A Comparison of Principal Self-Efficacy and Assessment Ratings by Certified Staff: Using Multi-Rater Feedback as Part of a Statewide Principal Evaluation System

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A vast body of research supports the notion that school leadership is the second most influential factor on student achievement, behind only the classroom teacher (Davis & Darling-Hammond, 2012; Lynch, 2012; Mendels & Mitgang, 2013; Miller, 2013; Pannell, Peltier-Glaze, Haynes, Davis, & Skelton, 2015). Lawmakers have begun to recognize the significance of the principal’s impact on student achievement, and while waiting on reauthorization of federal education legislation, the United States Department of Education (USDE) included a principal evaluation component in the requirements for states to waive certain provisions of the No Child Left Behind Act (NCLB) of 2001. To request flexibility, states were required to develop a principal evaluation system that met certain criteria as outlined by the USDE, including the use of student outcomes as a major component of the evaluation system.

As states began to develop a principal evaluation system, one state opted to include a multi-rater survey component to comprise 30% of the overall principal evaluation score. The Vanderbilt Assessment of Leadership in Education (VAL-ED™), a multi-rater survey closely aligned to the Interstate School Leaders Licensure Consortium (ISLLC) 2008 Standards was used in the pilot year of implementation, and the state subsequently developed its own statewide, multi-rater survey based upon the state leadership standards (D. Murphy, personal communication, February 02, 2016). The survey included ratings from certified staff, the principal, and the principal’s supervisor on indicators of leadership effectiveness.

**Statement of the Problem**

The impact school leaders have on student achievement is prominent in the national conversation regarding educational reform. Perhaps, one of the most highly debated topics is how to assess their impact, and recent legislation tasked every state with determining how to evaluate principal effectiveness. Any new or customized evaluation tool requires years of data for study to ensure its reliability, and state officials need data to determine if the multi-rater feedback supports
improved professional practice of school leaders. Data from studies such as this can help with these determinations.

**Purpose of the Study**

The purpose of this study was to explore the relationship between principal self-efficacy and the assessment rating of their certified staff regarding leadership behaviors. The research sought to determine if a statistically significant difference between mean self-assessment scores of principals and assessment scores of their certified staff existed when grouped by school accountability rating.

**Significance of the Study**

Results from this study may provide leaders, legislators, and researchers who develop school administrator evaluation systems with information regarding how perception data from principals and teachers compared when grouped by the school’s most recent accountability rating. Results from this study are available for consideration as states work to develop effective principal evaluation systems. In addition, this study provided data regarding how principals of varying school performance levels rated themselves in comparison to how certified staff members rated them. Comparing these data allows researchers to consider whether school administrators and certified staff defined school leadership abilities and behaviors similarly, even though they observed them from different vantage points. This study also provided information regarding a substantial component of the principal evaluation system that, when considered with other data over time, may support the use of a multi-rater survey as part of the evaluation system for principals.

**Theoretical Framework**

Research has explored cognitive processing theories to explain how, why, and when behavior change occurs because of feedback. Several researchers referenced the role of attention as an essential element for behavior change, with both cognitive and behavioral actions found to result from the direction of the attention or limited attention (Hu, Chen, & Tian, 2016; King, 2016; Kluger & DeNisi, 1996, 1998; Locke & Latham, 2002). Kluger and DeNisi’s (1996, 1998) Feedback Intervention Theory (FIT) identified attention as a key component in feedback resulting in subsequent behavior change.

