

Distributed Leadership in Practice: A Modified Delphi Method Study

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ABSTRACT

Background and Purpose

Distributed leadership is about practice rather than people and formal roles. Although there is no unanimous agreement on a definition of the term, Tian et al. (2016) identify two schools of research around distributed leadership: (a) the descriptive-analytical paradigm and (b) the prescriptive-normative paradigm, which examines the practical applications of distributed leadership. This study utilized the latter paradigm, seeking to expand upon distributed leadership practices currently employed in Ontario schools.

Research Design

In this study, 49 principals across four school districts in Ontario, Canada were invited to share how they enact distributed leadership strategies in their schools, using a modified Delphi method. Their responses over three iterations of the Delphi method were then compared to existing research on distributed leadership, and similarities and differences were examined.

Findings

The principals' responses demonstrated a decidedly hands-on focus, but overall the responses agreed with existing research; exceptions are identified and discussed.

Conclusion

This study adds to the literature on distributed leadership in practice, and provides suggestions for future research in this area as well as examples of distributed leadership practices that have been successfully employed in schools, and a framework for evaluating other potential distributed leadership initiatives.

Keywords: distributed leadership, theory into practice, Delphi method, mixed methods, exemplars

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DISTRIBUTED LEADERSHIP IN PRACTICE: A MODIFIED DELPHI METHOD STUDY

Distributed leadership has found increasing traction over the last two decades, due in part to the recognition that the heroic leader model of leadership is untenable. The heroic leader model posits that an individual—knowledgeable, capable, caring, and charismatic—can enter a school and singlehandedly improve learning for all students (Harris, 2009a). In the complex world of education and accountability, it has become clear that this is no longer possible (Halverson et al., 2014). In addition, the heroic leader model, dependent on personal characteristics of the leader, is not replicable and does not provide a model that allows for scaling up across systems. Distributed leadership offers one solution to some of these issues. Although Harris and DeFlaminis (2016) indicate that some authors refer to distributed leadership somewhat derogatorily as “delegation by another name” (p. 143), it provides a tool for change (Tian et al., 2016) and a lens for examining leadership practices (Carbone et al., 2017). Still, Spillane (2008) cautions that distributed leadership is not a blueprint for change but rather a refocusing on the actions and interactions among leaders rather than on the latter’s personal characteristics. There is the presumption that distributed leadership is inherently “good” (Lumby, 2016, p. 165), and the current paper examines this presumption.

What constitutes distributed leadership varies widely across research (Mohd et al., 2016) and there is no unanimous agreement on a definition of the term (Cherkowski & Brown, 2013). Tian et al. (2016) identify two schools of research around distributed leadership: (a) the descriptive-analytical paradigm, which seeks to clarify understanding of the concepts related to distributed leadership; and (b) the prescriptive-normative paradigm, which examines the practical applications of distributed leadership. This paper utilizes the second of these paradigms, seeking to expand on distributed leadership practices currently being employed in schools across four school districts in Ontario, Canada (called school boards in Ontario). This terminology was used in all survey questions and is used synonymously with school district throughout this paper.

REVIEW OF THE LITERATURE

The extant literature reveals a number of unresolved issues with respect to distributed leadership. Among these are the definition of the term distributed leadership; the theoretical foundation of distributed leadership, usually attributed to activity theory; factors influencing successful implementation of distributed leadership; benefits derived from implementing distributed leadership strategies in schools; and existing barriers to implementation.

Definition of Distributed Leadership

There is no unanimous agreement on a definition of distributed leadership (Cherkowski & Brown, 2013). Definitions that have been offered include terms such as shared leadership (Goksoy, 2016; Spillane, 2008); democratic leadership (Spillane, 2008); authentic leadership (Fusco et al., 2015); transformational leadership (Robinson, 2009); team leadership (Spillane, 2008). All of these have been criticized to some extent. For example, Spillane (2008) points out that team leadership may or may not be distributed leadership, and shared leadership may to some mean that responsibilities are shared equally among all members, which is not necessarily distributed leadership (Ho & Ng, 2017; Liang & Sandmann, 2015).

The various definitions of distributed leadership have been criticized as having a lack of clarity (Tian et al., 2016); for being “loose” (Camburn & Han, 2009, p. 141) or “murky” (Lumby, 2016, p. 163); and for attempting to be a catchall term that is not clear conceptually (Harris, 2009a). Further, the assumed cause and effect relationship between distributed leadership and student success is problematic, given the weakness of the evidence presented (Hallinger & Heck, 2009). These difficulties have resulted in Gronn (2009) proposing the term hybrid leadership, subsuming leadership activities carried out by a single person, two people working together, teams, and what he refers to as “holistic” leadership, with potentially large numbers of leaders in a school (p. 209; see also Carbone et al. (2017) for a fuller discussion of where hybrid leadership may fit into the distributed leadership structure). As a consequence, some researchers have resorted to delineating characteristics of activities that qualify as distributed leadership rather than attempting a definition of the term. For example, Carbone et al. (2017) cite openness of boundaries and breadth and depth of expertise as characteristics of distributed leadership; Diamond and Spillane (2016) identify core elements, such as how leadership actually gets done, what people actually do together, how they do it (including what resources are used) and why they do it; while Cherkowski and Brown (2013) classify three types of distributed leadership—collaborated, collective, and coordinated.

Given the varied and sometimes contradictory elements included in definitions of distributed leadership, this study asked participants to define or describe what the concept of distributed leadership meant to them rather than presenting them with a singular definition. In this way, leaders in the field who are implementing distributed leadership strategies in practice revealed how the leadership activities that they carried out in their schools reflected the working definitions they actually employed.

Theoretical Foundations of Distributed Leadership

The majority of the literature identifies activity theory as the theoretical basis for distributed leadership. Activity theory postulates that a subject (individual or group) interacts with an object (the problem or situation) to produce a desired outcome (Ho & Ng, 2017; Ho et al., 2016; Spillane, 2008). These interactions are mediated by other nodes: the community in which the interactions occur; tools, such as physical or psychological dimensions including language; rules, which include norms, conventions, and policies; and division of labour, which is sometimes implicitly included in the interactions of subject and object (Ho et al., 2016). In turn, each of these nodes interacts with and is interacted upon by the subject and object as well as the other nodes. The nodes excluding the subject and object are sometimes referred to as context (Ho & Ng, 2017). Since this is a dynamic system, the constant interactions among elements result in tensions among the elements, which drive the system to dynamically change and progress (Ho & Ng, 2016). The focus of an activity system is on the interactions rather than the nodes.

This focus on interactions is implicit in Spillane’s (2008) reference to distributed leadership’s focus on practice rather than leaders: “Distributed leadership is first and foremost about leadership practice rather than leaders or their roles, functions, routines, and structures” (p. 144). The focus on interactions is echoed by Ho et al. (2017) who reference interactions of a network of individuals resulting in conjoint rather than individual agency; by Harris and DeFlaminis (2016) who also identify the shift from people to interactions; and by Tian et al. (2016) who state that Spillane’s work has “fundamentally changed the unit of analysis from people to practice” (p. 150).

Activity theory is not unanimously recognized as the theoretical base of distributed leadership. For example, Harris (2009a) comments that network theory and complexity theory can also be viewed as theoretical foundations for distributed leadership. Hargreaves and Fink (2009) identify network theory and communities of practice as foundations of distributed leadership in education.

Factors Influencing Implementation of Distributed Leadership

The nodes identified in activity theory as context (community, tools, rules, division of labour) play a very large role in the successful implementation of distributed leadership in schools. Factors that have been found to support distributed leadership include a climate of trust, formal leaders' support, strategic staff policy, and the use of artifacts such as tools and routines (Tian et al., 2016). School culture is key to the success of distributed leadership initiatives (Harris, 2009b). Of the dimensions of school culture, trust is identified as the most important (Dinham, 2009; Mascall et al., 2009; Seashore Louis et al., 2009). Without formal leaders' trust in staff (and, simultaneously, formal leaders having the trust of their staffs), distributed leadership initiatives frequently fail, or at least fail to reach their potential (Dinham, 2009; Mascall et al., 2009; Seashore Louis et al., 2009). Related to trust is leaders' willingness to share power to some extent (Gronn, 2009) and followers' willingness to accept some devolution of power to them.

Another dimension of school culture is related to teacher beliefs and teacher efficacy. Teacher beliefs are an important determinant of teacher practice (Mascall et al., 2009) as well as a reflection of teacher confidence and self-efficacy (Harris, 2009a; Mascall et al., 2009). Mascall et al. (2009) define a collective teacher-beliefs variable as *academic optimism*, consisting of trust, efficacy, and academic emphasis. In schools where teachers trust each other and their leaders, possess collective efficacy that they can accomplish positive results for their students, and emphasize a philosophy that all students can learn, distributed leadership initiatives have been found to result in positive effects (Mascall et al., 2009).

