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**Leadership to Sustain Professional Learning Communities**

**Elementary Principal Leadership Characteristics:  
Sustaining Professional Learning Communities in Schools**

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**Abstract**

**Professional Learning Communities (PLCs) have shown promise as a means to meet the challenge of the No Child Left Behind Act. A problem that has surfaced is the inability of schools to sustain PLCs. The purpose of this research was to utilize Linda Lambert’s Leadership Capacity School Survey (LCSS) to examine leadership characteristics of selected elementary school principals and to determine how these characteristics shape organizational culture and provide support for sustaining professional learning communities. The theoretical underpinnings of this study were based on the work of DuFour and DuFour, which places leadership of the principal at the forefront of successful school improvement. Quantitative findings indicated that broad-based, skillful participation in the work of leadership (Construct 1) was the most important leadership construct to the success of sustaining PLCs. These findings lead to conclusions that can impact the success of PLCs.**

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According to Schmoker (2006), Professional Learning Communities should be a priority for educators to support school improvement. The leader’s role in a PLC is vital to its successful implementation and sustainability (Protheroe, 2005). A highly effective school leader can have a powerful influence on the academic achievement of students (Leithwood, Jantizi et al., 2004; Marzano, Waters, & McNulty, 2005). For PLCs to function, leaders must promote the understanding that successful teamwork is essential to success (McLaughlin & Talbert, 2006; Taylor, 2002).

**Quantitative Research Questions**

1. What were the mean, median, variance, and standard deviation scores of the participants on the Lambert (2003) LCSS?

2. Which of Lambert's (2003) six critical constructs were most commonly practiced among the schools in the study?
3. Which of Lambert's (2003) six critical constructs were the least commonly practiced among the schools in the study?

### **Setting and Sample**

The population of this study was principals in southwest Kansas who had been leading PLCs for a minimum of 3 years. The quantitative portion of this study included 30 elementary principals. Descriptive statistics was used to describe the basic features of the data in the study. This process provided simple summaries about mean scores (*M*), median, variance, and standard deviation (*sd*). The sampling technique used for this study was a convenience sample. The sample was not controlled for age range, gender, or ethnicity.

### **Data Collection Instrument**

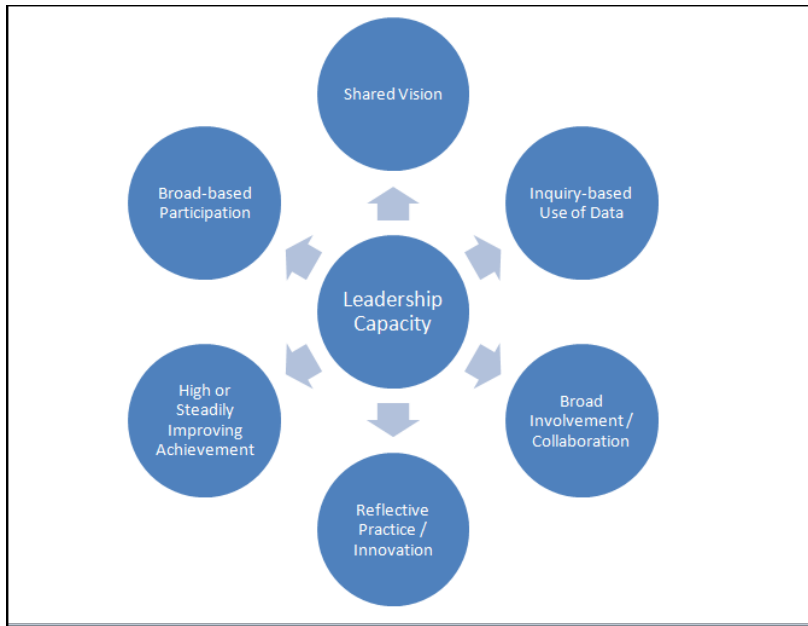
Lambert's (2003) LCSS was used to collect data for this study. Lambert supported building leadership capacity from within the school and community as a method of sustaining school-improvement initiatives. The survey consists of 30 multiple-choice questions and asks participants their perceptions using a 5-point Likert scale with responses ranging from "we do not do this at our school" to "we are refining our practice in this area". The survey queries respondents as to their perceptions of current practice in their schools. Once all principals responded, the data were tabulated to obtain scores for individual principals as well as the group.

### **Reliability and Validity**

Validity for the LCSS (Lambert, 2003) was determined using the research of Pierce, 2007. In his study, face, content, and construct validity of the LCSS were verified. Pierce also analyzed the reliability of Lambert's Survey and found the overall reliability factor was .97, which represents a high level of internal consistency (Cronk, 2004).