Feedback Intervention Theory (FIT) included an evaluation step during which feedback was compared to a standard or goal, and this comparison produced an awareness of a discrepancy or a gap. The theory proposed that, after the identification of the discrepancy or gap, a person’s *locus of attention* would change to either the self, the specific task, or the components of the task, and that people act on that which their attention is focused (Kluger & DeNisi, 1996, 1998). Similarly, in another seminal study, Locke and Latham (2002) identified attention as essential to attaining goals and asserted people tend to focus attention and effort towards activities that would help them to attain their goals and away from activities that would not help. In addition to where attention was directed, personality characteristics and feedback purpose helped determine whether the subsequent behavior change was positive in nature or resulted in negative feelings and a decline in performance (Kluger & DeNisi, 1996, 1998). Collectively, this theoretical perspective regarding how feedback could effectively be used to improve professional practice, as well as considerations when planning the use of feedback to increase the likelihood of resulting in positive behavior change was the framework that shaped this research.
Review of the Literature
Since the late 1980s, multi-rater feedback has been widely used in the corporate world, most commonly in the form of a survey. Prior to the dramatic increase in the use of multiple perceptions to provide feedback regarding a leader’s performance, most managers’ performance was evaluated by a supervisor using a top-down approach (Ling, 2012). The author noted, as leadership in organizations became more team-based, and in many instances, levels of management or leadership hierarchy were erased, a focus on obtaining feedback from stakeholders increased. As the role of the school principal has shifted away from managerial supervision to one of an instruction leader and schools have begun to incorporate more teamwork through distributed leadership practices, recent educational reform has generated much interest in the evaluation of school leadership and obtaining feedback from stakeholders as part of a principal evaluation system.

Purpose of Feedback
Past research has identified the purpose of feedback as an attempt to improve performance through an increase in self-awareness, thus prompting oneself to seek to reduce the gap between expectation and performance or to reach a goal or standard (Baumeister, Vohs, DeWall, & Zhang, 2007; Kluger & DeNisi, 1998; Orr, Swisher, Tang, & De Meuse, 2010; Yammarino & Atwater, 1997). Using multi-rater feedback provides leaders with perception data from other stakeholder groups with which to compare a self-assessment to determine areas of discrepancy, thus increasing self-awareness and helping detect both hidden strengths and blind spots (Orr et al., 2010; Van Velsor, Taylor, & Leslie, 1993). A meta-analysis of 131 studies regarding feedback intervention, in which one-third of the studies reported a decline in performance, contended effectiveness of feedback in behavior change was dependent upon several factors, including how the person receiving the feedback reacted and processed the feedback (Kluger and DeNisi, 1996).

Categories of raters. To understand how and when multi-rater feedback resulted in behavior change, it is important to understand certain characteristics that emerged as groups of raters were identified. Seminal research studies grouped leaders into three categories based upon the results of the comparisons: overraters, underraters, and in-agreement raters (broken into two subgroups: in-agreement/good and in-agreement/poor) (Atwater & Yammarino, 1992; Van Velsor et al., 1993; Yammarino & Atwater, 1997). According to Van Velsor et al. (1993), overraters, or leaders who rated themselves higher than others, tended to have the lowest ratings from others in studies that compared all three categories of raters, while underraters, or those leaders who tended to rate themselves lower than others, were found to have the highest effectiveness ratings from others.

The discrepancy between self-rating and others’ rating was considered an indicator of potentially low self-awareness (Yammarino & Atwater, 1993), although many researchers acknowledged differences in opportunities to observe behaviors, training differences, and different opportunities to interact with the leader could have affected others’ ratings (e.g., Cheung, 1999; Ling, 2012). Those who rated themselves as others rated them were identified as in-agreement raters, with two distinctions — either in-agreement/good or in-agreement/poor (Atwater & Yammarino, 1992; Van Velsor et al., 1993; Yammarino & Atwater, 1997). In-agreement raters were considered the
most self-aware by definition, and Atwater and Yammarino (1992) claimed people with a high degree of self-awareness tended to process and use feedback to self-regulate behavior or improve.

The role of self-efficacy. Bandura (2012) defined self-efficacy as “a judgment of capability” (p. 29), and it is task-specific based upon social cognitive theory of motivation and behavior. In order to understand how one views the usefulness of feedback, how self-efficacy affects the processing and subsequent use of feedback to improve performance must be considered. First, the belief in one’s own ability to achieve or perform certain tasks need to be separated from one’s feelings of self-worth, as they represent two very different concepts (Cervone, Mor, Orom, Shadel, & Scott, 2011). Second, Bandura (1977) differentiated between achievements that rely more on ability from those that rely more on effort expended. Bandura noted people processed successful task performance differently, with easy task success often attributed to ability with no new learning perceived as occurring. Tasks people conceptualized as requiring more effort were considered to involve learning new information (Bandura, 1977). This distinction is important when dealing with maximizing feedback effectiveness, as limited attention and self-efficacy affect prioritization of areas identified as needing improvement.