Teacher demand for change has been found to stimulate distributed leadership strategies (Seashore Louis et al., 2009), as has the language of messages concerning distributed leadership (Day, 2009), particularly how these messages are framed (Seashore Louis et al., 2009). If such messages are framed as responding to teacher demands for change, and the potential benefits of distributed leadership for both staff and students are emphasized, the probability of higher uptake by staff is increased. Similarly, if distributed leadership initiatives are coherent with broader school or district policies, there is a greater chance of broad acceptance.

Finally, there is consideration of school size, as smaller schools may lack leadership capacity among staff to facilitate distributed leadership strategies. However, staff in small schools often are familiar with each other and work cohesively on school-wide initiatives. Larger schools have increased capacity, but staff are often segregated into "silos" such as departments or curriculum groupings. This may mitigate against greater uptake among staff, although Dinham (2009) found that in large schools with a culture of leadership development and a high degree of trust, distributed leadership initiatives were frequently very successful.

Harris and DeFlaminis (2016) pragmatically summarize three dimensions of school environments critical to the success of distributed leadership: sound pedagogy, coherent curricula, and authentic literacy across all disciplines. Sound pedagogy reflects the academic optimism dimension; coherent curricula speak to policies and school goals; and authentic literacy

is both a broader goal of education as well as a more focused strategy for student success. If all three of these conditions are met, the probability of successful distributed leadership strategies is enhanced.

Benefits of Distributed Leadership

Many of the benefits ascribed to distributed leadership relate to development of staff. Foremost among these staff benefits is development of collaboration and relationship building (Carbone et al., 2017; Kelley & Dikkers, 2016; Liang & Sandmann, 2015; Min et al., 2016). Also recognized as a major benefit of distributed leadership activities is leadership capacity building (Halverson et al., 2014; Robinson, 2009); support of action research (Day, 2009; Seashore Louis et al., 2009); teacher motivation (Carbone et al., 2017; Mascall et al., 2009); development of new teaching practices (Camburn & Han, 2009; Robinson, 2009); trust-building between leaders and other staff (Min et al., 2016); and staff recognition (Halverson et al., 2014; Harris & Spillane, 2008). An additional benefit of implementing distributed leadership strategies is related to organizational change (Blitz & Modeste, 2015; Camburn & Han, 2009; Gedik & Bellibas, 2015; Harris & Spillane, 2008; Halverson et al., 2014; Kelley & Dikkers, 2016). Halverson et al. (2014) found increased staff buy-in for organizational changes when implemented through distributed leadership practices.

Min et al. (2016) found increased trust among staff when distributed leadership strategies were employed. This may be due to the greater sharing of power in schools when distributed leadership strategies are utilized (Carbone et al., 2017; Harris & Spillane, 2008; Robinson, 2009). Related to this power sharing is Halverson et al.'s (2014) finding that distributed leadership activities resulted in reduced need for supervision of staff, and the fostering of professional learning communities. Carbone et al. (2017) in turn found that implementing distributed leadership activities made accountability less demanding for the leader.

The most contentious impact of distributed leadership is on student achievement and school improvement, arguably the most important goals of a school. Camburn and Han (2009) state that distributed leadership is not a blueprint for instructional change, yet a wide variety of researchers assume that distributed leadership is a “good” thing for schools and students (Gedik & Bellibas, 2015; Kelley & Dikkers, 2016; Mascall et al., 2009). The assumed cause and effect relationship between distributed leadership and student achievement is problematic (Hallinger & Heck, 2009). While some claim a positive link between distributed leadership and school success (Harris & Spillane, 2008; Robinson, 2009), others state that the evidence is weak and the link is tenuous (Liang & Sandmann, 2015; Mascall et al., 2009; Spillane, 2008) and at best, the linkage is indirect (Hallinger & Heck, 2009; Halverson et al., 2014; Tian et al., 2016).

The Comprehensive Assessment of Leadership for Learning (CALL) is a multi-rater (Blitz & Modeste, 2015) survey of leadership practices that explicitly addresses distributed leadership as an exemplar of best practices in leadership (Halverson et al., 2014; Kelley & Halverson, 2012). The CALL separates leadership practices into five domains: focus on learning, monitoring teaching and learning, building nested learning communities, acquiring and allocating resources, and maintaining a safe and effective learning environment (Kelley & Halverson, 2012). The CALL focuses on the practices of leadership rather than opinions (Kelley & Halverson, 2012) and is “built upon the best school leadership practices whose impact has proven effective for improving teaching and learning” (Gedik & Bellibas, 2015, p. 102). However, the CALL focus on distributed leadership to the exclusion of any other leadership

practices is problematic given that the direct evidence of distributed leadership's influence on student achievement and school success is weak.

Barriers to Implementation of Distributed Leadership

Several of the factors identified as influencing the implementation of distributed leadership can be considered barriers. For example, leadership capacity in schools is often related to school size, with smaller schools having less capacity (Min et al., 2016). Similarly, school culture may mitigate against successfully implementing distributed leadership strategies (Kurt, 2016; Mohd et al., 2017), especially as it relates to bilateral trust—that is, leaders trusting staff and vice versa (Kurt, 2016; Tian et al., 2016). School organization, such as large schools organized into silos or departments, may inhibit the success of distributed leadership (Carbone et al., 2017; Kurt, 2016; Seashore Louis et al., 2009), as may internal school politics (Mohd et al., 2016) or external district policies that reflect diverse ends (Hallinger & Heck, 2009).

A major barrier to implementation may be teacher beliefs (Day, 2009; Mohd et al., 2016), particularly teacher self-efficacy beliefs (Mohd et al., 2016). If teachers do not believe they have the internal leadership capacity to participate in distributed leadership activities, attempts to implement such strategies become an emotional issue (Day, 2009). Some teachers may also believe that participation in distributed leadership initiatives will increase workloads beyond what is required to be effective teachers, and that such initiatives are beyond the scope of their professional responsibilities (Mohd et al., 2016).

Personal characteristics of leaders (especially principals) may also mitigate against successfully implementing distributed leadership (Miskolci et al., 2016; Mohd et al., 2016). The principals' respective philosophy (Min et al., 2016) and leadership style (Liang & Sandmann, 2015; Min et al., 2016) may be incompatible with distributed leadership. This is especially true when considering the power dynamics in a school. Distributed leadership requires some level of power sharing, which may not match the principal's philosophy or leadership style (Gronn, 2009; Liang & Sandmann, 2015; Lumby, 2016; Miskolci et al., 2016).

Other barriers may include lack of professional development around distributed leadership (Dinham, 2009; Hallinger & Heck, 2009; Kurt, 2016; Mohd et al., 2017); lack of time (Mohd et al., 2017); and a school's demographic or socio-economic status (Min et al., 2015). In general, the lack of any factor that is identified as an influencer in successfully implementing distributed leadership then becomes a barrier to implementation if that factor is not present.

Summary of Literature Review

Potential benefits of distributed leadership focus principally on staff development, including leadership development and increased cohesiveness and collaboration. The impact of distributed leadership on school success and student achievement is less clear, since this impact is at best indirect. Factors identified as context play a large role in both the implementation and the success of distributed leadership strategies. It is also clear from a review of the literature that there is a clear delineation between a more theoretical stance with respect to distributed leadership (the descriptive-analytical paradigm identified by Tian et al., 2016) and the enactment of distributed leadership (Tian et al.'s prescriptive-normative paradigm). This study took as its focus the prescriptive-normative view, asking school leaders to identify and rank possible distributed leadership strategies, and to identify benefits, risks, and barriers as viewed by

practising principals. As such, this study represents a definite focus on practices rather than roles and personalities. In this way, distributed leadership strategies that were identified as valuable can be used as exemplars for scaling up distributed leadership activities in schools.

THEORETICAL FRAMEWORK

This study employed the Benchmarking Framework for Distributed Leadership (Jones et al., 2014) to examine potential distributed leadership activities across five dimensions—engage, enable, enact, assess, and emergent:

- Engage: Engages a *broad range of participants* from all relevant functions, disciplines, groups and levels. This includes formal leaders, informal leaders and experts.
- Enable: Enabled through a *context of trust and a culture of respect* coupled with effecting change through *collaborative relationships*.
- Enact: Enacted by *the involvement of people*, the design of *processes*, the provision of *support*, and the implementation of *systems*.
- Assess: Evaluated by drawing on *multiple sources of evidence* of increased *engagement, collaboration, and growth in leadership capacity*.
- Emergent: Emergent and sustained through cycles of *action research* built on a participative action research methodology. (Jones et al., 2014, pp. 28–29; emphasis added)

The goals of distributed leadership initiatives are identified as increased engagement, increased collaboration, and increased leadership capacity within the system. This framework emphasizes that school culture plays a large role in successful distributed leadership initiatives, with collaboration, respect, trust, and broad participation necessary. It also points out that successful distributed leadership initiatives require structure and support, as well as continuous evaluation. While Jones et al.'s (2014) framework identifies action research as a key indicator of emergence, additional measures of emergence include breadth of staff involvement in distributed leadership activities; emergence of leadership among staff; and leadership capacity built among staff. Emergent leaders may comprise both informal and formal leaders, with the key being the emergence of leaders who have heretofore been relatively unrecognized for their leadership.

