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# Distributed Leadership Theory for Investigating Teacher Librarian Leadership

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*The ever-evolving and complex technological environment of 21st century schools and the new leadership capacities that accompany it have signified a paradigm shift in leadership. Distributed leadership has emerged as a possible method for dealing with the increased responsibilities and pressures placed upon school principals. Distributed leadership theory is proposed as a means of in-depth analysis of the practice of school leaders in order to understand the dynamics of leadership practice and proposes that leadership function is stretched over the work of a number of individuals (Spillane, 2006). This theory, the concepts, propositions it contains, and the research evolving from it present a means for exploring and analyzing the leadership activities, actions, and roles of teacher librarians. The applicability of distributed leadership to teacher librarian leadership will be demonstrated through this report of research that applied distributed leadership theory to investigate the enablers and barriers to teacher librarian technology integration leadership.*

## Introduction

The complex technological environment of 21st century schools and the new leadership capacities that accompany it have signified a paradigm shift in leadership (Anderson & Dexter, 2005; Bush, 2013; Gronn, 2008; Harris, 2010; Kowch, 2009). As the knowledge, skills, and abilities required of leaders increase in complexity, there has been a necessitated shift away from the one sole leader towards models of shared leadership, where the functions of technology leadership in schools will need to be shared, or distributed, across a group of staff members to collectively employ an adequate level of expertise (Anderson & Dexter, 2005; Bennett, 2008; Gronn, 2002; Harris & Spillane, 2008; Hulpia, Devos, Rosseel, & Vlerick, 2012; Kowch, 2009; Tan, 2011). In recent years distributed leadership has gained prominence in countries across the world as a model of shared leadership (e.g. Bolden, 2011; Bush & Glover, 2013; Duif et al., 2013; Harris, 2012; Mullick, Sharma, & Deppeler, 2013; Tian, Risku, & Collin, 2015; Torrence, 2013; Williams, 2011). Leadership, from the distributed perspective, is viewed as an “emergent property of a group or network of interacting individuals” that suggests an “openness of the boundaries of leadership” and in which “varieties of expertise are distributed across the many, not the few” (Bennett, Harvey, Wise, Woods, 2003, p. 7). For example, in schools, technology leadership consists of a shared set of responsibilities that may be distributed among the principal, technology specialist, teacher librarian, and other teacher leaders. Distributed leadership theory promotes this conjoint agency where individuals collaborate and bring ideas and expertise together so that their collective action achieves more than their individual actions.

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Grover and Glazier (1986) define the purpose of a theory as “to explain and predict relationships among phenomena, to give the practitioner an understanding of specific relationships, and to guide research” (p. 230) and in this case the observed interactive phenomena is leadership practice. Leadership refers to “activities tied to the core work of the organization that are designed by organizational members to influence motivation, knowledge, affect or practices of other organizational members or that are understood by organizational members as intended to influence their motivation, knowledge, affect, or practices” (Spillane, 2006, pp. 11-12). This perspective asserts that leadership is about more than just people in formal leadership positions and attempts to acknowledge all, formal or informal, who participate in leadership practice (Spillane, 2006). These informal leaders are teacher leaders. Teacher leaders are those teachers that assume informal and formal leadership responsibilities outside the classroom, create a participatory environment where all learn from each other, and engage with others in working together for student learning (Barth, 2001; Elmore, 2000; Harris & Muijs, 2005; Katzenmeyer & Moller, 2009; Spillane et al., 2002; York-Barr & Duke, 2004). Teacher leadership goes beyond the scope of the teacher leading students in a classroom; teachers are empowered within a culture of learning, taking authority from pedagogical expertise, and focusing on improving instruction and student learning (Murphy, 2007; Smylie, Conley, & Marks, 2002; York-Barr & Duke, 2004). Based on this definition, the leadership practices of teacher librarians are essentially those of teacher leaders (Johnston, 2012). Distributed leadership provides a solid theoretical foundation for research on leadership practices within a school and can illuminate the multiple dimensions of leadership that occur in a school, including those of teacher librarians.

## **Distributed Leadership Theory**

For the past several decades the focus of leadership research has centered on the individual stand-alone formal leader, yet in recent years the concept of shared, dispersed, or distributed leadership has emerged and received increased research attention (Gronn, 2002a; Spillane, 2006; Torrance, 2013; Tian et al., 2015). The impetus for this paradigm shift is attributed to the disillusionment with the individual leader and the increased demands on educational leaders in the ever-changing world of education (Elmore, 2000; Gronn, 2002a; Hulpia et al., 2012; Spillane, 2006). Leadership demands have increased so that they are greater than one individual, and distributed leadership theory promotes a situation not where one individual does something to others, but one where multiple people work together in such a way that they pool together their abilities and expertise to facilitate an outcome that is greater than the sum of their individual actions (Gronn, 2002a; Harris, 2004; Spillane, Halverson, & Diamond, 2004). While traditional educational leadership research focuses on identifying a particular set of characteristics present in those who are deemed effective leaders, and then identifying potential leaders who possess those traits, the research from the past decade places emphasis on the importance of context and the constitution of leadership practice. It is in this context that distributed leadership has emerged as a viable framework (Beauchum & Dentith, 2004; Bolden, 2011; Camburn, Rowan, & Taylor, 2003; Spillane et al., 2004; Spillane et al., 2011; Tian et al., 2015).