Using Multi-Rater Feedback in Evaluating School Administrators
Variations in what denotes principal effectiveness has contributed multitude of approaches being used to evaluate school leaders. Principals’ performance evaluation tools should communicate what defines successful school leadership because how principals are evaluated conveys to them the priorities and expectations of the governing organization and serves as an indicator of successful job performance (Catano & Stronge, 2007). While the use of high-stakes student assessment data in educator evaluation systems has been controversial, most research supports the use of high-stakes student outcome data as long as other measures are included as part of the principal evaluation system, such as observation of principal performance, teacher growth, and multi-rater surveys, to capture a better picture of the actual constellation of duties principals performed (Pannell et al., 2015; Clifford, Behrstock-Sheratt, & Fetters, 2012; Clifford Hansen, & Wraight, 2014; Grissom, Kalogrides, & Loeb, 2015; Guilfoyle, 2013; New Leaders for New Schools, 2010).

Because principals work in a social context, using multi-rater feedback helps obtain a complete picture of a principal’s performance that might not be captured by a single assessment tool and adds insight into leadership actions not visible to the supervisor daily (Brown-Sims, 2010; Wallace Foundation, 2009; Catano & Stronge, 2007). Clifford and Ross (2011), argued teachers who work within the conditions created by the principal provided valuable insight and feedback regarding the principal’s professional practice. Moore (2009) claimed evaluating principals using 360-degree feedback could create a school culture where feedback would be sought to promote professional growth and emphasized feedback increased self-awareness, helped the principal to identify areas needing improvement, and increased validity of performance assessments. Throughout much of the literature regarding principal evaluation, enhanced self-awareness was considered both a need and a benefit and was gained through a comparison of others’ ratings and a self-rating such as the self-assessment that was included as part of a multi-rater tool (e.g., Brown-Sims, 2010; Moore, 2009). Additionally, Moore (2009) stressed the importance of the actions after feedback to support improvement of professional practice, such as
follow-up with a coach and the development of professional growth goals to address areas identified as needing improvement.

**Methodology**

This cross-sectional, comparative study examined relationships of principals’ self-assessment scores and certified staff assessment scores when grouped by the most recent state school accountability rating.

**Participants**

Participants in this study included principals and certified staff employed full- or part-time in one southern state from 635 public schools with grade levels subject to high stakes assessments during the academic school-year. Principals with no self-assessment and/or certified staff scores were excluded from the study. Additionally, principals with fewer than ten certified staff scores were excluded from the study to ensure the rating from a single certified staff member did not contribute more than ten percent of the principal’s certified staff score mean. Of the 833 principal records obtained from the state department of education, 180 records were excluded due to the lack of a self-assessment and/or a certified staff score. Eighteen additional principals with fewer than 10 certified staff scores were also excluded from the study.

Table 1

*Number and Percentage of Principals’ Records Included and Excluded, Grouped by Accountability Rating*

<table>
<thead>
<tr>
<th>School Accountability Rating</th>
<th>Included</th>
<th>Excluded</th>
<th>Total</th>
<th>Total Excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
<td>N</td>
<td>Percent</td>
</tr>
<tr>
<td>A</td>
<td>60</td>
<td>9.4</td>
<td>17</td>
<td>8.6</td>
</tr>
<tr>
<td>B</td>
<td>131</td>
<td>20.6</td>
<td>25</td>
<td>12.6</td>
</tr>
<tr>
<td>C</td>
<td>214</td>
<td>33.7</td>
<td>56</td>
<td>28.3</td>
</tr>
<tr>
<td>D</td>
<td>196</td>
<td>30.9</td>
<td>89</td>
<td>44.9</td>
</tr>
<tr>
<td>F</td>
<td>34</td>
<td>5.4</td>
<td>11</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>635</td>
<td>100.0</td>
<td>198</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Instruments
The multi-rater tool used in this study was developed by state leaders and other educational stakeholders throughout the state to evaluate school administrators’ professional practices as part of the statewide principal evaluation system. This survey was aligned to specified state standards, adapted from the ISLSC Standards, and consisted of 30 indicators of leadership ability and practice grouped by leadership domains. Using a Likert-type scale, respondents selected either 1 (unsatisfactory), 2 (emerging), 3 (effective), or 4 (distinguished) to represent the administrator’s level of functioning on each of the 30 indicators.