The distributed leadership activities examined in this paper were evaluated against the framework to determine how closely distributed leadership activities as practiced in schools addressed the five dimensions.

Research Questions

This study was undertaken to address the following research questions:

1. What does distributed leadership look like when enacted in schools, as viewed by school leaders?
2. What role do contextual factors such as school culture, school size, principal's philosophy, collaboration, and trust play in the success of distributed leadership initiatives?
3. How important is professional development and other supports in the success of distributed leadership initiatives?
4. What are the identified benefits of enacting distributed leadership activities within a school?

5. What barriers to implementation of distributed leadership initiatives exist within schools and how can these be mitigated?

Methodology

This study employed a mixed methods methodology (Teddle & Tashakkori, 2009) with elements of both qualitative and quantitative methodologies. Qualitative data consisted of survey questions inquiring about the definition of distributed leadership, benefits and barriers to implementation of distributed leadership, and the impact of school culture, principal's leadership style, and school leadership capacity. The data were analyzed using content analysis (Krippendorff, 2013). Quantitative data consisted of experts' rankings of various distributed leadership strategies, and the correlation between the level of implementation of distributed leadership in schools and the amount of professional learning provided to school leaders with respect to distributed leadership. Data were analyzed using Kendall's W coefficients of concordance (Okoli & Pawlowski, 2004) as well as Spearman's rank correlation coefficient (Zumbo & Zimmerman, 1993), and descriptive statistics including mean, median, mode, interquartile range, and standard deviation (Skulmoski et al., 2007). In addition, each distributed leadership strategy's median and mean ranking was compared to the strategy's scores on Jones et al.'s (2014) distributed leadership framework.

This study used a modified Delphi method (Okoli & Pawlowski, 2004). The Delphi method, developed by Dalkey and Helmer in 1963 for the RAND Corporation (Baker et al., 2006; Skulmoski et al., 2007), is a technique for developing and ranking solutions to a problem or issue. The Delphi method is an iterative process, typically involving three rounds (Franklin, 2011; Holey et al., 2007; Hsu & Sandford, 2007). All solicitations are anonymous throughout the method (Hsu & Sandford, 2007). In the first round the problem or issue is identified, and a pool of experts is solicited to brainstorm solutions to the problem or issue. Additional issues or constraints may also be identified. In the second round, the experts rank the potential alternative solutions based on some criteria. In the third round, the ranked alternatives are presented to the expert panel and the experts are asked if they wish to change any of their rankings, usually providing a rationale for the changes.

Issues with the Delphi method include appropriate identification of experts with respect to the problem under study (Baker et al., 2006; Franklin, 2011; Okoli & Pawlowski, 2004; Nayahangan et al., 2018); inclusion criteria (Baker et al., 2006); ranking criteria for alternatives (Baker et al., 2006); low response rates (Menke et al., 2018); time lags between rounds (Franklin, 2011); and appropriate data analysis tools (Meijering et al., 2013; Okoli & Pawlowski, 2004; Skulmoski et al., 2007). Finally, since responses are anonymous, the expert panel may not necessarily be identical across rounds (Baker et al., 2006).

In this study, a modified Delphi method was employed to iteratively solicit data from a panel of 49 principals and superintendents in four school districts in Ontario, Canada, on the topic of enacted distributed leadership in their schools. Given the expected response rate of 15% to 25% (Menke et al., 2018), the initial expert pool was expected to garner sufficient responses to enable meaningful analysis to be carried out. Board email addresses were used for all three rounds but placed under the blank carbon copy (BCC) icon to preserve anonymity.

To identify the pool participants as experts, the following inclusion criteria were used: all participants held principal's or superintendent's qualifications; all participants had successfully proceeded through the principal application process in their respective school districts; and all

participants had at least 1 full year of experience as a principal. Principals with less than 1 year's experience were excluded, as were other formal leaders such as department heads and curriculum lead teachers.

Round 1 asked participants to first state their definition or description of distributed leadership. They were then asked to rank some potential examples of distributed leadership, using a 10-point rating scale (10, 9 = excellent example of distributed leadership; 8, 7 = very good example of distributed leadership; 6, 5 = good example of distributed leadership; 4, 3 = weak example of distributed leadership; 2, 1 = not an example of distributed leadership). Finally in Round 1, participants were asked to provide other strategies that they considered examples of distributed leadership in practice.

In Round 2, participants were again given a list of potential distributed leadership strategies, including higher-ranked choices from the first round plus additional strategies provided by the expert responses from Round 1. The same rating scale as in Round 1 was used. Experts were also asked about the amount of professional development they had received with respect to distributed leadership, and what priority they perceived that their school district placed on distributed leadership.

The original intent of Round 3 was to have experts examine the ranked responses from Round 2 and consider changes to their personal rankings. However, due to the high degree of agreement in the rankings of the Round 2 choices, Round 3 was modified to ask about other dimensions related to distributed leadership: the impact of school size; school culture; principal's philosophy; principal's leadership style; benefits of distributed leadership; barriers to implementing distributed leadership; the impact of distributed leadership on the principal's need to monitor staff; how well professional development around distributed leadership was congruent with the school district's perceived priority for distributed leadership; and whether participants' volunteerism versus administrative identification impacted distributed leadership strategies.

RESULTS

Email solicitations for participation in Round 1 were sent to 49 principals and superintendents in four school districts. Response rates were: Round 1, 18 (37%); Round 2, 15 (31%); Round 3, 16 (33%). These response rates are considered high compared to expected response rates of 15% to 25% (Menke et al., 2018).

Definition of Distributed Leadership

The definitions and descriptions of distributed leadership identified concepts such as power/empowerment/authority/choice/voluntary (mentioned in 61% of definitions); growth (50%); expertise/capacity (44%); collaboration (39%); sharing (33%); interest (28%); school goals (22%); and need for resources (11%). We can see here a concatenation of attributes of distributed leadership (power, collaboration, sharing) together blended with goals of distributed leadership (growth, capacity, achieving school goals) as well as constraints or conditions for successfully implementing distributed leadership strategies (interest, resource needs). Somewhat surprisingly, several key dimensions of distributed leadership received very few mentions, such as engagement (only in 6% of definitions), school culture (6%), inclusion (6%), and consensus (6%) (Figure 1).

Figure 1*Word Cloud of Major Responses to Question 1*

Q1 Describe or define your conception of distributed leadership



Table 1 presents the distributed leadership strategies examined in this study. The table includes strategies initially provided by the researcher, as well as strategies given by responses by the expert panel.

Table 1*Descriptions of Distributed Leadership Strategies Examined in This Study*

Strategy	Description
Differentiated PD	PD sessions were separated into Novice, Intermediate, and Advanced categories. Teachers self-selected which session to attend. All sessions were led by teachers from the school, unless lack of capacity required bringing in an external leader.
Department head volunteers	When a new initiative was contemplated, volunteers from among the department heads were solicited to lead the initiative. The principal or vice-principal might sit on the committee, but the committee was led by a department head.
Lunch PLC	In a school with multiple lunch periods, departments were scheduled so that the entire department had the same lunch period. This facilitated informal and formal collaborations during lunch. It was expected that 30 minutes of one lunch period each month would be set aside for a formal department meeting.
Grade level long-term plans	Rather than each teacher submitting individual long-term plans, long-term plans were submitted by grade teams. Developing the plans required collaboration among the teachers in each grade.
Fireside chats	On a voluntary basis, teachers could sign up for a half-hour chat with the principal. Topics included teacher personal and professional plans; desire for leadership opportunities; and family and personal aspirations.
Mentors	Volunteer mentors for new teachers were provided with training, time release, and access to funding for professional development activities.
Teacher committee members	Teachers were expected to participate in at least one school committee. Teachers could be selected to be committee chairs.
Action research	A team of teachers identifies an issue, conducts research, collects evidence, and proposes solutions/actions for the school.

Administrative committees	Teachers and department heads were chosen for administrative committees such as budget and timetable. Staff could decline if they so chose.
School-wide expertise	Staff with school-wide expertise, such as special education, librarians, and physical education were chosen to lead student data collection projects for school improvement.
Board committees	Staff were identified to serve on board committees and/or spearhead new board initiatives within the school. Staff could decline if they so chose.
Special events	Staff were asked to lead special events such as Family Math Night, in-school Olympic Games, meet the teacher nights, and track and field days.
Staff sponsors	Teachers volunteered as staff sponsors for sports and clubs.