A variety of models and definitions of distributed leadership exist, but most share two common propositions: (1) that leadership is a shared process in which several individuals take part and (2) that leadership emerges from the interactions of the different individuals within a group where essential skills and knowledge are dispersed among many (Bennett et al., 2003; Harris, 2004; Spillane, 2006; Spillane, 2015). Distributed leadership places an emphasis upon maximizing expertise of teachers and building capacity within the organization (Harris, 2008; 2011; Gronn, 2002a; Spillane Diamond, Burch, Hallett, Jita, & Zoltners 2002). Distributed leadership can provide

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leadership that is “fluid and emergent, rather than a fixed phenomenon” (Gronn, 2000, p. 324), where teachers can become leaders at various times and work collaboratively to pool their expertise, vertically and laterally (Muijs & Harris, 2007).

Spillane (2006) proposes distributed leadership as an analytical framework and a diagnostic tool to help researchers and practitioners explore *how* the practice of leadership is “stretched over” (p. 23) multiple leaders, followers, and the situation or for “understanding school leadership practice” (p. 32). The *situation* is an integral component of leadership practice and Spillane asserts that the contextual situation of leadership defines leadership practice and influences interactions between leaders and followers and that the situation and structures through which people act determine *how* leadership practice is fundamentally enabled or constrained (Spillane, 2015).

### ***Foundations of Spillane’s Distributed Leadership Theory***

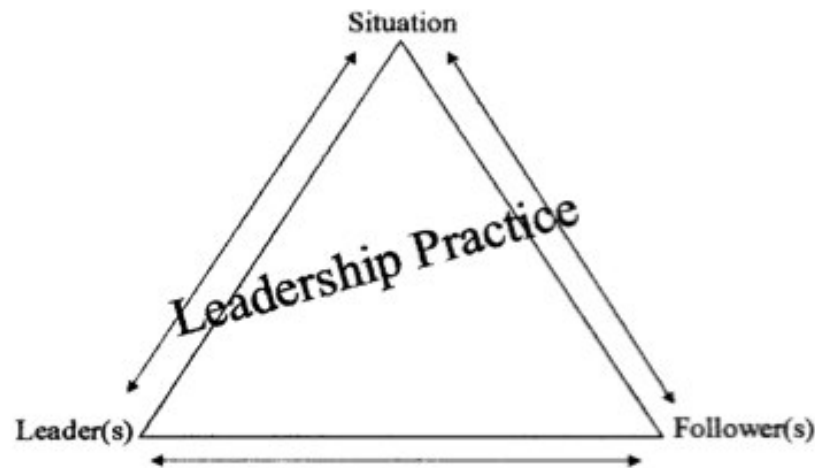
Spillane’s theory of distributed leadership draws from and builds upon previous work by Elmore and Gronn. Elmore (2000) defines distributed leadership through expertise, or the knowledge, skills, interest, predispositions, or aptitudes, that people within the organization either possess or develop and introduces the idea that distributed leadership is based on the assumption that all members in the organization can lead where they have expertise and therefore leadership can be shared. It is the “complement of competencies that all persons in the organization possess that allow for a fluid leadership” (p. 15). Elmore believed that in any organized system, people specialize or develop skills that are related to their interests, aptitudes, prior knowledge and roles, which determine the framework for their participation in distributed leadership.

Gronn (2002b) defines distributed leadership as an “emergent property of a group or network of interacting individuals” (p. 317). Gronn identifies two types of distributed leadership, as numerical action where leadership of an organization is broadly dispersed and as a concertive collaborative action. The dispersed action is the most well known version of distributed leadership, but Gronn defines this as merely a “superficial” level. Gronn’s (2002b) view is that the activity is what links people and structure together. Gronn asserts that leadership is a form of “concerted action” in which everyone works together in that “they pool their expertise” toward completion of a task or accomplishment of a goal or that the whole is more than the sum of its parts (Gronn, 2002a). The principle idea is that leadership revolves to those who have the expertise in that particular context at that point in time and that there can be several formal and informal leaders in any one organization (Gronn, 2000).

### ***Spillane’s Theory of Distributed Leadership***

The most contemporary perspective of distributed leadership theory and the one utilized for the purposes of this research is that developed by Spillane (2006), who bases his theory of distributed leadership on three propositions: leadership practice is the central concern; leadership practice is distributed over leaders, followers, and the school’s situation or context; and the situation defines leadership practice and is defined through leadership practice (see Figure 1). Spillane (2006) integrates social distribution theory as well, as illustrated by the belief “that leadership function is *stretched* [original emphasis] over the work of a number of individuals and the task is accomplished through the interaction of multiple leaders” (p. 20) and notably shifts from investigating leaders to investigating leadership practices. In a rebellion against the one heroic leader, this theory promotes a situation not where an individual does something to others, but one where people work together in such a way that they pool together their abilities and expertise to facilitate an outcome that is greater than the sum of their individual actions (Spillane et al., 2004).

Spillane (2006) defines this as the “leader plus aspect.” Distributed leadership takes the view that expertise is distributed across many people, not just a few and this opens boundaries for leaders to emerge from a variety of individuals who are spread throughout an organization (Bennett et al., 2003; Timperley, 2005; Watson & Scriber, 2007, Spillane, 2015). In a distributed approach, Spillane (2006) asserts that research must start with identifying and observing leadership practice and then “begin to explore the interactions among the leaders, the followers and their situation” (p. 84). Spillane promotes his distributed perspective as a means of simply better understanding the meaning and nature of leadership in schools, a theoretical foundation to study leadership practice and help practitioners understand school leadership practice.



