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Formative Program Evaluation of a Professional Learning Community in an Urban Elementary School

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COLLEGE OF EDUCATION

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Abstract

In a professional learning community (PLC), school personnel participate in focused collaboration to improve adult learning and facilitate student achievement. Implementation of a PLC is often haphazard and not evaluated for effectiveness, resulting in poor implementation. This study, a PLC-specific qualitative formative program evaluation, addressed a lack of documented PLC effectiveness at a local urban elementary school in the southern United States. The purpose of this project was to determine how teachers described the functioning of their PLC. The conceptual framework for the study was Hord and Tobia's 6 characteristics of a PLC. The research questions focused on how teachers described their PLC in terms of: supportive and shared leadership; shared beliefs, values, and vision; intentional collective learning; shared practice; physical or structural conditions; and collegial or relational conditions. The qualitative design consisted of semi-structured interviews with 10 teachers. The findings from the typological data analysis revealed that the research school was not functioning as a true PLC, with lack of collegial-relational conditions being a primary concern. Based on the findings, recommendations were made for school personnel to participate in team building exercises, adopt an educational change model to strengthen their PLC, participate in PLC training, and develop a continuous evaluation cycle for their PLC. The recommendations will help the research school more effectively build trust as they improve their PLC. Implications for positive social change include an improved school culture and delivery system of education, which fosters an educational environment more conducive for improved learning for teachers and students.

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Acknowledgments

Certainly, this doctoral journey encompassed sharp curves, rolling hills, and a few mountains along the way. As such, the doctoral journey led me down a path of greater spiritual growth in terms of growing my faith capacity and simultaneously not being attached to the outcomes of what is hoped. The greatest lesson that I learned is that nothing stays the same! I was so blessed to have so many people along my path that I do not have the space to thank them individually, so I will thank you collectively. I would not have attained this doctorate without your support. I was deeply blessed to have alongside the journey Walden faculty members and mentors that encouraged, inspired or coached me to my destination.

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Section 1: The Problem

Introduction to the Problem

Professional development has played an important part in reforming education in the United States (DuFour & Eaker, 1998; Hord & Tobia, 2011; U.S. Department of Education [USDOE], 2011). A professional learning community emphases on the outcomes of adult learners with the ultimate goal to advance the educational system (Reed & Swaminathan, 2014). When effectively applied, professional learning communities (PLCs) bolster student achievement (Carmichael & Martens, 2012). The overall goal in creating PLCs is to increase teacher and student learning. Increased accountability measures instituted by local, state, and national government, and by other educational entities, have pressured U.S. teachers to increase student achievement and close achievement gaps (Marsh & Farrell, 2014). A PLC offers a useful tool for educators to improve their practice and student learning.

In 2008, the State of Georgia Legislature passed House Bill 1209 to allow local school boards to work in partnership with the State Board of Education (SBOE) and the Governor's Office of Student Achievement (GDOE, 2013). This law requires that the LES in a partnership create a goal-setting plan to improve student achievement (GDOE, 2013). Through this contract, the GDOE specifically granted the school district studied in this dissertation greater flexibility in complying with specified Georgia laws and GDOE rules in exchange for the district providing increased accountability and specifically defined consequences to increase student achievement (RSD, 2013a). The school district used in this study, hereafter referred to as Research School District (RSD) was granted flexibility by the GDOE to opt out of certain state mandates under the "Investing in

Educational Excellence (IE^2) Partnership Contract" dated January 8, 2009 (RSD, 2013a, para 3). RSD was the first to set up such a partnership with the GDOE. This contract gives RSD an unusual degree of flexibility in making local decisions to increase student achievement as set forth in each local school's improvement plan. As of January 2014, only two other local school boards in Georgia had received similar approvals from the GDOE.

As schools in Georgia continued their quest to improve student academic achievement, in 2009 the GDOE applied for and received the Race to the Top grant from the USDOE. The GDOE made the grant available for local districts to apply to receive. RSD was the first to apply and receive the Race to the Top Grant. The USDOE funds the grant with a primary focus to rebuild schools. According to the Governor's Office of Student Achievement (2014), the GDOE has focused on the four Race to the Top aims: improve student achievement using the Common Core Georgia Performance Standards; improve recruitment and retention of teachers, especially in high-needs schools; improve student data systems to make information accessible to school staff; and improve student achievement in the lowest achieving schools. All schools in the State of Georgia first implemented the Common Core State Standards (CCSS) during the 2012–2013 school year (GDOE, 2014). Learning a new curriculum necessitated teacher collaboration. Teachers at RES had to learn how to implement the new curriculum and use student data to improve instruction within the PLC.

Furthermore, in an effort to increase student achievement, meet the goals in the IE^2 plan, and meet the Race to the Top requirements, the RSD, in collaboration with the GDOE, created and implemented a new evaluation system for teachers. The overall drive

of the new evaluation is three-fold: to increase student achievement, to identify teacher strengths, and to address weaknesses through personalized professional learning (RSD, 2013b). The new evaluation system uses multiple measures to evaluate teachers that include teacher observations, student growth on assessments and student perceptions of the teacher. An RSD spokesperson stated that the results from this evaluation would help further individualize professional development (RSD, 2013b).

Definition of the Problem

The problem addressed by this project was a lack of formative evaluation of the PLCs at the specific school studied in this dissertation, hereafter referred to as Local Elementary School (LES), to confirm their benefits. Several studies have concluded that PLCs in general increase teacher effectiveness and positively affect student learning (Cranston, 2009; DuFour, Eaker, & Karhanek, 2004; Hord & Tobia, 2011; Learning Forward, 2014a). As a result, many schools are seeking ways to define, implement, monitor and evaluate the effects of PLCs on student learning and achievement (Huffman, 2011; Sleegers et al., 2013; So & Jiyoung, 2013; Song, 2012). However, a common definition of a PLC does not exist, and examining a PLC can be complex because of the lack of a consistent definition (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Wells and Feun (2007) argued that the limited number of models of functioning PLCs prevents interested schools from observing how PLC teams collaborate and work together to improve student learning. Vescio, Ross, and Adams (2008) corroborated Wells and Feun (2007)'s claim, further noting that some schools use the term PLCs to refer to groups that are not truly functioning as one. A program evaluation is needed in order for the LES to determine if the PLC is functioning properly.

The LES specifically examined in this study is a Title I urban elementary school, located in the State of Georgia within the RSD. At the time of the study, LES had a recent record of improving student achievement and closing achievement gaps. In the 2013–2014 school year, LES enrolled approximately 677 students and employed approximately 53 certified teachers (LES, 2013). In the same school year, more than 65% of the students enrolled at LES received free or reduced lunches (LES, 2013). In addition, in terms of students' racial background and ethnicity, 65% were Black, 14% were White, 11% were Hispanic, 6% were multiracial, and 4% were Asian,. LES delivered special education services to 14% of the student population and served 6% with its English as a Second Language program during this same year (LES, 2013). Since 2008, the LES administration has placed an emphasis on strengthening professional learning and teacher collaboration because the LES's student achievement results, as stated on statewide exams, were dismal (LES, 2013). In addition, the LES was ranked in the bottom 10 of all elementary schools within RSD. Although LES has implemented PLCs (see Appendices B and C), student achievement gaps persist.

Professional learning in the context of PLCs has a designed structure through which teachers learn new skills and knowledge to improve student learning (Riveros, Newton & Burgess, 2012). Although LES previously conducted a summative professional learning evaluation using the Standard Assessment Inventory 2 (SAI2), an instrument that includes some questions about PLCs, this instrument is used to evaluate professional learning in general and not PLCs exclusively, which is the focus of this study. To determine LES teachers' perspectives of the PLC as suggested by Joyce and Calhoun (2011), I needed to use a formative evaluation that utilized a qualitative design.

Unlike summative evaluations, which evaluators conduct at the end of a program, a formative evaluation is conducted while a program is in progress. Formative evaluations allow for immediate feedback, which will improve a program already in progress (Spaulding, 2008). The formative program evaluation conducted by this study was needed so that school personnel could use its feedback to improve their PLC.

Rationale

Evidence of the Problem at the Local Level and the Professional Literature

The primary rationale for conducting this study was that PLC program stakeholders at LES had not conducted a formative program evaluation of their schools' professional learning communities. Because the State of Georgia implemented the CCSS in mathematics and language arts, Georgia public school teachers have had to find new insights and pedagogy to meet the rigorous demands of the new curriculum (McKinney, 2013). The CCSS is designed to give students the necessary knowledge and skills that will prove beneficial for college and beyond (RSD, 2013c). The curriculum focuses on (a) content integration, (b) problem solving, (c) application of learning, and (d) a conceptual understanding of mathematics (RSD, 2013c). The new standards require 50% of literacy instruction to include informational text (RSD, 2013c). Standards alone do not ensure implementation; teachers must learn and implement the new standards (Van Driel & Berry, 2012). A PLC is one means for teachers to collaborate in order to properly implement these new standards successfully.

In addition, with the new teacher evaluation system implemented system-wide during the 2013–2014 school year, teachers' evaluations during the 2014–2015 school year reflected student academic growth in reading and language arts (RSD, 2013b).

Student growth was weighed at 50% of a teacher's evaluation score (RSD, 2013b). To determine student growth, school officials used student test data based on assessments created by the RSD that aligned with the curriculum standards (RSD, 2013b).. Staff officials used students' test data from the Georgia Milestone state exam for third through fifth grades to calculate student growth (RSD, 2013b).. The state created the Georgia Milestone assessment in order to create alignment with the CCSS. School officials expect the outcome of the new teacher evaluation system to be an increase in student learning and academic achievement (RSD, 2013b). Accordingly, the RSD noted during the 2013-2014 school year that the results from the new teacher evaluation system should identify specific growth areas and target individualized professional learning needs for individual teachers (RSD, 2013b).. Teachers must simultaneously continue their efforts to close these achievement gaps and learn new instructional strategies in order for students to learn from the rigorous new learning standards (Wood & Burz, 2013).