Strategy Rankings by the Expert Panel

Table 2 shows results for expert evaluations of distributed leadership strategies in Round 1. Several strategies were ranked significantly lower than others: grade-level long-term plans, teacher involuntary committee membership, and fireside chats. Further, some strategies (lunch PLC, fireside chats, grade-level long-term plans) had relatively high standard deviations, indicating a low level of consensus among the expert panel members.

Table 2

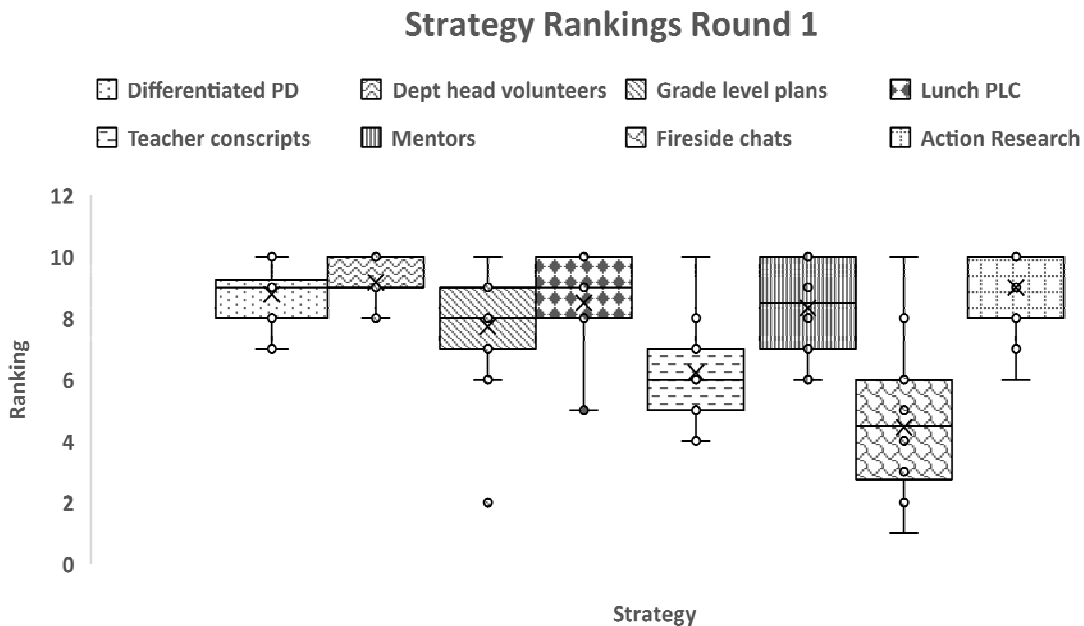
Descriptive Statistics for Round 1 Strategies

Strategy	Mean	Median	Mode	Interquartile range	Standard deviation
Differentiated PD	8.78	9.00	9.00	8.00–9.25	0.943
Dept. head volunteers	9.17	9.00	9.00	9.00–10.00	0.707
Grade level plans	7.72	8.00	9.00	7.00–9.00	1.809
Lunch PLC	8.50	9.00	10.00	8.00–10.00	1.790
Teacher committee	6.22	6.00	7.00	5.00–7.00	1.517
Mentors	8.33	8.50	10.00	7.00–10.00	1.495
Fireside chats	4.44	4.50	3.00	2.75–6.00	2.332
Action research	9.00	10.00	10.00	8.00–10.00	1.328

Figure 2 gives box and whiskers plots for the strategies ranked in Round 1 of the Delphi method. Some strategies (differentiated professional development and department head volunteers) showed significantly consistent within-strategy rankings.

Figure 2

Box and Whiskers Plot for Round 1 Strategies



For Round 1 of the Delphi method, there was a relatively low level of concordance across strategies among the experts who responded, with a Kendall’s W of 0.335. This perhaps is reflective of the varied and diverse definitions of distributed leadership provided by the expert panel respondents.

For Round 2, several strategies from Round 1 were included again for ranking, along with additional strategies provided by members of the expert panel. Low-ranking strategies from Round 1 were deleted from consideration. Similar to Round 1, some strategies had relatively high within-strategy standard deviations (differentiated professional development, staff sponsors, board committee membership, special-event sponsors). Staff sponsors stood out as having the lowest mean score.

Table 3

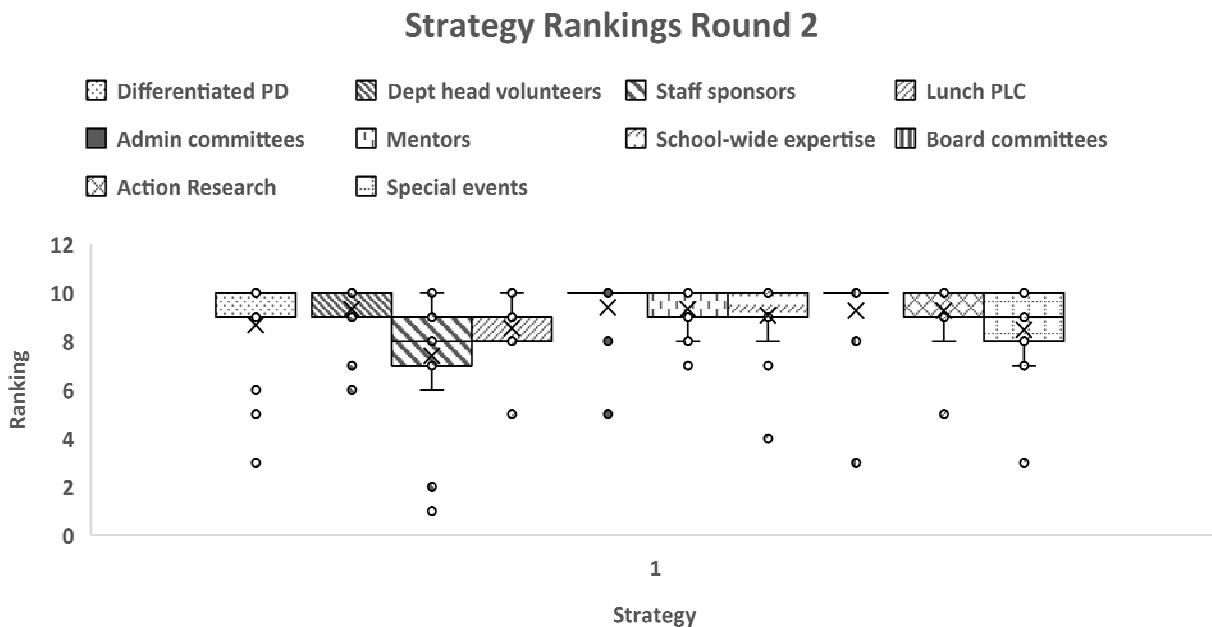
Descriptive Statistics for Round 2 Strategies

Strategy	Mean	Median	Mode	Interquartile range	Standard deviation
Differentiated PD	8.67	10.00	10.00	9.00–10.00	2.193
Dept. head volunteers	9.33	10.00	8.00	9.00–10.00	1.234
Staff sponsors	7.40	8.00	9.00	7.00–9.00	2.613
Lunch PLC	8.53	9.00	10.00	8.00–9.00	1.552
Admin committees	9.40	10.00	10.00	10.00–10.00	1.404
Mentors	9.33	10.00	10.00	9.00–10.00	0.976
Board committees	9.27	10.00	10.00	10.00–10.00	1.870
Action research	9.27	10.00	10.00	9.00–10.00	1.335
School-wide expertise	9.07	10.00	10.00	9.00–10.00	1.668
Special events	8.47	9.00	9.00	8.00–10.00	1.807

The box and whiskers plots for Round 2 (Figure 3) showed much tighter within-strategy interquartile ranges, but more outliers. Staff sponsors and special-event sponsors had the widest interquartile ranges, demonstrating a lower lack of agreement that these strategies were strong examples of distributed leadership.

Figure 3

Box and Whiskers Plot for Round 2 Strategies



For Round 2, there was again a low level of consensus among the expert panel across strategies, with a Kendall's W of 0.513. While somewhat higher than the Round 1 Kendall's W of 0.355, the value was still very low. This may again reflect the diverse definitions of distributed leadership used by the expert panel to rank the strategies. This conjecture concerning diverse definitions of distributed leadership is reinforced by the large number of outliers shown in Figure 3. It also should be noted that due to the anonymous nature of expert panel responses, a direct comparison to Round 1 values is not possible since those experts responding to Round 2 of the Delphi method may not be identical to the round one respondents.

When asked to identify the single best example of distributed leadership from among the strategies ranked in Rounds 1 and 2, action research, differentiated professional development, and selection to board committees were each identified by 25% of respondents. These strategies also ranked highly on the theoretical framework (see Theoretical Framework section).

