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A Comparison of the Leadership Practices of Principals of High Schools That Work Schools as Measured by the Leadership Practices Inventory

David Knab

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Introduction

According to the online Merriam-Webster dictionary, leadership is defined as "the office or position of a leader, capacity to lead, the act or an instance of leading." (Merriam-Webster, 2008). Therefore, one needs to go to the definition of "lead" to discover the true meaning of leadership. Accordingly, to lead means "to guide on a way especially by going in advance, to direct on a course or in a direction, to serve as a channel for <a pipe leads water to the house>" (2008). Leadership as a verb must mean that individuals are able to motivate people to advance in some direction. Leadership also implies that the leader serves as a channel for people to move forward to accomplish organizational goals. This could include the need to change organizations so they are ripe to achieve these goals. What this means in practice is much more difficult. It is the pursuit of what leader's do that has motivated many a researcher including the author to investigate leadership in many venues.

But why is this important to the principal of a school? Firstly, Leithwood, Louis, Anderson, and Wahlstrom (2004) in their voluminous review of the research on leadership restate the age old fact that leadership is important in improving schools. They go on to say, "Leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school" (p. 5). They also state that these effects are largest when and where they are needed the most.

If that is not reason enough to want to learn something new about becoming a better leader, consider Marzano, Walters, and McNulty's (2005) argument for better principals in the very first section of their book. After completing their meta-analysis in which the author's previous research was included as one of the 69 studies that were analyzed, they calculated the average correlation between leadership and student achievement to be .25. What this means in simple terms is if a principal were to improve their leadership practices one standard deviation or from the 50th percentile to the 84th percentile, then student achievement would increase 10 percentage points. If the principal could increase their practices two standard deviations to the 99th percentile, then student achievement would increase 22 percentage points. Without a doubt, a strong leader will make a tremendous impact on the student achievement in their school. The converse is also the case, though. Marzano, Walters, and McNulty (2005) also warn us of the negative side of school leadership. If the principal focuses on the wrong things, student achievement can be negatively impacted. As a result, it is imperative that the principal learn how to focus on the right things in their school to take advantage of the significant impact they have on student achievement.

Leadership Theories

There is an accumulation of leadership theory that makes it difficult to put your hands around what leaders are or should do. Regardless of the definition, leadership continues to be one of the most widely researched topics. From the earliest days when one thought leaders were born to the more recent theories, leadership has been a topic of wide discussion. In an attempt to summarize the wealth

of information about leadership and to help serve as framework to review the more significant literature, leadership will be divided into two sections. The first section will include leadership research pertaining to the characteristics of the leader and what the leader does. The second section will be about the focus of the leader.

Initially, it was thought that leaders were born and has different traits or characteristics. In 1948, and later expanded upon in 1974, Stogdill categorized the traits of successful leaders in six categories: capacity, achievement, responsibility, participation, status, and situation (Bass, 1990, p. 76). Subsequent research on leadership style or behavior resulted in the development of three leadership styles and two major behaviors as a result of the studies conducted at Ohio State University and the University of Michigan (Daft, 1988). The leadership styles are authoritarian, democratic and laissez faire; and the behaviors are initiating structure and consideration (Bass, 1990). The Ohio State University studies were instrumental in behavioral leadership theory and the development of the task and relationship dimensions (Bass, 1990). As has been frequently the case in leadership study, this theory was supplanted by another theory, the situational approach.

The situational approach states that it is the organizational situation which determines the leadership style or behavior (Bass, 1990). The "relationship between leadership traits and interpersonal motivation, leadership actions and behaviors, and the situation," resulted in the development of contingency theory (Chance, 1992, p. 23). Fiedler, and Evans and House were instrumental in the development of the contingency theory (Bass, 1990). Evans and House developed a theory of contingency leadership entitled path goal theory. This theory states that leaders will be more effective if they clarify the path for subordinates to attain rewards or increase the number of rewards available. Probably more familiar is Hersey and Blanchard's situational leadership model. It is based on a two by two matrix in which on one side is high and low task leadership; the other dimension is high and low on relationship behavior. The result is four different possible styles: telling (high task, low relationship), selling (high task and high relationship, participating (low task, high relationship, and delegating (low task, low relationship) (DuBrin, 2004)

James MacGregor Burns (1978) expanded upon the path goal theory in his book Leadership, in which he discusses two new leadership concepts – transactional and transformational leadership. According to Burns (1978), "transactional leaders approach followers with an eye to exchanging one thing for another" whereas the transformational leader "looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower" (p. 4).

At about that same time as MacGregor was writing about transformational leader, Robert Greenleaf proposed a leadership theory that also presupposed leaders are more concerned with others first. Greenleaf first discussed his servant leadership theory in his essay "The Servant as Leader" in 1970. Max DePree (1989) wonderfully captures the essence of this philosophy when he states that leaders need to first think of themselves as stewards. Leaders owe themselves to be good caretakers of not only the assets of organizations, but of the people who work in these organizations. It is through taking care of the people that successful leadership is able to come to fruition.

Alternative to concentrating on traits or what leaders do, leadership theory has also investigated the focus of the leader. First, visionary leadership involves the process of setting the direction of the organization. Bennis and Nanus (1985), as discussed in Leaders: The Strategy for Taking Charge, interviewed 90 leaders of which 60 were CEO's of successful organizations and 30 were outstanding

public leaders. As a result of their research, they identified four strategies of which one was attention to vision (p. 8). Leadership has also focused on the development of the people in the organization through monitoring, providing instruction, encouragement and recognition. Leadership geared toward redesigning the organization building a culture that encourages collaboration. Dr. Spillane promoted the theory of distributed leadership where leadership is shared among people much in the way to redesign the organization. Imagine a web in which for every person there is a circle and all of the circles are inter-connected. If an o
rganization could facilitate these connections, you would see people collaborating, coming together in collective groups, and coordinating their efforts toward the accomplishment of some organizational task or goal.