One job-embedded approach used to improve student achievement is to engage teachers in a PLC (Chiou, 2011). Ermeling and Gallimore (2013) stated that when teachers are involved in a PLC, teacher and student learning increases. A PLC allows teachers to improve their instructional practices through consistent collaboration with their colleagues (Hord, 1997; Huffman, 2011). A PLC improves teacher learning and thereby increases student achievement (Chiou, 2011). The LES developed a PLC composed of several learning teams (see Appendices B and C). Despite the school's efforts to build and carry out a PLC, student achievement gaps and a lack of teacher knowledge about helping at-risk students persist, according to an elementary teacher at the school under study (R. Robby, personal communication, March 13, 2012).

School leaders often implement PLCs without knowing the components required to create a true PLC, which results in poor implementation (Liljenberg, 2015); moreover, school leaders do not reap the benefits of improved teacher and student learning (DuFour, 2007; Hord & Tobia, 2011). Implementing a PLC is multifaceted and necessitates a change in the school's culture in order to be effective (Wells & Feun, 2013). To determine the progress of a PLC, school officials must conduct a program evaluation and inform local school administrators of the strengths and weaknesses (Ermeling & Gallimore, 2013; Hellner, 2008). Therefore, this research study was designed to carry out a formative program evaluation at the LES.

Several studies have concluded that teacher involvement in PLCs improves teacher and student learning (Ermeling & Gallimore, 2013; Hord, 1997; Nathan, 2008; Vescio et al., 2008). Although educational systems around the globe use PLCs, most PLCs are not well defined or understood, causing PLCs to frequently be implemented in parts rather than the whole (Ermeling & Gallimore, 2013; Tobia & Hord, 2012). This reform can be implemented and sustained only if schools move away from the usual bureaucratic model used in the United States and shift to a model congruent with the learning community perspective (DuFour & Fullan, 2013; Williams, Brien, Sprague, & Sullivan, 2008). In the traditional bureaucratic model, leaders mandate change; however, in the new nonbureaucratic model, leaders inspire and influence change.

In some schools, teachers assume that they are functioning as a PLC because they conduct frequent meetings, exchange ideas and share resources (DuFour, 2007; Hord & Tobia, 2011). However, a truly functioning PLC is one where teachers have an undeviating focus on improving their instructional practice or knowledge using student

data as a guide to produce improved student learning (DuFour & Fullan, 2013; Hord & Tobia, 2011). The PLC is a democratic process wherein teachers take ownership for their learning. However, in order for scholars to ascertain when a school is truly operating as a PLC, they must be willing to learn from the implementers (Wells & Feun, 2013). Therefore, schools must inspect their PLC and determine its strengths and weaknesses so that changes can be made for sustainability. As such, this study conducted a formative evaluation so that the LES can be provided with immediate feedback on its PLC.

Although I conducted a formative evaluation for this research project, the LES had previously conducted a summative evaluation using the SAI2 instrument. Learning Forward (2014a) designed the SAI2, a self-report, to "measure alignment between the school's professional development program and the Learning Forward's 2011 Standards for Professional Learning" (p. 7). Learning Forward (2014b) recognized Hord—who coauthored Hord and Tobia's (2011) six characteristics of successful PLCs, the theoretical framework of this study— as an expert in the field of PLCs. Hord helped to revise Learning Forward's professional learning standards to align them with the SAI2 and also contributed to the redesign and psychometric evaluation of the SAI2 (Learning Forward, 2014a, 2014b). The SAI2 evaluated professional learning in general. This research, however, evaluated a PLC specifically. Researchers can measure the effectiveness of a PLC using the SAI2 (Learning Forward, 2014a). The progress of the PLC at the LES was not determined before this doctoral study was conducted; therefore, I conducted a formative program evaluation using a qualitative strategy.

I used Hord and Tobia's (2011) six characteristics of a successful PLC to determine the strengths and weaknesses of the LES's PLC because these elements align

well with some of the indicators found in the SAI2. These characteristics are the following:

- supportive and shared leadership;
- shared beliefs, values, and vision;
- intentional collective learning;
- shared practice;
- physical or structural conditions; and
- collegial or relational conditions" (Hord & Tobia, 2011, pp. 486-498).

I used these six characteristics as the conceptual framework for this study and to inform the research questions and data analysis.

Definitions

Professional learning community (PLC): Hord and Tobia (2011) defined a PLC as teachers working together, sharing, and supporting each other using common goals based on student data as they learn and apply new content and skills and application.

Shared and supportive leadership: In the context of this study, a situation in which a school principal shares in the responsibility with teachers to make decisions in the school that include decisions involving improving student learning (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).

Shared beliefs, values, and vision: A total commitment and belief of the school staff that the goal of improving student learning is shared by all and is reflected in their daily work (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).

Intentional collective learning: Staff members who are involved in collaboration during the continual improvement cycle. This involves staff members using student data

to plan lesson that targets student individual needs, applying new knowledge and skills, and evaluating the progress of lessons using both self-reflection and feedback from fellow teachers (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).

Shared practice: A pedagogical arrangement in which teachers support each other by observing each other's classrooms and providing feedback the teacher can use to improve instructional techniques so as to address student needs. Shared practice includes the sharing of ideas and student data in an effort to advance teaching pedagogy and sharing the results of instructional practices (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).

Physical or structural conditions: In the context of this study, policies and procedures instituted by a school to provide physical space, time, and resources necessary for teacher collaboration (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).

Collegial or relational conditions: Supportive, trusting, and respectful atmospheres created to sustain teacher collaboration and collective learning (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).

Significance

The findings from this study can inform and provide the LES with a program evaluation process that focuses on continuous improvement for teacher learning. The USDOE (2013) recognized that professional development, which is focused on teacher collaboration and based on student data, is paramount in reforming schools. A PLC meets the characteristics cited by the USDOE (2013). Similarly, researchers of PLCs aim to provide teachers with collaboration opportunities to avoid learning in isolation (Hipp et

al., 2008; Hord & Tobia, 2011; Huffman, 2011). Hence, there must be a culture conducive to collaboration.

A school culture and the delivery of professional development conducive to an effective PLC may increase teacher pedagogy that could result in greater student achievement. However, schools must still correctly implement PLCs based on effective characteristics. The evaluation conducted in this doctoral study yielded research-based recommendations that can be used to improve the PLC at the LES. The results are also beneficial for the personnel at the LES, its school board, and the local community because it will provide them with opportunities to improve the PLC, thus improving teacher learning and student academic learning.

Research Questions

A PLC, when implemented properly, increases teacher knowledge and skills and, in turn, improves student learning. However, many schools that call themselves PLCs do not implement all facets of an effective PLC; thus, such schools may not see the intended results of a PLC: increased student and teacher learning (DuFour, 2007). The problem addressed by this research study was that the LES had not conducted a formative program evaluation of its PLC. At the time of data collection, the had LES employed the SAI2 as a summative evaluation at the conclusion of each school year to measure how professional learning implementation corresponded with Learning Forward's 2011 Standards of Professional Learning. A PLC is one of the seven standards within the SAI2 survey. The remaining standards on the SAI2 are closely associated with the concepts of a PLC, but does not evaluate the PLC specifically; therefore, qualitative interviews was necessary in order to understand teachers perceptions in order to conduct formative evaluation.

Teachers' perspectives on the PLC provided relevant data during the formative evaluation. The formative program evaluation conducted in this study allowed me to provide feedback and recommendations and recommendations. The RSD can use the recommendations for improving their PLC. The following research questions guided the formative program evaluation:

RQ1: How do teachers describe their PLC in terms of supportive and shared leadership?

RQ2: How do teachers describe their PLC regarding sharing beliefs, vision, and values?

RQ3: How do teachers describe their PLC regarding collectively learning and applying new knowledge and skills?

RQ4: How do teachers describe their PLC regarding shared practice?

RQ5: How do teachers describe their PLC regarding collegial or relational conditions?

RQ6: How do teachers describe their PLC regarding physical or structural conditions?

Review of the Literature

I conducted a search of Walden University's databases (ERIC, Academic Research Complete, Education Research Complete, and Education from SAGE, Google Scholar, Science Direct, and ProQuest Central) in order to reach saturation. I created a list of search terms and entered key terms into the databases separately. Search terms included *professional learning community, professional learning communities, learning*

communities, professional development, collaborative learning, learning community, communities of practice, and *critics of professional learning community*. Boolean search strategies were used with the following: *challenges and professional learning communities, professional learning critics, professional learning communities and elementary education, shared values, beliefs, vision, successful learning communities, peer learning, sustainability and professional learning community, inquiry groups, professional learning and leadership, professional learning communities and trust, professional learning communities and shared leadership, professional learning communities and vision, professional learning communities and collaboration, professional learning communities collaborative process, communities of practice*, and *professional development and results*. In addition to scholarly journal articles, many types of resources were referenced, such as textbooks, websites of organizations devoted to professional learning, and established PLCs such as the Southwest Educational Development Laboratory, Learning Forward, and All Things PLC.

Conceptual Framework

I selected Hord and Tobia's (2011) six dimensions of a PLC as the study's conceptual framework. In 1997, Hord conducted research at the Southwest Educational Development Laboratory (SEDL), a professional organization dedicated to advancing educational research to improve schools. In that study, Hord (1997) examined how organizations support school change. Hord (1997) found that change-ready schools valued and sought change. These results led Hord to conduct further research on effective methods to help school-based professional learning teams pursue continuous school improvement. After an extensive review of the literature, Hord (1997) operationalized the

PLC concept and established the original five characteristics of PLCs: “supportive and shared leadership; shared values and vision; collective learning and application; shared personal practice; and supportive conditions, namely, relationships and structure” (p. 14).