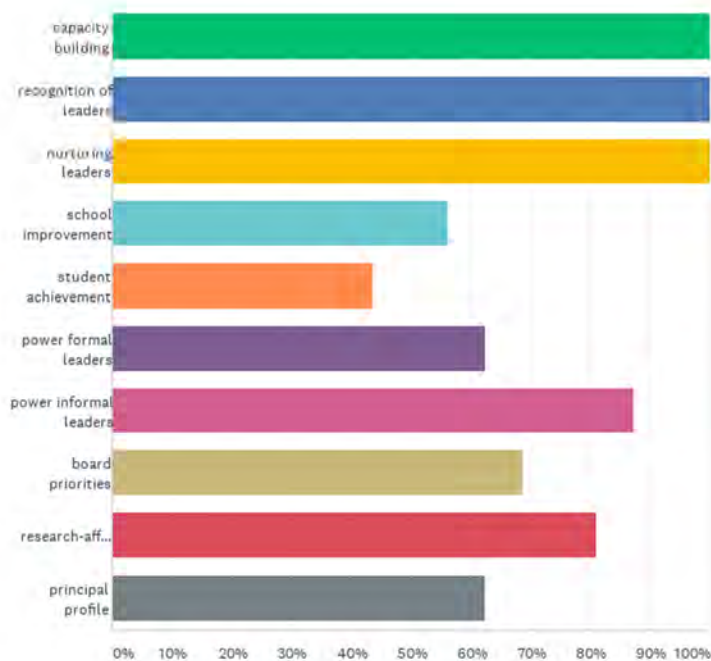
Benefits of Distributed Leadership

The expert panel was unanimous in identifying three major benefits of distributed leadership: leadership capacity building, recognition of formal and informal leaders, and nurturing of formal and informal leaders. There was strong agreement that distributed leadership increased the power of informal leaders, and to a lesser extent, increased the power of formal leaders. Another benefit identified by over 80% of respondents was that employing distributed leadership strategies was an example of a research-affirmed strategy in action (Figure 4).

Figure 4

Benefits of Distributed Leadership

Q10 What are the benefits of employing distributed leadership? (Check all that apply)



There was less agreement concerning benefits to students. Barely 50% of respondents cited employing distributed leadership strategies as being related to school improvement, and less than 50% claimed that distributed leadership strategies enhanced student achievement. Other benefits mentioned included supporting board priorities and enhancing the profile of the principal.

Factors Influencing Successful Implementation of Distributed Leadership

There was unanimous agreement on several factors influencing successful implementation of distributed leadership in their schools: school culture, principal’s philosophy, and principal’s personal leadership style (Figures 5 through 7).

Figure 5

Impact of School Culture on Implementing Distributed Leadership

Q3 What impact does school culture have on distributed leadership in your school?

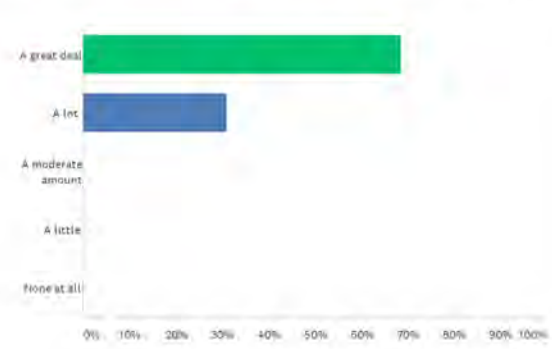


Figure 6

Impact of Principal's Philosophy on Implementing Distributed Leadership

Q5 What impact does a Principal's philosophy have on implementing distributed leadership?

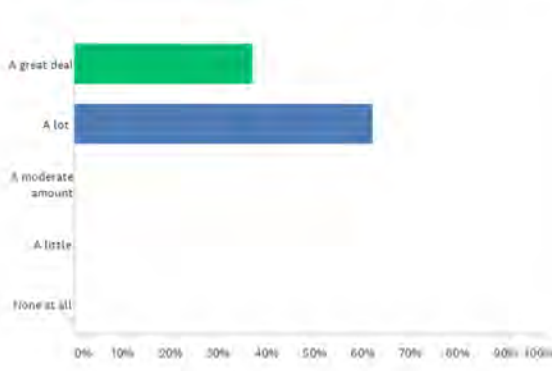
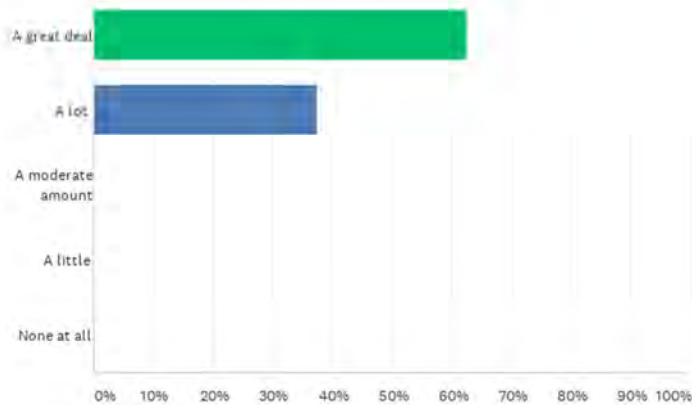


Figure 7

Impact of Principal’s Leadership Style on Implementing Distributed Leadership

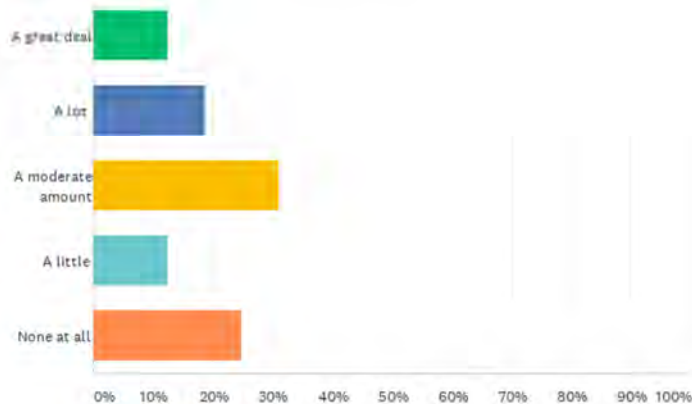
Q6 Does a Principal's personal leadership style influence her/his ability to implement distributed leadership?



Responses related to school size were mixed, with 31% stating that school size had a large or significant impact, while 38% responded that school size had little or no influence (Figure 8).

Figure 8 - Impact of School Size on Implementing Distributed Leadership

Q2 What impact does school size have on a school's ability to employ distributed leadership?

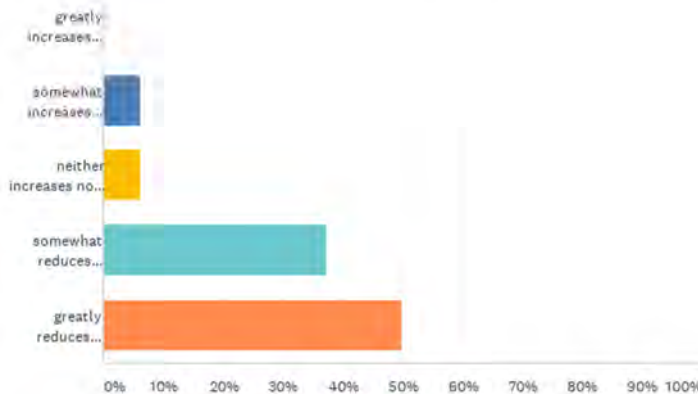


Somewhat mixed results were found when the expert panel was asked what impact distributed leadership had on the principal’s need to monitor staff (Figure 9). While 87% stated that implementing distributed leadership strategies reduced the amount of supervision of staff required, 13% stated that implementing such strategies would somewhat or greatly increase the need for supervision. These results may indicate that in some schools there was a lack of trust

between principals and their staff. When a high level of trust exists in the school, principals are more likely to reduce staff supervision once leaders are identified to address a specific initiative.

Figure 9

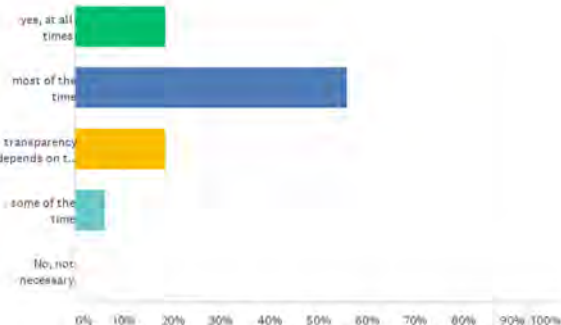
Impact of Implementing Distributed Leadership on Supervision of Staff
 Q7 How does implementing distributed leadership impact the Principal's need to monitor/supervise staff?



A somewhat similar result was found in response to a question about whether a principal needs to be transparent to their staff with respect to the use of distributed leadership strategies (Figure 10). While 75% stated that transparency was required all or most of the time, 25% disagreed. It is possible that this result was also impacted by trust issues between principals and their staff.

Figure 10

Need for Transparency When Implementing Distributed Leadership
 Q8 Does a Principal need to be transparent to his/her staff with respect to the use of distributed leadership?



