**Paper Title** School-Level Factors that Predict Results on the Comprehensive Assessment of Leadership for Learning (CALL)

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# School-Level Factors that Predict Results on the Comprehensive Assessment of Leadership for Learning (CALL)

## Objectives

This paper will present findings from a large-scale validation study of the Comprehensive Assessment of Leadership for Learning (CALL). Funded by the Institute for Education Sciences (IES), CALL is an on-line formative assessment and feedback system designed to measure leadership for learning practices in schools. As part of the grant from IES, the CALL research team administered the CALL survey to 95 schools across the country for purpose of validating the tool against various indicators of school effectiveness as well as examining the relationship of CALL results to other school factors. This study focuses on the latter effort. In using multiple linear regression analysis, the authors seek to identify the factors (i.e. school size, grades served, socio economic status) that predict a school scoring well on the CALL survey in each of the five core domains:

1. Focus on Learning
2. Monitoring Teaching and Learning
3. Building Nested Learning Communities
4. Acquiring and Allocating Resources
5. Maintaining a Safe and Effective Learning Environment

Four or five subdomains are situated within each domain that group the items accordingly.

Two distinguishing characteristics of the CALL instrument are the focus on distributed leadership and the 360-degree assessment. Those characteristics are central in this study: a distributed leadership framework allows for a broader picture of school-wide practices, and a 360-degree assessment allows for comparable data within a school setting. Therefore, the following research questions guided our study:

- What are the factors that predict high scores in each of the five CALL domains?
- What is the predictive power of potential relationships between each CALL domain to the others?

## Theoretical Framework

Effective school leadership has been widely recognized as a significant factor to advance student learning (Leithwood & Seashore-Louis, 2011; Marzano, Waters, & McNulty, 2005). The ongoing question, therefore, is not *whether* to assess leadership effectiveness but *how* to do so. Goldring and colleagues (2009) discussed the challenge of developing appropriate assessment tools as well as identifying the appropriate dimensions on which to measure performance. Researchers and district leaders may opt to evaluate the individual principal or focus on leadership as a distributed practice. While each model of leadership evaluation contains nuances, where these models converge is over the focus on leadership for learning (Murphy et al, 2007).

Regarding the approach of assessment, applying a 360-degree model allows for disagreement among raters, which in turn provides nuanced data for assessment results (Porter et al, 2010). Within a 360-degree assessment, raters tend to disagree across organizational levels, and therefore disaggregating the data according to role and other

factors would work to identify the rationale for differences (Borman, 1997). District and school leaders are drawn to 360-degree assessments, believing it offers the most accurate picture of leadership performance. However, 360-degree assessment is most effective when utilized as tool for offering real-time formative feedback for school leaders for professional development and school improvement (Toegel & Conger, 2003). School leaders should rely upon data from 360-degree assessments for decision-making processes (Craig & Hannum, 2006).

While multi-rater assessments are the preferred approach to assessment leadership, these assessments tend to focus on the individual school leader, namely the principal (Condon & Clifford, 2010). Assessing the individual principal as a means to determine the effectiveness of school leadership, however, overlooks the distributed nature of school leadership (Spillane, Halverson, & Diamond, 2004). A task-based assessment of leadership practices distributed across a school would capture a wide-range of practices carried out by formal and informal school leaders (Blitz, 2012; Kelley et al, 2012). Critiques of distributed leadership and its various incarnations claim that despite the common support of the fruitfulness of this model, it has not consistently demonstrated a link to school improvement (Mayrowetz, 2008). That assertion cannot be applied to the Spillane, Halverson, and Diamond (2001; 2004) framework since it is, after all, a framework. The distributed leadership theory of action adopted by the CALL instrument is not the same as other theories of distributed leadership that espouse a collaborative, team-focused, and/or democratic leadership (Bush & Glover, 2012; Gronn, 2003, 2008, 2010; Watson & Scribner, 2007). Distributed leadership as presented through CALL is not a goal; rather it is an approach to looking at the various moving parts and actions that comprise leadership (Harris & Spillane, 2008).

The development, validation, and theoretical underpinnings of CALL have been reported to this point (Blitz, 2012; Camburn & Salisbury, 2012; Kelley et al., 2012; Halverson & Dikkers, 2010). The long form of this paper will further expound upon the foundation of CALL and core domains of practice.