In schools, the focus of the principal has varied, too. During the early days of schools as we know them today, the principal was the instructional leader. This was born out in that the lead or head master teacher in many schools was the principal. Thus came the term, headmaster which is prevalent in many private schools. Subsequently, the principal became more of a manager as the centralization of responsibilities at the district level took shape. Today, the pendulum has swung back in the direction of the principal as the instructional leader. While there have been numerous attempts to define exactly what instructional leadership is, according to Weber (1989), the functions of an instructional leader are: defining school mission; promoting a positive learning climate; observing and giving feedback to teachers; and managing and assessing the curriculum and the instructional program. Regardless of the definition of instructional leadership, research has shown that leadership focusing on improving instruction will have the greatest impact on student achievement.

While there have been many different theories and definitions of leadership, there is still much to learn about leadership. Since it is well documented that principal leadership is key to improving student achievement, it is important that we continue to investigate what type of leadership is most effective in schools.

Prior Research

The previous research conducted by the author (Author, 1998) compared the leadership practices of blue ribbon schools (BRS) with the leadership practices of non-blue ribbon schools as measured by the Leadership Practices Inventory (LPI). At the time of the study, schools to be recognized as BRS had to complete a rigorous process including a self-study, thorough application, subsequent visit, and ultimately selection process by a panel. Approximately 225 schools were recognized each year from both public and private schools.

The findings of that study were that the leadership practices of principals of BRS schools do differ from the leadership practices of principals of non-BRS. Specifically, it was found that there was a statistically significant difference between the LPI scores between BRS principals and non-BRS principals for the leadership practices of Challenging the Process, Inspiring a Shared Vision, and Enabling Others to Act. The significant differences found were BRS principals focused the efforts of their school by promoting a shared vision, they were problem finders, always in search for opportunities for improvement, and they were the head cheerleader at their school, commending students and staff alike upon the achievement of significant milestones (Author, 1998).

This current research undertaken was very similar to the first study. The two goals in mind for this

research are to determine if the leadership practices of the principals of the higher performing High Schools That Work (HSTW) schools are more transformational than the practices of the moderate and lower performing HSTW schools as measured by the LPI, and to determine if the self-reported leadership practices scores of HSTW principals are different from the expected scores for the leadership practices as measured by the LPI.

As previously stated, it is well documented that principal leadership is key to improving student achievement. Thus, the main assumption for this study is that the ultimate effectiveness of teachers in helping students achieve at higher levels is partially the result of the principal whose leadership practices are more transformational in nature. This means that the principal is able to broaden and elevate the interests of their teachers and staff by generating awareness and acceptance of the purposes and mission of the school and ultimately motivate followers to look beyond their own self interest for the good of the students.

One such theory of leadership that has been developed and subsequently validated in a number of independent studies in the educational setting is the theory by Kouzes and Posner (2007). According to their research, practices of exemplary leaders fall in five categories.

The first practice is modeling the way. Modeling means living behaviors and values that you want individuals in your organization to emulate. This sort of leading is leading in front like pulling a string works better than trying to push it from behind. Open and honest, and developing trusting interactions through doing what you say you are going to do,

The second practice is inspiring a shared vision. People are motivated more from grand ideas and causes that capture their attention. This does not necessarily mean, though, that the vision of the leader is the one adopted by the organization but rather the leader helps everyone formulate a vision for the organization that each person can adopt. The leader's task is to then communicate effectively that vision through stories and symbols, and inspire others to action.

The third practice is challenging the process. Leaders are the problem identifiers. They look for difficult situations and try to find new ways of doing things. Exercise courage and take risks and know that incremental change is challenging

The fourth practice is enabling others to act. Encouraging others to do a job is not enough. They must also feel that they are able to act and are able to put their own ideas into place with the support of the leader. Provide choices, strengthen each other as we work, and inspire confidence

The fifth practice is encouraging the heart. People work hardest when they are passionate about the job. Leaders using this practice are able to get others to be more passionate about their work through the leaders own visible and active passion they have for the organization. Show appreciation for others, encourage others, and maintain caring in your community.

The LPI has been used in many education studies. In the table below, you can see how it aligns with the 21 responsibilities proscribed by Marzano, Waters, and McNulty (2005) in their meta-analysis or school research.

As a result of Kouzes and

Posner's research, they developed the Leadership Practices Inventory (LPI), an instrument with strong internal reliability and that has been validated through a number of independent studies and an instrument that attempts to measure the leadership practices of individuals in the five practices mentioned above. The LPI encompasses nearly 25 years of research

Table 1 – Comparison of LPI Practices and Marzano, Waters, and McNulty's Responsibilities

LPI	21 Responsibilities		
Modeling the Way	Involved in Curriculum, Instruction &Assessment Visibility		
Inspiring a Shared Vision	Culture Focus	Flexibility Ideals/Beliefs	Outreach
Challenging the Process	Change Agent Knowledge of Curriculum, Instruction, & Assessment Optimizer	Situational Awareness Intellectual Stimulation	
Enabling Others to Act	Input Discipline Resources	Order Relationships Monitoring/Evaluating	Communication
Encouraging the Heart	Affirmation Contingent Rewards		

and has been administered to over 350,000 managers and non-managers. The LPI comes in two forms: Self and Observer. The Self and Observer questionnaires are similar in their content and form, each consists of 30 questions asking the respondent to rate the leader, in this case the principal. In the Self version, the respondent rates him- or herself; in the Observer version, the respondent, in this case the teacher, rates the principal. Respondents answer using a Likert scale ranging from 1 (almost never do what is described) to 10 (almost always do what is described).

