From Professional Practice to Practical Leader: Teacher Leadership in Professional Learning Communities

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The primary purpose of this research is to illuminate perceptions and lived experiences of secondary teachers through their involvement in a Professional Learning Community (PLC). Teachers' experiences within a PLC were examined for patterns of cultivated leadership. The second purpose of the study was to identify variables that either promote or hinder teacher leadership development. Hord's (1997, 2004) research on PLC's is the conceptual framework for this study, which states that PLCs are comprised of five essential dimensions: (1) shared and supportive leadership; (2) shared values and vision; (3) collective learning and its application; (4) shared personal practice; and (5) supportive conditions. Online survey research method was used to investigate teacher leadership in PLCs and the underlying variables associated with participation in such communities of practice. The findings indicate teachers have varying perceptions and experiences that both promote and hinder their growth as teacher leaders.

Key words: teacher leadership; Professional Learning Communities (PLCs); principal leadership

Introduction

According to literature, a professional community of learners is defined as "a place in which the teachers and administrators of a school continuously seek and share learning, and act on that learning" (Astuto et al., 1993, p.2). Research suggests that school reform occurs when teachers engage in authentic professional learning communities and increased student learning is a byproduct of such communities (Hord, 1997, 2004; Carmichael & Martens, 2012). Professional Learning Communities (PLC) involve shared governance amongst its members that will ultimately result in a positive contribution to the change process in school improvement (DuFour & Fullan, 2013). Aside from student learning gains, professional communities also provide lasting benefits for teachers, which result in higher human, professional, and social capital. Reduction in isolation among teachers, increased commitment to the mission and goals of the school, and shared responsibility are a few of the many benefits associated with PLCs. It is through participation in professional learning communities that teachers become well informed, professionally renewed, and inspired to promote student excellence (Hord, 1997). Despite the added and known benefits of PLCs, this study sought to address gaps in how such communities foster teacher leadership and identify specific actions school leaders should take to simultaneously empower teachers and maintain effective PLCs in their schools.

Purpose of the Study

The purpose of this research was twofold. The first purpose was to describe and explain the perceptions and lived experiences of eight high school teachers through their involvement in a PLC. Their shared experiences were examined for patterns of cultivated leadership and increased social, human, and professional capital. The second purpose was to identify influencing variables that either contributed to or hindered teacher leadership amongst participants. With this in mind, this study adds to the body of research on teacher leadership by asking the following:

- 1. How do teachers themselves define their role as a teacher-leader as a result of engaging in a professional learning community?
- 2. What activities do teachers specifically engage in as a result of their participation in a professional learning community?
- 3. What variables within a professional learning community do teachers identify as contributing to student success?

Review of the Literature

Development of Teacher Leadership

Teacher leadership has increasingly become embedded within education. Extensive research and literature suggests teacher leaders are critical in reforming schools, resulting in shifts in the traditional structure of leadership within schools. Historically, teacher leadership existed within several informal contexts within schools. Now new opportunities for such leadership have come about through "increased recognition of teacher leadership, visions of expanded teacher leadership roles, and new hope for the contributions these expanded roles might make in improving schools" (Smylie & Denny, 1990, p.46).

Current educational reform calls for more distributed leadership among school stakeholders (Spillane & Diamond, 2007; Wallace Foundation, 2016). While it is evident that there are many sources of leadership within schools, principals remain the central source in moving schools forward (Johnston, 2010). As a result, leadership distribution depends heavily on what is to be accomplished, on the availability of professional expertise, and on principals' preferences regarding the use of such expertise (Johnston, 2010). Consequently, shifts in leadership design within schools have expanded teacher leadership opportunities, redefining and refashioning the role of teacher leadership. Silva, Gimbert, and Nolan (2000) offer that this evolution has occurred in three distinct waves over time: (a) formal roles, (b) instructional expertise, and (c) re-culturing based on collaboration and continuous learning.

Initial forms of teacher leadership involved—and remain—formal roles, such as department head, master teacher, or union representative. Essentially such roles consisted of managerial tasks with the primary purpose of efficiency in school operations rather than in instructional leadership (York-Barr & Duke, 2004). According to Wasley (1991), teachers as managers served as an extension to administration, "designed not to change practice but to ensure the efficiency and effectiveness of the existing system" (p. 4). Frymier (1987) described this limited view on teacher leadership as a "bureaucratic routinization of teaching and learning [caused by] administrative attempts to control schools as places with teachers as deskilled workers and students as uniform products" (p. 11).

