch and grow our practice beyond where we are currently comfortable.	1	2	3	4
x. I believe that we can accomplish just about anything if we are willing to work hard enough and if we believe in ourselves.	1	2	3	4
y. I have explicitly communicated my beliefs and vision to teachers.	1	2	3	4
z. At any given time, I can accurately determine how effective our school is in terms of enhancing student learning.	1	2	3	4
aa. In my school, we regularly read articles and books about effective practices.	1	2	3	4
bb. My behavior is consistent with my ideals and beliefs regarding schools, teachers, and learning.	1	2	3	4

*(The above items were used by permission of McREL, derived from Marzano, Waters, McNulty, 2005)*

**Section 3: Demographics**

- a. Your Name: \_\_\_\_\_
- b. Name of school you were a principal in during 2004/05, 05/06, 06/07: \_\_\_\_\_  
\_\_\_\_\_
- c. Number of years as principal in this school: \_\_\_\_\_
- d. Number of total years in school leadership, including other administrative positions: \_\_\_\_\_

**Thank you for completing this survey, your input is incredibly valuable.**

Would you be willing to participate in a 1.5-hour focus group that will discuss the topics covered in this survey? If so, please check your preference for times and dates below (check as many as you may be available to aid in scheduling). Dinner will be provided.

- Tuesday, January 8 at 5PM                       Wednesday, January 9 at 5PM  
 Thursday, January 10 at 5PM                 Tuesday, January 15 at 5PM  
 Wednesday, January 16 at 5PM               Thursday, January 17 at 5PM

If you would you like to receive a copy of the results of this study, please include your email address here

\_\_\_\_\_.

**Please place the completed survey in the self-addressed and stamped envelope by November 16, 2007.**

**Donna Braun, 75 Carpenter Street, Providence, RI 02903**