Hord and Tobia (2011) advanced the existing PLC research, including the seminal work of Hord (1997), and established the following six characteristics of a PLC that act as the conceptual framework for the current research study:

1. Teachers in a PLC gain new knowledge and skills that increase their confidence and ability to reach all students.
2. Teachers organize their teams to share ideas and strategies based on student data, create lesson plans for implementation of instructional strategies, and provide effective follow-up.
3. Teachers deliver a continuous learning cycle by observing other teachers implementing lessons and providing feedback that will improve a teacher’s effectiveness.
4. All PLC activity takes place on designated days and times prescheduled into the school calendar.
5. Teachers treat each other with respect in order to establish trust.
6. Each school’s shared beliefs, values, and vision direct teachers’ work (Hord & Tobia, 2011).

These characteristics or dimensions, as Tobia and Hord (2012) argued, are interdependent. For example, a leader who involves the school staff in making decisions characterizes supportive and shared leadership. In essence, the principal distributes leadership among school staff. Such a leader is likely to provide the time and structure

teachers need to learn collectively and share personal practices. Hord and Tobia (2011) argued that when school personnel collaborate within a PLC, the collaboration helps to improve teacher knowledge and student achievement.

Other researchers have used Hord's (1997) model as their conceptual or theoretical framework to create PLC survey instruments. Hipp et al. (2008) used Hord's PLC characteristics for their theoretical framework in a study aimed at determining two schools' progress toward becoming PLCs. Williams et al. (2008) created a survey modeled after the School Professional Staff Learning Communities Questionnaire, an instrument created by Hord during her work at SEDL. Maloney and Konza (2011) also used Hord's (1997) PLC characteristics to examine early childhood teachers' participation in and creation of their own PLC.Hipp, Huffman, Pankake, and Oliver used Hord's (1997) PLC characteristics for their theoretical framework in a study aimed at determining two schools' progress toward becoming a Professional learning community. As the conceptual framework used in this study, Hord and Tobia's (2011) six characteristics of PLCs guided the formulation of the research and interview questions. Moreover, the conceptual framework formed the typologies that guided the typological analysis of the interview data in order to answer the research questions.

Review of the Literature on the Problem Statement

A review of current research literature on PLCs reveals the challenges and successes that institutions encounter when implementing PLCs. In addition, according to the literature, researchers should evaluate each PLC to identify barriers and provide opportunities for improvement and success to ensure that the PLC is functioning effectively (Hellner, 2008). The review of literature begins with a historical review of

PLCs, as well as of the reform movement. Then, I define and explain the concept of and characteristics of a PLC in detail. I organized the literature review to address the following themes: "supportive and shared leadership; shared beliefs, values, and vision; intentional collective learning; shared practice; physical or structural conditions; and collegial or relational conditions" (Hord & Tobia, 2011, pp. 486-498). Furthermore, I used additional researcher perspectives to explain and elaborate on these six themes. The literature review concludes with a review of studies that used PLC evaluations and critical reviews of the PLC's implementation process.

Historical Context of Professional Learning Communities in School Reform

School reform efforts became robust in the 1980s after the release of the *Nation at Risk* report, which identified America's subpar educational system as a risk to its national security (DuFour & Eaker, 1998). After this report was released, many states began to investigate the conditions in their schools and attempt to transform them to ensure that every student received a superior education (DuFour & Eaker, 1998). One of these reform efforts focused on improving professional development for school personnel.

In the late 1980s, the PLC became a method used to reform schools. The PLC is a term originally derived from organizational theory and human relations literature (Huffman, 2011), and the concept was introduced into the educational field by Peter Senge. Senge's (1997) work focused on increasing business capacity for innovation and creativity, as well as using system thinking during problem solving. A system comprises key personnel who work interdependently or collectively and are committed to learning and challenging their own thinking to solve organizational problems. Senge's work caught the attention of educational researchers (Hord, 1997). Thereafter, Rosenholtz

(1985) began to explore teachers' working conditions and organizational conditions. Rosenholtz (1985) found teaching in isolation with little collaboration and with few chances to participate in professional development affected teachers' commitment. Collaboration is the foundation of a PLC. Hord (1997) extended this conversation on learning communities to form and define the PLC concept based on the work of other educational researchers, including Astuto, Clark, Read, McGree, and Fernandez (1993); Darling-Hammond (1996); and Rosenholtz (1985). From that point forward, educational researchers and scholars referred to learning communities as PLCs. Hord (1997) stated that a PLC must include "supportive and shared leadership; shared values and vision; collective learning and application; shared practice; and supportive conditions" (p. 14). DuFour and Eaker (1998) added that a PLC must also consist of teachers having shared goals as well as opportunities to experiment with teaching pedagogies focused on achieving results.

Hord and Tobia (2011) extended Hord's (1997) initial conception of a PLC and concluded that a successful PLC should include Hord's (1997) original five characteristics; however, the supportive conditions characteristic should be divided into two separate components: physical and relational conditions. Hord's (1997) original description of supportive conditions included both physical structures and relational conditions. Hord and Tobia (2011), however, argued that relational and physical conditions are two distinct concepts. Therefore, the updated PLC concept includes six characteristics.

Literature regarding best practices for PLCs and educational reform efforts has extended well into the 21st century. In 2002, Public Law 107-110 was reestablished as

the No Child Left Behind Act of 2001 (NCLB; USDOE, 2011). NCLB aimed to increase academic rigor, school personnel quality, and accountability by using high-stakes testing (USDOE, 2011). NCLB aimed to close achievement gaps through a system that graded states based on self-developed annual measurable objectives. The USDOE (2011) has found that although NCLB did provide insights into student academic achievement gaps, it also created failed results. For example, to meet necessary objectives and achieve designated yearly progress, some states set their standards purposefully low. Title II, Part A of the ESEA allocates school systems money that must be used to improve teacher and principal quality (USDOE, 2006). The USDOE then extended states' flexibility in adhering to the 100% proficiency requirement of the NCLB 2014 mandate. In exchange for this flexibility, states had to create school reform strategies aimed at improving student achievement and closing the achievement gaps. In 2014, state agencies also were permitted to use their allocated funds for professional development, teacher preparation, recruitment, and teacher retention. The GDOE ultimately accepted the waiver and removed themselves from the mandates of NCLB after President Barack Obama's administration took office.

In 2009, the Obama administration proposed yet another opportunity for schools to enact school reform via the professional development of teachers, namely through the Race to the Top program. Race to the Top aims to improve schools and increase student achievement (USDOE, 2009). According to the USDOE (2009), Race to the Top requires schools to adopt new student learning objectives and student exams with the aims of preparing students for post-secondary education or careers, using data management system to track progress, and retaining and recruiting effective teachers and principals.

School systems compete to receive the Race to the Top grant, which allocates funds to the school districts if the district's application has been selected by the USDOE for the grant.

Georgia, where the LES of this study is located, is a recipient of the grant money funded by Race to the Top. States in the program must be committed to turning around their lowest performing schools. To satisfy the requirement of implementing researched-based professional development, states use professional development entities, including Learning Forward (2014e), to assist them with developing effective professional learning programs based on Learning Forward's professional learning (PL) standards.

Learning Forward is the only organization that focuses solely on advancing professional learning for increased student achievement. Learning Forward also provides states with professional learning assessments that evaluate the effectiveness of the state's individual professional learning program. The county of the LES built its PL standards based on Learning Forward's PL standards. In addition, the RSD used Learning Forward's SAI2 instrument to compare their own PL with the 2011 PL standards.

PLCs may help teachers meet Race to the Top reforms, particularly with respect to implementing the new CCSS (Rhode Island Department of Education, 2014). Ermeling (2013) posited that using the CCSS to close the achievement gap requires teachers to be knowledgeable, trained in methods of effective teamwork, and willing to engage in collaboration. Ermeling added, "Professional learning communities could play a pivotal role, but not unless we re-conceptualize the structure and content and provide teachers with a roadmap to productively guide their collaborative work around the Common Core State Standards" (2013, p. 1). To reconceptualize their PLCs' structure and content,

schools must first examine the current state of their PLC using a formative program evaluation.

Professional Learning Community Defined

A PLC has been defined in multiple ways in the research. As a concept, PLC lacks a universally accepted definition, mainly because it is not a prescribed program (Stoll et al., 2006). In any case, Hord (1997) established that a PLC provides the infrastructure in which administrators and staff can work together to improve student achievement. Within all of the definitions proposed by various researchers, certain key elements have common overlapping concepts, including (a) teachers' autonomy in making decisions, (b) teacher collaboration for improved instructional strategies, and (c) increased student achievement (DuFour, 2007; Hargreaves et al., 2013; Hipp et al., 2008; Huffman, 2011; McLaughlin & Talbert, 2006). Hord (1997) thus defined a PLC as school personnel consistently collaborating, sharing, and applying new learning to improve student achievement.

Learning Forward (2014d) defined learning communities as school personnel committed to continuous new learning and application of that learning to improve student learning. Both Hord (1997) and Learning Forward place teacher and student learning as the center focus of a PLC. Some educators define PLCs as holding faculty meetings, grade level team planning, and holding other teacher groups within the school (DuFour, 2007).

The lack of a universal definition of a PLC has led to some school officials' failure to understand and thus properly implement a PLC. Failing to understand and therefore correctly implement the true components of a PLC has led to some schools

yielding minimum results in improving educators' learning and student academic learning (Cranston, 2009; Hargreaves et al., 2013). Nonetheless, Hord (1997) and Learning Forward's (2014d) definition has, however, provided an entryway to better understanding PLCs. The next section unveils key components of a PLC. Furthermore, I offer further depth to understanding what constitutes a true PLC, which schools may use as a blueprint so to establish and implement their PLC.

