

2-1-2017

The Theoretical and Empirical Basis of Teacher Leadership: A Review of the Literature

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Abstract

The current review examined teacher leadership research completed since York-Barr and Duke published the seminal review on teacher leadership in 2004. The review was undertaken to examine how teacher leadership is defined, how teacher leaders are prepared, their impact, and those factors that facilitate or inhibit teacher leaders' work. Beyond this, the review considered theories informing teacher leadership, teacher leadership within disciplinary contexts, and the roles of teacher leaders in social justice and equity issues. Within this review, the most salient findings were (a) teacher leadership, although rarely defined, focused on roles beyond the classroom, supporting the professional learning of peers, influencing policy/decision making, and ultimately targeting student learning, (b) the research was only somewhat theoretical, (c) principals, school structures, and norms are important factors that empower or marginalize the roles of teacher leaders, and (d) very little teacher leadership research exists to examine issues of social justice and equity.

Keywords: teacher leadership; school change; educational leadership

Many scholars have noted the positive effects that leadership can have on schools. In fact, Leithwood, Louis, Anderson, and Wahlstrom (2004) asserted, "[l]eadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school..." (p. 5). In the past few decades, teacher leadership in particular has attracted more attention as an important aspect of school leadership. Mangin and Stoelinga (2008) have argued that teachers are uniquely positioned to promote change within schools because they are well versed in the complexities involved with teaching. Moreover, researchers have concluded that teacher leaders have the capacity to lead the school via increasing teacher collaboration, spreading best practices, encouraging teacher professional learning, offering assistance with differentiation, and focusing on content-specific issues (Curtis, 2013; Muijs & Harris, 2003, 2006).

However, conceptualizations of what exactly is meant by the term *teacher leader* are widely varied. Neumerski (2012) has pointed out that "[u]nfortunately, there is little consensus around what constitutes 'teacher leadership'... it tends to be an umbrella term referring to a myriad of work" (p. 320). Additionally, the concept of teacher leadership is further complicated by the fact that often, teacher leaders do not hold the same titles across schools. Within the literature, teacher leaders have been given titles such as coordinator, coach, specialist, lead teacher, department chair, and mentor teacher, just to name a few (Mangin & Stoelinga, 2008; Neumerski, 2012). Perhaps it is this 'muddiness' that makes teacher leadership so intriguing to many educational stakeholders; teacher leaders can potentially fit into a variety of positions and meet the needs of any situation. Yet, this perspective becomes dangerous when the call and backing for more teacher leaders in schools is not well supported by rigorous, empirical research.

York-Barr and Duke (2004) conducted what is widely considered to be a seminal literature review concerning teacher leadership. Their examination of the literature from 1980 to 2004 sought to answer the simple question, "What is known about teacher leadership?" (p. 256). This review created a firm foundation for research and thoughts concerning teacher leadership over the past decade, but much has changed since 2004; teacher quality mandates have been implemented in several states and Teacher Leader Model Standards (Teacher Leadership Exploratory Consortium, 2012) have been created. Recently, scholars have included reviews of teacher leadership literature in their research, but no comprehensive literature review of empirical research has been completed over the last decade since tremendous shifts in policy and other influences have coalesced to reshape the educational landscape. Rather, the reviews conducted pertaining to teacher leadership have been focused on narrow aspects of the field. For example, Neumerski

(2012) examined several different kinds of instructional leadership (e.g., coach, teacher, and principal), yet largely combined all three types of leaders when drawing conclusions about the literature. Additionally, Billingsley (2007) investigated selected teacher leadership literature in light of the needs of special educators.

Therefore, a rigorous examination of the empirical research that has occurred in the last decade surrounding teacher leadership was undertaken at this point in time for three important and related reasons. First, teacher leadership has of late become an increasingly popular topic amongst educational policymakers and influential educational organizations as an important component of school reform. For example, in January 2014 the National Education Association, the leading professional employee organization representing more than 3 million educators in the U.S., partnered with the Center for Teaching Quality and the National Board for Professional Teaching Standards to launch the national Teacher Leadership Initiative (TLI). The TLI was created to develop a new generation of leaders within the teaching profession by working to define the foundational competencies of teacher leadership, developing relevant experiences and supports to help teachers cultivate those competencies, and mobilizing teachers to be leaders within their profession. Beyond this, in April 2015, the Center for American Progress held an event entitled “Teacher Leadership: The Pathway to Common Core Success” with the President of the American Federation of Teachers as an opening speaker. And, on the U.S. Department of Education website, Secretary of Education Arne Duncan blogged about the 5th International Summit on the Teaching Profession held in March 2015 in which teacher leadership – and U.S. initiative “Teach to Lead”, which was originally introduced at the National Board for Professional Teaching Standards’ Teaching and Learning conference – was the main topic of conversation.

Additionally, university degree programs, certificates, and endorsements in teacher leadership seem to be on the rise. Just to name a few, since 2009, the University of Cincinnati has offered a Teacher Leadership Endorsement aimed at Ohio teachers holding Master’s degrees; Northwestern University began offering an M.S. in Education with a Teacher Leadership concentration in 2013 in which teacher leaders can then further focus on leadership in math, science, literacy, or gifted education; and finally, in 2012, Villanova University began offering a Teacher Leadership certificate for those already possessing Master’s degrees as well as a concentration in Teacher Leadership within a Master’s program. This increased interest in teacher leadership as a means to aid school reform is encouraging and exciting, but we cannot expect these initiatives to be successful without solid theories and data to guide this work.

A second motivation for a close examination of the empirical research on teacher leadership stems from the increased political interest within the milieu of accountability in education, as some schools are including expectations of teacher leadership as an element of teacher evaluations. For example, the Framework for Teaching Evaluation Instrument (Danielson, 2014) that is used in several states for teacher evaluations (e.g. Idaho, New York, Washington, Kentucky) states under the component *4d: Participating in the Professional Community* that a ‘Distinguished’ teacher will:

...[assume] leadership among the faculty. The teacher takes a leadership role in promoting a culture of professional inquiry. The teacher volunteers to participate in school events and district projects, making a substantial contribution and assuming a leadership role in at least one aspect of school or district life. (p. 97)

Similarly, in the Lake Havasu Unified School District #1 in Arizona, their teacher evaluation instrument includes an evaluation domain entitled *Interpersonal Skills*, which includes the element of *Collaboration/relationship with staff*. In this instrument, an ‘Exemplary’ teacher “works productively with staff as a leader” and “is viewed as a...teacher leader by peers” (2011, p. 21). Finally, in Colorado’s teacher evaluation system, *Quality Standard IV: Teachers demonstrate leadership*, an ‘Exemplary’ teacher, among other things, “initiates and leads collaborative activities”, “leads professional growth and development activities whenever possible”, and “participates in district-wide decision-making processes that impact the school community” (Colorado Department of Education, 2015, p. 17).

Including leadership in teacher evaluations may be a step in the right direction, but it is presumptuous to think that teachers intuitively know how to lead their colleagues or schools without any focused support in the form of professional development (PD). Without this kind of support, schools may very well set teachers up for unfavorable evaluations as they stumble around how to lead. Given this, teacher educators and other educational leaders will need to design and facilitate PD that specifically considers and supports preservice and inservice teachers as leaders. In this, strong theoretical and empirical support in the form of an established knowledge base about teacher leadership will be needed to frame and substantiate decisions made about PD, especially related to the types of training that will be most beneficial, ways in which teacher leaders may enact leadership in schools, and supports that can facilitate the work of teacher leaders.

A third and final motivation for our review of the literature on teacher leadership is the challenge of teacher attrition. According to Ingersoll and Merrill (2012), the annual attrition rate in 2008 was 9%, and the trend has been for this rate to increase each year. Especially troubling is that 40-50% of teachers leave within the first five years of their career (Ingersoll & Perda, 2012). The vexing question, then, is how to keep teachers teaching. Donaldson (2007) and Johnson and Donaldson (2004) have suggested that teachers may want to remain in schools, yet they want new and different challenges as their careers progress; a stagnant career trajectory may cause teachers to consider leaving the profession altogether. Although many teachers with this desire opt to become administrators, there are a number of teachers who wish to continue working in the classroom. Consequently, teacher leadership appears to be a possible solution for the problem of attrition, as teachers can continue to teach while taking on additional leadership responsibilities.

It is obvious that the need is great for empirical research on teacher leadership. In this review, we take the first step towards meeting that need by compiling the empirical research on the topic of teacher leadership from 2004 to 2013 so that others may build upon this work in focused and productive ways. Specifically, we have sought to answer the following questions:

1. How is teacher leadership defined in the research and what are the constructs/elements of teacher leadership within these conceptualizations?
2. To what extent and in what ways is teacher leadership being investigated within the different disciplinary contexts?
3. What theories are used to frame research surrounding teacher leadership?
4. How are teacher leaders prepared and what strategies or programs appear to be most fruitful for developing teacher leaders?
5. What are the effects of teacher leadership?
6. What factors facilitate or inhibit teacher leadership?
7. To what extent and in what ways does the research surrounding teacher leadership investigate issues of equity and diversity?

In the next section, we will provide justification for each of our research questions as well as offer our conceptual framework of teacher leadership.

Reasoning for and Areas of Focus for Reviewing Teacher Leadership Literature

York-Barr and Duke (2004) synthesized two decades' worth of literature surrounding the topic of teacher leadership and organized their findings around seven questions:

1. Why focus on teacher leadership?
2. How is teacher leadership defined?
3. What do teacher leaders do?
4. Who are teacher leaders?
5. What conditions influence teacher leadership?
6. How are teacher leaders prepared to lead?
7. What are the effects of teacher leadership? (p. 257)

For reasons that will be explained next, we chose to continue some of the investigations begun by York-Barr and Duke in addition to extending our research questions beyond their original list.

The Need to Continue to Explore Teacher Leadership in Ways Similar to York-Barr and Duke. Little (2003) noted that starting in the 1980s – the beginning of York-Barr and Duke's review timeline – schooling went through three distinct phases that shaped how teacher leadership was viewed, from "leadership rooted in specific teaching contexts and small-scale collaboration" (p. 405), to teacher leadership being an integral part of whole-school reform in the late 1980s to early 1990s, to teacher leadership most recently supporting accountability mechanisms in the early 2000s. More specifically, the creation of teacher leaders in the last decade has been "driven...by the urgent need for expertise

to expand instructional capacity within schools. School officials seeking to substantially increase students' performance on annual assessments have appointed teachers to serve as instructional coaches, curriculum writers, professional developers, and data analysts..." (Donaldson et al., 2005). In this way, as the call for accountability has grown, so has the population of teacher leaders supporting accountability-related initiatives and programs. Given the evolution of how teacher leaders were viewed and utilized within schools during these two decades, York-Barr and Duke largely sought to unify ideas about teacher leadership with the aim of guiding future research. However, as teacher leadership did not become part of the accountability mechanism until the early 2000s, we believed this context and the accompanying issues were only partially accounted for by York-Barr and Duke (i.e., 2000-2004). Consequently, due to this shift in the educational climate, we believed that many of the issues that constituted teacher leadership explored by York-Barr and Duke (e.g., how teacher leadership is defined, what teacher leaders do, who teacher leaders are, and the conditions that influence teacher leadership) may have undergone substantive transformations, especially given the changing activity within which teacher leadership is situated. As such, many of the questions York-Barr and Duke explored were (re)considered in this current literature review.

The Need to Move Beyond Exploring Teacher Leadership in Ways Similar to York-Barr & Duke. Not only did we investigate teacher leadership potentially shaped by accountability mechanisms and other emerging forces pressing on the ecology of teacher leadership, we also looked at teacher leadership as constituted in different disciplines, the ways in which it was framed by theory, and the roles social justice and issues of equity played in the work of teacher leaders. Concerning the constitution of teacher leadership in disciplinary contexts, Spillane and Hopkins (2013) asserted that researchers "must take the school subject into consideration because instruction is not a generic or monolithic variable but rather a *subject specific one*" (p. 722, emphasis original). They continued to say that subject matter not only shapes teachers' instruction, but also their responses to reforming their practice in those subjects as well. Subject matter is, in fact, so influential in the ways in which teachers and schools behave that Ball and Lacey (2012) went as far as categorizing different subject areas as 'sub-cultures'. In terms of leadership, Spillane, Diamond, and Jita (2003) noted in their study that the number and type of leaders varied depending on the subject. For example, math and literacy was typically led by several people and 'spread' between administrators and teachers with formal leadership designations, whereas science was typically led by a few informal teacher leaders. Given these differences, we felt it was important to explore the empirical research related to teacher leadership in particular subject areas and to specifically investigate whether or not teacher leadership was discussed and perhaps conceptualized differently across the various disciplines.