During an administration window of December through January, principals completed a self-assessment, and the body of certified staff completed the survey as well. The certified staff responded anonymously, and the certified staff score was reported in aggregate. The principal’s self-assessment score and the certified staff score were reported separately and contributed a portion toward the overall principal evaluation score.

Procedures
This study examined principal evaluation scores from a multi-rater survey to determine if a statistically significant difference existed between mean self-assessment scores of principals and assessment scores of their certified staff when grouped by school accountability rating. Each principal’s overall score was calculated for each rater type, representing the average of the ratings on the 30 indicators, and these overall scores from the self-assessment and the certified staff were used in this study.

Descriptive statistical analyses of raw data were conducted, including the mean, standard deviation, kurtosis values, and skewness values of the self-assessment and certified staff scores. Tests of assumptions were conducted, and due to the violation of assumptions necessary for parametric tests to be used, the research question was addressed using non-parametric statistics to test for significant differences between the self-assessment scores and certified staff scores by school accountability rating. The critical p-value to determine significance was set at p < .05. A Kruskal-Wallis test was conducted to test for statistically significant differences between principals’ self-assessment and certified staff scores when grouped by school accountability rating. A post hoc procedure, the Dunn’s test, was calculated to determine where the significant differences existed. Finally, Spearman’s correlation coefficients were calculated to determine if a relationship existed between self-assessment scores and certified staff scores within each accountability rating category, as well as the direction and magnitude of the relationship.

Findings
Based on student achievement results from the statewide assessment program and other outcome measures, schools were assigned a grade of A, B, C, D or F, with A being the highest and F being the lowest categorical rating. Principals of schools with an accountability rating of A received the highest average scores in both self and certified staff rater types, and as the accountability rating decreased, the mean of the certified staff scores descriptively decreased. Likewise, the self-assessment scores of principals descriptively decreased from the A accountability rating through the D rating; however, principals in schools that received F accountability ratings scored themselves slightly higher than those with school accountability ratings of C and D. These data are grouped by accountability rating and reported by rater type in Table 2.
Table 2

**Descriptive Statistics for Multi-Rater Survey Scores Grouped by Accountability Rating**

<table>
<thead>
<tr>
<th>School Accountability Rating</th>
<th>Rater Type</th>
<th>Self</th>
<th>Certified Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>Min.</td>
</tr>
<tr>
<td>A</td>
<td>Self</td>
<td>60</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>Certified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Self</td>
<td>131</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Certified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Self</td>
<td>214</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>Certified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Self</td>
<td>196</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Certified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Self</td>
<td>34</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Certified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>635</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Results from the Independent Samples Kruskal-Wallis test indicated that significant differences did exist within both categories of rater type, certified staff (p < .001) and self (p = .004) when grouped by accountability rating. Calculated by rater type using a Bonferroni correction, the adjusted results of Dunn’s test suggested self-assessment scores of principals were only significant (p < .05) when comparing B and D ratings (p = .027) and A and D ratings (p = .009). Certified staff scores showed more significant differences (p < .05), indicating that the scores of certified staffs were different for principals when grouped by accountability rating, with only principals of schools with A and B ratings, C and D ratings, and D and F ratings showing nonsignificant findings. These findings are presented in Table 3.

Results, reported in Table 4, suggested statistically significant relationships in all accountability rating categories between principal self-assessment scores and their certified staff scores except schools rated A, and weak, positive correlations between rater types for all accountability rating categories.

When considering results showing significant differences in ratings of the certified staff when grouped by the school’s accountability rating category and the significant relationships between rater types of principals in schools with accountability ratings B through F, the researcher determined that a difference did exist between principals and their certified staff when grouped by accountability rating.
Table 3