### **Lambert's Six Critical Leadership Constructs**

Lambert's research identified six critical leadership constructs important in sustaining school improvement initiatives. These leadership capacities are the following: (a) broad-based, skillful participation in the work of leadership; (b) shared vision resulting in program coherence; (c) inquiry-based use of information to inform shared decisions and practice; (d) roles and responsibilities that reflect broad involvement, collaboration, and collective responsibility; (e) reflective practice and innovation as the norm; and (f) high or steadily improving student achievement (Lambert, 2003, pp. 6–7). These six critical leadership constructs make up the components measured by the LCSS (Lambert, 2003). ). Figure 1 illustrates the six critical constructs of a "high" leadership-capacity school found by Lambert (Lambert, 2003).



*Figure 1. Six critical constructs of leadership capacity.*

*Note.* Adapted from *Leadership Capacity for Lasting School Improvement*, by L. Lambert, 2003, Alexandria, VA, Association for Supervision and Curriculum Development.

### **Summary of Participant Responses**

Tables 1–6 represent the responses from 30 principals for each of the 30 questions on the LCSS (Lambert, 2003) organized by the six leadership constructs. Once all principals responded, the data were tabulated to obtain scores to answer the research questions posed in this study. In Table 1, Question 7, Construct 1 (broad-based skillful participation), 5 individuals failed to record answers on the survey. The reason for this is unknown. Table 1 shows that in Construct 1, Questions 1, 2, and 4 (*have established groups, perform collaborative work, and organize for maximum interaction*) were strongest among the participants, with 16.7% of the participants scoring 5 on the Likert scale. The weakest scores were on Questions 3 and 6 (*model leadership skills and entire school and community were considered*) with only 10% of participants answering 5.

Table 1

*Summary of Responses for Construct 1: Broad-Based Skillful Participation*

#	Question	N	5			4		3		2		1	
			n	%	n	%	n	%	n	%	n	%	
1	Have established groups	30	5	16.7	12	40.0	9	30.0	2	6.7	2	6.7	
2	Perform collaborative work	30	5	16.7	16	53.3	7	23.3	2	6.7	0	0.0	
3	Model leadership skills	30	3	10.0	15	50.0	9	30.0	3	10.0	0	0.0	
4	Organize for maximum interaction	30	5	16.7	12	40.0	11	36.7	2	6.7	0	0.0	
5	Share authority and resources	30	4	13.3	15	50.0	9	30.0	2	6.7	0	0.0	
6	Entire school and community considered	30	3	10.0	15	50.0	11	36.7	0	0.0	1	3.3	
7	Engage each other to lead	25	3	12.0	11	44.0	9	36.0	1	4.0	1	4.0	

Vision, (Construct 2), Table 2, consisted of four questions. Questions 8 and 10 (*developing vision jointly* and *align standards with vision*) showed the strongest capacity with 26.7% of participants scoring 5. The weakest area of the vision construct was Question 11 (*review the vision regularly*) with 0 participants scoring 5.

Table 2

*Summary of Responses for Construct 2: Shared Vision*

#	Question	N	5			4		3		2		1	
			n	%	n	%	n	%	n	%	n	%	
8	Develop vision jointly	30	8	26.7	16	53.3	6	20.0	0	0.0	0	0.0	
9	Ask each other questions	30	2	6.7	13	43.3	13	43.3	1	3.3	1	3.3	
10	Align standards with vision	30	8	26.7	14	46.7	8	26.7	0	0.0	0	0.0	
11	Review vision regularly	30	0	0.0	3	10.0	17	56.7	8	26.7	2	6.7	

For Table 3, Construct 3, Question 15 (*data-driven decision making*) showed the strongest use by the participants with 36.7% indicating a Level 5. Questions 12 and 16 (*use of the learning cycle* and *comprehensive information system*) scored 3.3%, which translates as only 1 of the 30 participants scoring 5.

Table 3  
*Summary of Responses for Construct 3: Inquiry-Based Use of Data*

#	Question	N	5		4		3		2		1	
			n	%	n	%	n	%	n	%	n	%
12	Use a learning cycle	30	1	3.3	6	20.0	21	70.0	1	3.3	1	3.3
13	Make time available	30	3	10.0	17	56.7	10	33.3	0	0.0	0	0.0
14	Focus on student learning	30	10	33.3	17	56.7	3	10.0	0	0.0	0	0.0
15	Decisions are data driven	30	8	36.7	11	36.7	11	36.7	0	0.0	0	0.0
16	Comprehensive information system	30	1	3.3	10	33.3	17	56.7	2	6.7	0	0.0

In Table 4, Construct 4 (*collaboration*), there are 29 responses to all four questions in this construct. One participant failed to answer the entire set of questions on collaboration. I contacted this participant to determine if he would like the opportunity to correct this; the participant indicated he had not answered the questions in this section by choice. He did not explain this decision further. The data for this construct showed that collaboration is not a strength for the participants with Questions 17, 18, and 19 (*having designed roles, perform outside traditional roles, and new ways to collaborate*) having only 6.9% (or 2 participants) scoring a 5.