The Key Characteristics of a Professional Learning Community

Implementing a PLC requires the knowledge of its essential characteristics. Although different models exist, many researchers have identified the same essentials as Hord and Tobia (2011):

- supportive and shared leadership (DuFour & Mattos, 2013; Hipp et al., 2008; Kilbane, 2009);
- shared beliefs, values, and vision (DuFour, 2007; DuFour & Mattos, 2013; Hipp et al., 2008; Kilbane, 2009);
- intentional collective learning (Hipp et al., 2008; Kilbane, 2009; Richmond & Manokore, 2011; Santagata & Guarino, 2012);
- shared practice;
- physical or structural conditions (DuFour & Mattos, 2013; Hipp et al., 2008; Kilbane, 2009; Richmond & Manokore, 2011); and
- collegial or relational conditions (DuFour & Mattos, 2013; Hipp et al., 2008; Kilbane, 2009; Richmond & Manokore, 2011).

The reader should be careful not to take Hord and Tobia's (2011) six characteristics individually and view one outside of the context of the whole—rather, the characteristics

must be viewed as a complex system of interdependent dimensions. For example, a teacher cannot expect shared personal practice without having supportive and shared leadership. Teachers must feel supported by the principal to trust their peers observing them teaching.

DuFour (2007) argued that many schools implement PLCs without any real conceptual knowledge. As a result, schools do not benefit from improved teacher learning or increased student achievement. In addition, Hord and Tobia (2011) argued that many schools identify themselves as PLCs because they meet every week, but they still lack PLC characteristics. A PLC must be defined by school systems, and a well honed definition of a PLC can be used during a program evaluation in order to measure specific results (Hord & Tobia, 2011).

Supportive and shared leadership. Hord (1997) defined supportive and shared leadership, the first PLC characteristic, as the "collegial and facilitative participation of the principal who shares leadership—and thus, power and authority—through inviting staff to contribute to decision-making" (p. 24). Hord and Tobia (2011) added that principals should support teachers to develop their leadership skills and confidence to take on leadership roles. Shared and supportive practice is integral to a PLC because instructional practices improve when teachers participate in making decisions that directly affect themselves (Walhstrom & Louis, 2008). Supportive leaders believe that all PLC members are capable of being professional learning leaders (Learning Forward, 2014e). When school leaders break down the power structures and incorporate teachers' input, teachers are empowered to lead the process of improving their own instructional practice and improve student learning (Bruce & Flynn, 2013; Hargreaves et al., 2013;

Hord & Tobia, 2011). In many schools today, teacher leaders and administrators form leadership teams. The leadership team's purpose is to collaborate with administration and provide input into the decision making process. However, when a school principal uses leadership team meetings to drive the administrator's or a district's agenda rather than to provide valuable input for teacher leaders, teacher leadership initiative is discouraged (Birky, Shelton, & Headley, 2006; Ferguson, 2013). Thus, true teacher leadership aimed at improving teacher participation in decision making is an important part of a PLC.

Sharing authority with teachers is essential to encouraging teachers to make decisions and take risks (Liljenberg, 2015). The school principal is the key leader in this effort (Cranston, 2009; Hord, 1997; Kilbane, 2009; Sackey, 2012). Thus, principals must be empowered with this knowledge in order to ensure a PLC is effective. Cranston (2009) conducted a naturalistic study to determine how 12 principals from Manitoba, Canada, viewed the features of a PLC. Cranston found that school leaders had high regard for implementing PLCs but lacked a clear understanding of what a PLC was. Cranston underscored DuFour's (2007) assertion that when a principal does not understand the concepts of a PLC, schools will not yield increased teacher learning or improvement of student achievement. Lunenburg (2010) argued that principals hold a pivotal role in forming PLCs as they bring the school community to the process to collaborate on a shared vision, goals, values and mission. Thus, it stands to reason that ineffective PLCs may be caused by principals who lack knowledge and understanding about what a PLC entails.

Consistent with the work of Hord and Tobia (2011), Reitzug, West, and Angel (2008) conducted a phenomenological study using grounded theory to determine how

principals perceive the connection between day-to-day efforts and instruction improvement. Reitzug et al. (2011) interviewed 20 principals and found that an organic leadership style is needed to implement and sustain a PLC. Organic leadership occurs when leaders take actions to stimulate dialogue and analysis among teachers about teaching and learning, which results in teachers learning more about pedagogic methodologies and student learning. Reitzug et al. (2011) further described the specific actions an organic leader promotes: "peer walk-throughs; team-based issue study; action research; researching school issues; analyzing and discussing data; grade-level curriculum discussions; team lesson planning; and posing of questions" (p. 710). Reitzug et al.'s research pinpoints a major factor in the formation of an effective PLC: school principals must lead by example—that is, collaborate with teachers in order to problem solve.

Mullen and Schunk (2010) corroborated Reitzug et al.'s (2008) study on leadership style as a reform effort and focused specifically on leadership styles that need to be implemented to sustain professional learning. Mullen and Schunk (2010) argued that school leaders should possess three types of leadership styles: instructional, transformational, and transactional. Instructional leadership is focused on school stated objectives, goals, and climate. A transformational leader, however, improves working conditions by restricting the school environment. Transactional leadership places emphasis on setting goals with teachers and establishing consequences for meeting or not meeting those goals. School leaders should use each style at different times for different purposes, but focus on instructional and transformational styles because those styles focus on improving teachers and learning—goals that are important to a PLC.

Moolenaar, Daly, and Sleegers (2010) extended this argument, claiming that transactional leadership does not focus on teaching and learning. Moolenaar et al. (2010) noted that when principals focus on procedural aspects of reform, they are demonstrating or utilizing a transactional leadership style. As such, these principals may not involve teachers in creating a vision. In addition, these same principals may not provide opportunities for teachers to share in the responsibility to improve their school. Transformative leadership style, on the other hand, enables principals to connect and build trust with teachers, which results in teachers taking risks, challenging the status quo, and putting in more efforts, resulting in greater productivity.

Transformative leadership encapsulates Hord and Tobia's (2011) supportive and shared leadership characteristic of a PLC. A transformative leader shows interest in teachers and is supportive in helping to develop those teachers (Balyer, 2012; Moolenaar et al., 2010; Mullen & Schunk, 2010). Moreover, transformative leaders engage other perspectives in creating solutions (Balyer, 2012; Moolenaar et al., 2010; Mullen & Schunk, 2010). However, Reed and Swaminathan (2014) argued that leaders should balance their approach and utilize both transactional and transformative leadership skills.

Principals play the key role in making sure that teachers get the necessary support and that teachers believe they can contribute to the decision making taking place within their school (Leclerc, Moreau, Dumouchel, & Sallafranque-St-Louis, 2012). When principals support teachers and share leadership, those teachers have the confidence to make decisions that will improve the schools (Hord & Tobia, 2011). Furthermore, when principals support teachers with supportive and shared decision making, teachers do not feel as though decisions are external or simply another bureaucratic idea handed to them

to execute (Balyer, 2012). Instead, the school functions as a cohesive unit, transforming itself rather than allowing bureaucracy to guide it (Balyer, 2012). Transformative leadership is key in PLCs as it produces innovative practices that can improve teacher learning and thereby student achievement (Moolenaar et al., 2010).

Shared beliefs, values, and vision. Principals also play a significant part in creating the structures necessary for teachers to have the time to collaborate and create shared visions based on shared values (Huffman, 2003; Kise, 2012; Liljenberg, 2015). Hord (1997) posited that shared vision and values are "developed from an unswerving commitment on the part of staff to students' learning and ... [are] consistently articulated and referenced for the staff's work" (p. 24). Hord further stated that a shared vision should serve as a guidepost during decision making with the aim of increasing student achievement. Hord and Tobia (2011) contended that shared values and vision are the framework in which community members collectively work toward helping all students learn. In essence, PLC members believe all stakeholders share the responsibility to improve student learning (Learning Forward, 2014c). Hipp et al. (2008) pointed out how schools should "define shared visions and values based on student learning, and provide a culture where teachers and administrators learn together in an environment that encourages risk and experimentation" (p. 193).

DuFour, Dufour, and Eaker (2008) argued that shared vision is the building block for sustaining a PLC. A shared vision gives the school staff a purpose for existence and collectively guides the school's transformation process (DuFour et al., 2008). Kilbane shares a similar view, in that a PLC with a shared vision is aimed at increasing student learning through collaborative sharing and involves consistent reflection on the teaching

and learning processes. Shared vision also maintains organizational learning (Hughes & Kritsonis, 2006).

Al-Taneiji (2009) conducted a study to ascertain the presence of PLCs in elementary and secondary schools in the United Arab Emirates based on Hord's (1997) model of a successful PLC. Al-Taneiji separated supportive conditions into two categories: (a) supportive structures and (b) supportive relationships. The separation of supportive conditions was also consistent with the work of Hord and Tobia (2011). Hord and Tobia divided supportive conditions into separate categories "in order for specificity and understanding, serve to explicate the identity of effective professional learning communities" (p. 933).

Al-Taneiji (2009) found only two characteristics were evident in the school, namely, supportive structure and shared leadership. In Al-Taneji's (2009) study, all PLC characteristics aside from supportive structure and shared leadership were lacking. Participants stated that the principal developed the vision statement without teacher input and then distributed that statement to the school staff. DuFour et al. (2008) warned against principals dictating vision and stated that a vision statement should be a collaboration between school staff and the school principal. In addition, a shared vision offers key benefits, such as it gives teachers and administrators meaning to their jobs when they are tasked with examining school problems to solve (DuFour et al., 2008). With a shared vision, school staff act with confidence as they set goals, implement objectives to attain those goals and measure their progress. When goals are not attained, school staff members collaborate and reformulate goals and objectives to further forward.