York-Barr and Duke's (2004) characterization of the literature on teacher leadership as "largely atheoretical" (p. 291) prompted another area of inquiry in this literature review. Due to their disturbing findings, we wanted to examine the extent to which this characterization remained true today. Additionally, we endeavored to assess whether researchers took up York-Barr and Duke's conceptual framework for teacher leadership or if there were other theories informing teacher leadership. York-Barr and Duke stated, "Research grounded in theory is less likely to revisit what is already known and is more likely to further existing understandings and inform practice" (p. 291). It was our hope that in the span of a decade, researchers had taken this notion to heart and attempted to further understandings about teacher leadership by using robust theory to inform their research.

A final area we wanted to investigate via this literature review was that of social justice and issues of equity in terms of teacher leadership. We were not only interested in research that attended to these issues in terms of the teacher leaders themselves, but also in terms of teacher leaders preparing to lead in diverse settings and on topics related to social justice. As schools become increasingly diverse, both in regards to the student population as well as the teacher population, researchers need to explore the ramifications of these changes. For example, Madsen and Mabokela (2014) noted that tensions can exist amongst a diverse group of teachers. Certainly these tensions could impact the ways in which teacher leaders are identified, developed, treated, and the work they are able to do within a school. Terrell and Lindsey (2008) have advocated for a special type of leadership they call 'culturally proficient leadership' in which one must understand his/her own cultural assumptions in order to lead effectively in diverse settings. Perhaps skills found in this type of leadership were being integrated into teacher leader training in order to produce culturally sensitive leaders. With the changing landscape of schools, we felt we would be remiss in ignoring social justice and issues of equity.

Collectively, the decisions made pursued questions that extended those findings of York-Barr and Duke, as well as asked additional justified and needed questions. Like others (Curtis, 2013; Leithwood et al., 2004; Muijs & Harris, 2003, 2006), we saw teacher leaders as potentially among the most influential leaders in schools. As such, this review is a critical vehicle for, among other things, reifying teacher leaders' roles in schools, how teacher leadership is

conceptualized and framed, and how teacher leaders can support all learners. But first, providing our conceptualization of teacher leadership will shed further light on the decisions we made regarding the literature reviewed in this current research.

Conceptual Framework: Teacher Leadership

As previously noted, there are a wide variety of perspectives in the literature concerning the definition of a teacher leader. And, although investigating this point was one of the emphases of this review, we felt that in order to ensure that our review truly centered on teacher leaders, we needed to develop our own working definition. Thus, for the purposes of this review, we defined teacher leaders as *teachers who maintain K-12 classroom-based teaching responsibilities, while also taking on leadership responsibilities outside of the classroom*. This definition reflects the stance that teacher leaders with continuing classroom responsibilities are afforded a special understanding of the complexities of teaching (Mangin & Stoelinga, 2008), and at the same time uniquely positioned as collaborators with a capacity for modeling and refining content-specific instructional practices, among other things (Curtis, 2013; Muijs & Harris, 2003, 2006). This definition of teacher leadership was most consistent with that of Margolis's (2012) notion of a hybrid teacher leader, which he described as "a teacher whose official schedule includes both teaching K-12 students and leading teachers in some capacity" (p. 292).

We acknowledge that this definition of teacher leadership does not represent a consensus conception, but is one that helps differentiate teacher leaders from other forms of leadership in schools (e.g., administrators, disciplinary specialists, etc.). Additionally, this notion of teacher leadership highlights the reality that all teachers have the capacity to be leaders, but does not assume that all teachers do lead outside of their classroom or that they should (Spillane & Diamond, 2007). This concept was key to our working definition of teacher leaders, as it empowers all teachers, but implies that teacher leaders somehow go above and beyond their typical duties. This working definition also allowed us to view schools as complex systems that are comprised of "large numbers of agents in highly connected webs" (Goldspink, 2007, p. 42), as well as to consider teacher leaders as not just influencing individual teachers, but also having the capability to influence the entire school, community, and profession.

As with any definition, the act of defining what something *is* naturally defines what it *is not*. By stipulating that teacher leaders maintain classroom responsibilities, we were fully aware that there were a number of educational leaders and leadership positions we were not including in this review. For example, in many schools there are full-time math or literacy coaches who work with teachers to improve student learning in those disciplines. These coaches are often people who were very successful teachers and as such, were nominated by administrators and peers to leave the classroom in order to share their expertise on a broader scale. Likewise, there are district coordinators or curriculum specialists at the district level who have risen through the ranks of teaching and because of their exemplary teaching skills, now facilitate PD for teachers across the district. Coaches, coordinators, and specialists certainly lead teachers and can influence entire schools and communities, but we argue that there is something unique when a leader is not also a peer; a district-based leader, for example, cannot completely understand the affordances and constraints of teaching in a particular setting. Therefore, although this review of the literature on teacher leadership did not 'cover' the entire field, it included the types of leadership that honor both the 'teacher' and the 'leader' in the term 'teacher leader.'

Method

Inclusion/Exclusion Criteria

The inclusion/exclusion criteria for the studies in our literature review were inspired by both conceptual and pragmatic considerations. More specifically, because York-Barr and Duke (2004) found that most of the literature they reviewed was solely descriptive and limited to case study designs, small sample sizes, and self-report or interview methodologies, their criticism and suggestions formed the foundation for our inclusion criteria (i.e., empirical/beyond purely descriptive, small sample sizes [$N \geq 5$], triangulated data). We then created criteria based on our working definition of teacher leaders (i.e., K-12 teachers, classroom responsibility, lead the school). Finally, we created practical criteria that would allow us to uncover high-quality empirical research that truly focused on teacher leadership (i.e., only teacher leaders, peer reviewed, teacher leadership central to research). More details about each of the inclusion/exclusion criteria are found in Table 1.

Search and Abstract Review Methods

To search for literature, we used the Education Research Complete database. Using the search parameters of “teacher leadership” in any field and constraining the search to January 2004 through December 2013, our search yielded 704 results. We acknowledge that research meeting our criteria has been published since December of 2013; however, we began this research in 2014 and the large scope of this research necessitated a clear cut-off date. Consequently, we chose to end our literature collection with items published through December of 2013. In order to ensure consistency during the abstract review process, we began by reviewing 10 abstracts independently and applying the criteria found in Table 1 to those abstracts. We then met to discuss our findings and resolved all interpretive discrepancies. We repeated this process twice more, once with 20 abstracts, and then with 40 abstracts. After reviewing a total 70 abstracts, we then reviewed the remaining 634 abstracts independently. If we did not feel we had enough information in the abstract to apply our criteria, we obtained a copy of the piece of literature for further review. Similarly, edited books were obtained so each chapter could be independently reviewed. Of the 704 abstracts reviewed, 75 pieces of literature were excluded immediately from our review because although they were somehow related to the search term, teacher leadership was only peripherally connected to the research; this brought the total to 629 total pieces of literature focused on the topic of teacher leadership. 557 more pieces of literature were then excluded from our review because they did not meet one or more of our criteria. Thus, based on the abstracts reviewed, 72 pieces of literature (approximately 10%) were included for full review.

To begin our in-depth reading and review of the 72 pieces of literature, we created a shared spreadsheet that would allow us to chronicle our findings and questions about the literature. In this document, we recorded basic bibliographic information, methodological details, data that would help us answer our research questions, and other interesting topics that arose as we conducted our review (e.g., whether or not authors explicitly provided their definition of teacher leadership). Independently, we reviewed eight pieces of literature (approximately 10%). We then met to discuss our findings, record data in the spreadsheet, and resolve all interpretive discrepancies. We then reviewed the remaining 64 pieces of literature independently, meeting weekly to discuss any further questions or issues. During this process, all articles were annotated and placed in an archive so that each of the facets of teacher leadership of interest was traceable back to the original text. If disagreements or questions arose about a specific article, the researchers revisited the original archived article and sought consensus of interpretation before finalizing the analysis result for the perspective article.

As we completed this more in-depth analysis of each of the 72 pieces of literature, we found that 18 pieces we initially included after reading the abstracts were not appropriate for this review. The most common reason for exclusion was that upon further investigation, teacher leadership was merely peripheral to the article’s focus. For example, Booth’s (2012) article focused more on the online learning communities themselves, rather than the teacher leaders in those communities. After excluding these additional 18 pieces, this left us with a total of 54 pieces of literature on which to base this literature review. Figure 1 reveals a flow chart describing how the literature was narrowed to the 54 pieces finally included for this literature review. Figure 2 provides further detail concerning the number of pieces excluded by criteria item.

Results

This section begins with general findings about the research studies included in this review. Before reporting these, however, readers are reminded that our inclusion criteria for the review was that (a) data methods had to be triangulated, and (b) sample sizes had to be greater than or equal to five teacher leaders. Of the 54 studies in our review, most ($n = 40$; 74%) were qualitative, and to the researchers’ credit, many studies used multiple methods to capture their data, with interviewing ($n = 43$; 80%) being the most common data collection method (see Figure 3 for more details on research methods).

An average sample size could not be calculated, as some studies were not clear when they reported that a district participated (Robinson, 2009), or that six schools were surveyed (Gordin, 2010). Although we were uncomfortable with this ambiguity, for the few instances in which this occurred, we gave the authors the benefit of the doubt based on the research reported that the sample included at least five teacher leaders. For example, Gordin (2010) stated that the sample size for her study was six schools; we assumed for the sake of the review that at least five teacher leaders were part of that six-school sample. That said, many of the studies had relatively large sample sizes, particularly for qualitative studies (e.g., Vernon-Dotson [2008] had 33 participants, Edge and Mylopoulos [2008] had 23 participants).

We also documented other descriptive details about the articles in this review, including the source types, areas of foci, and whether or not the research was conducted outside of the United States. Three pieces (6%) of literature were book chapters, eight (15%) were dissertations, and the remaining 43 (79%) pieces of literature were in peer-reviewed journals. The three most common areas of focus were conditions that impact teacher leaders ($n = 15$; 30%), what teacher leaders do ($n = 13$; 24%), and the evaluation of programs that prepared teacher leaders ($n = 9$; 17%). Finally, most of the research occurred in the United States, but 13 studies (24%) took place outside of the United States, with multiple studies coming from Australia, Canada, Israel, and the United Kingdom.

The remainder of this Results Section will report the findings from this review in terms of our research questions.

How is Teacher Leadership Defined and What Are the Constructs/Elements of Teacher Leadership within the Conceptualization?

As we were documenting our findings for this research question, we were struck by how few authors explicitly described their particular definition of teacher leadership. Many pieces of literature ($n = 35$; 65%) simply listed others' definitions of teacher leadership and/or noted that there is often confusion surrounding the definition, but never definitively stated how they defined teacher leadership for the purposes of their study. For example, Brosky (2011) stated,

...in the field of education, a struggle continues with the basic definition of teacher leadership that should be fundamental in educators' professional vocabulary. Many administrators, boards of education, parents, and even teachers don't recognize or understand teacher leadership. This lack of understanding adds to the obstacles teacher leaders face (Ackerman & Mackenzie, 2006; Donaldson, 2007). Katzenmeyer and Moller (2001) contend, "We are a long way from a common understanding of teacher leadership. Confusion about definitions and expectations of teacher leaders abound" (pp.4-5). York-Barr and Duke's (2004) meta-analysis on 20 years of research on teacher leadership states, "The lack of definition may be due, in part, to the expansive territory encompassed under the umbrella term 'teacher leadership'" (p. 260). (p. 3)

Albeit prudent to note there is widespread confusion concerning what teacher leadership is, we sought to answer how researchers in the field defined teacher leadership, at least in terms of their research.