Purpose

The purpose of this study was to replicate a previous study conducted by the author. Replication of a research is the process of repeating a study on different subjects. One purpose of replicating a study is to determine if the results of a previous study can be applied to a wider population. The present study hopes to examine the generalizability of the results of the previous study as it applies to schools implementing the comprehensive school reform model High Schools That Work (HSTW). HSTW comprehensive school reform is promoted by the Southern Regional Education Board (SREB). There are nearly 1,100 HSTW schools throughout the country in 16 states in which these schools are all public schools.

In recent years, SREB has recognized schools that have achieved certain high levels in the implementation of the HSTW model. These schools are recognized each year as "Pacesetter" schools. As a result, it was hypothesized that the leadership practices of principals of these Pacesetter schools and other schools that have highly implemented the HSTW model must differ from principals of schools making little or no progress in improving the success or students as measured by SREB guidelines. It was also hypothesized that the leadership practices of principals of these Pacesetter schools and other high implementer schools must differ from the leadership practices of all leaders that responded to Kouzes and Posner in the development of this instrument.

Method

The procedure employed followed from comparative research design. The purpose of this comparative study was to build upon previous research and to lay the groundwork for future research. The population of schools, from which the study sample was drawn, consisted of all schools that have implemented the HSTW comprehensive school reform model. Participants included all HSTW schools based on a 2006

list provided by SREB. Of the population, there were 286 high implementer schools as defined by SREB and 736 schools that, as determined by SREB, are making little or no progress toward the improvement of their student body as measured by the SREB guidelines.

One of the main assumptions in this study is that Pacesetter schools must be among the best HSTW schools. To ensure sufficient responses, the author decided to expand the Pacesetter group to include all "high implementer" schools as determined by SREB. SREB uses 15 factors to determine the extent to which schools have implemented the HSTW model. These factors include the extent schools have implemented HSTW curriculum, the level of intensity in the major disciplines to include literacy, numeracy, science, and work-based learning, the level of intensity in the importance of high school, promoting high expectations, guidance and extra help, and the extent to which students are earning college credit and there is continuous teacher improvement as reported on the teacher survey. Schools can earn a minimum score of 15 and a maximum score of 80. Schools scoring 15-40 are considered "low implementer" schools, 41-50 are "moderate implementer" schools, and 51-80 are "high implementer" schools.

The principal of each school was emailed an introductory letter outlining the study. The principal was asked to complete a Self version of the LPI and a demographic survey online using SurveyMonkey.com web site to host the surveys. The principal was also asked to randomly select a teacher and forward the email he/she received. The teacher was asked to complete an Observer version of the LPI and demographic survey also on SurveyMonkey.com. The demographic survey requested information on the principal's school, his or her professional background, and personal information. In order to avoid confusion, the principal instruments were accessed via one link and the teacher instruments were accessed via a separate link. In addition, the high implementer schools had two separate links as compared to the low and moderate implementer schools so as to facilitate comparison of the responses.

After the questionnaires were returned, the data was input into a desktop computer. SPSS statistical analysis program was used to perform statistical analysis on the data. One-way analysis of variance (ANOVA) tests were used to test hypotheses comparing means and one-sample t-test was conducted to compare the mean score of the self-reported leadership practices of the sample of HSTW and the Kouzes and Posner norms. The .05 percent confidence level was used as the criteria to reject the null hypothesis. Pearson correlation and regression analysis was also conducted to determine if any statistically significant correlations existed. The hypotheses were stated in the null form. Tests for significance were set at .05 level of confidence. The statistical analysis conducted for each hypothesis was a t-test or analysis of variance (ANOVA), as applicable. The following nine research questions were developed:

Research Question #1: Do the Kouzes and Posner mean scores (for the five dimensions) differ between principals of high implementer, moderate implementer, and low implementer schools?

Research Question #2: Is there a difference between the self-reported leadership practices scores of principals in the current study and the Kouzes and Posner norms for these leadership practices?

Research Question #3: Do the scores differ between the principal self reported scores and teacher-observer scores?

Research Question #4: Do the Kouzes and Posner mean scores (for the five dimensions) differ between principals based on their gender, degree, and years of experience?

Research Question #5: Do the Kouzes and Posner mean scores (for the five dimensions) differ among principals based on school location or size?

Research Question #6: Is there any relationship between the Kouzes and Posner mean scores (for the five dimensions) and principal personal or school factors?

Data Analysis and Hypothesis Testing

The overall number of schools that were invited to participate in this research was 1,022 of which there were 286 high implementer schools and 736 moderate and low implementer schools. The return rate of questionnaires was significantly lower than the first study by the author. Overall, principals of 12% of the schools and teachers of 4% of the schools responded to the survey. A comparison of the number of surveys distributed and received is reflected in next table.

An analysis of the descriptive data was conducted. As summarized in the next table, the demographics of the principals of high implementer schools were very similar to the demographics of moderate and low implementer schools. Of the 123 principals who responded with their gender, 37 (30.0%) were females and 86 (70.0%) were males. High implementer schools and moderate and low implementer schools gender distribution was very similar. The mean age of the principals was 49.3. The age of high implementer schools was also nearly the same as the age of principals of moderate and low implementer schools. Of the 122 principals who responded with their degree, 0 had a bachelor

Table 2 - Summary of survey responses.

	Number of emails distributed	Number of responses received		Percent received	
		Self	Observer	Self	Observer
High Implementer Schools	286	43	15	15%	5%
Moderate/Low Implementer Schools	736	81	30	11%	4%
Total	1,022	124	45	12%	4%

degree, 98 (80.3%) had a masters degree, and 24 (19.8%) had a doctorate degree. Moderate and low implementer school principals had nearly twice the percentage and three times the number of principals with a doctorate degree, and fewer principals who had a master's degree as compared to high implementer schools. The principal mean years in predominantly administrative position was 12.9 and the median was 12. High implementer school principals had a slightly higher mean and median number of years of administrative experience as compared to moderate and low implementer schools. The mean years predominantly teaching was 13.0 and median was 12 years. This was very similar for both high and moderate/low implementer schools. Finally, the mean years in current position was 5.3 years and median was 4 years. Principals of high implementer tended to be in their current position on average 2 more years than moderate and low implementer school principals.