## Methodology

For this study, we used multiple linear regression to identify the factors that predict a school scoring well on the CALL survey for one of five domains. Schools and school districts from a nationally representative sample across the United States used the CALL survey as a formative assessment that measures leadership practices throughout the organization of a school or district. The CALL survey identifies the places in the school or district where formal and informal leadership is strong and those places where it can be further developed. The purpose of this study is to better understand the types of schools that will achieve high scores in a given domain of practice on the CALL survey. The models below represent our theories on the factors that influence a school's score for each of the five CALL domains.

1. $Y_{Domain1} = \beta_0 + \beta_1 x_{AdmnExper} + \beta_2 x_{AdmnRole_{n=1}} + \beta_3 x_{AdmRole_{n>1}} + \beta_4 x_{CALLClmt} + e$
2. $Y_{Domain2} = \beta_0 + \beta_1 x_{SchlAvgTotYrsTch} + \beta_2 x_{AvgYrsTchSchl} + \beta_3 x_{SchlLvl} + \beta_4 x_{SchlSz} + e$
3. $Y_{Domain3} = \beta_0 + \beta_1 x_{SchlSz} + \beta_2 x_{SchlLvl} + \beta_3 x_{AvgYrsTchSchl} + e$
4. $Y_{Domain4} = \beta_0 + \beta_1 x_{AdmnExper} + \beta_2 x_{SclSES} + \beta_3 x_{CALLClmt} + e$
5. $Y_{Domain5} = \beta_0 + \beta_1 x_{SchlSz} + \beta_2 x_{SchlLvl} + \beta_3 x_{SclSES} + \beta_4 x_{SchlAvgTotYrsTch} + \beta_5 x_{AvgYrsTchSchl} + \beta_6 x_{AdmnExper} + e$

6. $Y_{Domain1} = \beta_0 + \beta_1 x_{Domain2} + \beta_2 x_{Domain3} + \beta_3 x_{Domain4} + \beta_4 x_{Domain5} + e$
7. $Y_{Domain2} = \beta_0 + \beta_1 x_{Domain1} + \beta_2 x_{Domain3} + \beta_3 x_{Domain4} + \beta_4 x_{Domain5} + e$
8. $Y_{Domain3} = \beta_0 + \beta_1 x_{Domain1} + \beta_2 x_{Domain2} + \beta_3 x_{Domain4} + \beta_4 x_{Domain5} + e$
9. $Y_{Domain4} = \beta_0 + \beta_1 x_{Domain1} + \beta_2 x_{Domain2} + \beta_3 x_{Domain3} + \beta_4 x_{Domain5} + e$
10. $Y_{Domain5} = \beta_0 + \beta_1 x_{Domain1} + \beta_2 x_{Domain2} + \beta_3 x_{Domain3} + \beta_4 x_{Domain4} + e$

This analysis seeks to uncover the factors that describe a school with high scores for each domain in the CALL survey. Models one through five represent our naïve models for this study. Model 1 for Domain 1: *Focus on Learning* represents our findings from our research on this domain: a school's change in score for Domain 1 will increase in proportion to the level of experience an administrator has, the number of administrators leading a school, and the school's climate. The climate variable is a composite of specific item-level data from respondents to the CALL survey. Model 2 for the domain *Monitoring Teaching and Learning*, captures several important variables: the average number of years teachers have been teaching in the school, the school level or type (elementary, middle, high), and the size of the school. These factors contribute to a school's ability to monitor the progress students and teachers make on formative and summative assessments. Similarly in Domain 3: *Building Nested Communities*, the research literature distinguishes school size, the school level, and the average teaching years in the school as the integral variables that will affect a positive change in the Domain 3 score. Much like the model for Domain 1, our fourth model for Domain 4: *Acquiring and Allocating Resources*, includes the administrator's experience, the socio-economic status of the schools and climate indicators from the CALL survey. Lastly, the model for Domain 5: *Maintaining a Safe and Effective Learning Environment* contains six variables: school size, school level, socio-economic status, average total years teaching, average total years teaching at the school, and experience of the administrator. Models six through ten serve to identify the domains that we believe impact the outcome of a score on a given domain. Our assumption here is that for a school to score high in a given domain, it would need to score high in the associated domains as well. Therefore, we will look for the relationships among domain scores.