As such, the remainder of the findings surrounding this research question focus on the 19 pieces of literature (35%) that to varying degrees, explicitly described what they believed teacher leadership to be. Many authors chose to cite another scholar's definition of teacher leadership, as in the case of Carpenter and Sherretz (2012) when they stated,

To guide the current study we perceive teacher leadership as conceptualized by Childs- Bowen, Moeller, and Scrivener (2000): "We believe teachers are leaders when they function in professional learning communities to affect student learning; contribute to school improvement; inspire excellence in practice; and empower stakeholders to participate in educational improvement" (p. 28). (p. 91)

Other authors, such as Taylor, Goeke, Klein, Onore, and Geist (2011) defined teacher leadership themselves, and noted that for their study, "Our commitment was to a definition of TL [teacher leadership] based in the work of classroom teachers that was neither supervisory nor hierarchical but focused on individual and school growth and development" (p. 920). Regardless of the methods of defining teacher leadership, we extracted these definitions and found that there were five general themes that described teacher leadership, italicized and described next.

The first theme was *teacher leadership goes beyond the classroom walls*. Several authors opined that to be a teacher leader one must lead more than his/her students and conduct leadership work outside of his/her classroom (Chamberland, 2009; Chesson, 2010; Durias, 2010; Gonzales, 2004; Hunzicker, 2012; Vernon-Dotson, 2008). The second and third themes described what teacher leaders should be doing beyond their classroom walls. Many scholars believed that *teacher leaders should support professional learning in their schools*, which could be in the form of leading professional learning communities, conducting formal PD, or assisting other teachers in classrooms (Can, 2009; Durias, 2010; Gonzales, 2004; Gordin, 2010; Margolis, 2012; Margolis & Doring, 2012; Margolis & Huggins, 2012; Muijs & Harris, 2006; Vernon- Dotson, 2008; Vernon-Dotson & Floyd, 2012). Additionally, several authors asserted that *teacher leaders should be involved in policy and/or decision-making at some level* (Can, 2009; Carpenter & Sherretz, 2012; Durias, 2010; Gonzales, 2004; Vernon-Dotson, 2008). A fourth major theme that arose from the

definitions of teacher leadership was that *the ultimate goal of teacher leadership is improving student learning and success* (Carpenter & Sherretz, 2012; Hanuscin, Rebello, & Sinha, 2012; Hunzicker, 2012; Vernon-Dotson & Floyd, 2012). Finally, many definitions seemed to point to *teacher leaders working towards improvement and change for the whole school organization* (Carpenter & Sherretz, 2012; Gaffney & Faragher, 2010; Gigante & Firestone, 2008; Taylor et al., 2011; Vernon-Dotson & Floyd, 2012).

To What Extent and in What Ways is Teacher Leadership Being Investigated within the Different Disciplinary Contexts?

Fifteen (28%) of the 54 pieces of literature focused on teacher leadership within specific disciplinary contexts. Literacy/English was the most common discipline found in the teacher leadership literature (six focused solely on literacy/English and one other focused on literacy/English and math). However, science was also a significant area of focus, with three pieces of literature focusing solely on science, and two more focusing on math and science/STEM. Although it was our intention to draw comparisons between the pieces of literature in our review and the findings of Spillane et al. (2003) that there are differences in the number and types of leaders depending on the discipline context, this sample size is much too small for us to draw conclusions on this matter. With only seven pieces of literature focused on literacy/English, five pieces focused on science, and four focused on math, any trends would be difficult to discern (See Table 2 for details). Moreover, it should be noted that whereas these pieces of literature were rooted in these disciplines, in most pieces of literature the discipline did not seem to play a large role in the research at hand. Rather, whether the study took place within the realms of literacy, math, or science was by and large found to be extraneous contextual information.

What Theories are Used to Frame Research Surrounding Teacher Leadership?

Given that York-Barr and Duke (2004) found the literature on teacher leadership to be “largely atheoretical” (p. 291) as well as the fact that they developed a theory of action for teacher leadership that included the foundation upon which teacher leadership may happen, we explored the use of theory in our review. Of the 54 pieces of literature, 33 pieces (61%) specifically cited at least one theory that informed the work. It should be noted that there were other researchers who mentioned theory, but after careful review were judged to have not used the theory to inform their work. Rather, theory was mentioned in passing, or in the literature review as something that others had used to frame research surrounding the topic at hand. The most popular theory cited by far was distributed leadership, with ten pieces of literature (19%) using this theory to inform the research. Other notable theories used to frame research in teacher leadership include democratic/constructivist leadership, structure and agency, parallel leadership, transactional leadership, and communities of practice (see Table 3 for more detail). As far as taking up York-Barr and Duke’s (2004) theory of action for teacher leadership, only one piece of literature (Fairman & MacKenzie, 2012) used this theory to frame their research.

How are Teacher Leaders Prepared and What Elements Appear to be the Most Fruitful for Developing Teacher Leaders?

Based on the literature, teacher leaders are largely being prepared in two ways, either via PD/local training/conferences, or via university Master’s programs. Within these two major teacher leader preparation categories, we found themes amongst the components that constituted these types of preparation. Given that only nine pieces of literature (17%) discussed teacher leader preparation in detail, we cannot make any judgments about the fruitfulness of any of these particular components or programs. However, each of the nine pieces of literature did have positive evaluations of these programs, which could imply that the themes/components we will present hold promise for effective teacher leader preparation.

Seven pieces (13%) of literature discussed teacher leader preparation taking place via PD, conferences, and local training programs. There was a great deal of variation in the duration and number of occasions for this preparation, ranging from weeklong trainings (Borchers, 2009) to trainings held over several years (Hanuscin et al., 2012; Shiu, Chrispeels, & Doerr, 2004; Vernon-Dotson, 2008). More consistent were the components found within these types of trainings. Five out of the seven preparation programs included training in pedagogical skills and strategies (e.g., Durias, 2010; Edge & Mylopoulos, 2008; Hofstein, Carmeli, & Shore, 2004). Six out of the seven preparation programs included some type of training in content knowledge or a particular curriculum (e.g., Borchers, 2009; Hanuscin et al., 2012; Vernon-Dotson, 2004). Finally, all of the seven preparation programs that took place via PD, conferences, and

local training included training in leadership skills and strategies. Hofstein et al. (2004) asserted that in the past, leadership skills were often neglected in PD presented to those who were expected to lead their schools. As such, 30% of their PD program for teacher leadership in chemistry consisted of training on content knowledge, 45% on pedagogical content knowledge, and 25% on leadership abilities. Beyond Hofstein et al., several other researchers seemed to follow in their footsteps and strive for this type of integrated teacher leader preparation.

Only two pieces of literature (4%) reported preparing teacher leaders via university Master's programs with a level of detail that allowed us to understand the components of the programs. Hunzicker (2012) described a STEM Master's program that contained a course in teacher leadership; Taylor et al. (2011) conducted research surrounding an entire Master's program in teacher leadership. Examining these two pieces of literature, we found that the teacher leadership components of these programs had two commonalities. First, they both seemed to focus on personal and professional growth. In the teacher leadership course within the STEM Master's program, students had to create a portfolio targeting engagement in self-assessment and reflection, and were required to compile artifacts that illustrated professional growth. A large component of Taylor et al.'s teacher leadership program was action research; students were to engage in inquiry and take steps to improve their practice. Additionally, both Hunzicker and Taylor et al. noted that these programs allowed for a great deal of personalized learning. As Taylor et al. contended,

If teacher leaders are told what to learn, how to learn, and why to learn, their learning is controlled by others and their capacity to lead is stunted. To learn to lead, then, teachers must place their own issues and concerns at the center of their learning process, know themselves as learners, reflect on their learning and share it with others. (p. 922).

Ultimately, what was evident with respect to teacher leader preparation was that two types of preparation were found (i.e., PD and university programs), with PD being more common.

What are the Effects of Teacher Leadership?

Regarding the effects of teacher leadership, York-Barr and Duke (2004) observed, "The literature is relatively rich with claims of the potential and desired effects of teacher leadership and relatively sparse with evidence of such effects, especially at the levels of classroom practice and student learning" (p. 282). We find this observation to hold true today. None of the literature in our review focused on this topic. Rather, the effects of teacher leadership were limited to the effects on the teacher leaders themselves and the colleagues of these teacher leaders.

Effects on Teacher Leaders. The effects of teacher leadership on the teacher leaders themselves fit into four general themes: *the stresses/difficulties; changing relationships with peers and administration; increased positive feelings and professional growth and increased leadership capacity*. Five pieces of literature (9%) described teacher leaders as feeling stressed or having difficulties balancing their job duties once they took on the additional responsibilities of a teacher leader. As one teacher leader noted,

...it's a challenging position within my school environment, because being a teacher leader is not the norm...Instead of building capacity and distributing leadership, the same few people get 'dumped on.' As a teacher leader, it's important to view new responsibilities as opportunities, but at the same time, too many responsibilities can become overwhelming. (Baecher, 2012, p. 323)

Similarly, teacher leaders in Brooks, Scribner, and Eferakorho's (2004) study often felt that teacher leadership was "a source of frustration that pried them from the essential, instructional tasks of their profession" (p. 253). Finally, Margolis and Huggins (2012) pointed to the often ill-defined roles of teacher leaders as being largely responsible for the "misuse, underuse, and inefficient use" of teacher leaders within a school (p. 968).

Teacher leaders' changing relationships with their peers as well as administration was another theme related to the effects of teacher leadership, with eight (15%) pieces of literature discussing these changes. Most often, the changes in relationships were negative; peers resented teacher leaders because it disrupted the egalitarian norms typically seen in schools. For example, a teacher leader in one study was so attacked by her peers after she was given some authority in a new coaching position that she joked, "I have to wear a bullet-proof vest to those [eighth-grade] meetings" (Margolis, 2012, p. 300). Similarly, the colleagues of teacher leaders in Podjasek's (2009) study perceived teacher leaders as having more power, which led to a breakdown in collegial relationships. However, there were some instances in which relationships changed for the better. Teacher leaders in Hofstein et al.'s (2004) study stated that after a year and a half in a chemistry coordinator program, the skills they had learned helped them "establish better

work relations with their staff; as a result, their colleagues became more cooperative, active, had initiative and were willing to contribute to the development of new ideas” (p. 18). Teacher leaders in Baecher’s (2012) study reported that as a result of becoming teacher leaders and presenting PD to the school, the teacher leaders were “becoming known” by school administrators (p. 323).

By and large, teacher leaders were reported to feel more confident, empowered and professionally satisfied via their work as a teacher leader (Beachum & Dentith, 2004; Hunzicker, 2012). Chew and Andrews (2010) explained that regarding teacher leaders in their study, “There has been a strong sense of purpose and satisfaction for them [teacher leaders] to realize that they are now leading the change, enjoy the autonomy for school improvement and change, and are empowered as leaders” (p. 72). In addition to these positive feelings, many teacher leaders felt that leading allowed them to improve their practice, learn more about content and pedagogy, and generally grow professionally (Hofstein et al., 2004; Singh, Yager, Yutakom, Yager, & Ali, 2012). One teacher leader noted that as a result of his/her teacher leader activities, “My teaching has improved and I am constantly looking for new techniques to use with the pupils...I constantly want to better myself and look forward to the next challenge” (Harris & Townsend, 2007, p. 171).

Finally, teacher leaders not only improved their leadership skills, but also sought out more leadership opportunities as a result of these skills (Edge & Mylopoulos, 2008; Hofstein et al., 2004). For example, in Chamberland’s (2009) study, one teacher leader stated,

I felt like more of a leader after that [participation in a study that encouraged distributed leadership]... All of a sudden I feel bold [sic] to do things...I took on teaching a technology class and my mentor teacher said that I should think about being a mentor myself in a few years. I think it’s kind of funny how it [leadership] rolls over to other contexts. (p. 98)

Similarly, as a result of participating on a leadership team in a school-university partnership school, teacher leaders in Vernon-Dotson and Floyd’s (2012) study began to take on more formal district-level leadership roles.

Effects on Colleagues. As has been demonstrated here, being a teacher leader can be beneficial to the teacher leaders themselves, but what of their colleagues? Based on the literature in this review, we found that teachers taking on leadership roles resulted in *feelings of empowerment for all teachers in a school; colleagues receiving support that is relevant and encourages professional growth and teacher leadership contributing significantly to school change.*

Many teacher leaders reported that they felt empowered by taking on leadership responsibilities, but the literature also indicated that teacher leadership within a school contributed to feelings of empowerment and professionalism for *all* teachers (Beachum & Dentith, 2004; Vernon-Dotson & Floyd, 2012). For example, Chesson (2010) found that in the Boston Arts Academy, in which there was a high level of teacher leadership,

...there is a stronger sense of professionalism among teachers within the building, a stronger sense of seriousness of purpose regarding academics, a stronger sense of the commitment within the school to work at engaging the community in the process of educating their students at the Boston Arts Academy than at the average school in the normative database and a stronger commitment within the building to do whatever it takes to positively impact student achievement. (p. 132)

Likewise, Friedman (2011) described teacher leaders as promoting other teachers’ self-esteem by “communicating high expectations, delegation of responsibilities, and serving as role models” (p. 295).