Recognizing these limitations, the second wave of teacher leadership emerged into teachers as instructional leaders, which emphasized the instructional expertise of teachers. The second wave bought about such roles as team leader, curriculum developer, and staff development positions for teachers. These capacities migrated away from the managerial tasks and toward pedagogical expertise. Such leadership responsibilities appeared to be "additional to" rather than "a part of" the teachers' daily work (Silva et al., 2000).

The third wave, which is still emerging, involves the re-culturing of schools through teacher leadership. This particular transformation has not completely dissolved the established roles of previous waves; however, it reflects the important role of teachers as primary creators and re-creators of school improvement (Darling Hammond, 1988; Silva et al., 2000). Wasley (1991) defines the third wave of teacher leadership as

those who enable their colleagues to improve professional practice by doing things they would not ordinarily do on their own...and are those who help redesign schools, mentor their colleagues, engage in problem solving at the school level, and provide professional growth activities for colleagues. (p. 56)

Ultimately, teacher leadership involves mobilizing and energizing others to meet imperative goals of school improvement. Leadership does not necessarily reside in the title alone, but is instead identified by one's ability to influence. Therefore, the complexities of teacher leadership are sometimes hard to identify and describe not just for principals, but also for teachers.

Defining Teacher Leadership

Classroom teachers are the most influential factor in the students' success. However, many teachers do not perceive themselves as leaders within their schools. This is partly because teacher leaders see themselves primarily as teachers. Literature also reflects the murkiness behind understanding teacher leadership, extending beyond lack of teachers' self-perception of leadership.

As a result, literature posits a wide range of definitions for teacher leadership. For example, Katzenmeyer and Moller (2001) define teacher leadership as, "leading within and beyond the classroom, identifying with and contributing to a community of teacher learners and leaders, and influencing others toward improved educational practice" (p. 5). Fullan and Hargreaves (1996) stated that teacher leadership is the "capacity and commitment to contribute beyond one's classroom" (p. 13).

Additionally, Childs-Bowen, Moller, and Scrivner (2000) aligned their definition with Silva et al.'s (2000) third wave of leadership development by describing teacher leadership as "leaders functioning in PLCs to affect student learning; contributing to school improvement; inspiring excellence in practice; and empowering stakeholders to participate in educational improvement" (p. 28). Despite the variance in definitions, there remains a common notion that such leadership is an expansion of actions beyond the classroom. Furthermore, York-Barr et al. (2004) cited teacher leadership as "inter-related domains of commitment and knowledge," (p. 34) including commitments to moral purpose, continuous learning, knowledge of teaching and learning, educational contexts, collegiality, and the change process.

Despite the variance in definitions and the historical emergence of teacher leadership, the above conceptions of teacher leadership all point to the importance of having expertise in instructional practice as a mechanism to enhance student achievement.

Professional Learning Communities and Teacher Leadership

Professional learning communities facilitate teacher leadership by allowing teachers to collaborate on their professional work, analyze student data, and assess student learning. In fact, Fullan (2001) eloquently explained the power of collaboration: "The litmus test of all leadership is whether it mobilizes people's commitment to putting energy into actions designed to improve things. It is individual commitment, but above all it is collective mobilization" (p. 9). At best, PLCs harness collective mobilization of shared values, commitments, and actions to meet overarching goals that ultimately impact school improvement efforts. In essence, PLC's are at the heart of teaching and learning within schools.

Professional learning communities are a platform to cultivate professional growth and student achievement simultaneously. It is difficult to create good schools without good teachers. Literature supports the impact of good teachers. The National Commission on Teaching and America's Future (1996) noted, "Teacher quality, teacher professionalism, and the conditions in which our nation's teachers are asked to teach are what matter most to students' learning" (p. 14). Newmann and Wehlage (1995) also supported this idea. Their large-scale national study on school restructuring indicated that, "Student achievement increases in schools where collaborative work cultures foster a professional learning community among teachers and others" (p. 34).

The literature supports the notion that professional learning communities are shown to be successful in improving student achievement and enhancing professional growth within teachers (Dufour, Dufer, & Eaker, 2008; Lieberman & Miller, 2004; Newmann & Wehlage, 1995; Senge, 1990). Furthermore, Hord (1997, 2004) designed professional learning community models, that provided structures to promote collaboration, leadership, and shared decision-making. Hord's (1997, 2004) study of professional learning communities allows for the illumination of lived experiences within such communities of practice.

