

**Distributed Leadership, Teacher Morale, and Teacher Enthusiasm:
Unravelling the Leadership Pathways to School Success**

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The purpose of this study is to further our understanding of distributed leadership in schools, the role of the school principal in the facilitation of distributed leadership, and its impact upon teachers' morale and sense of enthusiasm for their work. In the past decade or so, many governments have imposed top down accountability measures in the form of student scores on high stakes tests. While this growing focus on student achievement has contributed to an increased research focus on the determination of the direct effects of school leadership upon student test scores, the evidence of any direct link remains weak (Anderson, Moore, & Sun, 2009; Mascall, Leithwood, Strauss, & Sacks, 2009). Furthermore, given the evidence that student learning is impacted by multiple factors, many of which appear to be outside the direct control of educators (Kohn, 2002; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Stoll & Fink, 1996; Teddlie & Reynolds, 2001; Wang & Walberg, 1991), it appears that developing any meaningful direct connection between the role of the formal leader and student learning outcomes is likely to remain elusive (Anderson, Moore, & Sun, 2009; Leithwood & Mascall, 2008).

To be clear though, we are not claiming that school leaders have little or no impact on student learning; in fact, we recognize that school leaders do have a very positive impact on student learning. However, "it is widely understood that the effects of school leadership on students are largely indirect" (Leithwood, Patten & Jantzi); our research is directed at identifying the leadership variables that influence student learning.

To that effect, our work is consistent with that of a growing number of researchers who have come to realize that meaningfully leading schools requires more than the leadership of a single formal leader. They have concluded that attempting to find substantive direct connections between leadership provided by a formal leader and student achievement is simply wrongheaded. For instance, Hallinger and Heck (2009) have concluded that,

it may be the case, that some of the 'nagging problems' that have accompanied studies of school leadership effects arise from the fact that we have...been measuring an...incomplete portion of the school's leadership resources. Thus, future research would do well to assess the contribution of leadership...by the principal as well as by other key stakeholders. (p. 113)

Similarly, Mascall et al. contend that a more appropriate approach to understanding the impact of leadership upon student learning is to focus on identifying "the indirect path through which

leadership influences students [such as]...the amount of influence leadership has on teachers' motivations and related beliefs and feelings" (p. 81). "The challenge for indirect effects studies...however, is to select mediating variables that are susceptible to influence by leaders and that are, in turn, powerful enough to have significant effects on students" (Leithwood & Mascall, 2008, p. 556).

Sharing these views, we have employed a distributed leadership framework (Harris, 2009; Sheppard, Brown, & Dibbon, 2009; Sheppard & Dibbon, 2010; Spillane, 2005) and have focused on identifying the complex pathways through which this emerging approach to leadership influences a variety of factors that are more directly connected to student learning. While we have employed the term distributed leadership in our ongoing work, including the work reported in this paper, we make no claim that it is the most appropriate terminology for the leadership approach that we have operationalized. Rather, following the advice of Spillane et al. (2009), we have carefully delineated the framework that we identify as *distributed leadership* so that readers can determine for themselves if they wish to include this work within the distributed leadership genre. Our use of the term distributed leadership is synonymous with what we have elsewhere (Sheppard et al, 2009) described as collaborative leadership:

An approach in which there are two categories of leaders—formal leaders and informal leaders.... Teachers are viewed as partners, rather than as followers, and leadership is defined through the interaction of leaders, constituents, and situation.... Within this approach...both formal leaders and constituents have an important, yet distinct, leadership role to play. (p.15)

Within this leadership framework, the formal leader recognizes that the ability of the organization to learn "is dependent on the capacity of the organization to facilitate collaboration among individual learners [teacher leaders] who assume distributed leadership responsibilities and learn from one another" (Sheppard et al., p. 16). Formal leaders facilitate teacher leadership by being transformational and inclusive. These formal leaders provide resources for teachers' professional learning and they engage them in school leadership through collaboration with their colleagues, participation in shared decision-making, and through the development of a shared vision for their school.