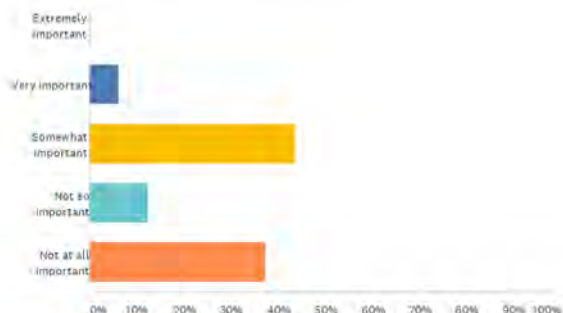
Finally, a contradiction was found concerning a question about potential leaders being volunteers versus being chosen by the principal (Figure 11). Fifty percent of respondents stated that volunteerism was important, while the other 50% responded that volunteering was of little or no importance. However, when one of the strategies related to this was ranked by the experts

(teachers being expected to serve on at least one school committee), the strategy was ranked very low by the majority of respondents. This result, related to teacher choice and power, is considered further in the Discussion section.

Figure 11

Do Potential Leaders Need to Be Volunteers?

Q1 How important is it that potential leaders be volunteers rather than be identified by administration?



Barriers to Implementing Distributed Leadership

Principals’ leadership style was cited as the greatest potential barrier to successful implementation of distributed leadership strategies in schools (33% of respondents). The second most cited barrier to implementation was a school culture that did not support distributed leadership (20%). Other barriers identified by more than one respondent were lack of leadership capacity in the school, and the principal’s lack of trust in his/her staff. One respondent cited lack of time to implement distributed leadership strategies.

Another possible barrier to implementation was related to professional development with respect to distributed leadership. While 67% of respondents stated that distributed leadership was a priority in their boards, 80% of the expert panel stated that they had received little or no professional development on distributed leadership and how to implement distributed leadership strategies in their schools. When asked explicitly how well the training they received in distributed leadership matched their board’s priority with respect to distributed leadership, 53% stated that the match was not a good match or a very poor match. Therefore, either the principals were incorrect with their assessment of the board priority given distributed leadership, or their boards were deficient in providing the professional development necessary for successful implementation of distributed leadership strategies.

Comparison of Strategies to the Theoretical Framework

All strategies included in Round 1 or Round 2 were evaluated against Jones et al.’s (2014) framework, with five dimensions: engage, enable, enact, assess, emergent (Table 4).

Table 4*Strategies Evaluated With Jones et al.'s (2014) Framework*

Strategy	Engage	Enable	Enact	Assess	Emergent	Rank
Differentiated PD	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	1
Lunch PLC	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	1
Action research	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	1
Mentors	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	1
Admin committees	★★	★★★★★	★★★★★	★★★★★	★★★★★	5
School-wide expertise	★★	★★★★	★★★★★	★★★★★	★★★★★	6
Grade level plans	★★	★★★★★	★★★★★	★★★★★	★★	7
Dept. head volunteers	★★	★★★★	★★★	★★★★	★★★★	8
Fireside chats	★★★★	★★★★	★★★	★★	★★	9
Special event leads	★★	★★	★★	★★★★	★★	10
Staff sponsors	★★★★	★★	★★	★★	★★	11
Teacher committee expected	★	★	★	★	★	12

Note. Number of stars (1 to 5) indicate the degree to which the strategy aligns with the framework.

It can be seen that strategies ranked highly by the study participants also ranked highly on Jones et al.'s (2014) framework. In particular, differentiated professional development, lunch professional learning communities, action research, and mentoring all ranked very highly across all five categories in the framework. Alternatively, compelling teachers to participate on school committees ranked very low on the framework and this strategy was also ranked very low by principals. Strategies such as staff sponsors for clubs, special event leads, and fireside chats, while important for school functioning, do not represent distributed leadership activities, and are ranked lower on the framework, as well as by the principals who responded in this study.

DISCUSSION

The Delphi method employed in this study was shown to be very efficient in soliciting input from the expert panel of principals, with higher than anticipated response rates. By soliciting principals' input from four different school districts, a broad cross-section of opinions was obtained. Two of the school boards in this survey were large, with a wide variety of school sizes and varied demographics. The other two boards were smaller, with mainly smaller schools and relatively similar demographics. In choosing these school districts, this study sought to obtain information across a variety of demographics and sizes of schools. Somewhat surprisingly, the opinions obtained were quite consistent. It should be noted that since all surveys were anonymous, there was no way of determining respondents' school boards, so no definitive comment can be made about principals' backgrounds or their schools' characteristics.

How Is Distributed Leadership Enacted in Schools? [RQ1]

The diversity of distributed leadership strategies employed in schools illustrates the myriad ways distributed leadership can be enacted. Two strategies are particularly noteworthy: differentiated professional development, and lunch professional learning communities. Both strategies were ranked very highly by principals and also ranked very high when measured against the theoretical framework. These strategies were not overtly about distributed leadership, and both had purposes beyond leadership, with school goals of staff development. However, both strategies provided an opportunity to nurture and support emergent leaders in a natural and holistic way.

What Roles Do Contextual Factors Play in the Success of Distributed Leadership Initiatives? [RQ2]

For the most part, principals' responses concerning the importance of contextual factors echoed research findings. School culture (Seashore Louis et al., 2009) and trust (Dinham, 2009) were both seen by principals as key to implementing distributed leadership, as was a collaborative stance by staff. While not explicitly identified by principals as part of school culture, teacher beliefs and teacher self-efficacy are cited by research (Harris, 2009a; Mascall et al., 2009) as key factors. These dimensions are related to teacher leadership capacity, which was identified by the expert panel as both a factor and a potential barrier to implementing distributed leadership initiatives. Capacity may in turn be related to school size (Dinham, 2009). As noted in the Results section, principals were split on the impact of school size, with approximately the same percentage stating that school size was a key factor and a similar percentage saying that school size had little or no influence on the success of distributed leadership implementation. Principals did note that the messaging around distributed leadership was important, affecting teacher buy-in and teacher self-efficacy beliefs. This is also consistent with research (Seashore Louis et al., 2009) as is the potential for teachers providing impetus for distributed leadership initiatives through demands for change (Day, 2009).

Related to the trust and power sharing dimension, principals noted that it was important for emergent leaders to be involved voluntarily and not compelled to participate. The trust dimension was also reflected in principals' responses to questions about the need for transparency and the need to monitor staff. If trust is present for both the staff and the principal, then transparency is assumed, and staff supervision requirements are reduced.

How Important Is Professional Development in the Success of Distributed Leadership Initiatives? [RQ3]

The expert panel identified a discrepancy between school board priorities with respect to distributed leadership and the supports and professional development that the boards provided. As noted earlier, two-thirds of the principals stated that distributed leadership was a board priority, but 80% said that they had received little or no professional development on this topic, and over half said that the match between board priorities and training that they had received was a poor to very poor match. This may have contributed to insufficient or contradictory messaging from the boards to their principals, and consequently, from the principals to their staffs, resulting in low uptake among the staff for distributed leadership initiatives; this is consistent with research around messaging and teacher beliefs (Day, 2009), teacher self-efficacy beliefs (Mohd et al., 2016), and lack of time for such initiatives (Mohd et al., 2016). There is abundant literature that identifies the need for professional development with respect to distributed leadership if such initiatives are to be successful (Dinham, 2009; Hallinger & Heck, 2009; Kurt, 2016).

What Are the Identified Benefits of Enacting Distributed Leadership Activities? [RQ4]

There was significant agreement on the main benefits of distributed leadership between the responses of the expert panel and research, particularly with respect to leadership capacity building (Halverson et al., 2014) and recognition of staff (Harris & Spillane, 2008). Interestingly, the expert panel cited increased recognition of both informal leaders and formal leaders as a benefit of distributed leadership. This may be because they identified strategies such as department head participation in in-school and board initiatives as important distributed leadership activities. Harris and Spillane (2008) cite recognition of informal leaders but they do not mention increasing recognition of leaders already in formal leadership positions.

Expert panel responses identify teacher motivation and trust-building as significant benefits. In the literature, trust is seen as a critical component of successfully implementing distributed leadership initiatives (Dinham, 2009), but lack of trust is often cited as a barrier to implementing distributed leadership (Kurt, 2016) rather than distributed leadership strategies being seen as a trust-building opportunity. Related to the trust issue is the need/opportunity for power sharing within the schools. The expert panel identified power sharing with both formal and informal leaders as a benefit, as does the research (Carbone et al., 2017).

Increased collaboration among staff is seen in the literature as a major benefit of distributed leadership (Kelley & Dikkers, 2016). While not explicitly mentioned by principals as a benefit, the importance of collaboration was reflected in their stated descriptions or definitions of distributed leadership, which clearly indicates that collaboration among staff was seen as a major benefit of distributed leadership. Similarly, action research is identified in the literature (Seashore Louis et al., 2009), and this stance was supported through the expert panel ranking action research as one of the best examples of a distributed leadership strategy.