Conceptual Framework

Hord (1997, 2004), who conducted extensive research on professional learning communities, guided the conceptual framework for this study. Hord's initial research on PLCs evolved over time. Her seminal work involved extensive research on the PLC characteristics and dynamics within a particular school for four years. Hord (1997) concluded there are five interrelated dimensions prominent in successful professional learning communities. Since then, Hord (2004) has extended her research to reinforce the importance of PLC's in school reform. According to Hord and Sommers (2008), schools that describe themselves as a professional learning community should exhibit the following characteristics: (1) supportive and shared leadership; (2) shared values and vision; (3) collective learning and the application of learning; (4) supportive conditions; and (5) shared practice (p. 7). Table 1 outlines each of the five interrelated dimensions.

Table 1

Dimensions of a Professional Learning Community – abridged (Hord, 1997, 2004; Hord & Sommers, 2008)

Professional Learning Community Dimension	Brief Description
Shared and Supportive Leadership	School administration and teachers both lead the school through shared decision.
Shared Values and Vision	All stakeholders embrace the values and vision.
Collective Learning and its Application	Stakeholders continuously and collaboratively engage in the inquiry process.
Shared Practice	Colleagues review teachers' professional behavior and practice in a non-evaluative manner.
Supportive Conditions	The physical conditions of the school and the human capital of those involved ensure the success of professional learning communities.

Description of Population

A large school district in central Florida including rural, urban, and suburban populations received the Smaller Learning Communities (SLC) federal grant as part of its initiative to improve high schools academically. The purpose of the SLC grant supported the implementation of SLCs and SLC-related activities. SLCs included structures such as freshman academies, multi-grade academies organized around career interests or other themes, and "houses" in which small groups of students remained together throughout high school. Related SLC activities included, but were not limited to personalization strategies, such as student advisories, family advocate systems, and mentoring programs.

The SLC grant was a five-year project that required regular monitoring and evaluation of the eight targeted schools. In accordance with the SLC guidelines, the school district designed the project to include the following for each school: (1) implementation of rigorous academic programs that would prepare students for postsecondary success; (2) extensive and ongoing professional development for teachers, guidance counselors, and administrators; (3) extensive use of data to inform teaching, learning, and assessments; (4) postsecondary planning and preparation; (5) intensive interventions for students, comprehensive guidance, and academic advising; (6) developmental and instructional supports to create a personalized learning experience for all students; (7) ongoing leadership training for all stakeholders; and (8) eservices to enhance the interactive nature of SLCs. Additionally, involved teachers received collaborative planning time and integrated professional development.

The structure of the smaller learning communities within the eight schools encompassed 9th and 10th grade students who were placed in learning communities based on their grade level and class schedules. Certain teachers were assigned to teach within learning communities and engaged in regular collaborative work, which involved meeting regularly to discuss and implement the following: interventions for students; community-building activities; incentives for students' successes; and curriculum alignment. This study surveyed the teachers at the eight high schools in order to understand teacher leadership in professional learning communities. For the purposes of this research and based on definitions in literature, the collaborative work of teachers within an SLC constituted a professional learning community (PLC). In other words, SLCs were the student learning communities and PLCs were the collaborative professional learning communities for teachers who worked with students in their assigned SLC groups. Working as an SLC teacher was not voluntary for all teachers at the eight school sites. Varying factors, such as teaching schedules and teacher preferences, dictated which teachers were assigned to an SLC.

The sample population included sixty-five teachers who were all involved in a PLC under the SLC structure as described previously. Thirty-nine teachers participated in the study, which resulted in a 60% response rate. Approximately 75% of the participants were female. Their teaching experience ranged from a year to greater than 21 years. More than a third of the participants (34%) had between one and five years of experience, while 11% had 21 or more years of experience.

Research Design

The design of this study included online survey research methods to investigate teachers' perceptions of teacher leadership in PLCs and the underlying variables associated with participation in such communities. An online survey method was utilized because of its ability to "include multiple choice answers from qualitative exploratory data and eliminate question bias through proper, unambiguous, concise wording" (Andrews, Nonnecke, & Preece, 2003, p. 5). Additionally, online web-based surveys are advantageous in data collection because they provide seamless error in transcription.