**Figure 1. Spillane's constituting elements of leadership practice (Spillane, Halverson, & Diamond, 2004, p. 11).**

**Leadership practice.** Building on ideas and premises of Gronn, Spillane (2006) defines distributed leadership as more than just shared leadership; it is about leadership practice. Most research pays little attention to the practice of leadership (Heck & Hallinger, 1999), but focuses on what leaders do rather than how they do it or the thinking and enacting of leadership. Spillane et al. (2004) assert that leadership practices provide insights into how school leaders act and the leadership routines within the structure of the school. Leadership practices may include the tasks or activities used in the performance of a routine; who is responsible for the tasks; what tools are necessary to perform the tasks; and the leadership function or goals the tasks are designed to address (Spillane, 2006).

**Expertise.** Building on Elmore's (2000) work, distributed leadership is premised on people leading when and where they have expertise. Distributed leadership theory looks beyond those in formal leadership positions, not focusing on the individual, but the practices of leadership, and asserts leadership needs to be distributed to those who have, or can develop, the knowledge or expertise required to carry out the leadership tasks to contribute to the improvement of the organization (Spillane, 2006). Spillane et al. (2004) define leadership practice as “the activities engaged in by leaders, in interaction with others in particular context around specific tasks” (p. 5) and that different school members emerge to take on leadership functions as dictated by the situation and their own interests and expertise. This leads to a dynamic pattern of distributed leadership in which the leadership can be flexible to change over time and across context depending on the needs and challenges that may arise in the school; it is these needs that determine who leadership is distributed to, not a hierarchical system (Elmore, 2000; Harris, 2008; Harris & Muijs, 2005, Spillane, 2015).

A distributed leadership perspective recognizes the varied skills and expertise of individuals and engages multiple individuals, both in formal and informal leadership positions in leadership practices. The teacher leadership literature reflects the importance of expertise in the content area as an enabler for leadership involvement, and teacher leaders often describe teacher leadership that is based in classroom expertise rather than formal leadership roles and point to the value of teacher-created knowledge and expertise when it comes to sharing knowledge and leading others (Crowther, Kaagan, Ferguson, & Hann, 2002; Tschannen-Moran & Barr, 2004). Expertise that stems from subject area knowledge as well as instructional strategies is an essential element in teacher leadership. It is this expertise in the subject taught and how to teach it that gives teachers credibility and allows them to operate as teacher leaders (Lieberman & Miller, 2005).

*To whom is leadership distributed?* It is well documented in the research that multiple individuals perform leadership work in schools and that responsibility for leadership functions is typically distributed among three to seven people, including administrators and specialists (Camburn et al., 2003; Spillane, 2006, 2011, 2015; Spillane, Camburn, & Pareja, 2007; Spillane, Diamond, & Jita, 2003). Distributed leadership proposes that it is the task or the problem that determines how leadership is distributed to those who have the knowledge or expertise to contribute to leadership tasks and to the common goal of the organization (Gronn, 2002a; Leithwood, Day, Sammons, Harris, & Hopkins, 2006; Spillane, 2006, 2015). “[L]eadership practice emerges in and through the interactions of leaders, followers, and situation” (Spillane et al., 2001, p. 27), therefore indicating that there is no one defining way to say who leadership is distributed to, or when, or where it will occur (Spillane, 2006; Spillane et al., 2003). It is impractical and unwise for the principal to hold and distribute all knowledge needed to lead a school through the improvement process. Instead, those with talents for the tasks, no matter what positions they hold in the school, need to become leaders to advance a school's improvement goals (Camburn et al., 2003; Spillane et al., 2003). Teachers “construct others as influential leaders based on their interactions with them as well as conversations with colleagues about these individuals” (Spillane, 2006, p. 48). This can be based on forms of “human, cultural, social, and economic capital” (p. 48) and defines who is viewed as an influential leader and who emerges as a teacher leader within a school.

*How is leadership distributed?* Leadership is inevitably distributed in schools, but *how* the leadership activities are distributed and who decides how they are distributed can be very different from school to school (Spillane, 2006; Spillane et al., 2007; Timperley, 2005). The overarching assumption is that distributed leadership is “not restricted to any particular pattern and cannot be prescribed in advance but emerges within the organization in order to solve problems or to take action” (Harris, 2008, p. 175). Distributed leadership theory recognizes that many people have the potential to exercise leadership in any organization but the key to success will be the way that leadership is facilitated, orchestrated, and supported (Elmore, 2000; Gronn, 2002a; Harris, 2008; Spillane, 2015).

Research suggests that there are three mechanisms that can determine how leadership is distributed. These include by design, by default, and by crisis, but they are not mutually exclusive (Spillane, 2006). Through deliberate design decisions, formal and informal leaders can influence the distribution of responsibility for leadership tasks. This “institutionalized practice” involves the establishment of formal committees and structures (Gronn, 2002b, Bush & Glover, 2012). The distribution of leadership is not always planned and tasks can arise by default when formal leaders or teacher leaders identify an area in which leadership is lacking and fill a gap when the principal lacks the prerequisite skills or expertise in that particular area (Crowther et al., 2002;

Hulpia, 2012; Spillane, 2006). Therefore, the distribution of leadership among leaders evolves over time as individuals get to know one another's skills and weaknesses, develop trust, and create what Gronn (2002b) calls "intuitive working relations" that contribute to the distribution of leadership (p. 430). Finally, a school may encounter an unanticipated crisis or challenge, and formal leaders and teachers leaders will have to work together to take on a particular leadership task to address the problem (Spillane, 2006; Spillane & Orlina, 2005). Gronn (2002b) refers to this impromptu distribution of leadership as "spontaneous collaboration" (p. 430). Distributed leadership implies that the practice of leadership is one that is shared within formal and informal contexts. This could be formal school committees or a randomly formed group to address an issue. This distribution depends on the situation and time teachers are working together to solve particular sets of pedagogical problems within the school, they are engaging in leadership practice (Harris, 2008). As described by Spillane (2001), distributed leadership is an "interactive web" of leaders and followers who periodically change roles as the circumstances warrant (p. 23).