Table 3 - Demographics of the principals

Age			
	Overall	High	Mod/Low
Mean	49.3	49.8	49.0
Median	51	52	50
Minimum	31	31	31
Maximum	65	64	65
Years of Predominantly Administrative Experience			
	Overall	High	Mod/Low
Mean	12.9	13.7	12.4
Median	12	14	11
Minimum	0	0	2
Maximum	37	37	34
Years of Predominantly Teaching Experience			
	Overall	High	Mod/Low
Mean	13.0	13.0	12.9
Median	12	12	11
Minimum	1	2	1
Maximum	35	31	35
Years in Current Position			
	Overall	High	Mod/Low
Mean	5.3	6.6	4.6
Median	4	5	3
Minimum	1	1	1
Maximum	31	31	18
Gender – Percent (Number of valid responses)			
	Overall	High	Mod/Low
Male	69.9(86)	68.9(31)	70.5(55)
Female	30.1(37)	31.1(14)	29.5(23)
Ethnicity – Percent (Number of valid responses)			

	Overall	High	Mod/Low
Caucasian	90.0(100)	90.9(40)	90.9(60)
Hispanic	4.5(5)	6.8(3)	3.0(2)
African American	4.5(5)	2.3(1)	6.1(4)
Highest Degree – Percent (Number of valid responses)			
	Overall	High	Mod/Low
Doctorate	19.7(24)	13.3(6)	23.4(18)
Masters	80.3(98)	86.7(39)	76.6(59)
Bachelors	0(0)	0(0)	0(0)

As summarized in the next table, the demographics of the schools were as similar between high implementer and moderate and low implementer schools as was the demographics of the principals. The mean school size for all schools was 1,097.6 and the median was 850 students. Although moderate and low implementer schools were slightly larger on average, their median was less than high implementer schools. Of the schools that responded to the survey, there were 23 urban schools, 31 suburban schools, and 68 rural schools. There was nearly twice the percentage of urban moderate and low implementer schools as compared to high implementer schools.

Table 4 - Demographics of the schools

School Location – Percent (Number of valid responses)			
	Overall	High	Mod/Low
Urban	18.9(23)	13.6(6)	21.8(17)
Suburban	25.4(31)	25.0(11)	25.6(20)
Rural	55.7(68)	61.4(27)	52.6(41)
School Enrollment Size			
	Overall	High	Mod/Low
Mean	1097.6	984.6	1,162.7
Median	850	964	822.5
Minimum	65	65	300
Maximum	10,392	2,385	10,392

A statistical analysis of the data was next conducted. First, it appeared there were fewer masters prepared principals and more doctorate prepared principals within the HSTW sample than would be expected on average throughout the country. As a result, a sign and binomial test calculator at http://graphpad.com/quickcalcs/binomial1.cfm was used to test if the proportions of masters and doctorates of the sample were significantly different from expected number of masters and doctorates based on 2004 SASS downloaded from Department of Education. According to 2004 SASS information, 59.2% of all public school principals had a master degree and 8.6% had a doctorate. There was a significant difference between the number of masters prepared principals (p=.000% significant at the .05 level) and doctorate prepared principals (p=0.009% significant at the .05 level) as compared to the national norms.

Next, an analysis of the LPI responses was conducted. An ANOVA statistical test was conducted to determine if the leadership practices of high implementer schools was significantly different from moderate and low implement schools. As seen in the next table, high implementer school principals scored higher for all five practices except challenging the process. There was no significant difference, though, between leadership practices of principals of high implementer schools as compared to the leadership practices of principals of moderate and low implementer schools. When analyzing the rank order of the responses, enabling others to act received the highest responses for both high implementer and moderate and low implementer schools. High implementer school principals, though, had higher scores for encouraging the heart than moderate and low implementer schools. All other practices were very similar in their rank order.

Table 5 - Teacher and principal analysis by Low and Moderate Implementer versus High Implementer Schools

	LOW/MOD		HIGH		F	P
	Rank	Score(SD)	Rank	Score(SD)		
MTW	2	50.89(7.75)	2	51.07(7.58)	0.02	0.887
ISV	3	49.72(7.58)	4	50.29(7.88)	0.21	0.646
CTP	4	49.58(7.53)	5	49.26(7.78)	0.07	0.797
EOTA	1	52.15(5.93)	1	52.98(4.44)	0.87	0.351
ETH	5	49.18(8.80)	3	50.58(6.35)	1.13	0.288

*Significant at the .05 level of significance

A three-way ANOVA statistical test was conducted to determine any differences between high, moderate, and low implementer schools. High implementer schools scored higher than low and moderate for all practices except modeling the way. There was no significant difference, though, between the leadership practices of the three groups. Interesting in the analysis was moderate implementer schools scored lower than high implementer schools as well as low implementer schools for all practices. A summary of the analysis is presented in the next table.