To collect data, the researcher created an open-ended questionnaire based upon Hord's (1997) School Professional Staff as Learning Community Questionnaire (SPSLCQ). The design of the instruments for this study was twofold: (a) the SPSLCQ instrument allowed respondents to rate their experiences and perceptions of PLC's within their schools and (b) the open-ended questionnaire allowed respondents to elaborate on their experiences, providing a more thorough understanding of the relationship between PLCs and teacher leadership.

School professional staff as learning community questionnaire. The SPSLCQ contains 17 Likert-type questions to assess the perceptions of professional learning communities, to "the extent to which teachers believes their school is a positive learning environment and is supportive as a learning community" (Cowley, 1999, p. 50). The questionnaire corresponds to the five foundational dimensions of a PLC: shared leadership, shared values and vision, collective learning and application of learning, shared practice, and supportive conditions (Hord, 1997).

Open-ended questionnaire. The open-ended questionnaire was also distributed online to elicit each respondent's experiences and perceptions about PLC's. There were four open-ended questions:

- 1. Describe your role as a teacher leader within your school.
- 2. Explain any current or past barriers you have experienced in your professional development as a teacher leader within your school.
- 3. Describe the types of activities you have engaged in professionally as a result of being a member of a Professional Learning Community.
- 4. Describe how you have connected with other teachers within your school as a result of being a member of a Professional Learning Community.

Procedures

Both instruments were distributed via Survey Monkey. An invitation letter was sent to sixty-five high school teachers participating in a professional learning community as specified for this study. The email invitation clarified that all participating teachers must be currently involved in a PLC in conjunction with a SLC at their school site. The email invitation also included a direct link to the questionnaires. Each school received coded questionnaires as a method to verify participation from all eight schools. There were no identifiers to link individual teachers to their responses. Thirty-nine teachers responded and completed the online questionnaires.

Data Analysis

Data analysis occurred in three stages: (a) a quantitative analysis of the data from the SPSLCQ questionnaire, (b) a qualitative analysis of the open-ended survey questions, and (c) a comparative analysis of the data from both instruments to identify patterns and themes within the data. Triangulation using both instruments was used to analyze the data in relation to the research questions.

School professional staff as learning community questionnaire. Quantitative data were obtained from the SPSLCQ to measure teachers' perceptions and experiences of the five dimensions within their PLC. Participants answered Likert-types questions, which rated their PLC experiences from one to five. The descriptors were "never," "seldom," or "always occurring." Descriptive statistics showed the distribution of responses along with frequency of responses for each Likert item. Additionally, Cronbach's alpha was used to establish reliability of the instrument for the study's sample, as well as reliability for each of the five dimensions as identified by Hord (1997). Lastly, the mean and standard deviation for each dimension was recorded. The mean scores were used to determine which PLC dimensions were perceived as being either strong or weak among the participants.

Open-ended response questions. Interim analysis, which is the cyclical process used to collect and analyze data, was used to continuously analyze the open-ended questions. The researcher also wrote memos on a continual basis throughout the qualitative analysis process. Memos included reflective notes regarding themes and new discoveries. Then data reduction method was used for coding qualitative data in order to analyze the open-ended questions and identify themes or patterns. The coding methods for this study included a detailed description for

each code, a set of inclusion and exclusion criteria for each code, and examples of real text for each theme (McQueen, McLellan, Kay, & Milstein, 1998).

Analysis procedures were established prior to data analysis. The procedures included: (1) carefully reading the transcribed data line by line; (2) segmenting the data by dividing it into analytical units; (3) coding meaningful segments of data that were highly identifiable; and (4) enumeration. A master list of themes was maintained to identify connections between the four open-ended questions. Enumeration was used to count the number of times certain words or phrases were used in participant responses.

Limitations of Study

The main challenge in survey research is ensuring an adequate return rate in order to have reliable data. The population sample was not randomized, which potentially reduced variation of the data. Due to the survey instruments, the pool of participants was limited to teachers at each school site already involved in a PLC in conjunction with the Smaller Learning Communities grant. Distribution methods also created a limitation because some participants may have been reluctant to open the email invitation soliciting their participation. Due to the general increase in unsolicited emails, some participants may have deleted the invitation prior to reading it. A second email invitation was sent to all non-respondents in order to reduce the likelihood of this problem.