In a recent study, Sheppard & Dibbon (2010) employed this above noted distributed leadership framework in an attempt to unravel the relationships among the various sources of formal and informal leadership for education in order to determine how these leadership

interactions impact the existence of a clear focus on teaching and student learning--“a key characteristic of effective and improving schools...[and] the singularly most important factor in raising achievement” (Harris, Chapman, Muijs, Russ, & Stoll, 2006, p. 416). Through the use of path analysis we determined that multiple sources of leadership that include provincial government, the school district, school administrators (principal and vice-principal), teacher leaders, parents, and community leaders have a positive effect on the extent to which schools are focused on student learning--collectively accounting for 55% of its variance (Sheppard & Dibbon, 2010).

Contrary to our above noted findings that distributed leadership has a positive effect on a school's focus on student learning (Sheppard & Dibbon, 2010), there is opposing evidence (Leithwood & Jantzi, 2000; Mayrowetz, 2008; York-Barr & Duke, 2004). Mayrowetz, for instance, has observed that “some researchers suggest that [distributed leadership] in schools...can lead to negative results for teachers and schools [as] teachers can become overstressed [by their leadership responsibilities, and therefore], the benefits of participation do not necessarily accrue to better teaching practice...[or] school improvement” (p. 429). He does recognize, however, that distributed leadership can potentially build capacity, and thereby contribute to school improvement if formal leaders can only meet the huge challenge of successfully engaging multiple people in school leadership as the accepted norm. On the other hand, he opines that the likelihood of success in meeting such a challenge remains slim.

As a means of further exploring the potential of distributed leadership to facilitate school improvement in light of Mayrowetz's observations, in this paper we explore the effects of distributed leadership upon teacher morale and enthusiasm. We chose teacher morale and enthusiasm as outcome variables for this study because we recognize them as mediators that either have been linked directly to improved student learning (Day et al, 2007, as cited in Harris, 2009) or are intuitively associated with teacher stress, teacher efficacy (Bandura, 1986), and academic optimism (Hoy, Tarter, & Woolfolk-Hoy, 2006) that have recognized effects on student learning (Leithwood & Maskall, 2008). We posit that if teachers engage in distributed leadership activities (engage as collaborative leaders who are involved in shared decision-making and in the development of a shared vision), and there is no observable negative impact upon their morale and level of enthusiasm, this will suggest that there is nothing inherent in distributed leadership that creates stress for teachers. Further, if our findings suggest that

distributed leadership has positive effects upon teacher morale and enthusiasm, this will contribute to the evidence base in respect to the desirability of distributed leadership in schools.

Methodology

Using Amos 17 (Arbuckle, 2008) and maximum likelihood estimation, we employed path analysis, a subset of Structural Equation Modeling (SEM), to develop a best-fitting nested model to examine the relationships among the following factors: formal school leaders, teacher collaborative leadership, teachers' professional learning, shared decision-making, shared vision, teacher morale, and teacher enthusiasm. At the outset, we developed a theoretical model on the basis of a review of the relevant theory and research related to distributed leadership in schools (Bass & Riggio, 2006; Harris, 2009; Kouzes & Posner, 2003; Leithwood et al., 2004; Sheppard et al, 2009, Spillane, 2005). This theoretical model (Figure 1) is premised on the assumption that the school administrators' (principal and vice-principal) leadership approach sets the stage for the collaborative engagement of others in leadership. It sets out hypothesized pathways through which (1) school administrators facilitate the engagement of teachers as leaders in their school; (2) school administrators impact the level of support for teachers' professional learning, and through which (3) both school administrators and teacher leaders impact the existence of shared decision-making and the creation of a shared vision in the school. Finally, it posits that each of these preceding factors of leadership engagement impact teachers' level of morale and enthusiasm for their work.