Table 4  
*Summary of Responses for Construct 4: Collaboration*

#	Question	N	5		4		3		2		1	
			n	%	n	%	n	%	n	%	n	%
17	Have designed roles	29	2	6.9	7	24.1	14	48.3	6	20.7	0	0.0
18	Perform outside traditional roles	29	2	6.9	11	37.9	12	41.4	4	13.8	0	0.0
19	New ways to collaborate	29	2	6.9	16	55.2	9	31.0	2	6.9	0	0.0
20	Plan for implementation	29	1	3.4	12	41.4	14	48.3	2	6.9	0	0.0

On Table 5, Construct 5, reflection, Question 21, (*making time for on-going reflection*) showed 16.7% of participants scoring 5 while 0 participants scored 5 on Question 25, (*having developed accountability criteria for reflection time*).

Table 5  
*Summary of Responses for Construct 5: Reflective Practice*

#	Question	N	5		4		3		2		1	
			n	%	n	%	n	%	n	%	n	%
21	Make time for ongoing reflection	30	5	16.7	12	40.0	10	33.3	2	6.7	1	3.3
22	Encourage initiative	30	1	3.3	16	53.3	10	33.3	3	10.0	0	0.0
23	Have joined with networks	30	2	6.7	4	13.3	16	53.3	5	16.7	3	10.0
24	Practice and support new ways	29	3	10.3	15	51.7	9	31.0	2	6.9	0	0.0
25	Developed accountability criteria	30	0	0.0	6	30.0	15	50.0	6	20.0	3	10.0

Finally on Table 6, Construct 6, Question 27 (*teach and assess so all students learn*) and Question 28 (*provide feedback to children and parents*) were the strengths of high student achievement construct with 7 participants or 23.3% scoring a 5. Only 1 participant considered himself functioning at Level 5 for Question 26 (*implementing standards and expectations*).

Table 6  
*Summary of Responses for Construct 6: High Student Achievement*

#	Question	N	5		4		3		2		1	
			n	%	n	%	n	%	n	%	n	%
26	Implement standards and expectations	30	1	3.3	12	40.0	16	53.3	1	3.3	0	0.0
27	Teach and assess so all children learn	30	7	23.3	17	56.7	6	20.0	0	0.0	0	0.0
28	Provide feedback to children and parents	30	7	23.3	16	53.3	7	23.3	0	0.0	0	0.0
29	Talk with families about school programs	30	5	16.7	14	46.7	11	36.7	0	0.0	0	0.0
30	Have structures to develop resiliency	30	2	6.7	11	36.7	10	33.3	7	23.3	0	0.0

### Data Analysis

The critical leadership constructs analyzed on the LCSS relate to significant aspects of leadership that sustain school-improvement initiatives (Lambert, 2003, p. 5). One can expect that the higher the score on each of the individual leadership constructs, the higher the leadership capacity of the participant (Lambert, 2003).

## Research Question 1

What were the mean, median, variance, and standard deviation scores of the participants on the Lambert (2003) LCSS?

A breakdown of the mean, median, standard deviation, and variance of each the critical leadership constructs is illustrated in Table 7. These findings indicate that the mean total score of the construct was 106.1. Mean is defined by Gravetter and Wallnau (2008) as the “sum of the scores divided by the number of scores” (p. 58). The other central tendency method that was calculated was median. This was determined to be 105. Table 7 also shows the area of standard deviation (square root of the variance) and variance, which were determined to be 10.8 and 117.4 respectively.

Table 7

*Summary of Mean, Median, Standard Deviation, and Variance From Principals*

	Construct 1	Construct 2	Construct 3	Construct 4	Construct 5	Construct 6	Total
Mean	24.9	14.8	18.4	13.5	16.3	18.5	106.1
Median	25.0	15.0	18.0	14.0	17.0	18.5	105.0
Std. Dev	4.2	2.2	2.1	3.4	3.1	2.1	10.8
Variance	17.7	4.9	4.5	11.6	9.9	4.5	117.4

## Research Question 2

Which of Lambert’s (2003) six critical constructs were the most commonly practiced among the schools in the study?