Undoubtedly, the principal must be willing to allow teacher input into creating the shared vision statement—hence, shared leadership. Specifically, Doolittle, Sudeck, and Rattigan (2008) concurred with Fullan, Hill, and Crévola (2006) that shared vision ensures quality processes. DuFour et al. (2008) wrote that although a collaboratively written vision statement provides direction, shared vision evolves over time through actions and interactions between colleagues. Lunenburg (2010) further expanded this notion, stating that a shared vision statement must be revisited because of school changes over time, such as new staff, policies, and curriculum.

Shared vision focuses on how the school envisions itself in the future; conversely, shared values focuses on how the school will fulfill that vision (DuFour et al., 2008). DuFour et al.'s (2008) opinion on the development of shared value statements or collective commitments differs from that of Huffman (2003). Huffman (2003) posited that school leaders build a shared vision with staff using shared values as a springboard. However, DuFour et al. (2008) states that a school faculty uses a vision statement to develop collective commitment. Lunenburg (2010) agreed with DuFour et al., stating that schools produce value statements after the vision statement. Lunenburg (2010) identified shared values as attitudes, behaviors, and commitments shared by all stakeholders to fulfill the school's vision. Furthermore, shared values are present in the daily actions of all school employees (Lunenburg, 2010). Shared values and vision, along with solid supportive and shared leadership, is the framework through which teachers collectively learn and work toward advancing their craft and student learning.

Intentional collective learning. In a PLC, educators execute shared vision and values through collective learning and application. Even when teachers and students

achieve some level of success, a PLC demands that they continue to seek ways to improve the educational culture within their schools. Teachers in a PLC are constantly engaged in reflective practice as they collaborate with colleagues to answer question, research new instructional strategies, take risks to implement those strategies, and evaluate instructional approaches for improvement (Hughes & Kristsonis, 2006; Kagle, 2014). Hord and Tobia (2011) defined intentional collective learning as school staff learning together and applying knowledge precisely to address students' needs. As such, PLC members are engaged in a continuous improvement cycle that is characterized by reviewing student data to identify areas of improvement, plan lessons to meet student deficits, implement lessons, reflect on the outcome of implementation, and evaluate results to devise the next plan of action (Learning Forward, 2014c). Other researchers have defined collective learning and application as teachers working collaboratively as they focus on student learning (Borrego, 2010; DuFour et al., 2006; Richmond & Manokore, 2011).

In a collaborative environment, the school staff works together to examine student data and determine how to help students better achieve (Hord & Tobia, 2011). Examining multiple student data and determining solutions to increase educators' instructional pedagogy and student achievement are the cusp of intentional collective learning in each PLC (Hord & Tobia, 2011). Teachers in a PLC collectively plan and study and discuss their instructional practice in order to make adjustments (Hord &Tobia, 2011). Teachers hold each other accountable for improved student knowledge and skills and share in the obligation for student learning. Moreover, teachers actively seek feedback in order to improve their practice.

A PLC requires that teachers collaborate regarding their instructional practices and student learning. When teachers collaborate, they learn together collectively (Hord, 1997). Moreover, teachers must put into practice newly acquired knowledge and skills to enhance their instructional practice and student learning. Through collective learning and its application, school staff can implement shared values and achieve the vision they seek. A supportive culture is necessary for teachers to collectively learn together as a team.

Cranston (2011) conducted a naturalistic inquiry study to examine the perceptions of principals from various communities in Manitoba regarding trust in PLC. Trust is paramount and necessary for teachers to work collectively. Cranston found three recurring themes: teachers must trust their principal before trusting each other, and principals are key to creating a trusting climate; teachers create trust with each other through interactions over time and taking risks in a supportive environment; good collaboration requires relational trust. Trust plays an important role when building any PLC (Liljenberg, 2015; Vodicka, 2006).To build a supportive environment based on trust, the principal plays a key role in creating a positive structure of time and space, so teachers have time to collaborate (Cranston, 2011; Levine, 2011, Liljenberg, 2015; Olsen & Sexton, 2009; Vodicka, 2006). Teachers' trust in their principal also affects how they trust each other and other stakeholders (Vodicka, 2006). In regards to principals role in nurturing trust, Vodica (2006) argued that four key elements occur when trust has been built in a school, including consistency, compassion, competence, and communication (Vodicka, 2006). I will further explore the topic of trust later in this literature review, as it relates to creating and building relationships.

Leach (2009) studied how teachers negotiate their personal and shared understandings within schools and create an opportunity to engage in learning communities. The researcher found that teachers' interactions within the organization depended on their perceptions of safety, their values, and the support they received for their personal, professional, and career development. Leach offered a psychological perspective on the decisions people make. However, Richmond and Manokore (2011) listed decisions, which are observable within PLCs. According to Richmond and Manokore (2011), to build and maintain a PLC, the PLC must establish themselves as a community so that consistent collaboration can occur. When this is done, it increases teacher confidence as teachers can affect change on policies within the classroom (Richmond & Manokore, 2011).

Santagata and Guarino (2012) conducted a qualitative study with 25 preservice teachers to determine the ways they develop collaborative skills. Santagata and Guarino found that when teachers attend an in-service, they need models and support to learn how to collaborate. Moreover, Santagata and Guarino (2012) determined that in developing collaboration skills, first, the teacher must figure out how students think. Additionally teachers must collaborative reason and form collective judgements about students' work. This research highlights the importance of collaboration and collaboration skills, and especially notes the importance of focusing on student learning and co-constructing an understanding of effective collaboration.

Kristmanson, Lafargue, and Culligan's (2011) research offered an in-depth description of teacher collaboration. The researchers found that while teachers were engaged in the PLC, their discourse led to deeper thinking as they co-constructed

understanding, which then led them to develop their own philosophical stance about what types of lessons to create and why (Kristmanson et al., 2011). Hipp et al. (2008) emphasized the importance of a PLC building common knowledge and understanding so that teachers question pedagogy and create improved instructional techniques. As a result, student academic achievement and learning will increase.

DuFour (2004) further suggested that teacher dialogue during collaborative learning in a PLC should focus on what students learn rather than on what teachers teach. Teachers should use common formative assessments that generate responses about how students learn, evidence that sheds light on what they learned, and how to provide interventions when students experience difficulty grasping concepts (DuFour, 2004). This study highlights the importance of using student data to guide collaboration and discourse. In a qualitative case study to see how teachers in PLCs communicate and progress through the inquiry cycle, Nelson (2009) found that only one out of three PLCs studied consistently participated in dialogue. This finding brings to question factors needed in a PLC to help teachers examine their teaching and student work critically through dialogic inquiry.

Ermeling and Gallimore (2013) stated that examining student work and assessment data is important during collaborative learning, but it is only effective when systematically connected to the planning and teaching cycle related to the specific learning needs of the student. The researchers found that after teachers examined and analyzed student work, little time existed for teachers to discuss instructional approaches to address those needs because teachers used the data analysis as the product of the dialogue.

Teacher collaboration, a developmental process, focuses on improving instructional practices and thereby improving student learning and helps school personnel solve problems, determine the needs of teachers and students, and accomplish those goals (Woodland & Hutton, 2012). Learning collectively requires a shift in thinking, and teachers must be willing to give and receive feedback. In a PLC, teachers are active participants. As such, they are involved in frequent ongoing communication with other teachers and administrators; these educators share their knowledge while they learn new information, which can improve instructional practice and student learning (Rahman, 2011).

Shared practice. Shared practice is the third characteristic of a PLC. Hord (1997) defined shared personal practice as when teachers have the opportunity to view other teachers in the classroom and give feedback to support that teacher's effectiveness. Further, Morrissey (2000) wrote that shared personal practice is the last PLC attribute to mature within a PLC, even in a highly functioning PLC. Hord and Tobia (2011) added that shared practice involves teachers observing quality teaching. Hord's (1997) and Hord and Tobia's characterization of shared practice is consistent with Learning Forward's (2014c) statement regarding effective professional learning, namely, that it includes teachers having the opportunity to observe each other's classrooms and give feedback to improve instructional approaches. The school leader plays a key role in guaranteeing that educators have the time and space to observe and share their practices.

Because teachers in a PLC must learn how to share their responsibilities for helping the school as a whole and their own classes in particular, shared practice is crucial. The SEDL (2001) stated that shared personal practice is typically the last

characteristic element to fully mature in a PLC. For teachers to gain the confidence to open up their classroom for others to view and give feedback on, trust and preexisting relationships must first be established. Servage (2008) stated that teaching has historically been an isolated activity; however, in a PLC, teachers are asked to "lay bare their assumptions, strengths, and weaknesses before their colleagues" (p. 71). For this reason, collaboration and sharing personal practices can be threatening, especially when the focus of discussion is on student learning, such as student assessment and teacher instructional pedagogy. PLCs should focus on transformative pedagogy. Aubusson, Steele, Dinham, and Brady (2007) stated that peer observations may be either transformative or evaluative. In their research, when peer observations were conducted using scoring rubrics, teachers resisted peer observations. These researchers also noted that trust is the antecedent of shared practice. One school in Aubusson et al.'s (2007) study postponed teacher observations until teacher confidence increased.