*Dunn’s Test Results for the Multi-Rater Scores of Certified Staff*

<table>
<thead>
<tr>
<th>School Accountability Rating</th>
<th>School Accountability Rating</th>
<th>Test Statistic</th>
<th>Std. Error</th>
<th>Std. Test Statistic</th>
<th>Sig.</th>
<th>Adj. Sig.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>33.20</td>
<td>28.43</td>
<td>1.17</td>
<td>.243</td>
<td>1.000</td>
</tr>
<tr>
<td>C</td>
<td>A</td>
<td>111.01</td>
<td>26.64</td>
<td>4.17</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>D</td>
<td>C</td>
<td>133.13</td>
<td>26.91</td>
<td>4.95</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>F</td>
<td>D</td>
<td>206.64</td>
<td>39.15</td>
<td>5.28</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

| B                            | C                            | 77.81          | 20.23      | 3.85                | <.001| .001       |
| D                            | B                            | 99.93          | 20.58      | 4.86                | <.001| <.001      |
| F                            | D                            | 173.44         | 35.10      | 4.94                | <.001| <.001      |

| C                            | D                            | 22.13          | 18.03      | 1.23                | .220 | 1.000      |
| F                            | C                            | 95.63          | 33.67      | 2.84                | .005 | .045       |

| D                            | F                            | 73.51          | 33.88      | 2.17                | .030 | .300       |

Asymptotic significances are displayed with $p < .05$.
*Bonferroni correction applied.*

Table 4

*Spearman’s $r_s$ Correlation Coefficients for the Multi-Rater Survey Self and Certified Staff Scores Within Each Accountability Rating Category*

<table>
<thead>
<tr>
<th>School Accountability Rating</th>
<th>N</th>
<th>$r_s$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>60</td>
<td>.16</td>
<td>.215</td>
</tr>
<tr>
<td>B</td>
<td>131</td>
<td>.18</td>
<td>.045</td>
</tr>
<tr>
<td>C</td>
<td>214</td>
<td>.20</td>
<td>.003</td>
</tr>
<tr>
<td>D</td>
<td>196</td>
<td>.20</td>
<td>.004</td>
</tr>
</tbody>
</table>
F  34  .36  .037  
Total  635  .23  <.001

Discussion
According to Kelleher (2016), school leaders’ thoughts, perceptions, and actions have an influence on the success of the schools and both the climate and culture, and student achievement continues to be a key component in how school leaders are judged. This research examined self-efficacy scores of school principals regarding effective leadership behaviors and ratings of their performance by certified staff members when grouped by school accountability rating. Given the emphasis placed on student achievement levels as a measure of principal success, it was not surprising that principals of the highest performing schools received the highest scores from both self and certified staff, and certified staff ratings decreased with the school accountability level. Surprisingly, however, principals of the lowest performing schools rated themselves higher in leadership behaviors than did the principals of schools in the two performance levels above them.

As principal evaluation continues to evolve into a comprehensive system capable of measuring a leader’s success based on the many facets of the job, it is imperative researchers develop multiple measures to effectively assess principals. The body of research regarding principal evaluation evidences the need for effective principal evaluation systems, and the results presented in this study support using multi-rater feedback as a means to assess and improve principal performance. Although the leadership survey used in this study was developed to closely align with leadership standards adopted by one state, the results of this study could assist other states in designing comprehensive principal evaluation systems. Further, the study of the components of principal evaluation could be designed in such a way to explore how principal efficacy aligns with accountability ratings or labels in those states.

Numerous factors contribute to student achievement scores. Some are directly, or indirectly, impacted by the principal; however, many are beyond their influence. Some of the most transformative leaders can neither overcome the environmental issues that contribute to low student achievement, nor shake the stigma associated with these scores. Ensuring students have access to a quality education is a critical part of a principal’s responsibilities but should not be the sole measure of their success. Researchers and policymakers must continue to work together to define principal effectiveness and develop assessments to accurately measure principal performance.

Recommendations for Future Research
The researchers recommend further study regarding validity and reliability of the inferences made from the multi-rater survey scores by including the supervisor component in future study. Research exploring reasons for anomalies, such as the self-assessment scores in this study for principals of schools with an accountability rating of F scoring themselves higher on average than principals in schools with C or D ratings, is suggested to identify causal factors. Finally, further study regarding the inclusion of a multi-rater survey as part of a principal evaluation system, for both developmental and evaluative purposes, is recommended to support the inferences made from the scores.
References


Hu, X., Chen, Y., & Tian, B. (2016). Feeling better about self after receiving negative feedback: When the sense that ability can be improved is activated. *Journal of Psychology, 150*(1), 72-87. doi: 10.1080/00223980.2015.1004299