Principals' ranking of the impact of distributed leadership on school success and student achievement was consistent with the literature (Hallinger & Heck, 2009). This impact was identified by less than 50% of the respondents as a benefit of implementing distributed leadership, and research (Liang & Sandmann, 2015; Mascall et al., 2009) indicates that evidence supporting this claim is weak, and at best, indirect (Halverson et al., 2014).

Principals did not mention the impact of distributed leadership on organizational change

(Blitz & Modeste, 2015) and the implementation of new teaching practices (Camburn & Han, 2009), which both have supporting research evidence outside this study. One benefit identified by principals that is not mentioned in the literature was that implementing distributed leadership practices enhanced the profile of the principal. This somewhat self-serving benefit may indicate that principals felt the need to be recognized for implementing district priorities around distributed leadership. This may be related to the conflict seen between board priorities and supporting professional development, discussed above.

What Are the Barriers to Implementation of Distributed Leadership Initiatives? [RQ5]

Principals and researchers were found to be in agreement concerning the barriers to implementing distributed leadership initiatives. As noted earlier, the lack of a factor identified as important to distributed leadership implementation resulted in its identification as a barrier. Principals cited school culture (Kurt, 2016), leadership capacity (Min et al., 2016), trust (Tian et al., 2016), and teacher beliefs—especially as related to workload and professional responsibilities (Mohd et al., 2016)—as important barriers.

Responses by principals stated that major barriers to implementation were related to principals' philosophy and leadership style. Expert panel responses noted that if distributed leadership clashed with a principal's philosophy of leadership, or with the principal's leadership style, successful implementation of such strategies was unlikely without dramatic changes in the principal's stance. They saw this as unlikely, especially related to how distributed leadership activities were framed by the district messaging. These comments are consistent with research related to personal characteristics of leaders (Liang & Sandmann, 2015; Miskolci et al., 2016; Min et al., 2016).

Summary of Discussion

Table 5 compares the research related to distributed leadership with the responses of the expert panel of principals. While principals' responses were generally in agreement with prior research, they tended to emphasize very hands-on concepts, such as the impact of distributed leadership on staff supervision, the issue of transparency, the need for trust, and the willingness of leaders to share power. They pragmatically commented that distributed leadership was a necessary step in educational leadership, given the high level of complexity, growing demands for accountability, and increased demands on leaders' time. They noted that to effect organizational change it is necessary to modify teacher beliefs, especially teacher self-efficacy with respect to leadership capacity. Several principals commented that by changing beliefs before behaviours, they hoped to move their staffs forward and impact the achievement of their students.

Table 5

Comparison of Research With Principals' Responses

Research	Distributed leadership	Practice
Collaboration is key; includes many dimensions; vague and not well defined	Definition of distributed leadership	Collaboration is key; includes many dimensions; clear but diverse
Factors/context		
Very important	School culture	Very important
Very important	Trust	Very important
Very important	Teacher beliefs and self-efficacy	Important
Somewhat important	Principal's philosophy	Very important
Somewhat important	Principal's leadership style	Very important
Mixed messages	School size	Mixed messages
	Benefits	
Major benefit	Leadership capacity building	Major benefit
Major benefit	Recognize informal leaders	Major benefit
Not mentioned	Recognize formal leaders	Major benefit
Major benefit	Support action research	Major benefit
Major benefit	Trust-building	Major benefit
Mixed results	Student achievement/school success	Mixed results
Not mentioned	Enhance the profile of the principal	Benefit
Benefit	New teacher practices	Minor mention
Implied	Utilize research-affirmed practices	Benefit
Major benefit	Increase collaboration	Major benefit
	Barriers	
Critical	School culture	Critical
Very important	Leadership capacity	Very important
Very important	Trust	Very important
Very important	Teacher beliefs	Important
Minor mention	Workload/time	Mention
Important	Principal's philosophy	Very important
Important	Principal's leadership style	Very important
Important	Professional development	Very important
Important	Demographics/socio-economic factors	Not addressed

CONCLUSION

This modified Delphi study followed Spillane's (2008) focus on practice rather than people or formal leadership roles. By asking practising principals to identify and rank distributed leadership strategies, and to identify benefits and barriers to implementing distributed leadership practices, the study provided additional clarity to exactly what constitutes distributed leadership activities in schools. This study adds to the prescriptive-normative (Tian et al., 2016) literature on distributed leadership as actually practised in schools. In addition, the study identifies several issues for further study and for action by school boards.

One of these issues is the notable perceived disconnect between distributed leadership as a board priority and the amount and value of professional development provided to principals and other formal and informal leaders. While most respondents indicated that distributed leadership was a board priority, few respondents indicated that there was sufficient and/or useful professional development provided by their boards. Further, almost none of the respondents indicated that professional development opportunities for staff in informal leadership positions had been made available with respect to distributed leadership. If distributed leadership is truly a priority for school boards, then this lack of support must be addressed.

A related issue is principals' philosophy and leadership styles, identified as barriers to successful implementation of distributed leadership. If distributed leadership is indeed a board priority, principals must be given additional training on both the potential benefits of distributed leadership and how such strategies could be implemented within their schools. This also emphasizes that board messaging must clearly identify the reasons for implementing distributed leadership, and these messages must be transmitted to principals and through them to all school staff.

A second issue with respect to implementing distributed leadership strategies is school size. While smaller school staffs may be more cohesive and collaborative, they may lack sufficient leadership capacity to implement distributed leadership. Alternatively, larger schools may have sufficient leadership capacity, but they are often siloed into departments or team structures that mitigate against broader, whole-school collaborations. Methods must be found to better integrate large staffs and encourage wide participation in activities that promote collaboration and encourage latent leadership opportunities.

Education and teaching are identified in the organizational literature as professional bureaucracies (Mintzberg, 1989). In these structures, school boards and departments of education set broad priorities, but implementation is the responsibility of school staffs. In this, individual teachers have wide latitude in exactly what occurs in their classrooms and their schools. To effect change, teachers and principals must be given multiple, clear examples of how new initiatives can positively impact their teaching practice and their students. The distributed leadership strategies outlined in this paper provide valid, tested examples of such strategies. These and similarly vetted examples need to be disseminated across school systems to promote scaling up of distributed leadership.

Finally, the contentious impact of distributed leadership on school success and student achievement must be further investigated. Since the impact of distributed leadership on these two outcomes is indirect, studies need to be undertaken to find ways of measuring the impact of distributed leadership on these two important goals of education. While the effect of distributed leadership on staff development and growth seems clear, ways must be found to ensure that such growth results in positively impacting student growth as well.

The results of this study not only validate the efficacy of Jones et al.'s (2014) theoretical framework utilized in the study but also provide principals with a framework against which to compare other distributed leadership strategies. By evaluating potential distributed leadership strategies against the framework, it is more probable that strategies ranking highly on the framework's five dimensions will be successful. In addition, if a proposed strategy is seen as deficient in one or more of the five categories (engage, enable, enact, assess, emergent), the strategy could be modified to increase its probable success.

REFERENCES

- Baker, J., Lovell, K., & Harris, N. (2006). How expert are the experts? An exploration of the concept of “expert” within Delphi panel techniques. *Nurse Researcher*, *14*(1), 59–70. <https://doi.org/10.7748/nr2006.10.14.1.59.c6010>
- Blitz, M., & Modeste, M. (2015). The differences across distributed leadership practices by school position according to the comprehensive assessment of leadership for learning (CALL). *Leadership and Policy in Schools*, *14*(3), 341–379. <https://doi.org/10.1080/15700763.2015.1024328>
- Camburn, E., & Han, S. (2009). Investigating connections between distributed leadership and instructional change. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 25–46). Springer. https://doi.org/10.1007/978-1-4020-9737-9_3
- Carbone, A., Evans, J., Ross, S., Drew, S., Phelan, L., Lindsay, K., Cottman, C., Stoney, S., & Ye, J. (2017). Assessing distributed leadership for learning and teaching quality: A multi-institutional study. *Journal of Higher Education Policy and Management*, *39*(2), 183–196. <https://doi.org/10.1080/1360080X.2017.1276629>
- Cherkowski, S., & Brown, W. (2013). Towards distributed leadership as standards-based practice in British Columbia. *Canadian Journal of Education*, *36*(3), 23–46. <https://eric.ed.gov/?id=EJ1057976>
- Day, C. (2009). Capacity building through layered leadership: Sustaining the turnaround. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 121–138). Springer. https://doi.org/10.1007/978-1-4020-9737-9_7
- Diamond, J., & Spillane, J. (2016). School leadership and management from a distributed perspective: A 2016 retrospective and prospective. *Management and Education*, *30*(4), 147–154. <https://doi.org/10.1177%2F0892020616665938>
- Dinham, S. (2009). The relationship between distributed leadership and action learning in schools: A case study. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 139–156). Springer. https://doi.org/10.1007/978-1-4020-9737-9_8
- Franklin, E. (2011). Greenhouse facility management experts identification of competencies and teaching methods in support secondary agriculture education instructors: A modified Delphi study. *Journal of Agricultural Education*, *52*(4), 150–161. <https://doi.org/10.5032/jae.2011.04150>
- Fusco, T., O’Riordan, S., & Palmer, S. (2015). Authentic leaders are... Conscious, competent, confident, and congruent: A grounded theory of group coaching and authentic leadership development. *International Coaching and Psychology Review*, *10*(2), 131–148. <https://tinyurl.com/ybl4q99g>
- Gedik, S., & Bellibas, M. (2015). Examining schools’ distributed instructional leadership capacity: Comparison of elementary and secondary schools. *Journal of Education and Training Studies*, *3*(6), 101–110. <https://doi.org/10.11114/jets.v3i6.1056>
- Goksoy, S. (2016). Analysis of the relationship between shared leadership and distributed leadership. *Eurasian Journal of Educational Research*, *65*, 295–312. <https://tinyurl.com/ybv8fdxz>
- Gronn, P. (2009). From distributed leadership to hybrid leadership practice. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 197–218). Springer. https://doi.org/10.1007/978-1-4020-9737-9_11