Insert Figure 1 About Here

We tested our theoretical model through the application of the following model fit indices (Garson, 2009; Hu & Bentler, 2000): Chi Square (χ^2), Standardized Root Mean Squared Residual (SRMR), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Akaike Information Criterion (AIC). Our determination of a good fitting model is based on cut-off values recommended by Hu & Bentler, (2000): SRMR<.08, TLI>=.95, .RMSEA<=.06, and chi-square statistic ($p>.05$)¹. The final of our fit indices, the AIC measure, does not have a cut-off value as the other indices; rather it is used as a comparison to other

¹ Even though a non-significant chi-square statistic ($p>.05$) would be a good indicator of model fit, we did not set a non-significant chi-square statistic as an essential element for our determination of a good fitting model because a large sample size such as in this study ($n=2029$) almost always results in a statistically significant chi-square statistic.

alternative models with the lower value indicating the best fitting model. In this study, the AIC measure of our theoretical model was compared to the saturated and independence models included in the AMOS output.

Data Sources

Our sample includes teachers from all schools from two public school districts in two Canadian provinces, a total of 136 schools and 2029 teachers. Data were collected through the use of a survey instrument that we have employed for previous work (Sheppard & Brown, 2009). As a result of a partnership arrangement with both districts, our survey return rates were very good at 94%. To handle missing data, we employed the maximum likelihood estimation features of AMOS.

Using Maximum Likelihood factor analysis, and through the use of the Eigen One Rule and the Scree plot, we identified the following latent variables and labelled them according to the substantive content of the items: Two formal leadership variables (*Inclusive* and *Transformational*); three teacher leadership variable (*Teacher Collaboration*, *Teacher Engagement in Shared Decision-Making* and in the Existence of a *Shared Vision*,); and one school condition variable (*Support for Teacher Professional Learning*). Each of the teacher outcome measures (*Teacher Morale* and *Teacher Enthusiasm* for their work) was a measured value representing participant responses to single survey items. General descriptions of each latent variable and the two single items, *Teacher Morale* and *Teacher Enthusiasm*, are provided in Table 1.

As can be viewed in Table 2, the internal consistency reliability coefficients (Cronbach Alpha) for the latent variables range from 0.76 to 0.91. In order to verify that there were no collinearity concerns, we checked the tolerance levels, the variance inflation factor (VIF), and the condition indices of each latent variable. No serious problems with collinearity were detected. Tolerance levels were all found to be above .50, no VIF values were greater than 2, and no condition index was above 15. As well, preliminary analysis of our data indicated that an assumption of multivariate normality was reasonable.

Insert Table 1 and Table 2 About Here

Results

Model Development

After having identified the theoretical model as presented in Figure 1 above, we tested it. A review of the selected fit statistics revealed that the theoretical model was not a “good” fit. With the exception of the SRMR at .0714 which suggests that the model may be relatively good fitting; the remaining fit indices were indicative of a poor fitting model: TLI=.139; RMSEA=.303; $\chi^2(39) = 945.064$, $p < .000$. Also, the AIC value (1023.06) was larger than that of the saturated model (88.0). Therefore, we deemed the model not to be a good fit.

The first step to improving the model fit was to assess the model estimates, and to delete paths with non-significant critical ratios. This resulted in the removal of direct paths between *Transformational Leadership* and *Shared Decision-Making*, *Professional Learning Support*, *Teacher Enthusiasm*, and *Teacher Morale*; and between *Inclusive Leadership* and both *Shared Vision* and *Teacher Morale*. After having removed these aforesaid paths and retesting our revised model, the revised modification index (MI) output recommended the addition of only two paths that we viewed as theoretically appropriate: a direct path from *Teacher Collaboration* to *Shared Vision* and a direct path from *Teacher Morale* to *Teacher Enthusiasm*. We completed these changes and tested the nested model once again to determine whether the changes would significantly improve the model fit. The chi-square value remained statistically significant ($\chi^2(9) = 56.115$, $p < .000$); however, all of the other fit measures improved and the following indices were within the range set for this study: SRMR=.0322, TLI=.976, RMSEA=.051. While the AIC value (126.115) improved from our original model; however, it remained larger than that of the saturated model (88.0). Therefore, we sought once more to improve the model.