Collegial or relational conditions. Researchers characterize a PLC as professionals involved in a continuous cycle of learning in order to improve student achievement (Hord & Tobia, 2011; Huffman, 2011; Learning Forward, 2014c). Teachers and administrators frequently collaborate to share ideas, look back on teaching practices, provide critical feedback, and analyze student learning in an effort to work toward a shared vision. Relational conditions provide the foundation for such continuous and critical collaboration (DuFour et al., 2008; Hord, 1997; Hord & Tobia, 2011). According to Learning Forward (2014c), effective communication and relationship skills foster trust. Trust also appears also to be a component of relational or collegial conditions and improves the effectiveness of an organization (Tschannen-Moran, 2001; Van Maele &

Van Houtte, 2009; Vodicka, 2006). Trust can be fostered through collaboration. Tschannen-Moran (2009) found that collaboration efforts correlated to how well teachers trusted each other. In other words, when teacher collaboration was high, so was teachers' trust in each other. Tschannen-Moran (2001) also argued administrators should collaborate with teachers and give educators opportunities to collaborate between themselves. Tschannen-Moran (2001) found trust was an important condition for nurturing collaboration; when teachers trust the principal, teachers' trust in their colleagues was much higher. This finding implies that the principal is key in establishing trustworthy relationships and thus a strong foundation for effective PLCs. When school leadership is trustworthy, collective learning and collaboration can prevail among teachers. Trust is necessary to hold the PLC together and is the foundation for adult relationships (Cranston, 2009; Vodicka, 2006).

Physical or structural conditions. Stakeholders accomplish the interplay of "supportive and shared leadership; shared values, vision, and intentional collective learning; and shared practice" when the actual precise structures exist for these things to occur (Hord & Tobia, 2011, Location 486-498). Physical conditions encourage collaboration and sharing among teachers (Leclerc et al., 2012). Teachers must have time to dialogue about their teaching practices and student learning (Hord, 1997; Nathan, 2008). Moreover, communication structures must be present to keep teachers and school staff informed about school happenings and new research (Hord & Tobia, 2011). Common times and locations for teachers to collaborate in a PLC are the most challenging of the six dimensions of a PLC to implement (Tobia & Hord, 2012; Sackey, 2012). Learning Forward (2014c) proposed that schools should provide policies and

procedures that support a PLC and provide scheduling and physical space for teachers to collaborate several times a week. Some districts provide regularly scheduled meetings before school for school personnel to participate in a PLC (Sackey, 2012). However, the principal is key person responsible for making sure that the PLC functions and the structure for a PLC exists (DuFour et al., 2008; Hord & Tobia, 2011). Principals can create time before or during school for teachers to meet (Sackey, 2012) though most teachers and administrators desire PLC meetings occur during the school day (Leclerc et al., 2012).

Al-Taneiji (2009) found that supportive structures and supportive and shared leadership were the only professional learning characteristics evident in the school under study. Al-Taneiji's findings were consistent with other research on PLCs in that principals must deliberately allow space in the schedule for teachers to collaborate. Schools need to consider how to schedule PLC meetings before the start of the year. The elementary school in this study makes the schedule during the summer before school starts.

Evaluating and Sustaining a Professional Learning Community

Although numerous schools across the world proclaim to be a PLC, many of those schools simply have teachers meet regularly, which is not a true PLC. However, this is a positive step in the right direction towards provided the necessary structure (DuFour, 2007; S. Hord, personal communication, October 29, 2013; Hord & Tobia, 2011). In order to determine whether a PLC is truly functioning as one, schools should evaluate their PLC and determine its effectiveness and progress with implementation (Aubusson et al., 2007).

To determine if a PLC is effective, an evaluation based on defined characteristics is needed to denote the strengths and weaknesses of the PLC. Learning Forward (2014a) contended that evaluating professional learning based on predefined standards is essential for (a) determining if teachers have a clear perception of professional learning, (b) providing systems that address the challenges and successes of the implementation of professional learning, and (c) providing data based on these defined standards. Hord (1997) helped to write the Learning Forward's Professional Learning Standards; moreover, she provided feedback on the creation of the SAI2. The SAI2 instrument measures professional learning situated a PLC. The LES completed the SAI2 in the spring of 2015.

In addition to the SAI2, researchers have attempted to develop other quantitative instruments that measure different aspects of a PLC. Williams et al. (2008), for instance, developed an instrument that schools could use to identify the barriers that hinder the implementation of a PLC. The researchers modeled survey items on a questionnaire originally developed by Hord (1997) called the school Professional Staff as a Learning Communities Questionnaire (as cited in Williams et al., 2008). In addition, Leclerc et al. (2012) identified the following crucial indicators to be used to evaluate the progress of any PLC: the school's vision, physical and human conditions, cooperative school culture, principal and teacher leadership, effective communication of expertise, and data based collaboration based on student learning.

Hannum and Sargent (2009) also evaluated a PLC by conducting a case study in rural China using 30 primary school teachers. Hannum and Sargent's PLC evaluation found that although over half of the teachers participated in PLCs, teachers' interaction

with each other varied across different schools as well as within the same school. In addition, involvement in PLCs was related to effective principal leadership, policy reforms that provided that structure, time for collaboration, and teachers' initiative to participate.

Since a PLC is not universally defined, educators lack the true understanding about how a PLC should function. When school leaders lack a true understanding of the purpose and actions of a PLC, the PLC can have limited results (Cifuentes, Maxwell, & Bulu's, 2011). After teachers from various schools within the district participated in an online PLC project and once the project ended, teachers did not want to collaborate because of time constraints. Kilbane (2009) identified the factors necessary to sustain PLCs such as administrative support, an internal sense of accountability among faculty and staff, teacher networks to share ideas, relational integrity and enablers, and coherence to keep the district's vision aligned with the school's vision. Perhaps alignment with the district's vision may have prevented teachers in Cifuentes, Maxwell, and Bulu's (2011) study from not continuing to participate in the online PLC.

Sigurdardottir's (2010) work helped to establish how a successful PLC can be sustained, as she determined the attributes of a productive PLCs. Sigurdardottir (2010) stated that teachers need to believe in the legitimacy of PLCs and their ability to sustain that collaboration successfully. However, Hipp et al. (2008) conducted a multicase study in two schools that were developing PLCs in southwest Georgia. The researchers used Hord's (1997) dimensions of a PLCs as part of their theoretical framework. Hipp et al. (2008) found that in order to maintain PLCs, the following characteristics should be

present: shared responsibility, a collaborative and professional culture, collective decision making, and focus on the learner, teamwork, and teamwork at the district level.

Criticisms of a Professional Learning Community

Based on the existing literature, PLCs benefit schools and improve teacher instructional practice and student learning. Some researchers, however, have argued against creating PLCs and offer caution against collaborative teams (Kyounghye & You-Kyung, 2012; Talbert, 2010). Participating in a professional learning community is a democratic process that should allow school personnel to give input openly and receive feedback without interference. When schools implement PLCs within a bureaucratic framework, however, school leaders may instead diminish teachers' voices. Talbert (2010) noted that PLCs are often developed under bureaucratic patterns that include mandates requiring collaboration and directives for how to close the student achievement gap. Talbert states that effective PLCs do not thrive or survive when teachers view them as mandates geared solely on student test results instead of on teacher learning and successes. When teachers' expertise are dismissed and more work is placed on them in terms of paperwork with added criteria for teacher evaluations, PLCs are less likely to survive (Talbert, 2010). As such, the outcome of such bureaucratic PLCs formation is often that educators will either comply and put forth little effort into collaboration, resist by constantly challenging the validity of PLCs, or become anxious under the pressure to increase student achievement (Talbert, 2010).Kyounghye and You-Kyung (2012) underscored Talbert's (2010) assertion that teachers will attend mandated meetings but put forth little if any effort for true collaboration. The aforementioned studies indicates

that a PLC should be a democratic process. Teachers should be included in designing and implementing their PLC.

Implications

If implemented properly, a PLC can increase teacher and student learning (Chiou, 2011; DuFour et al., 2008; Hord & Tobia, 2011). The literature review established the need to evaluate PLCs to ensure proper implementation. I have identified strengths and opportunities for improvement at the LES in order to develop and make their PLC more sustainable. By conducting a formative program evaluation, I can offer recommendations that the LES can use to improve their PLC. Administrators may use these program evaluation recommendations to make immediate adjustments.

The evaluation results and subsequent program recommendations provided in this project study may have implications for policy at the district level, specifically in the provision of PLC training. The RSD designed the new teacher evaluation system at the LES to provide feedback based on individual teachers' areas of growth. Professional learning at the LES is job embedded and occurs within the PLC; teachers currently receive this training in their PLC. As prior research indicates, schools often call themselves PLCs just because they meet every week, but many still lack the elements of a true PLC (DuFour et al., 2008; Hord & Tobia, 2011). Targeting training would ensure that school and teacher leaders understand the precise functioning of the PLC to meet teachers' areas of growth.

Summary

A PLC is a professional development, school reform strategy that aims to improve teacher learning and thereby increase student learning. Section 1 provided a review of the

literature regarding the historical context of how PLCs developed within school reform efforts, as well as the definitions and characteristics of PLCs from on multiple research perspectives. I elaborated on Hord and Tobia's (2011) six characteristics of a PLC, as this work acts as the theoretical framework of my study. To ensure schools implement PLCs properly, a full formative program evaluation based on these vital PLC characteristics is necessary

The current study contributes to the body of education literature and fills a gap in the evaluation of PLCs, particularly at the LES to ensure this school is implementing its PLC with integrity. A formative program evaluation could give stakeholders an opportunity to learn their areas of success and their opportunities for improvement. More importantly, the results of the evaluation will help make the PLC at the research school more sustainable.

In Section 2, I focus on the methodology, including the research design and approach, type of evaluation, participants, data collection and analysis, limitations, and rights of participants. The details and findings of this proposed study project are included in Section 3. Finally, Section 4 includes reflections and conclusions.