**Situation.** Often researchers treat aspects of the situation as external to practice, but Spillane (2015) theorizes that the situation is one of three equal "core constituting or defining elements" of leadership practice along with leaders and followers (Figure 1). In treating the situation as one of the three core constituting elements, Spillane finds that the situation defines practice from inside and that the aspects of the situation "are the medium for human interactions framing and focusing how leaders and followers interact," thereby defining leadership practice (p. 282). Situation and practice are thus closely intertwined in a distributed leadership approach. Depending on the activity or situation, school staff can move in and out of leadership roles (Spillane & Healey 2010), and this supports leadership practices to take a shape (Pitts & Spillane 2009).

The situation is considered an integral part of distributed leadership: the "situation or context does not simply affect what school leaders do as some sort of independent or interdependent variable(s): it is constitutive of leadership practice" (Spillane et al., 2004, p. 20-21). Yet, this influence is also reciprocal in that leadership interactions can affect the structure and individuals that constitute that organization. An organization's internal context, its organizational culture and history, plays a significant role in leadership development (Bennett et al., 2003; Bolden, 2011). Additionally distributed leadership, when not executed properly or when exclusively implemented in a "top-down" approach, can be interpreted as misguided delegation or even coercion (Hatcher, 2005). Whether a school setting has a collaborative culture or a history of teachers accustomed to working in isolation can influence the development of distributed leadership, as can values held in the school such as trust, collaboration, and collective efficacy. Also, in education, the external context must be considered, including the surrounding community and school district, as well as state and federal policy (Leithwood et al., 2006).

In examining patterns of distribution within schools, current research finds that while there are many sources of leadership in schools, the principal remains the central source (Louis, Leithwood, Wahlstrom, & Anderson 2010). Distributed leadership does not imply that the formal leadership structures within organizations are removed, but instead, assumes that there is a prevailing relationship between vertical and lateral leadership processes, and it also means that those in formal leadership roles are the gatekeepers to distributed leadership practice in their schools (Bush, 2011; Harris, 2008; Torrance, 2013). Spillane proposes that it is the job of the principal to guide and bring the pieces of the organization together in a productive relationship, to coordinate and connect the leadership efforts of many, or lead the leaders.

### ***Limitations to Distributed Leadership***

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Although the concept of distributed leadership has gained popularity and empirical research using this theory is growing, the possible limitations to this theory must be considered. One of the biggest challenges is Spillane's assumption that principals understand how position and relationships may be used positively or negatively in school culture to determine the leadership practices that can occur (Hatcher, 2005). Spillane's (2006) framework also largely neglects the principal's role as the formal leader and the responsibilities or circumstances under which the principal must exercise leadership. Moreover, distributed leadership, when not executed properly or when exclusively implemented in a "top-down" approach, can be interpreted choosing to involve only those who support the administration agenda and exclude those who do not (Hatcher, 2005; Torrance, 2013). This may involve principals creating conditions that intentionally limit the distribution of leadership which limit collective leadership through the exclusion of certain individuals or groups from full participation (Bolden, 2011; Hatcher, 2005). Distributed leadership is unlikely without focused leadership on the part of the school's formal leader (Leithwood et al., 2007; Harris, 2013; Hulpia, 2012; Torrance, 2013).

It is also a challenge to understand the extent to which *situation* actually constitutes and defines leadership practice through interactions between leaders and followers. Distributed leadership, however, not only involves tasks to get done, but also involves true delegation of responsibility and authority. The design of leadership practice must be intentional and ongoing. Defining how leadership is distributed, who takes on the charge, and how the situation defines leadership practice is one of the biggest challenges ahead for distributed leadership in education (Spillane, 2006).

There are challenges to operationalizing distributed leadership, which have been identified in the literature. The most difficult challenge is the job distinctions between followers and leaders (Gronn, 2000; Spillane & Orlina, 2005; Timperley, 2005). Teacher leadership falls into two categories: informal and formal. Informal teacher leadership is work that is done in the classroom (lesson planning or management of the classroom and school), while formal teacher leadership is work that includes department chairs, committee chairs, and other positions that require a move away from the classroom. Many researchers acknowledge the difficulty of studying leadership that is distributed because many interactions take place informally and privately (Bolden, 2011; Harris, 2008; Harris, 2013; Timperley, 2005).