Certainly these feelings of empowerment and improved professionalism could be linked to teacher learning. As previously discussed, one of the primary duties of teacher leaders tends to be supporting the professional learning of colleagues. As such, it was encouraging to find that many teachers benefit from PD presented by teacher leaders. Not only did teacher leaders provide more opportunities for PD (Carpenter & Sherretz, 2012), but also better quality and more relevant PD (Hickey & Harris, 2005; Vernon-Dotson, 2008; Westfall-Rudd, 2011). Additionally, teacher leaders were seen as resources capable of providing assistance and support with pedagogy and content in a non-PD format (Gordin, 2010; Margolis & Deuel, 2009).

Harris and Townsend (2007) observed,

It has shown that where teachers are given the opportunity to lead...a great deal can be achieved for the benefit of schools and young people. As the limitations of top-down reform and accountability policy become even more apparent the need for alternative solutions to improving schools and systems becomes ever more vital. (p. 175)

Similarly, Muijs and Harris (2006) believed teacher leadership to be key to school improvement because “it was seen to harness teacher creativity and devolve work and responsibility from the head [principal]” (p. 965). Although this theme of teacher leadership contributing to school improvement was not widespread, there were a few pieces of literature that hinted at teacher leadership’s improving or changing the culture of the school for the better (e.g., Beachum & Dentith, 2004; Brooks et al., 2004). Certainly it is reasonable to believe that increased feelings of empowerment and confidence as well as improved PD for teachers would contribute greatly to improving teaching and learning within a school.

What Factors Facilitate or Inhibit Teacher Leadership?

As seen above, there are several benefits to teacher leadership. Consequently, it behooves us to better understand what enables and constrains teacher leadership. Concerning factors that support teacher leadership, four general themes in the literature were identified: *External training and support for teacher leaders; support from administration; climate and structural factors that better allow teacher leaders to do their work and clear-cut job responsibilities and recognition for meeting those responsibilities.*

Factors That Facilitate. Despite there being a dearth of literature explaining in detail the preparation of teacher leaders, what is clear is that training and PD of some sort for teacher leaders is valuable. Besides obtaining training in content, pedagogy, and leadership skills, this type of training appears to be important due to the support networks and partnerships that are formed (Durias, 2010; Edge & Mylopoulos, 2008). For example, teacher leaders who were enrolled in a leadership program “pointed to their colleagues in the program as means of support in terms of resources and contacts for input” (Brosky, 2011, p. 6). Similarly, Yonezawa, Jones, and Singer (2011) found that the program, and in turn, the network in which their teacher leaders participated provided content, pedagogical information, cultural support, and assistance in developing leadership skills.

Notwithstanding the benefits of external supports, administrative support seems to be paramount if teacher leadership is to be successful. In particular, administration affording teacher leaders the appropriate levels of autonomy appears to be key. Moreover, Chamberland (2009) observed that, “Even when a team shares a common purpose and is given the autonomy to make decisions, the principal needs to make a continual effort to encourage the leadership of others” (p. 104). As a principal in her study noted, “If we don’t support them [teacher leaders], if we don’t check in regularly with them...If we don’t follow-through on the things we say, we can set them up for failure” (p. 104). Perhaps precursors to appropriate levels of autonomy for teacher leaders are administrators who listen to and respect teacher leaders. Beachum and Dentith (2004) found that teacher leaders appreciated when principals sought out teacher leaders’ opinions on school matters; Gordin (2010) found that teacher leaders were grateful to have principals who listened to problems teacher leaders were having with peers that were interfering with leadership activities. As Gigante and Firestone (2008) stated, “They [teacher leaders] want to know that administrators understand the teacher leader role and find it important” (p. 323).

In addition to building productive relationships with teacher leaders, principals also played a large role in creating a school environment that allowed teacher leaders to do their work. Components in the school environment that were conducive to teacher leadership ranged from logistical items to cultural norms. In terms of logistical items, principals simply changing schedules (Borchers, 2009; Gaffney & Faragher, 2010) or providing time and space for collaboration (Chesson, 2010; Chew & Andrews, 2010) appeared to greatly benefit teacher leaders and their work. As far as creating a culture that supported teacher leadership, principals who attempted to encourage norms such as trust or an ethic of care (Beachum & Dentith, 2004), shared leadership (Gonzales, 2004), penalty-free risk-taking (Brosky, 2011), and continuous learning (Hunzicker, 2012) in their schools were seen as being supportive of teacher leaders. Finally, when principals shared a common vision or purpose with their staff, this was seen as being quite advantageous to teacher leadership (Chamberland, 2009; Muijs & Harris, 2006; Podjasek, 2009).

A final way in which principals could support teacher leadership was by fully understanding the responsibilities and job description of teacher leaders as well as recognizing those teacher leaders in some way (material compensation or otherwise) for fulfilling that job description. For example, teacher leaders in Borchers' (2009) study created a job description that provided details concerning "the analysis of data, goal setting, and how to communicate within their departments" (p. 106) which allowed for those on leadership teams to fully understand their responsibilities and roles. Even if not all teacher leaders were as lucky to have such clear job descriptions, it was noted that they felt more inclined to be teacher leaders if they received some sort of recognition. In some cases, this recognition came in the form of monetary compensation (Borchers, 2009) or simply recognition by peers and administration (Vernon- Dotson, 2008).

Factors That Inhibit. As will be seen, it is largely the lack of those factors mentioned above that inhibit teacher leadership. Based on the literature, the following four general themes were identified for factors that do not support teacher leadership: *lack of time; poor relationships with peers and/or administration; climate and structural factors and personal characteristics.*

For many teacher leaders, an overwhelming workload and/or little time for teacher leadership duties was a significant factor that inhibited teacher leadership (e.g., Adams & Gamage, 2008; Hands, 2012). Durias (2010) noted for the teacher leaders in her study,

Taking time out of the class to go to meetings was not good. They felt it took a lot of time to get prepared for the inservice by having to make substitute plans. This also took time away from their families. Each felt that when they get involved with something then they must consider "how much time is this role going to take from the classroom and home." (p. 160)

Another teacher leader felt that due to a lack of time,

"There is no way I can do everything." Most distressing was that he was often unable and unavailable to work with teachers, frequently being pulled out of the building for district-level meetings or having to teach his own classes when another teacher wanted to work with him. (Margolis, 2012, p. 302)

With so many teachers feeling that there is not enough time in the day to accomplish 'regular' teaching duties, it is clearly understandable how teacher leaders would be unable to do their jobs without some sort of time allowances.

Poor relationships with administrators and/or colleagues was another factor that inhibited teacher leadership. As seen above, principal support is invaluable to the success of a teacher leader. When principals are unsupportive, teacher leaders are often unable to fulfill their duties, either because there are not structures or resources in place to assist the teacher leaders (Klinker, Watson, Furgerson, Halsey, & Janisch, 2010), the principal does not allow the teacher leaders the authority or autonomy to complete their work (Friedman, 2011), the teacher leaders do not feel appreciated or recognized for the work they do (Sanders, 2006), or the faculty as a whole does not feel compelled to attend to the work of the teacher leaders (Margolis & Doring, 2012). And because working with colleagues is typically a large part of teacher leaders' work, resistant or resentful colleagues can make teacher leadership equally difficult. Some of the obstacles that teacher leaders face when confronted with oppositional colleagues are described below by Brosky (2011):

Resistance took the form of non-support from colleagues who blocked progress of those who took on leadership roles...Taking on leadership roles sometimes resulted in being ostracized by colleagues...[T]eacher leaders attempting to lead were interpreted as trying to get ahead for personal gain...Resentment from colleagues...occurred when other teachers perceived the use of undue influence over the principal...Finally, the presence of alliances, factions and cliques of teachers were identified by teacher leaders as groups that discourage teacher leadership by attempting to negate or sabotage the advancement of teacher leadership. (p. 6)

Obviously, it is difficult to be a leader when others do not wish to follow.

A third factor that inhibited teacher leadership came in the form of school climate factors. Schools that were resistant to change overall had problems accepting teacher leadership (Durias, 2010). Similarly, schools that seemed to lack a unified vision also inhibited teacher leadership (Brooks et al., 2004). Additionally, schools and faculty who were used to hierarchical structures typically found in schools resisted leadership coming from those who were not the principal

(Chew & Andrews, 2010; Friedman, 2011; Muijs & Harris, 2006). Finally, a lack of clear communication – either between the teacher leader and the principal or amongst the staff at large seemed to interfere with the work of teacher leaders (Chesson, 2010; Margolis & Doring, 2012).

Lastly, the literature mentioned some personal characteristics that do not appear to be conducive to effective teacher leadership. Those teacher leaders who were unwilling or unable to disturb traditional hierarchical structures or who did not feel comfortable ‘being the boss’ had difficulties fulfilling their roles efficiently (Brosky, 2011; Chamberland, 2009). Likewise, those who lacked confidence, either because they were uncomfortable with the subject matter or because they were still novice leaders often struggled to lead (Durias, 2010; Klinker et al., 2010; Muijs & Harris, 2006). These personal characteristics often had the effects of the teacher leaders losing credibility in the eyes of their colleagues, or the teacher leaders being unable to advocate for their position and work.

In What Ways Does the Research Surrounding Teacher Leadership Examine Issues of Diversity and Equity?

Of the 54 pieces of literature in our review, only five (9%) focused on issues of diversity and equity. Bradley-Levine (2012) and Larrabee and Morehead (2010) conducted research in graduate-level courses that were preparing teacher leaders. The program Bradley-Levine explored was centered on the concept of ‘critical consciousness’ and sought to prepare teacher leaders to become “moral and transformative agents committed to the principles of equity, justice, and diversity” (p. 751-752). As such, the research conducted sought to evaluate the effectiveness of the program in instilling critical consciousness. Larrabee and Morehead (2010) focused on one particular course within a graduate program and the students’ reflections on a lecture given on the topic of lesbian, gay, and bisexual issues.

Durias (2010), Podjasek (2009), and Watson (2007) all conducted research on teacher leaders in the field, and focused on particular minority groups. Durias investigated the motivations and practices that encouraged or hindered math teacher leaders of color to take on larger leadership roles. Podjasek (2009) examined the experiences of female elementary teachers leaders and their perceptions of leadership. Finally, Watson (2007) sought to understand why female African-American teacher leaders were inspired to pursue higher leadership positions within urban schools. Despite each of these topics being worthy of exploration, given the current educational, social, and political contexts, it was surprising these were the *only* issues surrounding equity and diversity found in this collection of literature.

Discussion

This section begins with a more general discussion about the demographic statistics reported outside of the research questions investigated in this study to better contextualize the literature reviewed.

As noted in the results section, although there are many nuances that distinguish the research reviewed here from that reviewed by York-Barr and Duke (2004), the body of empirical research on teacher leadership from 2004 to 2013 seems to have changed very little in terms of the research paradigms and data collection methodologies used. More specifically, research on teacher leadership continues to be largely qualitative in nature and conducted as small-scale case studies with primarily convenience samples and self-reporting methodologies. Fully 74% of the literature we reviewed was qualitative in nature ($n = 40$) and although the 54 pieces of literature included in this current review did use a variety of data collection methods, many pieces of literature found in the initial keyword search were excluded from the review because they were either judged as purely descriptive articles or included only self-reported and/or un-triangulated data (339 pieces and 77 pieces, respectively).

Nearly one-fourth of the research reviewed took place outside the U.S. And although some may debate the inclusion of international investigations in this review because of the potentially disparate contexts that exist within schools and school systems internationally, we found that the international studies were drawing on and working to contribute to the common body of literature on teacher leadership (e.g., citing common seminal pieces of literature). Moreover, the dialogue in these international pieces of literature appeared to attend to similar concerns articulated in the U.S. studies included in the review. As an example, Grant (2009) examined the extent to which a distributed leadership model allowed for teachers to emerge as leaders and participate in school level decision making in the context of their schools in South Africa.