Table 6 - Teacher and principal analysis by Low versus Moderate versus High Implementer Schools

	LOW		MOD		HIGH		F	P
	Rank	Score (SD)	Rank	Score (SD)	Rank	Score (SD)		
MTW	2	51.41(7.32)	2	48.09(9.09)	2	51.26(7.44)	1.75	0.178
ISV	3	49.95(7.53)	4	47.41(8.42)	4	50.39(7.71)	1.25	0.289
CTP	4	49.56(7.46)	3	48.00(8.47)	5	49.49(7.65)	0.38	0.684
EOTA	1	52.28(5.72)	1	50.91(7.13)	1	53.03(4.37)	1.24	0.292
ETH	5	49.06(8.54)	5	47.23(10.47)	3	50.68(6.22)	1.63	0.200

*Significant at the .05 level of significance

ANOVA statistical test was conducted to analyze individual questions and determine if there were any statistically significant differences as well as if there were any differences in the rank order of the questions between high implementer and moderate and low implementer schools. There were no significant differences at the .05 level of significance for any of the questions. Two questions did stand out in which high implementer schools scored higher than moderate and low implementer schools and were nearly significant. For question 15, "make sure people are creatively rewarded" (p=.061) and question 19, "support the decisions that people make" (p=.100), the responses from high implementer schools were higher than the responses from moderate and low implementer schools. There was one question where the responses from moderate and low implementer schools was higher than the responses from high implementer schools and was nearly significant. This was for question 11, "follow through on promises and commitments" (p=.211).

Next, a single sample t-test statistical analysis was conducted to determine if the self reported leadership practices of principals differed from the norms for the LPI instrument. It was found, as summarized in the next table, the self-reported leadership practices of all HSTW principals was significantly different than the Kouzes and Posner norms for all practices.

Table 7 - Single sample t-test comparison of self reported principal practices with Kouzes and Posner norms

		N	Mean	SD	t	p
MTW	Principal	126	52.52	5.32	11.61	0.000*
	Norm	1256	47.02	7.10		
ISV	Principal	126	50.79	5.86	12.37	0.000*
	Norm	1252	44.34	8.79		
CTP	Principal	126	50.45	5.71	8.51	0.000*
	Norm	1257	46.12	7.22		
EOTA	Principal	125	53.28	4.23	10.26	0.000*
	Norm	1256	49.40	6.42		
ETH	Principal	126	50.71	6.10	6.71	0.000*
	Norm	1255	47.06	8.20		

*Significant at the .05 level of significance

An ANOVA test was conducted to determine if the teacher observer scores differed from the self reported scores for the principals. As summarized in the next table, there was a significant difference between teacher observer and principal self-reported scores for all practices. When conducting a rank order analysis of the responses, enabling others to act was rated the highest practice by both the teachers and principals whereas principals and teacher differed on the second highest practice. Principals felt their second strongest practice was modeling the way whereas the teachers scored this practice fifth. The teachers ranked inspiring a shared vision as second highest.

Table 8 - Principals and teachers analysis

	Rank	Teacher (SD)	Rank	Principal (SD)	diff	F	P
MTW	5	46.38(10.81)	2	52.61(5.30)	6.23	24.93	0.000*
ISV	2	47.18(10.93)	3	50.91(5.81)	3.73	8.17	0.005*
CTP	3	46.49(10.81)	5	50.55(5.71)	4.06	9.93	0.002*
EOTA	1	49.91(7.54)	1	53.37(4.14)	3.46	14.23	0.000*
ETH	4	46.48(11.49)	4	50.78(6.10)	4.30	9.74	0.002*

*Significant at the .05 level of significance

The next set of statistical analysis focused exclusively on the demographics of the principals. In all cases, ANOVA statistical test was conducted to determine if there were any significant differences between principals of high implementer and moderate and low implementer schools based on different demographic factors. The first was a gender analysis. Female principals reported high leadership scores for all practices except enabling others to act as compared to male principals. In addition, there was a significant difference between male and female principals for the practices inspiring a shared vision and challenging the process.

Table 9 - Principals only factor analysis by gender

	Male (SD)	Female (SD)	F	P
MTW	51.97(5.13)	53.81(5.38)	3.25	0.074
ISV	50.08(5.85)	52.46(5.35)	4.50	0.036*
CTP	49.53(5.74)	52.46(4.91)	7.29	0.008*
EOTA	53.39(4.30)	53.08(3.78)	0.14	0.708
ETH	50.20(6.37)	51.78(5.24)	1.78	0.185

*Significant at the .05 level of significance

Similarly, there were differences between doctorate and master prepared principals. The principals with doctorates reported higher leadership scores for all practices and there was a significant difference found for the practices inspiring a shared vision and challenging the process.

Table 10 - Principals only factor analysis by degree

	PhD (SD)	Masters (SD)	F	P
MTW	53.29(6.25)	52.28(5.04)	0.71	0.403
ISV	53.29(5.20)	50.11(5.82)	5.98	0.016*
CTP	53.62(4.40)	49.56(5.69)	10.66	0.001*
EOTA	53.83(3.96)	53.15(4.23)	0.52	0.473
ETH	51.75(5.72)	50.38(6.21)	0.96	0.329

*Significant at the .05 level of significance

The mean years of experience in administration for the principals was 12.9 and the median was 12 years. As a result, the principals were divided into two groups for further analysis – less than or equal to 12 years lower group and greater than 12 years for the higher group. There were no significant differences in the leadership practices given the number of years in administration, although principals with more than 12 years of administrative experience scored higher for all leadership practices except modeling the way.

The mean years of experience as a teacher for the principals was 13.0 and the median was 12 years. As a result, the principals were divided into two groups using 12 years as a break point. There were no significant differences in the leadership practices given the number of years a principal was a teacher. Principals with more than 12 years of teaching experience, though, scored higher for the practices modeling the way, enabling others to act, and encouraging the heart.

The mean years the principals were in their current position was 5.1 and the median 4 years. As a result, the principals were divided into two groups – less than or equal to 4 years for the lower group and greater than 4 years for the upper group. There were no significant differences in the leadership practices given the number of years in administration. Principals with less than four years in their current position, though, scored higher for all of the practices except inspiring a shared vision.