Spillane focuses on interactions between leaders, followers, and the situation, but the relationship with student learning is more ambiguous. Spillane (2006) asserts that "leadership practice connects with instructional practice" and that "teaching and learning should be a central concern" (p. 90-91), but also believes that leadership practice itself must be explored and investigated before attempting to measure effectiveness on student learning. Yet, Timperley (2005) warns that leadership should be distributed only when it provides better quality leadership that contributes to assisting teachers in providing more effective instruction to their students and improves student performance since this is the overall goal of any educational practice, including leadership (Heck & Hallinger, 1999; Leithwood et al., 2009). Currently distributed leadership is a term widely used, but in addition to being plagued by ambiguity, there is a significant lack of empirical research connecting it to school improvement or student improvement (Bennett et al., 2003; Bolden, 2011; Crawford, 2012; Gronn, 2000; Harris, 2013; Leithwood et al., 2006; Mayrowetz, Murphy, Louis, & Smylie, 2007; Spillane et al., 2004). In order to address this limitation, current research has shifted focus to examine the relationship between distributed leadership and organizational outcomes (e.g. Harris, 2012; Harris, 2013; Hulpia et al, 2012; Leithwood, Mascall, & Strauss, 2009; Louis et al., 2010; Spillane, 2011; 2015).

## Implications for Teacher Librarian Research

Spillane proposes his descriptive distributed leadership theory as an analytical tool that researchers and practitioners can use to frame investigations of school leadership for “understanding school leadership practice” (Spillane & Diamond, 2007, p. 148) and has been widely applied to teacher leaders (e.g. Harris, 2004; Harris & Muijs, 2005; Hulpia, 2012; Katzenmeyer & Moller, 2009; Muijs & Harris, 2007; Lieberman & Miller, 2005; Spillane & Healey, 2010). In examining the concepts and propositions of distributed leadership theory it is apparent they relate to teacher librarians and can provide guidance examining the leadership practices of teacher librarians, an area in which there is a dearth of research (e.g. Branch & Oberg, 2001; DiScala & Subramaniam, 2011; Everhart, 2007; Everhart & Dresang, 2007; Everhart et al., 2012; Johnston, 2011, 2012; Underwood, 2003). The technologically advanced environment of the 21st century school has made an impact on leadership practices in education and has afforded teacher librarians an opportunity to enact technology leadership roles, but the research in this area is even more limited (e.g. Branch-Mueller & de Groot, 2011; Everhart, Mardis, Johnston, 2012; Hughes-Hassel & Hanson-Baldauf, 2008; Johnston, 2012). While distributed leadership has been applied in LIS research in the areas of public libraries and academic libraries (e.g. Goulding & Walton, 2014; Hernon, Giesecke, & Alire, 2008; Hernon & Schwartz, 2008; Jange, 2012; Pan & Howard, 2010), the application to school libraries is extremely scarce (Rojtas-Milliner, 2006; Johnston, 2011).

The applicability of distributed leadership to teacher librarian leadership research will be demonstrated through this report of research that applied distributed leadership theory to investigate the enablers and barriers to teacher librarian technology integration leadership. This research was based on the results from *The School Library Media Specialist and Technology Integration Survey*. This survey consisted of three sections and collected the following data: 30 demographic questions covering areas such as staffing levels, education and experience of the teacher librarians, and Internet access; 60 statements related to technology integration activities; and three open-ended questions that asked respondents to discuss enablers, barriers, and other factors that influenced their leadership practices (Everhart et al., 2012). This report of the findings will focus on three specific concepts of the distributed leadership perspective that are of importance to teacher librarian research: leadership practice, expertise, and the situation, which are examined in detail as they apply to the technology leadership practices of teacher librarians.

### **Leadership Practice**

Distributed leadership shifts the focus of analysis from leaders to leadership activity and Spillane (2006) concludes that the collaborative nature of the work of teacher leaders represents the idea and ideals of distributed leadership, thus making it applicable to teacher librarians, who’s leadership practices are essentially those of teacher leaders (Johnston, 2011). Distributed leadership promotes opportunities for teachers to become leaders at various times to contribute to the goals of the school (Muijs & Harris, 2007), which aligns to the job expectations found in the U.S. guidelines, *Empowering Learners* (AASL, 2009). As a conceptual lens, distributed leadership aids in the study of study school-embedded leadership practice in order to help practitioners understand school leadership practice. This perspective provides a lens to examine and understand the leadership practices like that of teacher librarians due to the informal and embedded nature of these leadership practices.

In a distributed approach, Spillane (2006) asserts that research must start with identifying and observing leadership practice and then “begin to explore the interactions among the leaders, the followers and their situation” (p. 84). The 60 statements from *The School Library Media Specialist*

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and *Technology Integration Survey* set out and defined the technology integration leadership practices of teacher librarians, therefore taking the initial step to identify the leadership practices of teacher librarians in the area of technology integration (Everhart et al., 2012). This research took the next step, according to Spillane (2006), to explore the interactions among the leaders, the followers and their situation, more specifically the enablers and barriers of the situation that teacher librarians experience when enacting a leadership role in technology integration. The data was obtained through the U. S. teacher librarian participant responses to the open-ended questions that asked respondents to discuss barriers, enablers, and other factors that influenced their leadership practices. Content analysis of the open-ended responses illuminated the factors that enabled teacher librarians' involvement in technology integration leadership practices as well as the factors that constrained them. The first open-ended question asked respondents, "Think back about the activities in the preceding statements, specifically those in which you are fully involved. What enables you to be involved at that level?" and the second open-ended question asked, "Again, think about those activities addressed earlier. Are there any activities in which you'd like to be more involved than you are right now? If so, please tell us about the barriers that hinder your involvement" (PALM, 2009).