The remainder of this section is focused on discussion of the findings. However, rather than a linear discussion of research questions in the order in which they were reported, the discussion section is organized in a more integrated format that allows for larger themes amongst the research questions to emerge. This organization also supports a focus on the implications of the overall research as the findings of research questions were considered in concert. The first theme to be discussed is teacher leadership in schools today and the preparation for these roles. In this, attention is given to how teacher leadership was defined in the research reviewed (research question 1), the attention given to issues of equity and diversity in teacher leadership (research question 7), and the preparation of teacher leaders (research question 4). The next theme to be discussed concerns the contexts and theories that have been used to frame teacher leadership over the last decade (research questions 2 and 3). The final theme to be discussed is in regards to those factors that facilitate or inhibit teacher leadership in schools (research questions 5 and 6).

Teacher Leadership in Schools Today and the Preparation for These Roles

This first discussion theme focuses on a consideration of what this collection of literature says about what we believe teacher leadership to be in the current climate and organization of schools. These beliefs were manifested in how researchers defined teacher leadership. In our results section, relatively few researchers ($n = 19$; 35%) explicitly described how they defined teacher leadership for the purposes of their study. This finding was judged to be problematic, as it reveals that a majority ($n = 35$; 65%) of the research reviewed did not definitively state what they believed teacher leadership to be. Instead, many researchers mentioned several other researchers' definitions of teacher leadership in passing, but in the end did not indicate how they were defining teacher leadership within their research. In those instances within the literature in which researchers did define teacher leadership for their study, it was conceptualized as working beyond the classroom walls, supporting professional learning in their schools, and being involved in policy and/or decision-making at some level with the ultimate goal of improving student learning and success and seeking improvement and change for the whole school organization.

One implication of the lack of clarity surrounding teacher leadership is that it then becomes conceptually ill defined, like "inquiry" or "standards-based teaching" (Windschitl, Thompson, Braaten, & Stroupe, 2012). And like inquiry or standards-based teaching, this muddiness could lead to inconsistencies between the research literature on teacher leadership and local enactments of teacher leadership. As an example, Beachum and Dentith (2004) did not explicitly define teacher leadership for their study, but rather seemed to cite the body of literature on teacher leadership in general by stating that teacher leadership is "leadership beyond traditional classroom boundaries" (p. 277). In this definition, it is implied that teachers are still in the classroom, but still, this definition is quite vague in what exactly teacher leadership means for their study. Beachum and Dentith's research identified how teacher leadership led to the establishment of a positive culture in the school because teachers felt empowered. Given these findings, if a school strove to enact teacher leadership as informed by Beachum and Dentith's work, but their teacher leaders did not maintain K-12 classroom-based teaching responsibilities, the positive culture and feeling of teacher empowerment sought may not be amongst the eventual outcomes. This is an entirely plausible alternative outcome because, as Mangin and Stoelinga (2008) have noted, teacher leaders with classroom responsibilities are afforded an understanding of the complexities of teaching. Additionally, Curtis (2013) and Muijs and Harris (2003, 2006), have stated how teacher leaders with classroom teaching responsibilities are uniquely positioned as collaborators with a capacity for modeling and refining content-specific instructional practices. This serves as but one example of how the lack of clarity in how teacher leadership is defined might lead to a mismatch between research and practice.

Related to the threat of inconsistency between local enactments of teacher leadership and teacher leadership research, the lack of clarity surrounding teacher leadership holds the potential to inhibit the field from building on others' work. That is, if researchers are, as Neumerski (2012) described, using teacher leadership as an "umbrella term referring to a myriad of work" (p. 320), it becomes difficult to closely examine consistent facets of teacher leadership in order to construct reliable knowledge. Put more concisely, if researchers are not explicit in articulating how they are defining teacher leadership or the specific roles teacher leaders in their research do or do not take on, it seems unlikely that consistent evidence can be collected to ground knowledge claims about teacher leadership or that connections will be made between the current climate or organization of schools and teacher leadership.

In considering teacher leadership in the current climate and organization of schools, consideration was given to the ways in which the research surrounding teacher leadership investigated issues of equity and diversity. This important component of teacher leadership was highlighted because of the important influence equity and diversity can have in determining which teachers take on leadership roles and how teacher leaders more generally, once taking these roles,

support the diverse populations of teachers and students they lead. To prepare teacher leaders to lead in an equitable manner, especially as diverse populations come together in ways that might lead to unequal power distributed among populations or groups, researchers like Bradley-Levine (2012) have considered frameworks like Freire's (1970/2006, 1973/2002) critical consciousness. As teacher leaders develop critical consciousness, they carefully give consideration to the problems related to diversity and equity within schools and society more broadly by considering the roles historical and social activity had in creating these problems. Moreover, this critical consciousness is wed with a balance of action (hooks, 1994), whereby teacher leaders take action to provide equitable educational opportunities for all students. In this review of teacher leadership, equity and diversity was seen as being central to identifying and preparing teacher leaders. However, as noted in the results, only five (9%) of the articles reviewed attended to issues of diversity and equity. To reiterate, this meant that equity and diversity were not considered in 91% ($n = 49$) of the articles included. Given the rapidly changing world of education as well as the populations found in schools, this manifests as an unacceptable oversight. Those five pieces of literature that did attend to issues of equity and diversity provided insight into possibilities for preparing teacher leaders (e.g., Bradley-Levine, 2012; Larrabee & Morehead, 2010) or the experiences of teacher leaders from minority groups (i.e., Durias, 2010; Podjasek, 2009; Watson, 2007), but these few studies hardly provide the strong base of literature.

When considering teacher leadership preparation more broadly beyond considerations of equity and diversity, more research was identified. However, only nine pieces of literature (17%) discussed teacher leader preparation in detail. Additionally, these nine pieces of literature examined widely varied programs or components of teacher leadership preparation, from teacher leader preparation taking place via PD, conferences, and local training programs, to university Masters programs and courses. Due to this lack of focus related to teacher leadership preparation, we decline to make judgments about the importance or promise of any one program or components of these programs. However, even across these varied organizational structures within which teacher leaders were supported, it was noted that there was relative agreement in the three areas of learning (content knowledge, pedagogical knowledge, leadership skills) that should have been emphasized within a teacher leadership preparation program.

In summary, it seems imperative that future research on teacher leadership clearly defines the concept of teacher leadership, even while acknowledging disagreement and ambiguity within the field and variation in localized organizational structures. It is only through conducting research using these working definitions that the notion of teacher leadership will be clearly defined. Furthermore, these findings suggest that those working in teacher leadership programs (university-based or school-based) should conduct empirical research on the components, as well as the outcomes of these programs. Additionally, we encourage teacher leader preparation programs to discuss best practices related to issues of equity and diversity.

Contexts and Theories That Frame Research Surrounding Teacher Leadership

As stated earlier, this literature review sought to better understand the emerging forces potentially pressing on the ecology of teacher leadership. In considering this, researchers like Spillane and Hopkins (2013), Ball and Lacey (2012), and Spillane et al. (2003) have revealed how disciplinary context (e.g., science, mathematics, etc.) is likely one of the key contextual factors that might shape teacher leadership, especially because the disciplinary contexts have been characterized as, among other things, subcultures (Ball & Lacey, 2012). Consequently, we explored whether our review of the literature might allow us to aggregate research on teacher leadership by discipline such that the unique idiosyncrasies of each discipline could be illuminated. However, as noted in our results, the small number of studies from each of the disciplines as well as the fact that the disciplinary contexts represented in this body of literature seemed only mentioned in passing as extraneous contextual information prevented us making any claims about what might differentiate teacher leadership related to teaching English, as an example, as any different from teacher leadership related to teaching science.

This does not mean that disciplinary contexts are unimportant in shaping the work of teacher leaders. On the contrary, research in science education, for example, has revealed how disciplines bring with them particular ways of knowing both in terms of epistemic and epistemological resources (e.g., Berland & Hammer, 2012), and in the differences in semiotic registers that are activated within disciplinary epistemic work (e.g., Wilson, Boatright, & Landon-Hays, 2014). However given our findings, little in the way of how the epistemological commitments of the disciplines, as well as how classroom activities in these disciplines targeting approximations of these commitments have to date been considered as they relate to teacher leadership. Therefore, we believe future research to understand teacher leadership will be greatly informed as more attention is given to the very specific disciplinary idiosyncrasies that exist. This will

help distinguish disciplinary learning as well as how these contribute to the selection of disciplinary teacher leaders, how they help shape and organize the work of teacher leaders, and how teacher leaders influence student learning within these disciplines.

This review not only worked to examine the context of teacher leadership, but it also sought to understand the extent to which the teacher leadership literature reviewed could be considered theoretical. Further consideration was given to which theories were found within the literature reviewed. With respect to the literature reviewed, it is difficult to assert that the literature on teacher leadership has remained atheoretical, as 33 (61%) pieces of literature did rely on at least one theory to inform the studies (see Table 3). However, given that the research included in this review is peer-reviewed, we were surprised to find that there were still so many researchers conducting what would be considered 'atheoretical' research.

The *Journal of Teacher Education*, a top educational research journal (Impact Factor: 2.21; Ranking: Education & Educational Research 17 out of 219), requires a 'Conceptual Framework', which is defined as "connections to relevant constructs in literature" (Sage, 2015, para. 4). Another top educational research journal, the *Journal of Research in Science Teaching*, (Impact Factor: 3.02; Ranking: Education & Educational Research 6 out of 219), requires the following of submissions being considered for publication: "Articles are expected to reflect the best scholarly practice relevant to the study design. It is expected that you...establish and justify the guiding theoretical framework..." (John Wiley & Sons, Inc., 2015, para. 3). These examples are shared to demonstrate the importance that top scholars place on theoretical frameworks for grounding and building on educational research. There is value in using theory to inform research in a field so others may think beyond the results of one particular investigation and consider more generalizable perspectives that may provide insight across settings and investigations and inform practice (York-Barr & Duke, 2004).

We found at least 25 different theories identified in the research reviewed here. Among these, ten studies (19%) reviewed here utilized distributed leadership to frame their research. This leads us to believe that there may be some agreement within the field as to a 'best' theory with which to more generally frame research on teacher leadership. However, each author seemed to define distributed leadership slightly differently and emphasize different aspects of the theory, and there was quite a bit of variety in the foci of the studies. Topics explored using this framework included leadership structures and the sustainability of that leadership (Chamberland, 2009; Grant, 2009), school change and development (Hands, 2012; Harris & Townsend, 2009; Muijs & Harris, 2006), the conditions surrounding teacher leadership (Anderson, 2012; Grant, 2009; Hoang, 2008; Muijs & Harris, 2006; Supovitz, 2008; Vernon-Dotson & Floyd, 2012), and the impacts of teacher leadership (Gigante & Firestone, 2008; Muijs & Harris, 2006). So despite the fact that 19% of the literature reviewed here applied the same theoretical framework to research in teacher leadership, we would be hard-pressed to say that this allowed knowledge in the field to move forward in a unified direction.

We believe that it is appropriate to characterize the literature on teacher leadership as only 'partially theoretical' as just over a majority of the literature was framed by theory. We recognize that the theory selected for any particular investigation into teacher leadership is largely dependent on the purposes of the research, and as such this helps to explain the large variety of theory identified across the research reviewed. Nevertheless, we believe more consistency in the use of theory is needed if we expect to see some strands of research around teacher leadership building synergistically towards a theory of teacher leadership. Given this, we recommend that future research exploring teacher leadership consider the theories that have been applied previously as well as the emphasized aspects of those theories so as to work towards a theory of teacher leadership. Further, we propose that future researchers using distributed leadership in particular consider and work to identify central features of this theory, as it appears to already have taken a somewhat prominent position as a theoretical lens for examining teacher leadership.

The Effects of Teacher Leadership and Those Things That Facilitate and Inhibit Such Effects

In the results section we revealed several of the effects of teacher leadership in terms of how it affects those taking up these roles, as well as the effects of teacher leaders on colleagues and schools. Beyond this we also examined those factors that facilitated or inhibited the impact of teacher leaders. Given the findings, we inferred that many of the positive or adverse effects of being a teacher leader seemed bound up in those things that either facilitate or inhibit the effectiveness of teacher leaders. Therefore, this section considers these (i.e., effects on those taking on teacher leadership roles, factors that facilitate or inhibit teacher leadership effectiveness) together.