Additionally, data collection for this study took place during the last two months of the school year. Survey respondents may have had time constraints associated with the demands of ending the school year. Lastly, researcher bias was a limitation in this study. At the time of this research, the researcher was a classroom teacher and held a leadership position in managing several PLCs within one of the schools selected for this study. The researcher's background knowledge about the history of the grant informed the study and data analysis. However, knowledge of such information neither altered the results of this study nor the findings from the data analysis. Conducting a similar study in a different school district would have eliminated this particular researcher bias; however, the researcher did not compromise the study with the background knowledge gained.

Findings

SPSLCQ Responses

Dimension one (shared and supportive leadership) of the survey stated, "School administrators participate democratically with teachers sharing power, authority, and decision making." Dimension one included two survey questions, which involved how the sample population believes their administrators participate in shared power and decision making. A mean of 3.17 and a standard deviation of .57 were reported for this dimension.

A mean of 3.95 and a standard deviation of .37 were reported for dimension two (shared values and vision). The survey items associated with dimension two dealt with perceptions of shared vision on student learning and common practice toward such learning.

For dimension three (collective learning and its application), "The staff's collective learning and application of the learning create high intellectual learning tasks and solutions to address student needs" resulted in a mean of 3.34 and a standard deviation of .30. The survey items for dimension three related to perceived actions taken to address the needs of students.

Dimension four (shared practice) stated, "Peers review and give feedback based on observing one another's classroom behaviors in order to increase individual and organizational capacity", reflected a mean of 3.18 and a standard deviation of .49.

Lastly, dimension five (supportive conditions) stated, "School conditions and capacities support the staff's arrangement as a professional learning organization", reflected a mean of 3.98 and a standard deviation of .33. The items for this dimension related to the logistical and social dynamics necessary to support a professional learning community.

Overall, based on reported data on the SPSLCQ, teachers perceive shared values and vision (M = 3.95) and supportive conditions (M = 3.98) as strongest in their schools. This data suggests participants collectively possessed a shared vision regarding the impact of their professional practice on student learning. The data also reflects evidence of supportive conditions, such as scheduled meetings, processes, and procedures, within their learning communities. Conversely, participants perceived shared and supportive leadership as limited amongst their administration (M = 3.17). The data indicates that shared decision-making is reserved to a few staff members and does not regularly include the entire staff. In addition to a weak perception of shared leadership, the survey also indicates infrequent shared practice amongst participants (M = 3.18). Although more than half reported that their staff meetings focused on the quality of teacher and student learning, observing one another's teaching was not a common practice within the PLCs.

The following section illuminates how both, the SPSLCQ and the open-ended questionnaire, addressed the four research questions of this study.

Research Questions

Research Question 1: How do teachers define their role as a teacher-leader as a result of engaging in a professional learning community? Responses to the first open-ended question provided data on how participants identify teacher leadership in PLCs. Participants identify teacher leaders based on designated titles, roles, effectiveness as a classroom teacher, and collaborative efforts within their PLCs. Respondents described their role as a teacher leader in various ways, which provided an expansive reflection of how teacher leadership is defined and perceived amongst teachers. With the exception of eight participants who did not view themselves as teacher leaders, a fraction (18%) of the sample viewed themselves as teacher leaders through their role as a classroom teacher. Comments such as "My role is to lead and develop students academically" and "I feel I am a leader because I am very open to new ways of doing things to constantly improve the education my students are receiving," indicate participants view classroom teaching as leading. This perception of teachers as leaders from within the classroom is synonymous with literature, which suggests teacher leaders are "classroom-centered and focused on teaching and learning rather than on organizational nuts and bolts (Lashway, 1998, p. 2)." The majority of respondents (82%) viewed themselves as teacher leaders based on assigned duties and tasks. For example, one teacher commented, "I am a team leader, member of the reading leadership team, and I participate in a PLC for one of the courses I teach." Another teacher offered, "I serve as a lead teacher of a PLC, as well as coordinate a selective admissions program for all grade levels." Although 82% connected teacher leadership with defined duties and tasks, only 25% directly associated their involvement in a PLC to teacher leadership. Additionally, participants view teacher leadership as a task-orientated role. When asked about their role as a teacher leader, several respondents connected leadership with a list of

duties and tasks such as: (a) attending PLC/SLC meetings; (b) mentoring; (c) membership on committees; and (d) club sponsor.