### **Expertise**

This concept of people in the organization leading where they have expertise is what first garnered the researcher's attention to distributed leadership. A distributed leadership perspective recognizes the varied skills and expertise of individuals and engages multiple individuals, both in formal and informal leadership positions in leadership practices. This type of leadership is particularly appropriate for teacher librarians due to their unique technology knowledge and skills, a pedagogical background, expansive curricular knowledge, and experience developing partnerships with teachers (Asselin, 2005). This distinctive combination of knowledge, skills, and expertise often places teacher librarians in positions of leadership especially in the area of technology integration. The connection of expertise to leadership practice in distributed leadership theory places teacher librarians in the position to lead students and teachers through technology integration expertise paired with pedagogical knowledge (Johnston, 2011).

In examining the enablers from this research, "personal expertise and knowledge" was found to be fourth most frequently occurring factor that enabled teacher librarians enacting technology integration leadership. Conversely, several respondents also spoke of insufficient expertise as a barrier. The respondents reveal a unique combination of curriculum and technology expertise as enabling their involvement in technology integration leadership through sharing this expertise and working with teachers to identify instructional needs and recognize technologies that will serve as a tool in the learning process. This finding is also reflected in Massey's (2009) research that finds that National Board Certified school librarians demonstrate a high level of technology integration abilities and self-confidence that has developed with based on their expertise. Hanson-Baldauf and Hughes-Hassell (2009) also note that teacher librarians indeed feel they have sufficient technology knowledge and expertise. Numerous participants spoke of their "personal skills," "knowledge" and "expertise" in technology use and integration that enabled their involvement, but also include expertise in other areas such as instruction, assessment, and accommodating diverse learning styles as types of expertise that enable leadership involvement.

This research reveals the important connection to expertise; in order to assume a leadership role in technology integration it is important to have the technology expertise necessary, including

the knowledge and skills to integrate technology into instruction, therefore demonstrating the connection to expertise that is so prominent in distributed leadership theory.

**To whom is leadership distributed?** Research identifies that the individuals or groups providing leadership in schools include a mix of principals, assistant principals, teachers in a formal leadership role (e.g., grade or subject team leaders), and those with no formal leadership position such as teachers with specialist positions (e.g., literacy specialists, technology specialists, counselors, teacher librarians), subject area experts, mentor teachers, and other teachers informally recognized by peers as influential (Louis, et al., 2010). Rojtas-Milliner (2006) found this connection to distributed leadership and expertise in teacher librarians in teaching information literacy. Spillane (2006) concludes that leadership practice in schools is structured differently across school subjects and calls for more research to include other subject area contexts.

Teacher librarians are in position to share their expertise with colleagues in order to benefit teachers in their technology integration efforts and contribute to optimal student learning. Respondents mentioned leading by sharing their knowledge and expertise through leading professional development for teachers, working with teachers to create technology infused lessons, and modeling effective technology integration in their own instruction. This expertise is a form of human and social capital that positions teacher librarians as leaders, in that as educators, they understand how to approach teaching various subject matters with technologies and connect them to student learning. This culture of collaboration through a distributed leadership model promotes the concept that all are contributing to and responsible for the collective learning of all students. Rojtas-Milliner (2006) found that administrators “seemed to share leadership and respect the expertise of others” and viewed the teacher librarian as an “in-house consultant” based on her knowledge and expertise (p. 133). The teacher leadership literature also finds that fellow teachers value and respect expertise and subject area knowledge (Harris, 2011, 2012; Muijus & Harris, 2007, Murphy, 2007; Torrance, 2013).

It has become essential for schools to distribute leadership and allow others within the school, based on their expertise, to participate in technology leadership (Anderson & Dexter, 2005; Dexter, 2007, 2008; Tan et al., 2011) and this research asserts that teacher librarians have the knowledge and expertise to contribute to school improvement in the 21st century, through technology integration leadership and it is this expertise that positions the teacher librarian within a distributed leadership framework.

**How is leadership distributed?** As discussed earlier, research suggests that there are three mechanisms that can determine how leadership is distributed: by design, by default, and by crisis (Spillane, 2006). Through deliberate design decisions, formal and informal leaders can influence the distribution of responsibility for leadership tasks. This includes providing leadership opportunities and structures that enable the development of teacher leaders, including teacher librarians. This influence of the formal leader, the school principal as very evident in this research, with “opportunities for a leadership role and responsibilities” as the most frequent enabler of technology integration leadership. Teacher librarian respondents commented on being appointed to various committees and asked to serve in a variety of formal leadership positions, such as chairing a specific committee. In these formally designated leadership positions, others beyond the school administrators take responsibility for leadership tasks and these formal structures can serve as a way to enable teacher librarians to take on leadership responsibilities, but conversely can exclude teacher librarians, with this research finding that the second most frequent barrier, second only to time, in enacting a leadership role was the “exclusion from leadership role and responsibilities.” Respondents expressed their frustration commenting “technology decisions are made by those at the top with no input from the school librarian” and on being “excluded from the school leadership team and therefore decision-making.”

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The distribution of leadership can arise by default when there is an area in which school leadership is lacking and those that have the prerequisite skills or expertise in that particular area can assume leadership roles. Respondents spoke of assisting their school principals (who did not possess the expertise needed) in decision making regarding technology implementations, purchasing, and policies describing respectful relationships where leadership was shared and their opinion was valued, with responses such as “my principal values my opinion in technology-related matters” and “my principal appreciates and uses my experience.” They also commented on attending grade level meetings with teachers and offering ideas for integrating technology into a lesson.