One often-underreported outcome of teacher leadership is the effect it has on those taking up these roles. As an example, York-Barr and Duke (2004) examined the effects of teacher leaders and those factors that facilitated or inhibited teacher leaders' effectiveness, but little attention was explicitly given to the ways in which teacher leadership transformed those taking on this role or the potential toll it might have taken. In fact, we did not originally intend to consider this outcome either, until it became apparent in the articles we reviewed that this might be an important component of supporting teacher leaders. For example, Durias (2010) identified how some teacher leaders felt that teacher leadership roles were a lot to take on, especially given what they felt were already heavy teaching workloads and questions about how their peers might react to them taking such roles. On the other hand, Chew and Andrews (2010) described how teacher leadership roles gave individuals a strong sense of purpose and satisfaction as they felt empowered in work they were doing to improve their schools.

Ultimately, our review uncovered the following four themes to describe the impact of teacher leadership roles on individuals taking on these roles: *the stresses/difficulties; changing relationships with peers and administration; increased positive feelings and professional growth* and *increased leadership capacity*. As noted in the results section, the first two of these (i.e., *stresses/difficulties* and *changing relationships with peers and administration*) were more associated with things that could negatively impact those taking on these roles. And, among those things that led to these themes were the already important and taxing roles teachers assumed in classrooms and the egalitarian norms that reverberate throughout the teaching profession. When we examined the literature to identify those factors that inhibited the effectiveness of teacher leadership, we noted themes that seemed to align with the adverse effects of teacher leadership on teacher leaders. Particularly, *lack of time* seems reasonably connected with the stresses and difficulties teacher leaders reported in these roles. And, *poor relationships*, albeit not always the case, were at times tied to tensions that connected to challenging the egalitarian norms of the teaching profession (Friedman, 2011; Muijs & Harris, 2006). Further *climate and structural factors*, such as scheduling issues and norms that do not support the aims of teacher leadership, also seemed also connected to the adverse effects some teacher leaders reported.

Conversely, the positive effects on teacher leaders as they took on these roles (i.e., *increased positive feelings and professional growth* and *increased leadership capacity*) also seemed well aligned with those things identified as essential elements in facilitating the effectiveness of teacher leadership. This can be seen as principals afforded teacher leaders autonomy to do their work or when principals played a large role in creating an environment that supported teacher leaders' work. An example of this was seen in Gigante and Firestone (2008) as principals who supported the work of teacher leaders enabled those teacher leaders to more fully lead their schools, rather than simply serve as support personnel. These teacher leaders, in turn, felt more excited about and satisfied with their work. Certainly it can be seen how positive effects of being a teacher leader might emerge as the role is supported by principals and facilitating structures.

Beyond supportive environments arranged by principals facilitating effective teacher leadership, our review also revealed the importance of external supports. These external supports came in the form of training in content, pedagogy, and leadership and the collegial support networks and partnerships that emerged when multiple teacher leaders participated to take advantage of these supports in groups with other teacher leaders (e.g., Brosky, 2011; Yonezawa et al., 2011). This too seemed well aligned with positive benefits for teacher leaders as they took on their roles, namely *increased positive feelings and professional growth*.

What seemed most evident from considering the effects of teacher leadership and those things that facilitate and inhibit such effects, is how intricately connected the effects teacher leaders felt as part of taking on these roles were to the conditions within which their work was situated that either supported or inhibited this work. These findings point to the need for increased attention to the explicit articulation of teacher leaders' roles, the time needed to accomplish these roles, their professional learning needs, and the provision of appropriate levels of autonomy. Additionally, supporting teacher leaders also requires some attention to power structures that are bound up in the relationships between teacher leaders and teachers connected to the egalitarian norms of the teaching profession. This suggests a need for future research to work at continuing to develop better understandings about how climates can be constructed to reimagine the egalitarian norms associated with teaching or to reframe the work of teachers such that the role of a leader is seen not as a hierarchal position, but is instead is seen as a mechanism for putting everyone in place to take advantage of the skills and commitments teachers possess. And finally, it seems imperative that more research be conducted to understand the effect teacher leadership has on those taking on these roles. Often the details of the effects teacher

leadership had on those taking on these roles emerged in the research reviewed, but generally this was not the focus of the research. More focus in this area might, among other things, provide the beginnings of a teacher leadership professional learning trajectory for increased leadership capacity.

Finally as noted in the results, no research was found in the body of literature reviewed that examined the impact of teacher leaders on student learning. This stood out within the literature, particularly because a commitment to student learning is articulated in the ways that most define teacher leadership, including how we defined it for the purposes of this research. To be clear, we acknowledge that there is research linking overall school leadership and student learning (e.g., Leithwood & Jantzi, 2008; Leithwood, Patten, & Jantzi, 2010; Ma & Klinger, 2000; Robinson, Lloyd, & Rowe, 2008). However, there were no studies in the pieces of literature included in this review specifically linking teacher leadership to student learning, even though York-Barr and Duke (2004) identified this as a need in 2004, and the educational climate has shifted towards an increased focus on accountability for student learning. Although it has been recognized that there are inherent problems associated with documenting the 'value-added' by teachers (or in this case, teacher leaders; e.g., Ballou & Springer, 2015), the lack of data on this matter has the potential to adversely impact educational policy. Therefore, we urge researchers to investigate possible correlations between teacher leadership specifically and student learning through either methodologies like those employed in establishing the link between overall school leadership and student learning (e.g., Leithwood & Jantzi, 2008; Leithwood, et al., 2010; Ma & Klinger, 2000; Robinson, et al., 2008) or by exploring methodologies more relevant and specifically tied to the explicit roles articulated for teacher leaders. Given the political emphasis on accountability, we believe that teacher leadership can be no more than a passing fad unless empirical research can support the value of teacher leadership in terms of student learning.

Conclusion and Significance

We recognize that there are high-quality pieces of research surrounding the topic of teacher leadership that did not meet our inclusion criteria, but it is surprising just how few pieces did meet all of our criteria. Fully ten years ago, York-Barr and Duke (2004) were explicit in their call for literature based on empirical research with robust data collection measures. Based on our findings, the need for this type of literature on teacher leadership is still great. Particularly in light of the increased interest in teacher leadership as a key component of school reform, the inclusion of teacher leadership in teacher evaluations, and the challenge of teacher attrition, it is imperative that initiatives related to teacher leadership are grounded in high-quality research rather than 'gut feelings' and descriptive literature. Otherwise, as Muijs and Harris (2006) have cautioned, the continued lack of empirical research may lead us to only view teacher leadership through rose-colored glasses, as advocacy in lieu of research, which will present "a very optimistic picture of the implementation of teacher leadership and its consequences" (p. 962).

Another concern that surfaced in our review was the lack of attention given to issues of equity and diversity. Brown, Benkovitz, Muttillio, and Urban (2011) argue that school leaders must attend to issues of equity and social justice because "A school culture that perpetuates the status quo and turns a blind eye to the social injustices that permeate our schools is not really 'excellent'" (p. 86). Unfortunately, our review revealed that these critical issues are largely ignored in the teacher leadership literature and hold implications for future research.

Finally, it is also interesting to note the major topics associated with research on teacher leadership. Scholars in the last decade have continued the crusade to better understand what teacher leadership is, and the conditions that may inhibit or support teacher leadership. However, it seems that few scholars have moved past these basic components to ask more difficult questions; questions that will require a wide spectrum of research methodologies and data sources, such as the following:

- How is teacher leadership enacted?
- Recognizing that schools are nested and constituted in unique contexts, in what ways do the school-level factors shape the enactment of teacher leadership?
- To what extent can the roles of teacher leaders be connected to improved teacher practice and increased student learning?
- Are there models of teacher leadership that are more effective than others in terms of student learning and/or teacher learning?

- What role do teacher leaders play in shaping issues of equity and diversity in classrooms, schools, and communities?
- How might we encourage more teacher leadership among underrepresented groups?
- In what ways might teacher leadership mitigate teacher attrition?
- How might professional learning for teacher leaders be characterized and how is this learning related to the specific contexts within which teacher leadership is enacted?
- Can a theory of teacher leadership be developed to capture the essence of this unique form of leadership?

We, like others, believe that teacher leaders can play a central role in meeting the needs of students in schools. However, we predict that the role of teacher leader will continue to suffer from those factors that inhibit its effectiveness and the struggles teacher leaders encounter if researchers do not fill the gaps in the knowledge concerning teacher leadership with rigorous, empirically-based evidence. As such, this review has identified those gaps and provided directions for future research.

References

References marked with an asterisk indicate studies included in the review.

- *Adams, D., & Gamage, D. T. (2008). A study of leadership effectiveness in a large VET institution in Australia. *International Journal of Educational Management*, 22, 214–228. doi:10.1108/09513540810861856
- *Anderson, M. (2012). The struggle for collective leadership: Thinking and practice in a multi-campus school setting. *Educational Management Administration & Leadership*, 40, 328–342. doi:10.1177/1741143212436955
- Ball, S. J., & Lacey, C. (2012). Subject disciplines as the opportunity for group action: A measured critique of subject sub-cultures. In P. Woods (Ed.), *Teacher Strategies* (pp. 149–177). New York, NY: Routledge.
- Ballou, D., & Springer, M.G. (2015). Using student test scores to measure teacher performance: Some problems in the design and implementation of evaluation systems. *Educational Researcher*, 44, 77–86.
- *Baecher, L. (2012). Pathways to teacher leadership among English-as-a-Second-Language teachers: Professional development by and for emerging teacher leaders. *Professional Development in Education*, 38, 317–330. doi:10.1080/19415257.2012.657877
- *Beachum, F., & Dentith, A. M. (2004). Teacher leaders creating cultures of school renewal and transformation. *The Educational Forum*, 68, 276–286. doi:10.1080/00131720408984639
- Berland L. K., & Hammer, D. (2012). Framing for scientific argumentation. *Journal of Research in Science Teaching*, 49, 68–94. doi:10.1002/tea.20446
- Billingsley, B. S. (2007). Recognizing and supporting the critical roles of teachers in special education leadership. *Exceptionality*, 15, 163–176. doi:10.1080/09362830701503503
- Booth, S. E. (2012). Cultivating knowledge sharing and trust in online communities for educators. *Journal of Educational Computing Research*, 47, 1–31. doi:10.2190/EC.47.1.a
- *Borchers, B. T. (2009). *A study to determine the practices of high school principals and central office administrators who effectively foster continuous professional learning in high schools* (Order No. 3389298). Available from ProQuest Dissertations & Theses Global. (304932769). Retrieved from <http://search.proquest.com/docview/304932769?accountid=9649>
- *Bradley-Levine, J. (2012). Developing critical consciousness through teacher leader preparation. *Journal of School Leadership*, 22, 751–770.
- *Brooks, J. S., Scribner, J. P., & Eferakorho, J. (2004). Teacher leadership in the context of whole school reform. *Journal of School Leadership*, 14, 242–265.
- *Brosky, D. (2011). Micropolitics in the school: Teacher leaders' use of political skill and influence tactics. *International Journal of Educational Leadership Preparation*, 6, 1–11.
- Brown, K. M., Benkovitz, J., Muttillio, A. J., & Urban, T. (2011). Leading schools of excellence and equity: Documenting effective strategies in closing achievement gaps. *Teachers College Record*, 113, 57–96.
- *Can, N. (2009). The leadership behaviours of teachers in primary schools in Turkey. *Education*, 129, 436–448.
- *Carpenter, B. D., & Sherretz, C. E. (2012). Professional development school partnerships: An instrument for teacher leadership. *School-University Partnerships*, 5, 89–101.