Finally, analysis was conducted based on the demographics of the school. There were no significant differences in the leadership practices of principals between urban, suburban, and rural schools. The mean school size was calculated to be 1,108 and the median school size was calculated to be 850 of the respondent principals. Since there was at least one school with an enrollment reported at over 10,000 students, the median school size was used to divide the schools into two groups – less than or equal to 850 students for smaller schools and greater than 850 for larger schools. As summarized in

the next table, although there were no significant differences in the leadership practices between small, principals of larger schools scored higher for all practices and very nearly significant for the practices inspiring a shared vision and challenging the process.

Table 11 - Analysis based on the size of the school as measured by student enrollment.

	<=850 (SD)	>850 (SD)	F	P
MTW	51.90(5.85)	53.17(4.50)	1.79	0.184
ISV	49.83(6.22)	51.82(5.14)	3.72	0.056
CTP	49.54(5.66)	51.33(5.54)	3.15	0.078
EOTA	52.76(4.16)	53.85(4.08)	2.14	0.146
ETH	49.87(6.32)	51.52(5.73)	2.28	0.134

*Significant at the .05 level of significance

Regression analysis was conducted to determine if there was any relationship between principal factors and the LPI. Pearson correlation and individual regression was first conducted on the individual variables. Because the author believed the school that reported an enrollment of 10,392 was incorrect, that response was eliminated from these calculations. The following table is a summary of the Pearson correlation calculations.

Table 12 - Summary of Pearson Correlation

	School Size	Years in Current Position	Years Admin. Experience	Years Teaching Experience	Age
MTW					
Pearson Correlation	0.097	-0.149	0.040	0.051	0.126
Significance	0.288	0.100	0.661	0.576	0.173
ISV					
Pearson Correlation	0.098	-0.124	0.128	-0.025	0.137
Significance	0.284	0.173	0.162	0.780	0.137
CTP					
Pearson Correlation	0.114	-0.199*	0.053	0.045	0.106
Significance	0.210	0.028	0.565	0.625	0.253
EOTA					
Pearson Correlation	0.185*	-0.238*	0.209*	0.015	0.143
Significance	0.042	0.009	0.023	0.874	0.122
ETH					
Pearson Correlation	0.145	-0.180*	0.136	0.079	0.201*
Significance	0.110	0.048	0.139	0.386	0.029

*Significant at the .05 level of significance

A regression analysis of the relationship between school size and the five practices was positively correlated and statistically significant for the practice enabling others to act (p=.042) and accounts for 3.4% of the variability of enabling others to act. A regression analysis of the years in current position and five practices was negatively correlated and statistically significant for the practices challenging the process (p=.024), enabling others to act (p=.009), and encouraging the heart (p=.042). As a result, the years in current position accounts for 4.2% of the variability of challenging the process, 5.7% of enabling others to act, and 3.4% of encouraging the heart. A regression analysis of the relationship between years of administrative experience and the five practices was positively correlated and statistically significant for the practice enabling others to act (p=.023) and accounts for 4.4% of the variability of enabling others to act. A regression analysis of years of teaching experience and the five

practices indicated there was effectively no relationship. A regression analysis of the relationship between principals' age and the five practices was positively correlated and statistically significant for the practice encouraging the heart (p=.018) and accounts for 4.7% of the variability of encouraging the heart

Conclusions

The purpose of this comparative study was to determine if a statistically significant difference exists between the leadership practices of principals of HSTW high implementer schools and moderate and low implementer schools as measured by the LPI. A second main purpose of this study was to determine if a statistically significant difference exists between the leadership practices of all HSTW principals and the Kouzes and Posner norms for the LPI.

SREB recognizes schools that have more fully implemented the HSTW model. They do this through a rigorous process that includes 15 factors to identify which schools have been more successful in implementing SREB main tenets. Given the assumption that high implementer schools must be among the better HSTW schools, the leadership practices of the principals of those schools was compared to the leadership practices of the principals of moderate and low implementer schools as measured by the LPI.

The sample of schools included all HSTW schools: 286 were high implementer schools and 736 were moderate and low implementer schools. Principals were asked to complete a self version of the LPI and randomly select a teacher to complete an observer version of the LPI. The return rate was 12% for principals and 4% for teachers. The data were analyzed using StatPlus 2007 Professional statistical software package.

According to Schools and Staffing Survey downloaded from DOE website, the percentage of public school principals by highest degree earned, and state: 2003–04, 8.6% of all public school principals had doctorate. 24 of 122 HSTW principals or 19.7% had doctorate. Significantly different based on binomial test. In addition, 59.2% of all public school principals had masters and for HSTW, 80.2% (98 out of 122) had masters also significantly higher based on binomial test. Do not know if any of principals had Education specialist or professional diploma because that was not a choice and they could have answered masters as higher degree which skewed the results. According to the SASS, 30.3% of the principals had an educational specialist or professional diploma. Nonetheless, it appears HSTW are better prepared than public high schools on average.

High implementer school principals scored higher for all of the practices except challenging the process. There was no significant difference, though, between leadership practices of principals of high implementer schools as compared to the leadership practices of principals of moderate and low implementer schools. When analyzing the rankings, the ranks were very similar in which enabling others to act was first. High implementer school principals seemed to practice more frequently the practice encourage the heart than moderate and low implementer schools though.

There was also no significant differences when conducting a three-way analysis of the responses of high, moderate, and low implementer schools although the responses from moderate implementer schools were lower than high and low implementer schools for all five of the practices. When analyzing the ranking of the responses, the number one ranking practice was enabling others to act. In addition,

high implementer school principals responded that they used the practice encouraging the heart more frequently than moderate and low implementer schools.