Following a similar procedure as employed for our original model, we reviewed the estimates in order to determine if there existed any paths with non-significant critical ratios. As a result, we removed the direct paths from *Inclusive Leadership*, *Shared Decision-Making*, and *Resource Support for Professional Learning* to *Teacher Enthusiasm*. Additionally, using the recommendations of the MI output, we added a direct path from *Inclusive Leadership* to *Teacher Morale*. Other modifications indicated by the MI output could not be supported theoretically and therefore, were not completed. However, knowing that the AIC penalizes for lack of parsimony, we reviewed our nested model with this in mind. While the direct path from *Inclusive Leadership* to *Resource Support for Professional Learning* was statistically significant, the beta

weight of .104 indicated a small effect as did the Squared Multiple Correlation that revealed that only 1% of the variance of this variable was explained by the model. Additionally, it had only a small effect (.09) on *Teacher Morale* and a non-significant effect on *Teacher Enthusiasm*. Given those somewhat weak statistical relationships and recognizing that our measure of this variable, *Resource Support for Professional Learning*, was primarily focused on supports that were external to the school, we dropped it from our model.

Having made these changes to the nested model, we retested it. For the revised nested model, in spite of a relatively large sample size, the chi-square was not significant ($\chi^2(6) = 6.414$, $p = .378$), thereby indicating a good fit. All other fit measures improved as well, and were well within the limits that we had set for a good fitting model: SRMR=.005, TLI=.1.00, RMSEA=.006, and the AIC was smaller for this model (50.41) than for the saturated model (56.00). We conclude, therefore, that of the models we considered, this model (See Figure 2) is the best fit to the data.

Insert Figure 2 About Here

Discussion of the Model

For our analysis of the strength of the effects of each variable on another in our model, we employed the standardized parameter estimates using the following guidelines: $<.10$, a small effect; $>.30$, a medium effect, and $>.50$, a large effect (Kline, 2005). As can be seen in Figure 2, the direct effects of the formal leadership variables (*Inclusive* and *Transformational*) upon *Teacher Morale* and *Teacher Enthusiasm* are small to non-existent, with only the *Inclusive Leader* variable revealing itself as significant (.11). Reliance on less robust approaches that focus just on the direct effects might result in a conclusion that formal school leadership has little impact on either *Teacher Morale* or *Teacher Enthusiasm*. However, through the use of path analysis, we were able to take into account the indirect as well as the direct effects of the formal leadership variables upon both *Teacher Morale* and *Teacher Enthusiasm* that revealed that both leadership variables have significant effects upon both of the outcome variables (Table 3). While the total effect of *Transformational Leadership* upon each of these measures are significant, they are small (.10 and .12 respectively). The total effect of *Inclusive Leadership* upon *Teacher Morale*, however, is quite robust at .38 (medium effect), followed by a slightly smaller but significant effect (.26) upon *Teacher Enthusiasm*.

While these findings confirm that a transformational and inclusive formal leadership approach practiced by the school administrators has a positive, rather than a negative impact upon both teacher morale and enthusiasm, the findings of even more interest in this study are not the total effects of the formal leadership behaviours upon teacher morale, but the combined positive effects of distributed leadership upon *Teacher Morale* and *Teacher Enthusiasm*, accounting for 42% of the variance of *Teacher Morale* and 54% of *Teacher Enthusiasm*.