- Hallinger, P., & Heck, R. (2009). Distributed leadership in schools: Does system policy make a difference? In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 101–120). Springer. https://doi.org/10.1007/978-1-4020-9737-9_6
- Halverson, R., Kelley, C., & Shaw, J. (2014). A CALL for improved school leadership. *Phi Delta Kappan*, 95(6), 57–60. <https://doi.org/10.1177%2F003172171409500612>
- Hargreaves A., & Fink, D. (2009). Distributed leadership: Democracy or delivery? In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 181–196). Springer. https://doi.org/10.1007/978-1-4020-9737-9_10
- Harris, A. (2009a). Coda. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 241–244). Springer. https://doi.org/10.1007/978-1-4020-9737-9_13
- Harris, A. (2009b). Distributed leadership: What we know. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 11–24). Springer. https://doi.org/10.1007/978-1-4020-9737-9_2
- Harris, A., & DeFlaminis, J. (2018). Distributed leadership in practice: Evidence, misconceptions and possibilities. *Management in Education*, 30(4), 141–146. <https://doi.org/10.1177%2F0892020616656734>
- Harris, A., & Spillane, J. (2008). Distributed leadership through the looking glass. *Management in Education*, 22(1), 31–34. <https://doi.org/10.1177%2F0892020607085623>
- Ho, J., & Ng, D. (2017). Tensions in distributed leadership. *Educational Administration Quarterly*, 53(2), 233–254. <https://doi.org/10.1177%2F0013161X16681630>
- Ho, J., Chen, D., & Ng, D. (2016). Distributed leadership through the lens of activity theory. *Educational Management Administration and Leadership*, 44(5), 814–836. <https://doi.org/10.1177%2F1741143215570302>
- Holey, E., Feeley, J., Dixon, J., & Whittaker, V. (2007). An exploration of the use of simple statistics to measure consensus and stability in Delphi studies. *BMC Medical Research Methodology*, 7, Art. 52. <https://doi.org/10.1186/1471-2288-7-52>
- Hsu, C., & Sandford, B. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research, & Evaluation*, 12(10), 1–8. <https://doi.org/10.7275/pdz9-th90>
- Jones, S., Hadgraft, R., Harvey, M., Lefoe, G., & Ryland, K. (2014). *Evidence-based benchmarking framework for a distributed leadership approach to capacity building in learning and teaching*. Office for Learning and Teaching, Department of Education. <https://ro.uow.edu.au/sspapers/592/>
- Kelley, C., & Dikkers, S. (2016). Framing feedback for school improvement around distributed leadership. *Educational Administrative Quarterly*, 52(3), 392–422. <https://doi.org/10.1177%2F0013161X16638416>
- Krippendorff, K. (2013). *Content analysis: An introduction to its methodology* (3rd ed.). Sage.
- Kurt, T. (2016). A model to explain teacher leadership: The effects of distributed leadership model, organizational learning and teachers' sense of self-efficacy on teacher leadership. *Educational Science*, 41(183), 1–28. <https://dx.doi.org/10.15390/EB.2016.5081>
- Liang, J., & Sandmann, L. (2015). Leadership for community engagement—A distributed leadership perspective. *Journal of Higher Education Outreach and Engagement*, 19(1), 35–63. <https://files.eric.ed.gov/fulltext/EJ1061871.pdf>
- Lumby, J. (2016). Distributed leadership as fashion or fad. *Management in Education*, 30(4), 161–167. <https://doi.org/10.1177%2F0892020616665065>

- Mascall, B., Leithwood, K., Strauss, T., & Sacks, R. (2009). The relationship between distributed leadership and teachers' academic optimism. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 81–100). Springer. https://doi.org/10.1007/978-1-4020-9737-9_5
- Meijerling, J. V., Kampen, J. K., & Tobi, H. (2013). Quantifying the development of agreement among experts in Delphi studies. *Technological Forecasting & Social Change*, 80(8), 1607–1614. <https://doi.org/10.1016/j.techfore.2013.01.003>
- Menke, D., Stuck, S., & Ackerson, S. (2018). Assessing advisor competencies: A Delphi method study. *NACADA Journal*, 38(1), 12–21. <https://tinyurl.com/y93bf5sp>
- Min, S., Modeste, M., Salisbury, J., & Goff, P. (2016). Heeding the CALL (comprehensive assessment of leadership for learning): An inquiry into instructional collaboration among school professionals. *Journal of Educational Administration*, 54(2), 135–151. <https://doi.org/10.1108/JEA-07-2014-0075>
- Mintzberg, H. (1989). The structuring of organizations. In D. Asch & C. Bowman (Eds.), *Readings in strategic management* (pp. 322–352). Palgrave. https://doi.org/10.1007/978-1-349-20317-8_23
- Miskolci, J., Armstrong, D., & Spandagou, I. (2016). Teachers' perceptions of the relationship between inclusive education and distributed leadership in two primary schools in Slovakia and New South Wales (Australia). *Journal of Teacher Education for Sustainability*, 18(2), 53–65. <https://doi.org/10.1515/jtes-2016-0014>
- Mohd, L., Lee, T., Borhandden, M., Hadijah, M., Mohd, J., Haruzuan, N., Mohd, S., & Yasin, H. (2016). Challenges in distributed leadership: Evidence from the perspective of headteachers. *International Journal of Educational Management*, 30(6), 848–863. <https://doi.org/10.1108/IJEM-02-2015-0014>
- Nayahangan, L., Stefanidis, D., Kern, D., & Konge, L. (2018). How to identify and prioritize procedures suitable for simulation-based training: Experiences from general needs assessments using a modified Delphi method and a needs assessment formula. *Medical Teacher*, 40(7), 676–683. <https://doi.org/10.1080/0142159x.2018.1472756>
- Okoli, C., & Pawlowski, S. (2004). The Delphi method as a research tool: An example, design considerations and applications. *Information & Management*, 42, 15–29. <https://doi.org/10.1016/j.im.2003.11.002>
- Robinson, V. (2009). Fit for purpose: An educationally relevant account of distributed leadership. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 219–240). Springer. https://doi.org/10.1007/978-1-4020-9737-9_12
- Seashore Louis, K., Mayrowetz, D., Smiley, M., & Murphy, J. (2009). The role of sensemaking and trust in developing distributed leadership. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 157–180). Springer. https://doi.org/10.1007/978-1-4020-9737-9_9
- Skulmoski, G., Hartman, F., & Krahn, J. (2007). The Delphi method for graduate research. *Journal of Information Technology Education*, 6, 1–21. <http://www.jite.org/documents/Vol6/JITEv6p001-021Skulmoski212.pdf>
- Spillane, J. (2008). Distributed leadership. *The Educational Forum*, 69(2), 143–150. <https://doi.org/10.1080/00131720508984678>
- Spillane, J., Camburn, E., Pustejovsky, J., Stitzel Pareja, A., & Lewis, G. (2009). Taking a distributed perspective in studying school leadership and management: The challenge of

- study operations. In A. Harris (Ed.), *Distributed leadership: Different perspectives* (pp. 47–80). Springer. https://doi.org/10.1007/978-1-4020-9737-9_4
- Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research*. Sage.
- Tian, M., Risku, M., & Collin, K. (2016). A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus. *Educational Management, Administration and Leadership*, 44(1), 146–164. <https://doi.org/10.1177%2F1741143214558576>
- Zumbo, B. D., & Zimmerman, D. W. (1993). Is the selection of statistical methods governed by level of measurement? *Canadian Psychology/Psychologie canadienne*, 34(4), 390–400. <https://doi.org/10.1037/h0078865>