When analyzing individual questions, once again, there were no significant differences at the .05 level of significance for any of the questions. Two questions did stand out as being nearly significant. Principals of high implementer schools appear to reward people more frequently and support people's decisions more readily than moderate or low implementer schools. This could be the case because high implementer school principals may have more confidence in their subordinates and thus treat others in the building as professionals this includes recognizing individuals which is an important function of the principal. Also, principals of high implementer schools may recognize that it takes everyone's effort to change a school and thus understands that supporting others decisions is important. While all decisions may not work out in the end, it appears high implementer school principals have that ability to accept failure in their people more not as something bad but rather as a learning and growth tool.

A very significant finding of this study was that the self-reported leadership practices of all HSTW principals was significantly different than the Kouzes and Posner norms. SREB has published what it believes are the critical factors for effective principals. Of these, SREB believes there needs to be a focused mission and vision, effective instructional practices should be recognized, challenge all processes based on data analysis, manage the change process, and continually learn form new research and best practices. As a result of this study, it appears that HSTW principals as a whole practice the five Kouzes and Posner practices significantly more than the norms and in turn are working to uphold the critical factors needed for principals as described by SREB

Another significant finding exists when comparing the teacher observer responses with the principal responses. There was a significant difference for all five practices. Kouzes and Posner state that it is not surprising that there is a difference between self and observe responses and as a result, encourage a rank order analysis when making this comparison. Interesting to note, in the previous study conducted by the author, there were no significant differences. When analyzing the differences and rank ordering of responses, there is one significant difference. The differences and the rank order for all of the practices were very similar except for the practice modeling the way. For the practice modeling the way, it had the largest difference by nearly 50% and teachers ranked this practice last where as principals ranked this practice second overall. Looking closer at the responses for the individual questions, the rank order was nearly the same for teacher observers and principals. The lowest ranked question was asks for feedback. Next lowest questions were adheres to principles, builds consensus, and was clear about own leadership. Finally and ranked highest, sets personal example and follows through on promises.

The results for male versus female responses and doctorate versus master's level prepared principals were very similar. Female principals and doctorate prepared principals scored higher for the practices inspiring a shared vision and challenging the process. In addition, nearly 50% of doctora te prepared principals are female whereas only 25% of master prepared principals are female. This may be the reason that the gender and degree differences for the principals were both in the same areas.

Focusing on the preparation of principals, masters level programs tend to be more tactical in nature, focusing on the present in schools. Principals with doctorates indicate they talk about future trends,

describe a compelling image of what the future could be like, and appeal to others to share the exciting dream of the future they communicate. Principals tend to rise from the ranks of teachers. Teacher education does not normally include any courses or internships focusing on what it takes to be a leader. Even master's level prepared principals are still more focused on the day to day tactical issues, not the strategic ones necessary when inspiring a shared vision. It is possibly not until principals complete a doctorate program they realize or are taught it is important to have a vision for their school and to communicate that vision through the use images and stories to appeal to others about what can be in the future.

Though were no significant differences for the practices when comparing smaller schools (<=8500 with larger schools (>850), smaller schools scored lower on all practices and nearly significantly lower for practices inspiring a shared vision and challenging the process. This could be the case because as schools they do not have the same number of assistant principals which does not provide the principals with the time or the energy to focus on inspiring a vision and challenging process because they need to be more focused on the day to day. At the risk of losing touch with the happens of the school and the need to be visible each day, encourage principals to ensure they have the administrative support necessary so they can focus on these two very important practices. It would be interesting to see if indeed there is a significant difference in the support staff of the smaller schools as is surmised.

As a result of regression analysis, it appears, though small, that there is a relationship between some of the demographic factors and the LPI practices challenging the process, enabling others to act, and encouraging the heart. For the practices challenging the process and enabling others to act, years in current position and years of administrative experience account for 5.6% and 7.0% of the variability of each practice respectively. For encouraging the heart, years in current position, years of administrative experience, and age account for 6.9% of the variability. Intuitively, one would assume as an individual is on the job longer, they should not only more experience but their leadership practices should improve. This was not the case for years in current position which is negatively correlated with all five practices

Recommendations

The results of this study provided valuable insight into the practices of principals of all HSTW schools and helped emphasize the importance of the principal to school improvement. It is the second most important factor next to what goes on in the classroom. Despite this fact, what principals do varies from school to school. As a result, some schools are able to help its students achieve while others are less successful at that endeavor. Addressing what principals do at all schools is paramount in an effort to have all schools be successful. The following seven recommendations are provided as a result of this research.

1) From the study, it appears that HSTW principals are better prepared than the average principal in the country. As a percent, there were more doctorate and masters prepared principals among HSTW schools as compared to all high schools in the country. The study also tells us that masters prepared principals should consider improving their abilities for the practices inspiring a shared vision, challenging the process, and encouraging the heart. To inspire a shared vision, you should first reflect on your past. When leaders first reflect on their past, their horizon for the future was greater According to Kouzes and Posner (2007), to enhance your practices in this area, not only should you envision the future, you need to enlist others in pursuing that vision.. Also, principals need to be passionate about a

cause. People are more apt to rally around a cause than a plan. Finally, principals should communicate that cause to people often to enlist them. In order to improve the practice challenge the process, principals should be constantly looking for opportunities and encourage experimentation and risk-taking. You don't have to be the problem solver, rather, it is recommended that principals are the problem identifier. Use these opportunities to promote learning from experience and small wins. Lastly, in order to improve the practice encourage the heart, it is recommended that principals frequently reward individuals and celebrate accomplishments and the values that are important to the principal.

2) Principals as compared to the Kouzes and Posner norms are practicing the five leadership practices better. They should maintain their leadership practices through reflection of their own leadership practices through the use the LPI as a guide. The authors principal recently commented that using the LPI provided a good opportunity to reflect on his own practices and there were things that he had not considered previously before completing the survey. It is suspected that this was the case with other principals who completed the survey. Also, for all five practices except encouraging the heart, percentile rankings were above 75%ile. Therefore, it is recommended that principals should consider to more passionate about their work through visible and active passion they have for the organization, through showing appreciation and encouraging others, and by maintaining caring in the school community.