Section 2: Methodology

Research Design and Approach

The purpose of this formative program evaluation was to determine how teachers perceive their own professional learning community (PLC). A qualitative design best met the needs of this program evaluation in order to understand how participants experience their PLC, as well as to understand the research problem and address the research questions, as suggested by Andres (2012) and Creswell (2012). Data were collected through in-depth interviews with 10 teachers at LES, an urban elementary school located in the State of Georgia. I created the interview questions to answer the research questions, and based the interview questions on the review of the archival SAI2 summary report. Immediately after collection, I transcribed and analyzed the interview data. I undertook typological data analysis to analyze data for predefined themes. The interview questions were refined based on strengths and weaknesses identified through a typological analysis of earlier results from a SAI2 summary report.

Prior to collecting the qualitative data for this formative program evaluation, the parent school district of LES, hereafter referred to as Research School District (RSD) provided me with a summary report of an archival survey (Standard Assessment Inventory 2 [SAI2]). RSD administered the SAI2 survey to teachers at the LES during the spring of 2014. The SAI2 summary report that I obtained did not provide raw data. The SAI2 was not specifically designed to evaluate PLCs; however, certain components of the survey relate directly to PLCs, which are discussed later in this chapter. Therefore, a typological data analysis and review of the SAI2 summary report provided initial insight

into the development of the interview questions. The typologies used were gleaned from the conceptual framework based on Hord and Tobia's (2011) six characteristics of a PLC.

I noted the survey items that related to a PLC based on the typologies of a PLC, and reviewed the scores from the SAI2 summary report to establish the strengths and weaknesses of the PLC at the LES. Therefore, I reviewed the SAI2 summary report to inform the development of the interview questions that were used to conduct this qualitative formative program evaluation. Specifically, I added additional questions to the interview protocol, and used the results to determine the tone in which I asked the questions.

Justification for Qualitative Design

I conducted qualitative interviews because it was my aim to ascertain teachers' perceptions about their PLC at one local elementary school. Researchers use qualitative approaches when they want to understand how participants experience a phenomenon (Neuman, 2011). To get a closer look at the phenomenon and gain an in-depth understanding of the strengths and weaknesses of the PLC, the project study utilized qualitative research. Qualitative researchers can use various formats, such as telephone interviews, paper and pencil questionnaires, and face-to-face interviews (Andres, 2012). For this qualitative research project, I elected to use in-person interviews because predesigned and semistructured interview questions were a method suitable for answering the descriptive research questions that I designed, as suggested by Andres (2012). The research questions were descriptive in nature because the research questions required participants to describe their PLC.

Participants

The research was conducted in a single urban elementary school located in northern Georgia. This school, LES, is comprises students in pre-kindergarten through fifth grade. The participants in this study were all certified teachers, and thus required to participate in the PLC at the LES. This subsection offers a description and justification for (a) criterion for selection of participants, (b) the number of participants, (c) procedures for accessing participants, (d) methods of establishing working relationship between researcher and participant, and (e) method for ethical protection of participants.

Criteria for Selection of Participants

This research study focused on teachers' perceptions of the PLC at the study site. The study site, LES, is a Title I elementary school in an urban school district, RSD, that served about 165,000 students at the time of the study. LES is one of 72 elementary schools within that school district and served over 650 students in prekindergarten through fifth grade, including special education, at the time of the study. RSD, and by extension LES, was a recipient of a Race to the Top grant from the U.S. Department of Education (USDOE). The Race to the Top grant is designed to (a) increase student achievement using strategies to increase teacher effectiveness and retention, (b) improve low performing schools, (c) create student data management systems, and (d) provide rigorous learning objectives and a means for assessing student progress in a concerted effort to get students ready for post-secondary education or the workplace (USDOE, 2009).

LES's student demographic has changed significantly since the school's inception in 1997. In 2001, the school's student body included a majority of White students at 58%

(RSD, 2006). Over the years, however, the demographics have shifted; during the period of data collection, Black students made up a majority of the student body. In addition, because of school boundary changes, the enrollment of students at the research school had also changed significantly in recent years. During the 2009–2010 school year, LES served over 750 students. After the boundary change, LES served approximately 507 students during the 2010–2011 school year (LES, 2013). Enrollment has again increased since that time, however, and during the 2013–2014 school year, LES served approximately 677 students (LES, 2013).

All teachers at the LES are required to attend PLC meetings. During the 2013–2014 school year, the school employed 53 teachers (see Table 1). The school has various teaching positions that assist regular education, such as special education teachers, teachers for students who speak English as a second language, and teachers for gifted students. All teachers at the school also had various years of experience (see Table 2).

Table 1

Positions at the Research School

Teacher Type	Total # of Teachers 2013–2014
Special Education	9
Kindergarten	7
First Grade	4
Second Grade	5
Third Grade	4
Fourth Grade	4
Fifth Grade	4
Special Area (art, music, physical education, etc.)	4
Instructional Support	8

Note. Adapted from *Title I School-Wide/School Improvement Plan*, by LES, 2013.

Table 2

Years of Teaching Experience

Categorized Years	Years of Experience 2013–2014
0–5 years	13
6–10 years	10
11–15 years	14
16–20 years	7
21–25 years	4
26 years +	1

Note. Adapted from *Title I School-Wide/School Improvement Plan* by LES, 2013.

I used convenience sampling for this formative program evaluation, a method frequently used by qualitative researchers conducting small-scale research (Andres, 2012). Andres (2012) argued that that research findings resulting from qualitative research that utilizes a convenience sample are meaningful when the sample aligns with the research questions. The sample in this study aligned with the research questions because they were asked interview questions that directly aligned with the research questions. A convenience sampling method was especially appropriate for this study because generalizing results was not a goal of the study (Andres, 2012; Creswell, 2012).

The research questions required teachers at LES to describe their PLC, which all teachers were required to participate in. In the convenience sample for this study, all teachers ($N = 53$) at the school were invited to participate in the study. I gave teachers the choice of declining participation; ultimately, 10 teachers gave informed consent to participate in the study. I chose a convenience-sampling strategy in part because teacher selection was based on their schedule and willingness to be a participant in the study in addition to their willingness to provide key information about their experiences, as suggested by Merriam (2009). Researchers frequently use convenience sampling in educational settings because it gives researchers valuable information in order to answer research questions. (Creswell, 2012). In addition, I used a convenience sample because the focus was on one school, for which access was available and established relationships with the teachers and administrators existed. Therefore, the findings are not generalizable to the larger population.

Justification for the Number of Participants

Approximately 53 certified teachers were employed at LES at the time of the study. According to Guest, Bunce, and Johnson (2006), "data saturation occurs within the first 12 interviews" (p. 264) and metathemes can be revealed within six interviews. Therefore, I planned to interview 10–12 participants. I sent an invitation to all teachers to participate in the interview. Ten teachers responded to the recruitment letter and signed the consent form to participate in the interview. Creswell (1998) stated that 10 participants are sufficient to providing an in-depth experience of a phenomenon. The 10 interviews conducted in this study reached saturation with 10 participants. I also began to see meta-themes within six interviews.

Procedures for Gaining Access to Participants

Before data collection, I applied for approval with Walden University's Institutional Review Board (IRB). The expiration date for this approval was June 18, 2015. Once the Walden University IRB approved the proposal (06-19-14-0018499), I began data collection (see Appendix D). To gain access to participants and the archival SAI2 summary report, a LES Request Form was required (see Appendix L). The LES school principal approved the form and then forwarded it to RSD. Because I was employed by LES and conducted the study at my place of employment, RSD classified my research as internal research that only needed the approval of the LES principal. After the principal approved the research, I disseminated email invitations to teachers to participate in the study (Appendix H).

Methods of Establishing Researcher–Participant Relations

I was in communication about possible research topics with the LES school principal since beginning the doctoral program at Walden University, in order to get support for conducting research at the local site. This relationship was paramount to ensuring full access to all the participants. Once I selected the participants, I made sure to treat them with respect, established trust, and was honest throughout the entire research process, as mandated by the National Institutes of Health Office of Extramural Research (2011). I used no coercion and told participants that at any time they could cease the interview. I informed teachers that they might elect not to participate in the study without dread of retaliation from the principal or me. The informed consent form set the tone of honesty. I informed participants about their rights as well as the overall purpose of the research project. I respected the needs of all participants, including their need to schedule interviews at a time appropriate for their schedules. I established trust through open and ongoing communication.

Ethical Protection of Participants

I submitted a research proposal to Walden University's IRB for approval before collecting the data (see Appendix D). The IRB ensures that research follows all ethical guidelines in order to protect human subjects from harm (Walden University, 2013). Once approved, I submitted the proposal along with additional forms to the RSD. I met with each study participant individually. In each meeting, I reviewed the informed consent. Lodico, Spaulding, and Voegtle (2010) stated that an informed consent allows participants to understand their right to stop their participation in a research study as well as understand the benefits and risks involved in the study. To ensure the privacy and

confidentiality of each teacher, I listed their names as follows: T1, T2, T3, T4, and so on. I collected and stored all data files on a personal, password-protected laptop. The laptop was stored in a locked file cabinet when not in use. The data will be destroyed 5 years after the completion of the project study. All audio recordings will be deleted; and, any hand-written notes and paper reports and notes will be shredded and discarded after 5 years. The interview transcripts, the analysis of the SAI2 summary report, and the interview transcripts, which were stored in Excel and Word files, will be deleted after 5 years. I will empty the trash bin on the computer after five years.

Data Collection

I requested access to participants at the LES and the archival survey data report (SAI2) using the RSD's Permission to Conduct Research Form (see Appendix L). The request form was given to the school principal who signed the form indicating that I could proceed with the research at the LES. This approval from the LES's principal was placed in the IRB application. Upon IRB approval, data collection began (see Appendix D).