Recognizing this area where leadership expertise is lacking and taking responsibility for leadership to fill this vacuum allows for teacher librarians to establish their potential as sources of leadership due to expertise in this area and illustrate the valuable contribution they as individuals can make to the collective effort (Johnston, 2012). This is also an evolving relationship that teacher librarians must create with those with whom they teach; as collaboration occurs and people discover each other’s strengths and weaknesses, they will know whom to approach in the future for expertise in a certain area (Harris, 2008). This relationship was found as an enabler with respondents talking about collaborative relationships with teachers and being respected and valued by teachers for their expertise.

The prominence of relationships with others in the school building was revealed in this research as a critical factor in either facilitating or constraining leadership, illustrating the importance of this element of distributed leadership. This aligns with Spillane’s (2006) description of a recursive effect among the leaders, the situation, and the followers, and how leaders’ practices are distributed across the social and the situational context. Leadership practice is important in what aspects of technology get implemented or not in a classroom, therefore teachers’ understanding of who the technology leaders are and from whom they look to get and give input about technology uses for teaching and learning also matters (Dexter, 2007, 2008; Yuen, Law, & Wong 2003).

Lastly, a school may encounter an unanticipated crisis or challenge, and formal leaders and teachers leaders will have to work together to take on a particular leadership task to address the problem (Spillane, 2006; Spillane & Orlina, 2005). There are often unanticipated events or challenges within schools that call for teacher librarians, as part of the educational community, to contribute to leadership. Participants spoke of working together with formal and other informal leaders in the building to address a certain issue based on their knowledge, such as one-to-one initiatives, test scores, technology purchasing, grant writing, and digital citizenship instruction. This distribution depends on the situation, and the varied and broad knowledge base of teacher librarians allows them to contribute in many areas, but especially in the area of technology integration. This research demonstrates the alignment of the leadership practices of the teacher librarian to the element of expertise through essential skills and knowledge, including the aspects of to whom leadership is distributed and to the three mechanisms of how leadership is distributed, found in distributed leadership theory.

### **Situation**

A fundamental proposition of distributed leadership theory is that aspects of the situation determine *how* leadership practice is enabled or constrained. This perspective proposes that the situation is critical to understanding leadership practice and Spillane et al. (2004) stress the importance of identifying and researching facets of the situation that can both constrain or

facilitate leadership practices. This research focused on identifying the enablers and barriers to further understand the technology leadership practices of teacher librarians. As discussed above, expertise, collaborative school culture, relationships, and the school principal were all found to be enablers and/or barriers to leadership enactment, yet other situational factors emerged as well that align with distributed leadership theory and the previous research in this area.

**The school principal.** The extent to which leadership will be distributed in schools, and the forms it may take, are determined largely by what principals believe and feel about what is to be accomplished, the availability of expertise, and the principals' preference regarding the use of professional expertise (their own expertise, teachers' expertise, expertise from external sources) (Bush & Glover, 2012; Louis et al., 2010; Spillane & Healey, 2010; Hulpia et al., 2012). Teacher librarians do have expertise to contribute, but the principal in a distributed leadership context is a vital situational element that must be considered due to the impact he or she can have on teacher librarians' leadership efforts (Johnston, 2011; Rojtas-Milliner, 2006).

This research finds that principals still have disproportionate influence in school librarians enacting leadership in technology integration. Echoing previous distributed leadership research, this study finds that principals can serve as a barrier when they are unwilling to or uncertain how to share authority, create a hostile culture for teacher leadership, or do not have skills in delegating (Barth, 2001; Bush, 2011; Hulpia et al., 2012; Leithwood et al., 2006; Spillane & Healey, 2010; Tian et al., 2015). The principal's influence is also present in other barriers found in this research such as a lack of leadership opportunities, lack of funding, and inadequate staffing and scheduling. Research finds that principals "play a pivotal role in determining the boundaries within which distributed leadership can take place" and some assert that a strong principal to guide the distribution is a crucial element (Bennett, 2008, p. 605). The findings of this research align with multiple studies that demonstrate that in schools where significant teacher leadership is present, the involvement of teachers in school leadership is often initiated by the principal (Barth, 2001; Harris, 2003; Muijs & Harris, 2007; Rojtas-Milliner, 2006; Williams, 2011) and that without focused leadership on the part of the school formal leader distributed leadership is unlikely (Leithwood et al., 2007; Tan, 2011; Williams, 2011).

**The teacher librarians themselves.** Respondents were passionate about their "desire to make a difference for students and teachers," a "sense of obligation to get involved" and their "commitment to continual professional growth" as enabling them to enact leadership practices. This same commitment to teaching and to the organization is evident in distributed leadership research of teacher leaders as a factor that enables leadership (Harris, 2008; Hulpia et al., 2012; Tian et al., 2015; Tschannen-Moran & Barr, 2004; Smylie, Conley, & Marks, 2002; Spillane et al., 2001). Respondents commented on that it was up to them to "ensure that students are equipped with the skills and knowledge they need for success" and that "being a leader in technology makes me a better educator for the next generations and I always want to give my students the best preparation for life that I can offer." This commitment is reflected in the teacher leadership literature, in that teachers are often called to leadership work by the desire to make a difference and teacher leaders are driven by their commitment to create a better world and thus better education for all children. It is this link between teacher leadership and moral purpose, as well as the goal of equipping all children for success, that frequently motivates teachers to become involved in activities related to school leadership (Ackerman & Mackenzie, 2007; Crowther et al., 2002; York-Barr & Duke, 2004). This same intrinsic reward of improving learning outcomes for students is rewarding work for teacher librarians and serves as an enabler for technology integration leadership enactment.