Research Question 2: What activities do teachers engage in as a result of their participation in a professional learning community? Analysis of the data for the second research question examined teachers' engagement in PLCs in order to gain a deeper perspective regarding the types of actions associated with teacher leadership in such communities of practice. Data from the SPSLCQ along with responses from the open-ended questionnaire informed this research question. Responses (44%) suggest collaboration through structured and routine meetings was the most prominent type of engagement within PLCs. Data from open-ended questions indicated most respondents perceive their PLC involvement as dominated by attending meetings.

Dimension four (shared practice) of the SPSLCQ instrument surveyed participants about their experiences relating to peer review and providing feedback to their colleagues to increase individual and organizational capacity. A little more than half (51%) reported that visiting and observing another person's teaching occurred occasionally. Although half of the teachers in this study reported that observing their colleagues occurred occasionally, SPSLCQ data indicates providing feedback about observations was less frequent. The data reflected 39% provided feedback to one another about their teaching based on classroom observations.

In terms of shared decision-making, SPSLCQ data indicate shared decision-making was limited and reserved to only a select few. Survey data revealed only 31% perceived their administration as consistently involving the staff in making decisions about school issues. To add to this, 56% indicated their administration invited counsel from staff members, but ultimately made decisions themselves. Responses such as, "We give our opinions in our PLC meetings, but administrators do not attend the meetings and they rarely follow up to find out the status of things discussed at our PLC meetings," highlight that lack of shared leadership. Another response stated, "I think our administrators share information, but we are never involved in the decision making." Contrary to literature, which suggests that collegial support through professional communities and shared decision making cultivates teacher leadership, data from this research suggested that PLC teachers did not gain a heightened sense of empowerment through their involvement in their PLC.

Research Question 3: What variables within a professional learning community do teachers identify as barriers to teacher leadership? Data from the SPSLCQ and open-ended questionnaire indicate limited time as the biggest challenge for PLC teachers. For example, one respondent expressed, "Everyone is too busy to have one more thing on their plate...one more meeting, more data analysis, more talk, more theories....Teachers are disillusioned and frustrated with the amount of responsibilities." Simply stated, "Teachers are already dealing with too much to do and too little time to do it." Another comment relating to time constraints stated, "There are too many programs going on and not enough time to do anything well." Requiring teachers to attend designated PLC meetings explains why time was the biggest barrier. According to data from open-ended questions, 89% described their PLC experience as inundated with meetings. 31% shared that participating in a PLC was not voluntary, indicating mandatory attendance to PLC meetings. As a result, teachers felt attending PLC meetings created additional time constraints that affected their job performance.

Ultimately, the data suggests teachers did not regard their PLC participation as a benefit in making their jobs more efficient. Although data reflected teachers' collaboration with one another regarding student-centered issues, attending PLC meetings increased their responsibilities rather than reduce their workload. PLC meetings added more to their already full plates. One teacher stated,

There is limited time and added responsibility and/or tasks with little time for planning/execution. No compensation. I also felt there was too little communication about the specific goals associated with the SLCs. What exactly did the grant money pay for? Team leaders? Coordinators? How did the rest of the team teachers benefit? How did it impact student achievement? It should be equitable for all teachers involved.

Another teacher commented,

The structure of compensation within the SLC has led to stress. Many of the members are expected to participate but are not compensated for sacrificing their planning time or non-paid time. This is an issue because some teachers are not a part of the SLC/PLC. Some teachers are expected to participate while others are not.

Lived experiences and perceptions in this study are synonymous with literature, indicating teacher leadership is often compromised due to added responsibilities and conflicts between the role of being a teacher and the role of a leader. Literature further explains that such compromises tend to create more work for teachers, ultimately leading to negative perceptions toward leadership responsibilities (Zinn, 1997).

In addition to time, a lack of teacher buy-in was the second greatest barrier. One teacher acknowledged, "I have found that what I personally think is in the best interest of our students may not be taken seriously because of what is stipulated by the grant or plan for the school district." Statements included, "not being fully committed to the PLCs and not being focused on student achievement and professional development." Gaining a shared sense of purpose or buy-in is paramount to the success of professional learning communities. As expressed by DuFour et al. (2008), PLC members must make "collective commitments that clarify what each member will do to contribute to the community" (p. 15). In doing such, all members are mutually accountable in working towards the shared vision of the school.