Data Sources

Most of the data collected for this study was acquired through the CALL instrument. The instrument consists of approximately 100 multiple choice items focused on leadership practices. All items are situated within the five core domains and the twenty-one subdomains within the core domains. Each survey item was scored on a 5-point scale. Most survey items contained five responses, thereby facilitating the assigned

scoring: the first response was assigned a "1" and the optimal fifth response was assigned a "5." The research team referred to research on effective leadership practice to inform the scoring for items with four-response options. Therefore, a common scoring matrix for a four-response item was "1-2-4-5", but based on the item, the range of practices, and the effectiveness of these practices, the research team assigned scores of "1-2-3-5" as well. With the exception of one item, all three-response items were assigned scores of "1, 3, 5".

Scores for each survey item were determined by the mean response. The research team calculated scores for each participating school in the pilot study. The score for each item is the average responses for participants in each school. The score for each subdomain is the average of the item scores within that subdomain. The score for each domain is the average of the subdomains within that domain. The means of the domains and subdomains represent the unit of analysis for our regression.

In addition, the CALL survey asks for users to supply confidential and anonymous demographic data. Before the user begins the survey, the user is asked to select a role from the following options: "Administrator/Supervision", "Teacher/Classroom Instruction", or "Other Instructional Support Staff." Role identification informs the phrasing of several questions in the survey, and it also affords the opportunity to compare and filter responses based on role. Also, after completing all of the survey items, the user is then asked a number of demographic questions depending on role selection. For the role "Administrator/Supervision", the survey asks for the number of years the user has been in the current leadership position. For the role "Teacher/Classroom Instruction", the survey asks for total years of teaching experience, years of teaching experience in current school, grades taught, subjects taught, leadership team affiliation, special team affiliation, and special education affiliation. The demographic data gathered from these questions serve as the factors that predict CALL results in our analysis. We also acquired "economically disadvantaged" data from state department of education websites to include socio economic status as a factor as well.

The survey was administered in 95 schools (n = 4079 participants).

## Preliminary Findings

CALL results vary depending on role selection. Table 1 reveals that respondents who identified themselves as "Administrator/Supervision" consistently rated CALL items higher than those who identified themselves as "Teacher/Classroom Instruction". The largest difference is found in Domain 1, *Focus on Learning*. This domain, more than the other domains, focuses on the individual primary leader more often and directly inquires about instructional leadership practices.

We expect to find continued variance beyond role identification. The amount of teaching experience, leadership experience, and school size are the primary determinants for predicting high ratings within CALL domains. Furthermore, we anticipate that socio economic status will be a significant factor in predicting CALL results and the subsequent presence of effective leadership practices.

Table 1

CALL Results: Teacher Role vs. Administrator Role

| Domain | Role | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| 1. Focus on Learning | Teacher | 2919 | 3.5276 | .65823 | .01218 |
| | Admin | 133 | 3.8321 | .56283 | .04880 |
| 2. Monitoring Teaching and Learning | Teacher | 2898 | 3.1855 | .79512 | .01477 |
| | Admin | 131 | 3.4911 | .68906 | .06020 |
| 3. Building Nested Learning Communities | Teacher | 2876 | 3.2337 | .70626 | .01317 |
| | Admin | 126 | 3.5892 | .61855 | .05510 |
| 4. Acquiring and Allocating Resources | Teacher | 2876 | 3.0483 | .57029 | .01063 |
| | Admin | 126 | 3.3878 | .52379 | .04666 |
| 5. Maintaining a Safe and Effective Learning Environment | Teacher | 2874 | 3.5912 | .57712 | .01077 |
| | Admin | 126 | 3.8966 | .48314 | .04304 |

Finally, the CALL theory of action claims inter-connectedness among the five core domains. The analysis will reveal that high scores in one domain will correlate with relatively high ratings in one or more of the other domains.

## Scholarly significance

With its distributed leadership theory of action and 360-degree approach, the CALL formative feedback instrument provides a unique opportunity to capture and measure school-wide practices that move beyond the role and impact of the individual principal. It would then be logical to examine the results of such an assessment against school-level characteristics such as school type, school size, teacher professional experience, and administrator experience.