Teacher leaders are consummate learners and research suggests that a sense of inquiry and love of learning enables teachers to assume leadership responsibilities (Crowther et al., 2002;

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Harris, 2003; Katzenmeyer & Moller, 2009; Muijs & Harris, 2006; Smylie, 2002). Additionally, teacher leadership and distributed leadership research finds that teacher leaders need opportunities for continuous professional development in order to develop the expertise needed to provide leadership in their area of specialty (Harris & Muijs, 2003; Muijs & Harris, 2007). This commitment by teacher librarians to professional growth and continual learning is one that is necessary for technology integration leadership. Technology is constantly changing and it is essential that teacher librarians stay up to date through continuing their professional learning in order to advance and hone the skills and knowledge that are mandatory to lead in technology integration efforts.

**Institutional structure.** The most frequently occurring barriers respondents identify in this research are institutional structure type barriers including exclusion from leadership opportunities, lack of role definition, and a lack of resources such as time, funding, adequate staffing, scheduling, and technology resources. The world of education is full of formal and informal structures that can either support or constrain teacher leadership, including policies, procedures, and resources, as well as norms and expectations that can influence teachers' roles and opportunities in efforts to take part in leadership and facilitate professional learning (Rutherford, 2006). These institutional structures in education determine the allocation of resources such as funding, time, scheduling, staffing, and technology, as well as form the aspects of school climate that can either facilitate or constrain increased teacher leadership. The teacher librarian literature often notes the impact of the institutional structure on teacher librarians and role enactment (Mardis & Everhart, 2014; McCracken, 2001; Oberg, 2009, Johnston, 2015).

Not surprisingly, the most frequently noted barrier constraining involvement in technology integration leadership practices is time. Respondents commented on not having time to work with teachers, to plan, to learn about technologies, and to devote to any one activity because of the various tasks for which they are responsible. Multiple respondents note "too much to do" and "not enough time to devote to any one role to be fully involved in accomplishing it," no time to collaborate or plan with teachers, no flexibility, a lack of time to learn new things, and being pulled from the library for unrelated duties. Time constraints were also closely tied to the barriers of a fixed schedule and the lack of a clerk. This finding aligns with the teacher leadership literature; teacher leaders need time for leadership, but it is difficult for teacher leaders to find adequate time during regular school hours to take on the extra tasks often associated with teacher leadership, for example, time to plan together, time to talk about teaching, or work on problems or new initiatives in the school (Beachum & Dentith, 2004; (Katzenmeyer & Moller, 2001; Muijs & Harris, 2007).

Finally, technology resources, including an insufficient amount of them, lack of fully operational equipment, and dated equipment are found to be barriers. A lack of funding sometimes is mentioned as tied to this lack of technology, and budget cuts are mentioned frequently by respondents in conjunction with the elimination of personnel, both clerical and professional and a lack of resources. This is especially relevant when discussing technology integration leadership, it is difficult to enact leadership in this area if you do not have the necessary technology to do so. This research is consistent with literature from the field of teacher leadership and teacher librarianship in identifying time and the lack of various resources as barriers experienced in enacting leadership (Leithwood et al., 2009).

## Conclusions and Implications

There is a need for theoretical foundations for research in the library and information science field and often theories are borrowed from other disciplines (Leckie, Given, & Bushman, 2010). Based

on the assumption that the leadership practices of the teacher librarian are essentially those of teacher leaders, this research borrows from the field of education in searching for a theoretical basis for investigating the leadership practices of the teacher librarian. Distributed leadership theory has not previously been applied to the leadership practices of teacher librarians and whether or not its propositions would be supported in a school library context was an overarching purpose to this research. The findings of this research do support the propositions from distributed leadership: (1) that there are aspects of a situation that can enable or constrain leadership practice and (2) that leadership emerges from the interactions of the different individuals within a group where essential skills and knowledge are dispersed among many. This research, through the identification of the enablers and barriers, concludes that understanding how aspects of a situation can enable or constrain leadership practice does contribute to the understanding and definition of the leadership role in technology integration for teacher librarians and is applicable to this role. This study also finds that leadership can be distributed across the school community and can take a fluid form, presenting opportunities for teacher librarians to practice leadership based on essential technology integration skills and knowledge rather than formal authority.

Yet findings from this research illuminate some of the limitations of the application of the theory. Many researchers acknowledge the difficulty of studying leadership that is distributed because many interactions take place informally, privately, and without a specified time or place (Harris, 2008; Hulpia et al., 2012; Timperley, 2005; Tian et al., 2015). This is a considerable limitation when applying to teacher librarians, because their collaborative and leadership practices often take place in informal settings and through private exchanges.

There is a dearth of research investigating the leadership roles of the teacher librarian and there is no specific theory developed for the teacher librarian as a leader. This initial application of distributed leadership theory provides a foundation on which to build a case for utilizing distributed leadership theory as a conceptual lens for investigating the technology integration leadership practices of teacher librarians, and possibly the leadership practices of teacher librarians in other areas as well. Distributed leadership can also be utilized for exploring technology integration leadership in general since principals are unlikely to be the sole leader in technology integration efforts and a distributed perspective is one possible way to understand how various members of a school are involved in the leadership practices technology integration. As we continue as a profession to grow our research foundation and investigate the various practices of teacher librarians, distributed leadership has promise to contribute an analytical framework that researchers and practitioners can use to frame investigations of teacher librarian leadership in order to understanding school leadership practice.

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### **Author Note**

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