Results of the participants’ Likert scale responses by mean according to the six leadership constructs on the LCSS (Lambert, 2003) are shared in Table 8. There were three critical leadership constructs that were identified as the most commonly practiced by the participants in this study. These constructs include the following: Construct 1, (broad-based skillful participation); Construct 3, (inquiry-based use of information to inform shared decision and practice); and Construct 6, (high or steadily improving student achievement). These three constructs had a mean Likert score of 3.7.

Table 8

*Summary of Six Critical Constructs Mean Likert Score*

	Construct 1	Construct 2	Construct 3	Construct 4	Construct 5	Construct 6
Mean average Likert score	3.7	3.5	3.7	3.3	3.25	3.7

## Research Question 3

Which of Lambert’s (2003) six critical constructs were the least commonly practiced among the schools in the study?

Table 8 also identifies the least commonly practiced leadership constructs of the 30 participants in this study. Construct 5 (reflective practice and innovation in the work of leadership) had the lowest recorded mean Likert score of 3.25.

## **Results**

### **Outcomes of Research Question 1**

What were the mean, median, variance, and standard deviation scores of the participants on the Lambert (2003) LCSS?

Using SPSS software version 16.0, data were analyzed to determine mean, median, variance, and standard deviation of the six critical leadership constructs. Construct 1 (broad-based skillful participation) had the highest mean, median, standard deviation, and variance score (see Table 1). Of the six critical leadership constructs, Construct 4 (collaboration) had the lowest recorded mean and median score. Construct 3 (inquiry-based use of information to inform shared decisions and practice) had the lowest standard deviation score of 2.1, and Construct 6 (high or steadily improving student achievement) had the lowest variance score of 4.5.

This study would be strengthened through a comparative study. For example, the study might have compared the leadership capacity of principals from high-achieving schools to the leadership capacity of principals from low-achieving schools to determine if there was a difference in the leadership capacity of these two groups. With data from a comparative study and application of additional statistical analysis, the study would provide quality information to identify relevant results. The results of the current research study with reference to Research Question 1 are insignificant.

### **Outcomes of Research Question 3**

Which of Lambert's (2003) six critical constructs were the most commonly practiced among the schools in the study?

Three critical leadership constructs had a mean score of 3.7 as shown in Table 8 and were identified in this study as the most commonly practiced. Those constructs were Construct 1 (broad-based skillful participation), Construct 3 (inquiry-based use of information to inform shared decisions and practice), and Construct 6 (high or steadily improving student achievement). Construct 1 (broad-based skillful participation) consisted of seven questions. As shown in Table 1, the Likert scores were fairly evenly distributed throughout the 7 questions. Construct 3 (inquiry-based use of information to inform shared decisions and practice; see Table 3) consisted of five questions. Question 14 focused on student learning and Question 15 on data-driven decisions. These two questions stood out as practiced at a higher level by the 30 participants. In addition, 1 participant indicated that his school did not participate in the learning cycle or have a comprehensive information system to support collaboration. Of the five questions in Construct 6 (high or steadily improving student achievement; see Table 6), none were scored by the participants lower than a 2. A score of 1 on the Likert scale corresponds to "we do not do this at our school." The responses to two questions in this construct were significantly stronger



than the other three. Those questions were Question 27, we teach and assess so all children learn (23.3 % chose the answer 5), and Question 28, we provide feedback to children and parents (23.3 % chose the answer 5).

#### **Outcomes of Research Question 4**

Which of Lambert's (2003) six critical constructs were the least commonly practiced among the schools in the study?

The least commonly practiced critical leadership construct was identified as Construct 5 (reflective practice and innovation in the work of leadership), with a mean Likert score of 3.25 (see Table 8). There were five questions in this construct for participants to answer. These questions included the topics of creating time for reflection, encouraging colleagues to participate in reflection, collaborating in reflection with teachers in other school districts, taking risks by trying new instructional techniques, and developing a method of self-evaluation for reflection time. Question 24, developing a method of self-evaluation, was the lowest scored question in the construct of reflective practice. It received no responses of 5 (we are refining our practice in this area) from any of the 30 participants. Fifty-percent of the participants selected a 2 (we are starting to move in this direction) and 20% selected a 3 (we are making good progress).

Based on the findings of this study shared previously, the following conclusions were made:

1. Leaders involved in developing broad-based skillful participation in the work of leadership build leadership capacity in the organization.
2. Finding time for collaboration is a challenge to current leaders.
3. The daily practice of reflection is minimal.
4. Data-based inquiry drives instructional decisions.
5. Leaders must develop a collaborative culture in their buildings.

Findings of this study gained through the quantitative data collection processes support the information in the literature indicating that leadership capacity is an important factor to the success of sustaining school improvement initiatives. Leaders are crucial in a sustained cultural change (Buffum, Mattos, & Webber, 2009; DuFour, & Marzano, 2009; Schmoker, 2006).

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