- *Chamberland, L. (2009). *Distributed leadership: Developing a new practice. An action research study* (Order No. 3367708). Available from ProQuest Dissertations & Theses Global. (304856820). Retrieved from <http://search.proquest.com/docview/304856820?accountid=9649>
- *Chesson, L. S. (2011). *The nature of teacher leadership in a Boston pilot school* (Order No. 3446925). Available from ProQuest Dissertations & Theses Global. (858258515). Retrieved from <http://search.proquest.com/docview/858258515?accountid=9649>
- *Chew, J. O. A., & Andrews, D. (2010). Enabling teachers to become pedagogical leaders: Case studies of two IDEAS schools in Singapore and Australia. *Educational Research for Policy and Practice*, 9, 59–74. doi:10.1007/s10671-010-9079-0
- *Collinson, V. (2012). Leading by learning, learning by leading. *Professional Development in Education*, 38, 247–266. doi:10.1080/19415257.2012.657866
- Colorado Department of Education (2015). *2015-16 rubric for evaluating Colorado teachers*. Retrieved from <http://www.cde.state.co.us/educatoreffectiveness/rubric-for-colorado-teachers>
- Curtis, R. (2013). *Findings a new way: Leveraging teacher leadership to meet unprecedented demands*. Washington, D. C.: The Aspen Institute.
- Danielson, C. (2014). *The framework for teaching evaluation instrument* (2nd ed.). Danielson Group: www.danielsongroup.org
- Donaldson, M. L. (2007). To lead or not to lead?: A quandary for newly tenured teachers. In R. H. Ackerman & S. V. Mackenzie (Eds.), *Uncovering teacher leadership: Essays and voices from the field* (pp. 259–272). Thousand Oaks, CA: Corwin Press.
- Donaldson, M. L., Johnson, S. M., Kirkpatrick, C. L., Marinell, W., Steele, J. L., & Szczesiul, S. A. (2005). Angling for access, bartering for change: How second-stage teachers experience differentiated roles in schools. *Teachers College Record*, 110, 1088–1114.
- *Durias, R. F. (2010). *Teacher leaders of color: The impact of professional development on their leadership* (Order No. 3437275). Available from ProQuest Dissertations & Theses Global. (819911603). Retrieved from <http://search.proquest.com/docview/819911603?accountid=9649>
- *Edge, K., & Mylopoulos, M. (2008). Creating cross-school connections: LC networking in support of leadership and instructional development. *School Leadership & Management*, 28, 147–158. doi:10.1080/13632430801969823
- *Fairman, J. C., & Mackenzie, S. V. (2012). Spheres of teacher leadership action for learning. *Professional Development in Education*, 38, 229–246. doi:10.1080/19415257.2012.657865
- Freire, P. (2002). *Education for critical consciousness*. New York, NY: Continuum. (Original work published 1973).
- Freire, P. (2006). *Pedagogy of the oppressed*. New York, NY: Continuum. (Original work published 1970).
- *Friedman, H. (2011). The myth behind the subject leader as a school key player. *Teachers and Teaching*, 17, 289–302. doi:10.1080/13540602.2011.554701
- *Gaffney, M., & Faragher, R. (2010). Sustaining improvement in numeracy: Developing pedagogical content knowledge and leadership capabilities in tandem. *Mathematics Teacher Education and Development*, 12, 72–83.
- *Gates, G., & Robinson, S. (2009). Delving into teacher collaboration: Untangling problems and solutions for leadership. *NASSP Bulletin*, 93, 145–165. doi:10.1177/0192636509354375
- *Gigante, N. A., & Firestone, W. A. (2008). Administrative support and teacher leadership in schools implementing reform. *Journal of Educational Administration*, 46, 302–331. doi:10.1108/09578230810869266
- Goldspink, C. (2007). Rethinking educational reform: A loosely coupled and complex systems perspective. *Educational Management Administration & Leadership*, 35, 27–50. doi:10.1177/1741143207068219
- *Gonzales, L. D. (2004). Sustaining teacher leadership in enabling to inchoate cultures. *Journal of School Leadership*, 14, 128–152.
- *Gordin, L. (2010). *Conceptualization and support of the role of teachers serving as team leaders in a professional learning community* (Order No. 3415533). Available from ProQuest Dissertations & Theses Global. (725645784). Retrieved from <http://search.proquest.com/docview/725645784?accountid=9649>
- *Grant, C. (2009). Passing the buck: This is not teacher leadership! *Perspectives in Education*, 27, 289–301.
- *Hands, C. M. (2012). Supporting teacher leadership for partnerships. In S. Auerbach (Ed.), *School leadership for authentic family and community partnerships* (pp. 173–192). New York, NY: Taylor & Francis.
- *Hanuscin, D. L., Rebello, C. M., & Sinha, S. (2012). Supporting the development of science teacher leaders. Where do we begin? *Science Educator*, 21, 12–18.

- *Harris, A., & Townsend, A. (2007). Developing leaders for tomorrow: Releasing system potential. *School Leadership & Management*, 27, 167–177. doi:10.1080/13632430701237339
- *Hickey, W. D., & Harris, S. (2005). Improved professional development through teacher leadership. *The Rural Educator*, 26, 12–16.
- *Hoang, T. (2008). Perception, curriculum, and subject matter: Reforming instruction. *International Electronic Journal for Leadership in Learning*, 12(3). Retrieved from <http://iejll.synergiesprairies.ca/iejll/index.php/ijll/article/view/547/209>
- *Hofstein, A., Carmeli, M., & Shore, R. (2004). The professional development of high school chemistry coordinators. *Journal of Science Teacher Education*, 15, 3–24. doi:10.1023/B:JSTE.0000031460.64585.fdhooks, b. (1994). *Teaching to transgress: Education as the practice of freedom*. New York, NY: Routledge.
- *Hunzicker, J. (2012). Professional development and job-embedded collaboration: how teachers learn to exercise leadership. *Professional Development in Education*, 38, 267–289. doi:10.1080/19415257.2012.657870
- Ingersoll, R., & Merrill, E. (2012). *Seven trends: The transformation of the teaching force*. CPRE Working Paper (#WP-01). Philadelphia: Consortium for Policy Research in Education, University of Pennsylvania.
- Ingersoll, R., & Perda, D., (2012). *How high is teacher turnover and is it a problem?* Philadelphia: Consortium for Policy Research in Education, University of Pennsylvania. John Wiley & Sons, Inc. (2015). *Journal of Research in Science Teaching: Author guidelines*. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1098-2736/homepage/ForAuthors.html](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1098-2736/homepage/ForAuthors.html)
- Johnson, S. M., & Donaldson, M. L. (2004). Sustaining new teachers through professional growth. In S. M. Johnson (Ed.), *Finders and keepers: Helping new teachers survive and thrive in our schools* (pp. 225–248). San Francisco, CA: Jossey-Bass.
- *Klinker, J. F., Watson, P. A., Furgerson, P., Halsey, P., & Janisch, C. (2010). “Tipping” teachers toward change: Developing leadership characteristics through book club. *Teacher Education and Practice*, 23, 103–119.
- Lake Havasu Unified School District #1. (2011). *Teacher evaluation and growth system: Reference documentation*. Retrieved from <http://www.azed.gov/teacherprincipal-evaluation/files/2012/09/lakehavasuteacherevaluationgrowthsystem06142011.pdf>
- *Larrabee, T. G., & Morehead, P. (2010). Broadening views of social justice and teacher leadership: Addressing LGB issues in teacher education. *Issues in Teacher Education*, 19, 37–52.
- Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly*, 44, 496–528. doi:10.1177/0013161X08321501
- Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004). *Review of research: How leadership influences student learning*. The Wallace Foundation, New York, NY.
- Leithwood, K., Patten, S., & Jantzi, D. (2010). Testing a conception of how school leadership influences student learning. *Educational Administration Quarterly*, 46, 671–706. doi:10.1177/0013161X10377347
- Little, J. W. (2003). Constructions of teacher leadership in three periods of policy and reform activism. *School Leadership & Management*, 23, 401–419. doi:10.1080/1363243032000150944
- Ma, X., & Klinger, D. A. (2000). Hierarchical linear modeling of student and school effects on academic achievement. *Canadian Journal of Education*, 25, 41–55. doi:10.2307/1585867
- Madsen, J., & Mabokela, R. (2014). Leadership challenges in addressing changing demographics in schools. *NASSP Bulletin*, 98, 75–96. doi:10.1177/0192636513514110
- Mangin, M. M., & Stoelinga, S. R. (2008). Teacher leadership: What it is and why it matters. In M. M. Mangin & S. R. Stoelinga (Eds.), *Effective teacher leadership: Using research to inform and reform* (pp. 1–9). New York, NY: Teachers College Press.
- *Margolis, J. (2012). Hybrid teacher leaders and the new professional development ecology. *Professional Development in Education*, 38, 291–315. doi:10.1080/19415257.2012.657874
- *Margolis, J., & Deuel, A. (2009). Teacher leaders in action: Motivation, morality, and money. *Leadership and Policy in Schools*, 8, 264–286. doi:10.1080/15700760802416115
- *Margolis, J., & Doring, A. (2012). The fundamental dilemma of teacher leader-facilitated professional development: Do as I (kind of) say, not as I (sort of) do. *Educational Administration Quarterly*, 48, 859–882. doi:10.1177/0013161X12452563
- *Margolis, J., & Huggins, K. S. (2012). Distributed but undefined: New teacher leader roles to change schools. *Journal of School Leadership*, 22, 953–981.
- Muijs, D., & Harris, A. (2003). Teacher leadership—improvement through empowerment?: An overview of the literature. *Educational Management Administration & Leadership*, 31, 437–448. doi:10.1177/0263211X030314007

- *Muijs, D., & Harris, A. (2006). Teacher led school improvement: Teacher leadership in the UK. *Teaching and Teacher Education*, 22, 961–972. doi:10.1016/j.tate.2006.04.010
- Neumerski, C. M. (2012). Rethinking instructional leadership, a review: What do we know about principal, teacher, and coach instructional leadership, and where should we go from here? *Educational Administration Quarterly*, 49, 310–347. doi:10.1177/0013161X12456700
- *Pegg, A. E. (2010). Learning to lead the risk-conscious organization: An empirical study of five English primary school leaders. *International Journal of Leadership in Education*, 13, 121–139. doi:10.1080/13603120903410561
- *Podjasek, H. L. (2009). *The space between: Women teachers as leaders* (Order No. 3401058). Available from ProQuest Dissertations & Theses Global. (305168168). Retrieved from <http://search.proquest.com/docview/305168168?accountid=9649>
- *Robinson, J. B. (2009). *Teacher leadership and school reform: A case study of the accelerating student achievement project in a central Kentucky school district* (Order No. 3448083). Available from ProQuest Dissertations & Theses Global. (859606760). Retrieved from <http://search.proquest.com/docview/859606760?accountid=9649>
- Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly*, 44, 635–674. doi:10.1177/0013161X08321509
- Sage. (2015). *Journal of Teacher Education: Manuscript submission*. Retrieved from <http://www.sagepub.com/journals/Journal200961/manuscriptSubmission>
- *Salim, K. N. (2011). *Teacher developed leadership experiences in an urban school district: Exploring the professional needs and career plans of second-stage teachers*. (Unpublished doctoral dissertation). Harvard University, Cambridge, MA.
- *Sanders, M. G. (2006). Missteps in team leadership: The experiences of six novice teachers in three urban middle schools. *Urban Education*, 41, 277–304. doi:10.1177/0042085906287903
- *Scribner, S. M. P., & Bradley-Levine, J. (2010). The meaning(s) of teacher leadership in an urban high school reform. *Educational Administration Quarterly*, 46, 491–522. doi:10.1177/0013161X10383831
- *Shiu, S.-P., Chrispeels, J. H., & Doerr, R. E. (2004). Evolving roles and sharing leadership: The path of one leadership team. In J. H. Chrispeels (Ed.), *Learning to lead together: The promise and challenge of sharing leadership* (pp. 132–160). Thousand Oaks, CA: Sage.
- *Siers, Jr., R., & Gong, T. (2012). Examining the effect of mentor teacher’s leadership practices and interaction on student teaching interns’ efficacy in professional development schools. *School-University Partnerships*, 5, 63–74.
- *Singh, A., Yager, S. O., Yutakom, N., Yager, R. E., & Ali, M. M. (2012). Constructivist teaching practices used by five teacher leaders for the Iowa Chautauqua professional development program. *International Journal of Environmental & Science Education*, 7, 197–216.
- Spillane, J. P., & Diamond, J. B. (2007). A distributed perspective on and in practice. In J. P. Spillane & J. B. Diamond (Eds.), *Distributed leadership in practice* (pp. 146–166). New York, NY: Teachers College Press.
- Spillane, J. P., Diamond, J. B., & Jita, L. (2003). Leading instruction: The distribution of leadership for instruction. *Journal of Curriculum Studies*, 35, 533–543. doi:10.1080/0022027021000041972
- Spillane, J. P., & Hopkins, M. (2013). Organizing for instruction in education systems and school organizations: How the subject matters. *Journal of Curriculum Studies*, 45, 721–747. doi:10.1080/00220272.2013.810783
- *Supovitz, J. A. (2008). Instructional influence in American high schools. In M. M. Mangin & S. R. Stoelinga (Eds.), *Effective teacher leadership: Using research to inform and reform* (pp. 144–162). New York, NY: Teachers College Press.
- *Taylor, M., Goeke, J., Klein, E., Onore, C., & Geist, K. (2011). Changing leadership: Teachers lead the way for schools that learn. *Teaching and Teacher Education*, 27, 920–929. doi:10.1016/j.tate.2011.03.003
- Teacher Leadership Exploratory Consortium. (2012) *Teacher leader model standards*. Retrieved from www.teacherleaderstandards.org
- Terrell, R. D., & Lindsey, R. B. (2008). *Culturally proficient leadership: The personal journey begins within*. Thousand Oaks, CA: Corwin Press.
- *Vernon-Dotson, L. J. (2008). Promoting inclusive education through teacher leadership teams: A school reform initiative. *Journal of School Leadership*, 18, 344–373.
- *Vernon-Dotson, L. J., & Floyd, L. O. (2012). Building leadership capacity via school partnerships and teacher teams. *The Clearing House*, 85, 38–49. doi:10.1080/00098655.2011.607477