In summary, a lack of shared leadership and participant buy-in were essential missing elements that created barriers in developing teacher leadership within the PLCs described in this study. Although teachers gained a strengthened sense of collegiality with their fellow teachers through their frequent PLC meetings, the data suggests that their involvement was not an influencing factor in making critical decisions to move their school forward. The implications of such data present principals with forethought when structuring and supporting teacher leaders and PLCs within their schools.

Conclusion

Despite recent attempts in the literature to frame teacher leadership, there is still a need for a more concise and exploratory approach to delineating teacher leadership in schools. Many still view teacher leadership through the lens of formal roles, with little acknowledgment of the organic and informal teacher leadership that occurs in schools every day. Based on emerging themes in this study, two distinct conclusions regarding teacher leadership in PLCs are identified: (1) cultivation of teacher leadership begins with principal leadership and (2) school culture significantly impacts the sustainability and success of PLCs.

Principal Leadership

The role of the principal is intentionally mentioned first because of the significant impact principals possess in cultivating teacher leaders. There is a strong correlation between student achievement and principal leadership. However, success within schools does not solely rest with the principal. Tom Donahue suggests, "schools are trapped by a leadership dilemma: they require skilled, effective principals in order to outgrow their utter dependence on those principals" (as cited in DuFour & Eaker, 1998, p. 181).

With this in mind, much of a school's culture and success is shaped by the principal's ability to empower teachers (Katzenmeyer & Moller, 2001; Lambert, 2003). Some studies suggest schools have become too dependent on principal leadership and assert that reform is needed on a larger scale in order to lessen such dependence. Fullan (2002) contended that there is a lack of teacher leadership and suggested it is imperative for principals to develop more teacher leaders to promote school success and sustainability (p. 11). This notion suggests the increasing need for the development of principals to foster and support teacher leadership (Crowther, Kaagen, Ferguson, & Hann, 2002). To address such a need, principal leadership development programs have begun to include teacher development components that extend beyond traditional top-down approaches. For example, the Center for Teaching Quality (2008) asserted that principals could empower teacher leadership through PLCs by (1) empowering teachers to make decisions about their professional learning needs, (2) providing funding and support for such professional learning needs, and (3) soliciting evaluative feedback from PLCs for decision-making and informing stakeholders. Furthermore, New Leaders, Inc. (2011) suggests highly effective principals cultivate leadership by developing their teachers, managing their talent, and creating great working environments. Through all three approaches, teacher leadership is cultivated along with an enhanced school culture. Furthermore, according to New Leaders, Inc. (2011), effective principals lead best when they are able to integrate seamlessly their work within each of the three approaches to leadership development.

This study identified deficits in shared leadership, suggesting the need for more collaboration between school leaders and teachers. The data revealed that many teachers did not find the work of PLCs meaningful at their schools. Instead, as Rolls (1995) suggested, teachers should be engaged in "co-designing and co-creating to arrive at solutions jointly with their principals" (p. 106). Teacher empowerment produces heightened success, which yields a trickledown effect in student academic performance. However, when schools are governed by an autocratic leadership style rather than through shared decision-making, a restrictive school culture is cultivated, which stifles teacher leadership within schools. Consequently, the principal sets the tone for a school's culture, thereby affecting the organizational competence of professional learning communities, and the cultivation of teacher leaders. Principals possess a

critical role in the development and sustainability of teacher leadership, forging the conditions that give rise to the growth of communities of practice (Raywid, 1996). With this in mind, principals should work with staff to create structures to foster distributed leadership within PLCs (DuFour et al., 2008).

School Culture

From literature and this research, we know that the work of PLCs is a deliberate, yet delicate process of re-culturing schools. Profound cultural shifts must occur in order for PLCs to have a positive and lasting impact on the schooling organization. The school culture entails not only how things are done (systems, processes, and procedures), but also the mindset behind why things are done. In essence, the culture of a school is the "assumptions, beliefs, values, expectations, and habits that constitute the norms for an organization" (DuFour et al., 2008, p. 44).

As with this research, several survey questions addressed school culture. While it is apparent that the physical conditions (meeting times, teaching schedules, and common planning) were established to facilitate PLCs, the culture of the schools had not shifted in such a manner to support viable communities of practice for teachers. The professional learning communities were regarded as a "program" rather than as an ongoing "process" of restructuring. As a result, teachers embraced a mindset that "PLCs are what we do" rather than "PLCs are who we are." Contrary to the schools in this study, when the culture has truly shifted, every practice within the school is subject to ongoing review and constant evaluation, despite any assumptions or practices of the past (DuFour et al., 2008).