Lastly, this study directly addresses the 2013 AERA conference theme, "Education and Poverty: Theory, Research, Policy, and Praxis," in that we factor socio economic status into the analysis. Moreover, the CALL survey was designed for use in large comprehensive schools that are commonly found in poor urban areas. To be sure, the various participating schools will score differently on the CALL assessment; accounting for what predicts these differences will shed insight on effective school leadership practice.

References


Blitz, M. (2012). *A case study comparison of school leadership practice against the comprehensive assessment of leadership for learning (CALL) pilot results.* (WCER Working Paper No. 2012-5). Retrieved from University of Wisconsin–Madison, Wisconsin Center for Education Research website: http://www.wcer.wisc.edu/publications/workingPapers/papers.php

Borman, W. C. (1997). 360 ratings: An analysis of assumptions and a research agenda for evaluating their validity. *Human Resource Management Review, 7*(3), 299-315.

Bush, T. & Glover, D. (2012). Distributed leadership in action: Leading high-performing leadership teams in English schools. *School Leadership and Management: Formerly School Organization, 32*(1) 21–36.

Camburn, E. & Salisbury, J. (2012). *Examining the validity and reliability of the comprehensive assessment of leadership for learning (CALL) formative leadership assessment tool: Pilot study results.* Annual Conference of the American Education Research Association. Vancouver BC. April 2012.

Condon, C. & Clifford, M. (2010). *Measuring principal performance: How rigorous are commonly used principal performance assessment instruments?* A Quality School Leadership Issue Brief, Learning Point Associates.

Craig, S. B., & Hannum, K. (2006). Research update: 360-degree performance assessment. *Consulting Psychology Journal: Practice and Research, 58*, 117–122.

Goldring, E., Porter, A., Murphy, J., Elliott, S. N., & Cravens, X. (2009). Assessing learning-centered leadership: Connections to research, professional standards, and current practices. *Leadership and Policy in Schools 8*, 1-36.

Gronn. P. (2008). The future of distributed leadership. *Journal of Educational Administration, 46*(2), 141–158.

Gronn, P. (2003). Leadership: Who needs it? *School Leadership and Management, 23*(3), 267–290.

Gronn, P. (2010). *Where to next for educational leadership?* In T. Bush, L. Bell, & D. Middlewood (Eds.) The principles of educational leadership and management. London, UK: Sage.

Halverson, R. & Dikkers, S. (2010). *Formative leadership for learning: Leveraging empirical studies of educational leadership for formative tools*. Paper presented at the University Council for Educational Administration Annual Research Conference, New Orleans, LA, October 28–31, 2010.

Harris, A. & Spillane, J. (2008). Distributed leadership through the looking glass. *Management in Education, 22*(1), 31–34.

Kelley, C., Halverson, R., Camburn, E., Blitz, M., Salisbury, J., Dikkers, S., & Clifford, M. (2012). *The design and validation of the comprehensive assessment of leadership for learning (CALL) formative school leader assessment*. Paper presented at the American Education Research Association Conference, Vancouver, British Columbia, April 13–17.

Leithwood, K. & Seashore-Louis, K. (2012). *Linking leadership to student learning*. San Francisco, CA: Jossey Bass.

Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Alexandria, VA: Association for Supervision and Curriculum Development.

Mayrowetz, D. (2008). Making sense of distributed leadership: Exploring the multiple usages of the concept in the field. *Educational Administration Quarterly 44*(3), 424–435.

Murphy, J., Elliott, S.N., Goldring, E., & Porter, A.C. (2007). Leadership for learning: A research-based model and taxonomy of behaviors. *School Leadership & Management*, *27*(2), 179-201.

Porter, A.C., Polikoff, M.S., Goldring, E., Murphy, J.; Elliott, S.N.; & May, H. (2010). Investigating the validity and reliability of the Vanderbilt Assessment of Leadership in Education. *Elementary School Journal*, *111*(2), 282-313.

Spillane, J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies, 36*(1), 3–34.

Toegel, G., & Conger, J. A. (2003). 360-degree assessment: Time for reinvention. *Academy of Management Learning and Education, 2,* 297–311.

Watson, S. T. & Scribner, J. P. (2007). Beyond distributed leadership: Collaboration, interaction, and emergent reciprocal influence. *Journal of School Leadership Volume 17*(4). 443–468.