3) High implementer school principals seemed to practice more frequently the practice encourage the heart than moderate and low implementer schools. As a result, principals should reward people more frequently and find opportunities to celebrate accomplishments. It is common knowledge among teachers that positive feedback goes a lot farther than negative. This is also the case in leadership. Expect only the best from individuals and then make sure specific and timely recognition is provided when it is warranted. At a minimum, saying thank you will make a difference and help with continuing efforts.

4) Principals of high implementer schools also support people's decisions more readily than moderate or low implementer schools. This could be the case because high implementer school principals may have more confidence in their subordinates and thus treat others in the building as professionals this includes recognizing individuals which is an important function of the principal. This is supported in that question 10 having to do with confidence in other people was ranked 12th by high implementer schools and 20th for moderate and low implementer schools. Also, principals of high implementer schools may recognize that it takes everyone's effort to change a school and thus understands that supporting others decisions is important. While all decisions may not work out in the end, it appears high implementer school principals have that ability to accept failure in their people more not as something bad but rather as a learning and growth tool.

5) Principals of schools that fall in the moderate category should consider the five practices and how they could improve their leadership practices. It is recommended that principals of these schools read the current version of The Leadership Challenge in order to improve their leadership practices. In addition, it is recommended that the LPI be used as guide to improve leadership practices.

6) For all principals, consider the practice modeling the way, which had largest discrepancy betw een their ranking and the ranking of the teachers. It also had the largest difference by nearly 50% from principal self responses. First and foremost, ask for feedback from a variety of sources. It is not unusual that leaders do not ask for feedback; doing so will accomplish a number of goals. Asking for feedback

is the only real way principals will be able to improve their leadership practices and to see how their leadership practices impact their staff. Second, asking for feedback opens the lines of communication and encourages others to be able to provide and receive feedback. Next, work on adhering to important principles by spending time on the things that reflect the principal's values and use language that is consistent with the culture the principal would like for their school. Doing so will go a long ways toward modeling what is important for the organization. Lastly, principals should frequently share their values for the school and ask others what there values are. Values can not be imposed on others, but by asking what their values are, you can then seek out commonalities among the values in an effort to build consensus around values that are most important to the school. (Kouzes and Posner, 2007)

7) Principals of small schools (enrollment less than 850) scored lower on all practices and nearly significant on inspiring a shared vision and challenging the process. Intuitively, it would appear that principals of smaller schools should have more opportunities to implement these practices. This could be the case that principals of smaller schools do not have the support of assistant principals like larger schools and must focus more on the day-to-day operations and not the future. As a result, it is recommended that principals of small schools reflect on how spend their time and attempt to determine if there are opportunities to delegate some duties to other individuals such as teachers. Second, it is recommended that principals of small schools consider how they could hire more assistant principals. While this may seem to be inefficient use of school funds, principals need to remember if they focus on the wrong things, then student achievement may be impacted negatively.

The most troubling correlation involves the years the principals are in their current job. The more years, the lower they scored on the LPI. Principal turnover has always been a discussion of much consternation among school districts. High turnover of principals seems to impact negatively the success of schools. Given this study, though, it appears that the more years principals are on the job, the poorer their leadership practices become particularly for challenging the process, enabling others to act, and encouraging the heart. The author believes these three practices are critical to the success of schools. The more years on the job, the more difficult it is to maintain high intensity. In the military, commanding officers of ships and other commands change frequently, probably because of the intense nature of that job. This could also be the case for principals of high schools. Thus, it is recommended that principals to consider changing jobs periodically to help replenish and rejuvenate themselves and to avoid becoming stagnated and worst of all, not being the best for their school. Sabbaticals can also be taken to further education and gain new insights as well as provide an opportunity to refresh prior to taking on another principal position. Another alternative would be for principals to deliberately move to another principal position for a change of venue and opportunity to attack new and different challenges. Finally, principals who have been in their current position for a number of years might consider a move to the central office to assist and support new principals as a mentor or principal specialist.

Limitations and Future Studies

As a result of this study, there are some limitations and opportunities for future study. The first limitation involves the population selected and sample responses received of the study. The population for this study was a convenience population – all HSTW schools. The response rate was very low, 12% and 4% for principals and teachers. It is conceivable that given the low response rate, some important characteristic might not distinguish itself. In addition, the sample might not be representative of all public schools.

In addition, a follow-on study would be to expand this study to a more representative sampling of all public schools that have implemented a comprehensive school reform model like HSTW. What are the leadership practices of principals of those schools and are they significantly different from HSTW results?

Second, there were significant differences found between doctorate and master prepared principals. In the demographic survey, did not include an educational specialist or professional diploma as an option. A follow-up study might be conducted to determine if there are any differences between master, specialist, and doctorate prepared principals.

Third, while it is not unusual for observer scores to be lower the self-reported scores, the teacher scores in this study were all significantly lower than their principals. As a result, a follow-on study would be to further investigate the differences. Two interesting question would be is there a relationship between the teacher's assessment of the effectiveness of their principal and how they rated their principal's leadership practices and is there a relationship between the satisfaction at their school and their rating of their principal's leadership practices.

Fourth, principals of small schools scored lower on all practices. As a follow on study, suggest investigating if there is any relationship between their leadership practices and staffing, primarily the number of assistant principals.

Fifth, the years in current position is negatively correlated with the LPI whereas years of administrative experience is positively correlated. A study might be conducted to determine if regular turnover of principals indeed yields some positive effects, one of which might be staying in the education profession longer.

Finally, the LPI appears to align well with the 21 responsibilities that were borne out in Marzano, Waters, and McNulty's (2005) meta-analysis. For further investigation would be is there a correlation between principals who score high on the LPI and who also practice the 21 responsibilities.

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