- *Watson, A. (2007). A vision to serve: The experiences of five African American urban teacher leaders. *Journal of Urban Learning, Teaching, and Research*, 3, 175–196.
- *Westfall-Rudd, D. (2011). Agricultural education teacher leaders' development of ownership and responsibility for the profession through participation in continuing professional education program planning: A case study. *Journal of Agricultural Education*, 52, 148– 161. doi:10.5032/jae.2011.03148
- Wilson, A. A., Boatright, M. D., & Landon-Hays, M. (2014). Middle school teachers' discipline- specific use of gestures and implications for disciplinary literacy instruction. *Journal of Literacy Research*. 46, 234–262. doi:10.1177/1086296X14532615
- Windschitl, M., Thompson, J., & Braaten, M. & Stroupe, D. (2012). Proposing a core set of instructional practices and tools for teachers of science. *Science Education*, 96, 878-903. doi:10.1002/sc.21027
- *Yonezawa, S., Jones, M., & Singer, N. R. (2011). Teacher resilience in urban schools: The importance of technical knowledge, professional community, and leadership opportunities. *Urban Education*, 46, 913–931. doi:10.1177/0042085911400341
- York-Barr, A. J., & Duke, K. (2004). What do we know about teacher leadership?: Findings from two decades of scholarship. *Review of Educational Research*, 74, 255–316. doi:10.3102/00346543074003255

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Tables

Table 1 <i>Criteria and Impetus for Criteria for Inclusion/Exclusion in Literature Review</i>		
Source of Criteria Impetus	Criteria Impetus	Resulting Exclusion Criteria
York-Barr & Duke (2004)	Much of the literature was purely descriptive	Exclude purely descriptive/argument/rationale pieces; literature must report the findings of empirical studies
	Small sample sizes, single case study designs	Exclude studies where $N < 5$
	Much of the literature was solely self-report	Exclude studies in which data is untriangulated
Conceptual framework on teacher leadership	Teacher leaders are K-12 teachers	Exclude studies in which the participants are college-level teacher leaders or preservice teachers
	Teacher leaders maintain classroom responsibilities	Exclude studies in which participants are no longer in the classroom (e.g., district specialists, coaches with no teaching responsibilities, etc.)
	Teacher leaders should lead the school	Exclude studies in which teacher leadership is to promote a particular program/curriculum
Pragmatic considerations	Teacher leadership is a unique type of leadership	Exclude studies in which teacher leaders are participants, but part of a larger leadership group
	High-quality research is peer reviewed	Exclude studies without peer review (e.g., online submissions, reports from centers/organizations. Exception: dissertations, which are often subject to rigorous committee review
	Teacher leadership is the focus of the study	Exclude studies in which teacher leadership is peripherally included

Subject/Discipline	Authors
Agricultural Education	Westfall-Rudd, 2011
English Language Learners	Baecher, 2012 Chamberland, 2009
Literacy/English	Edge & Myopolous, 2008 Friedman, 2011 Gaffney & Faragher, 2010 Margolis & Deuel, 2009 Yonezawa, Jones & Singer, 2011
Math	Durias, 2010
Math AND Literacy/English	Hoang, 2008
Math and Science/STEM	Gigante & Firestone 2008 Hunzicker, 2012
Science	Hofstein, Carmeli & Shore, 2004 Singh, Yager, Yukatom, Yager & Ali 2012 Hanuscin, Rebello & Sinha, 2012
Vocational Education	Adams & Gamage, 2008

Table 3
Theories Cited in Literature

Theory	Authors
Bandura's Social Cognitive Theory	Friedman, 2011
Bethune's Founding Principles	Watson, 2007
Boundary Crossing	Pegg, 2010
Contemporary Planning Theory For Adult And Continuing Education	Westfall-Rudd, 2011
Democratic/Constructivist Leadership	Shiu, Chrispeels & Doerr, 2004 Gonalez, 2004
Distributed Leadership	Anderson, 2012 Chamberland, 2009 Gigante & Firestone, 2008 Harris & Townsend, 2007 Hoang, 2008 Supovitz, 2008 Vernon-Dotson & Floyd, 2012 Grant, 2009 Hands, 2012 Muijs & Harris, 2006
Ecological Policy Analysis	Margolis, 2012
Friere's Theory of Critical Consciousness	Bradley-Levine, 2012
Giddens' Structure and Agency	Hoang, 2008
Gordon's Model of Instructional Leadership	Margolis & Huggins, 2012
Lave & Wenger's Sociocultural Teacher Learning Models	Margolis & Doring, 2012
Mental Models	Shiu, Chrispeels & Doerr, 2004
Micropolitical Theory	Brosky, 2011
New Cultural Theory	Scribner & Bradley-Levine, 2010
Organizational Leadership Theory	Scribner & Bradley-Levine, 2010
Organizational Role Theory	Gordin, 2010
Parallel Leadership	Chew & Andrews, 2010
Resilience	Yonezawa, Jones & Singer, 2011
Sense-Making in Cognition	Hoang, 2008
Social Networks	Margolis, 2012
Teacher Subject-Matter Knowledge	Hoang, 2008
Theories of Power	Anderson, 2012 Podjasek, 2009
Transformational/Transactional Leadership	Adams & Gamage, 2008 Robinson, 2009 Siers & Gong, 2012
Wenger's Communities of Practice	Edge & Myolopolous, 2008
York-Barr & Duke's Dimensions of Practice	Hanuscin et al., 2012
York-Barr & Duke's Teacher Leadership for Student Learning	Fairman & Mackenzie, 2012
<i>Note that many authors (e.g., Margolis, 2012; Scribner & Bradley-Levine, 2010) used multiple theories to inform their work.</i>	

Figures

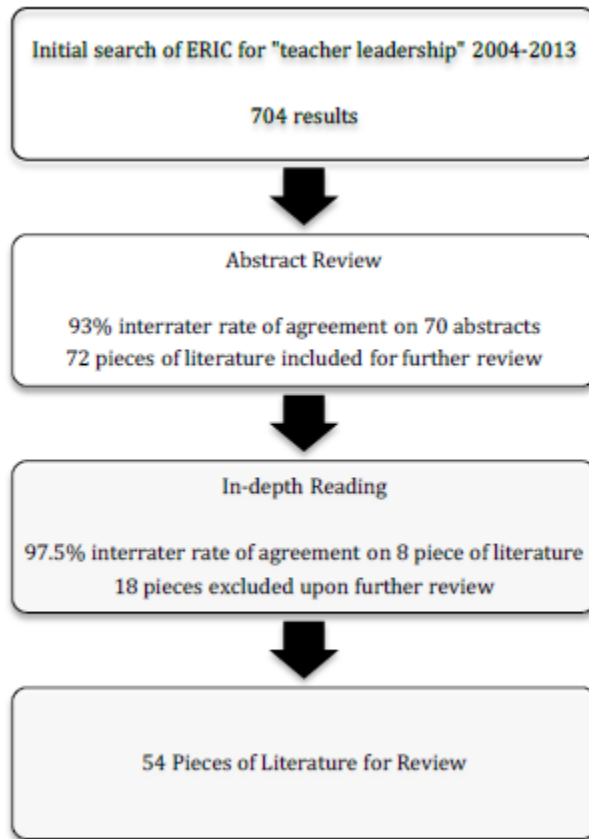


Figure 1. Inclusion/Exclusion Process for Literature Review

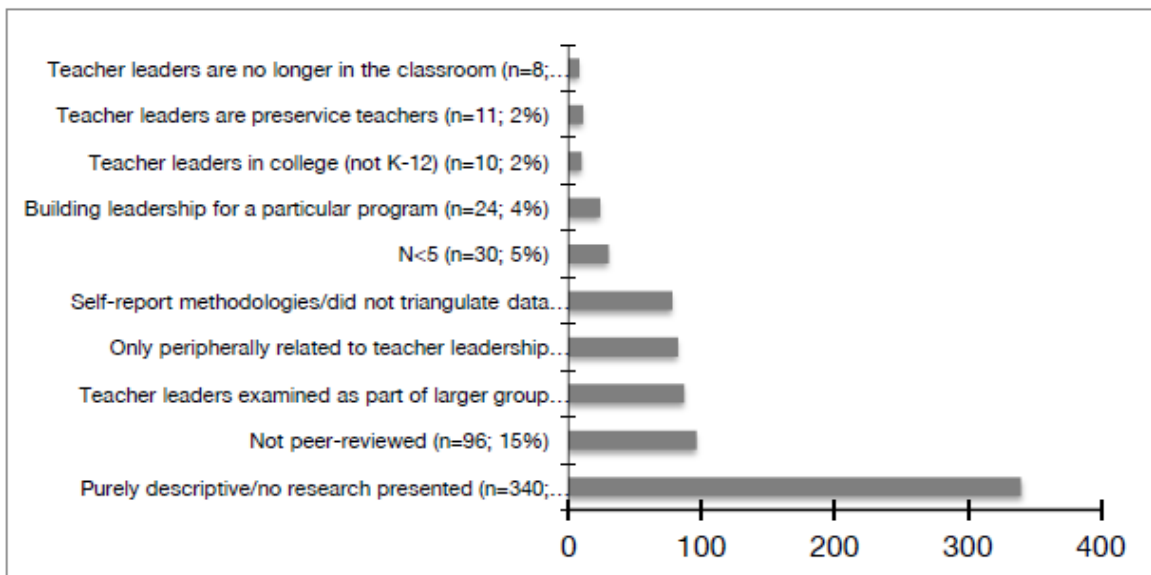


Figure 2. Pieces Excluded From Literature Review by Criteria (N = 650; note that many pieces were excluded for multiple reasons, so percentages do not add up to 100)

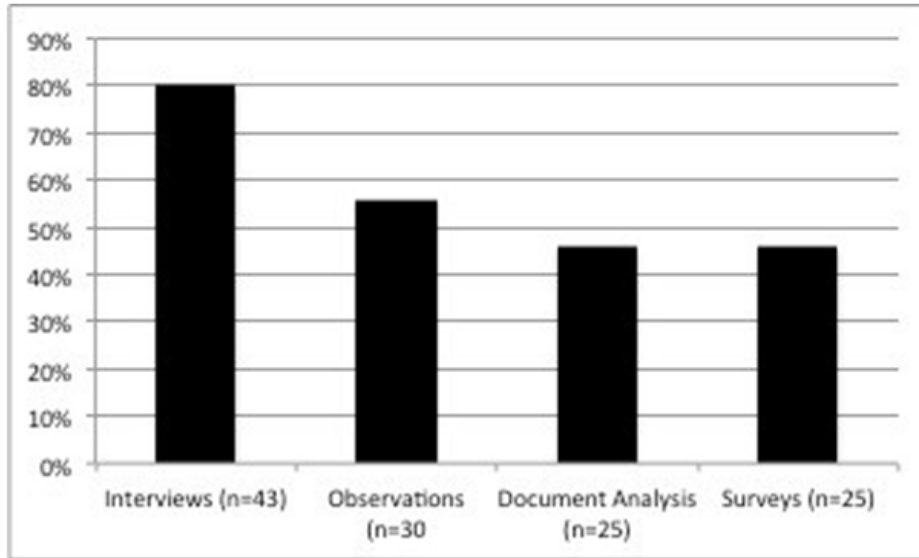


Figure 3. Research Methods