Additionally, our findings help disentangle the effects of the school administrators being perceived as transformational and inclusive upon the distribution of leadership to teachers (See Table 3). In this respect, our findings reveal that the total positive effects of transformational and inclusive leadership of school administrators upon each of the distributed leadership variables (*Teacher Collaboration*, *Shared Decision-Making*, and *Shared Vision*) range from .10 to .51. Furthermore, the total effects of each of the distributed leadership variables upon both *Teacher Morale* and *Teacher Enthusiasm* are similarly robust and positive, ranging between .09 and .49. This latter finding lays question to Mayrowetz's (2008) previous observations that teachers' engagement in distributed leadership contribute to increased teacher stress which in turn negatively impacts teacher performance. While we did not assess teacher stress levels in this study, our finding of the positive effects of distributed leadership upon teacher morale and teacher enthusiasm suggests minimally that whatever the teachers' stress levels, their attitude toward their work was positively, rather than negatively, impacted by it.

Insert Table 3 About Here

Scholarly Significance

While both the empirical base and practical application of distributed leadership has grown phenomenally in recent years, the evidence related to its effect upon improved school performance reveals continued uncertainty (Mayrowetz, 2008; Timperley, 2005). While we accept Robinson's (2009) claim that "there is a radical disconnection between research on educational leadership and the core purpose of schooling--the education of children" (p. 219), it is our view that only when we better understand the leadership processes that occur in schools, particularly as it relates to the distribution of leadership and how it impacts upon those that work directly with students (their teachers) can we begin to legitimately and meaningfully study the connection between school leadership and student learning. It is toward contributing to the

empirical evidence in respect to this “relatively un-charted territory” (Harris, 2009, p.9) that this study was directed.

Toward that purpose, we defined distributed leadership as a shared leadership responsibility of both formal leaders (school administrators) and teacher leaders. Our best-fitting model reveals that formal leadership behaviours that are transformational and inclusive in orientation have a significant positive influence upon the level of teachers’ active participation in school leadership as they collaborate with their colleagues and engage in both shared decision-making and the development of a shared vision for their school. Finally, our model reveals an approach to distributive leadership that accounts for a large amount of variance in teachers’ morale and enthusiasm for their work.

Mayrowetz (2008) suggested that perhaps the greatest potential of distributed leadership was in its potential to build human capacity within schools; however, he was sceptical of the prospects of its success. Contrary to this scepticism, evidence from this study highlights an existing approach to distributed leadership that builds teacher leadership capacity through their engagement in school leadership while enhancing their morale and enthusiasm. If teachers’ engagement in school leadership, their increased leadership capacity, and their enhanced morale and enthusiasm for their work have an impact on school performance, it is reasonable to conclude that the approach to distributed leadership that we have explored in this paper has considerable potential for meaningfully enhancing school success. Certainly, further investigation is warranted.