An essential component of school culture is the existence of social capital, which discusses the power of social connections between individuals and groups. Social capital is a major catalyst in empowering teachers to lead within their schools. Such capital must not only exist amongst peer teacher relationships, but must also be evident in how administrators form connections with their teachers. Most teachers in this study experienced positive relationships with their PLC colleagues. However, such relationships with their school leaders were elusive.

According to a study conducted by the Northwest Regional Educational Lab, transforming a schools' culture begins with the tone of the relationship between the school leaders and teachers (Muhammad, 2009). Social capital is imperative in the construction and effectiveness of school leadership (teacher leadership included) because it allows for the capacity of building trust and shared decision-making amongst principals and their staff. In addition to trust and relationships, school principals are responsible for ensuring that the school's goals are met in an adequate manner. School leaders should inspire the school mission and vision. Since principals serve in the capacity of empowering others, it is imperative that they establish a positive rapport with key individuals in reaching desired outcomes. Principal leadership involves a large scope in terms of building social capital in schools. Providing opportunities for social capital through professional development and PLCs are measures in which school principals can promote social capital (Newmann, King, & Youngs, 2000).

Establishing networks of social capital should not be done in isolation, but rather as a collaborative effort between school leaders, teachers, parents, and students. Although each individual group may have their own set of goals, schools move forward when everyone is unified with a collective goal (Putnam, 2000; Sergiovanni, 2004).

When examining mechanisms for supporting PLCs and teacher leadership, it is especially important to note evidences of technical versus cultural changes. As with most studies on PLCs,

technical changes are easily identifiable. In this study, most teachers easily recognized the technical changes (common planning periods, room locations, structured meetings, and teaching schedules) that occurred to establish PLCs within their schools. However, cultural changes were much more difficult to identify and/or articulate. One possible hypothesis is that administrators created their PLCs with the assumption that implementing technical changes would naturally foster the cultural changes needed to maintain the learning communities. Muhammad (2009) point out, "cultural changes are necessary to affect an improvement in student performance, but they produce very few positive results when used by people who do not believe in the intended outcome of the change" (p. 14). As opposed to technical changes, which are more obvious and easy to control, cultural changes are much more difficult to achieve and entail an ongoing process of reform and renewal within schools.

In conclusion, it is evident that teacher leadership and effective professional learning communities move schools forward and promote student achievement. The collective knowledge and collaboration that exists within PLCs are factors that contribute to the overall effectiveness of schools. When teachers have opportunities for collective inquiry that they can develop and share a body of wisdom gleaned from their experiences (McLaughlin & Talbert, 2001). The findings of this research add value to PLCs. According to Hord (1997, 2004), PLCs lead to a reduction in teacher isolation, increased commitment to the mission and goals of the school, refinement of effective teaching, a higher likelihood of understanding fundamental systemic change, and a greater tendency to promote a positive school culture.

It is imperative that school leaders clearly recognize, communicate, and implement effective dimensions of their PLCs in order to maintain sustainability. Based on literature and data presented in this study, such dimensions include shared vision and mission, shared leadership, a focus on student learning, supportive conditions, and a culture that promotes shared practice (DuFour et al., 2008; Hord, 1997, 2004). In addition to these identified dimensions, school leaders are to understand that the work of PLCs must also be data-informed, standards-driven, and focused on instruction.

Professional learning communities should include key stakeholders, who collectively examine their own professional practice in order to reach a common goal. School leaders must have a clear idea of the purpose of PLCs within their schools and how the work of such communities will be manifested on a continual basis as a means to promote success.

Finally, the role of teacher leaders must shift from being "representatives of change" to "leaders of change." In an effort to avoid role conflict, school administrators must clearly communicate and support teacher leaders within their schools. Based on the work of Lieberman, Saxl, and Miles (1988), principals can empower teachers by allowing them to engage in diagnosis of organizational conditions, by increasing teacher involvement in school-based processes, and by increasing shared decision making in managerial responsibilities. Principals can shift the culture of their schools by establishing a culture for collaboration amongst teachers and administrators, by providing support and encouragement for teachers, by ensuring that teacher leadership and PLC involvement will lighten the workload rather than create added demands, and by establishing clear communication and reflection amongst their staff.

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