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Figure 1. Theoretical model

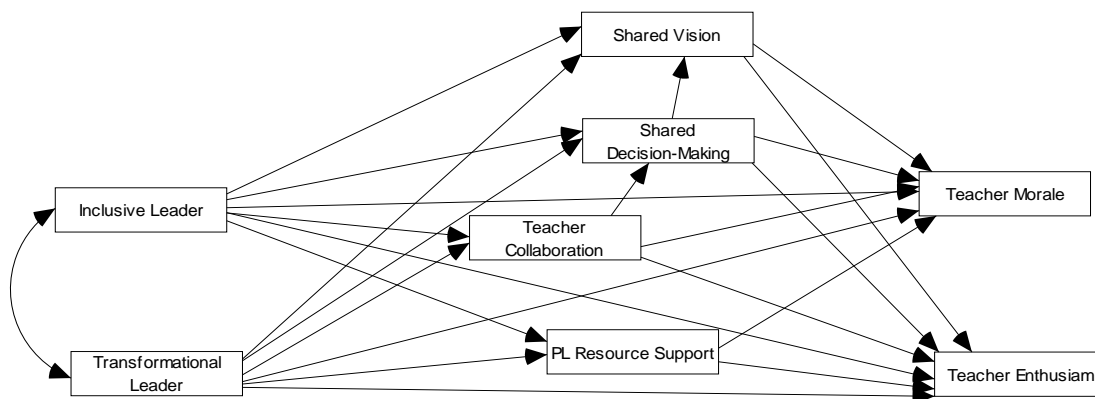


Figure 2. Nested model

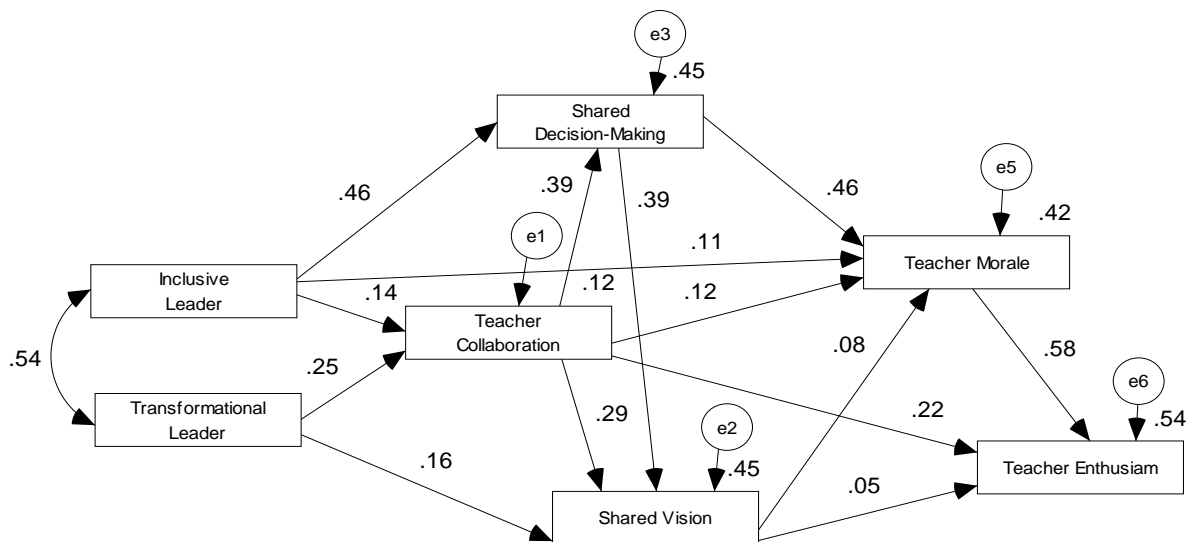


Table 1. *Factor Descriptions*

Factors	Description
Inclusive Leadership	Formal leaders are democratic, participatory, supportive, and collaborative.
Transformational Leadership	Formal leaders are visionary, change-oriented, goal oriented, intellectually stimulating, and hold high expectations.
Shared Decision-Making	Decision-making is shared with all teachers and leadership is a team effort.
Teacher Collaboration	Teachers are keen to learn from one another. They frequently discuss teaching approaches and peer coaching is common.
Shared Vision	The school has a vision that has been developed collaboratively. It is supported by a clear plan for moving toward it, and has considerable influence on classroom practices.
Support for Professional Learning	The school district and province provide adequate financial resources and sufficient release time to facilitate teachers' professional learning.
Teacher Morale	The morale of the staff is high.
Teacher Enthusiasm	Teachers go about their work with enthusiasm.

Table 2. *Internal Consistency Reliability of Factors (Cronbach Alpha)*

Factors	Cronbach Alpha
Inclusive leadership	.79
Transformational Leadership	.79
Teacher Collaboration	.83
Shared Vision	.91
Shared Decision-Making	.80
Professional Learning Resource Support	.76

Table 3. *Standardized Total Effects*

	Transformational Leadership	Inclusive Leadership	TC	SDM	SV	TM
Teacher Collaboration (TC)	.25	.14	.000	.000	.000	.000
Shared Decision-Making (SDM)	.10	.51	.39	.000	.000	.000
Shared Vision (SV)	.27	.24	.44	.39	.000	.000
Teacher Morale (TM)	.10	.38	.33	.49	.09	.000
Teacher Enthusiasm	.12	.26	.44	.30	.10	.58