Interview and Data Process Plan

The data for this qualitative formative program evaluation were collected at the LES because the school was already implementing a PLC but had not yet conducted a formative program evaluation. A formative program evaluation seeks to assess the quality of a program and provide recommendations for program improvement (Spaulding, 2008). I conducted in-depth, semistructured interviews to understand teachers' perceptions of their PLC (see Appendix F for the interview questions). The interview questions were semistructured so as to yield thick, rich data to understand better the phenomena from

each participant's unique perspective (Moustakas, 1994). I grounded the interview questions in the conceptual framework, results from the typological analysis of the SAI2 summary report, research questions, and review of the literature. Based on the initial findings established through the typological analysis and review of the SAI2 summary report, the interview questions were refined. Qualitative researchers use multiple forms of data, rather than relying on one type of data source (Creswell, 2012). Researchers review all data sources to gain meaning of the phenomena (Creswell, 2012).

I considered a focus group to collect information about teacher perception. However, a focus group could have impeded open and honest responses from participants because any focus group would involve interviewing multiple people at the same time (Lodico et al., 2010). Moreover, because I asked specific questions regarding the teachers' professional learning community one-on-one, semistructured interviews were more suitable than focus groups, wherein general questions are usually asked (N. King & Horrocks, 2010). Through the semistructured interview questions, I explored teachers' perceptions of their PLC and used the interview data to answer the research questions.

After IRB approval, I emailed teachers a letter of invitation and asked them to respond within one week if they were interested in learning more about the study for possible participation. Ten teachers expressed interest. I replied to teacher emails with the consent form after they requested additional information pertaining to the study. I contacted each respondent, who either consented by email or chose to consent in person, to schedule the interview and review the consent form. Teachers were given a 3-week period in which to schedule their interview at a time that was convenient for them (Creswell, 2012). Interviews took place during the week of June 30, 2014 in a conference

room or classroom. A “Do Not Disturb” sign was posted on the door during the interviews. All interviewees gave permission for me to audio record the interviews. Therefore, there was no need to record the interview by hand.

After I discussed the informed consent with the participant and the participant signed the consent form, the interview protocol (Appendix F) was used. The interviews lasted 45 minutes to one hour. All 10 interviews were audio recorded. I uploaded the audio files and stored them on a password-protected computer. I transcribed the interviews within 1 week after the interviews. The audio recordings and interview transcripts are stored in a locked file cabinet inside my home and will remain there for 5 years.

Systems for Keeping Track of Data

I transcribed the interviews in a separate Microsoft Word document for each participant. Interviews, demographic information, and consent forms were stored in a file folder listing each participant number as the name of the file. In order to keep track of the data during data analysis, I created a separate Excel sheet for each typology to input emerging subthemes along with its corresponding participants’ identification numbers.

Procedures for Gaining Access

Before data collection, I applied to Walden University’s IRB. Once Walden IRB approved the proposal, I began data collection (see Appendix D for IRB Approval). To gain access to participants and the SAI2 summary report, a LES Research Request Form was required (see Appendix L). The school principal approved the form and then forwarded it to the RSD office. Because I conducted the study at my place of employment, the research district considered the study as internal research that need local

school principal signature. After the principal approved the research, I submitted the form to IRB. Once IRB approved the research, I disseminated email invitations to teachers to participate in the study (see Appendix H).

Data Analysis

This formative program evaluation aimed to determine the strengths and weaknesses of the PLC at the LES. Data collection began by first requesting access to the SAI2 summary report from the spring of 2014. Only a summary report of the SAI2 was provided, not the raw data of the survey results. Since some questions on the SAI2 survey related to professional learning communities, a typological analysis was conducted to align survey statements with the typologies of a PLC (see Appendix E). Schools can and have used the original SAI to evaluate PLCs. For example, 33 New Jersey schools used the results from the SAI to assess the implementation of their PLCs (Learning Forward, 2014c).

The typologies from the conceptual framework of Hord and Tobia's (2011) six dimensions of a PLC were used for the typological analysis. Then, a review of the SAI2 summary report was conducted to establish the strengths and weaknesses of the PLC in order to develop and refine the interview questions. First, definitions for each typology were created using the review of literature. Then, the definitions provided the foundation for aligning the survey statements from the SAI2 summary report with the typologies within the conceptual framework (see Attachment C).

To complete the review of the SAI2 summary report, each typology was input into a separate page in an Excel workbook. Then, definitions of the concepts were used as a framework for the typological analysis. With only one typology in mind, each survey

statement was read. The survey statements that were related to that specific typology were typed into the Excel sheet. This step was repeated using the remaining five typologies. Finally, data were reread to ensure that the identified survey statement was supported by the definitions for each concept and research questions (see Appendix E for the review results).

Explanation of Aligning the SAI2 with Typologies

As discussed in Section 1, Hord, an expert in the area of PLCs, is a Scholar Laureate for Learning Forward, the organization that created the SAI2 (Learning Forward, 2014b). Hord participated in revising helped to revise Learning Forward's professional learning standards to align them with the SAI2 (Learning Forward, 2014b). She also provided feedback to Learning Forward during the preparation of the technical report for the redesign and psychometric evaluation of the SAI2 (Learning Forward, 2014a). As the researcher, I used the definitions of the typologies and the research questions to extract statements from the SAI2. Particular statements within the Leadership, Data, Resources, Learning Designs, and Implementation factors of the SAI2 reflect the supportive and shared leadership dimension found in the conceptual framework for this study. For example, statements in the Leadership domain included (a) "advocate for resources to fully support professional learning" and (b) "consider all staff capable of being professional learning leaders" (Learning Forward, 2014a, p. 24). Statements within the Data domain included "teacher performance data, individual professional learning goals are used to plan professional learning" (Learning Forward, 2014a, p. 25). A statement in the Implementation domain included "teachers receive

ongoing support in various ways to improve teaching" (Learning Forward, 2014a, p. 26). The aforementioned statements are examples of how leaders support teachers.

Several statements on the SAI2 were related to how leaders share leadership in regards to teacher input and decision making. A statement in the Learning Design domain was, "Teacher input is taken into consideration when planning school-wide professional learning" (Learning Forward, 2014a, p. 26). A statement within the Resources domain was, "Teachers in my school are involved in the decision-making about how professional learning resources are allocated" (Learning Forward, 2014a, p. 25). According to the supportive and shared leadership concept, school leaders support teachers and share decision making with staff members (Learning Forward, 2012; Tobia & Hord, 2012). Moreover, leaders share leadership responsibilities and collaborate with teachers, the community, and district personnel to improve student learning (Learning Forward, 2014d).

In alignment with the PLC characteristic of shared belief, values, and vision, statements within the Learning Community and Outcome factors of the SAI2 were focused on staff members' shared belief that all stakeholders are responsible for improving student learning and that commitment is reflected in their daily work (Hord & Tobia, 2011; Learning Forward, 2014b). For example, one statement in the Learning Community domain was, "Staff members, district personnel, families, and community members believe the responsibility to improve student learning is shared by all stake holders, such as all staff members, district personnel, families, and community members" (Learning Forward, 2014a, p. 24). A statement in the Outcome domain read, "All

professional staff members in my school are held to high standards to increase student learning" (Learning Forward, 2014a, p. 27).

In a PLC, members use various forms of student data as they collectively work together to reflect on their instructional pedagogy in an attempt to improve student academic achievement and evaluate results—thus, they engage in intentional collective learning (Hord & Tobia, 2011; Learning Forward, 2014b). Data from the SAI2 survey presented an abundance of indicators related to the Intentional Collective Learning typology found in the conceptual framework. Statements within the Learning Community, Data, Learning Design, Implementation, and Outcome factors aligned with intentional collective learning within the conceptual framework. For example, one statement that served as an indicator of Intentional Collective Learning found in the Learning Community domain was, "My school's learning communities are structured for teachers to engage in the continuous improvement cycle (e.g., data analysis, planning, implementation, reflection, and evaluation)" (Learning Forward, 2014a, p. 24). An example in the Data domain was, "Teachers use what is learned from professional learning to adjust and inform teaching practices" (Learning Forward, 2014a, p. 25). The one example within the Outcomes factor was, "Professional learning at my school focuses on the curriculum and how students learn" (Learning Forward, 2014a, p. 27). Likewise, one related statement appeared in the Learning Design factor, "Teachers in my school are responsible for selecting professional learning to enhance skills that improve student learning" (Learning Forward, 2014a, p. 26). Finally, in the Implementation factor, the statement, "My school's professional learning plan is aligned to school goals" (Learning Forward, 2014a, p. 27) is an indicator of collectively learning.

Shared practice involves teachers observing their colleagues and giving critical feedback for instructional improvement (Hord & Tobia, 2011; Learning Forward, 2014b). In addition, shared practice also includes teachers sharing instructional experiences and ideas (Hord & Tobia, 2011). Only two indicators of shared practice in the SAI2 exist, within the Implementation and Learning Design factors. The statement that aligns with shared practice within the Implementation factor was, "In my school, teachers give frequent feedback to colleagues to refine the implementation of instructional strategies" (Learning Forward, 2014a, p.27). The statement in the Learning Design factor was, "In my school, teachers have opportunities to observe each other as one type of job-embedded professional learning" (Learning Forward, 2014a, p. 26). No statements on the SAI2 related to shared ideas or instructional practices.

Collegial and relational conditions also had few indicators in the SAI2—only two on the Learning Community and Leadership factors. The statement in the Learning Community factor was, "Members demonstrate effective communication and relationship skills so that a high level of trust exists among the group" (Learning Forward, 2014a, p. 24). The statement in the Leadership domain was, "My school's leaders cultivate a positive culture that embraces characteristics such as collaboration, high expectations, respect, trust, and constructive feedback" (Learning Forward, 2014a, p. 24).

Structural and physical conditions, such as time, resources, and physical space, must exist for teachers to collaborate (Hord & Tobia, 2011). Furthermore, policies and procedures must be in place for PLCs to succeed (Learning Forward, 2014b). I found statements in the SAI2 that related to structural and physical conditions in the Learning Community, Learning Design, and Resource factors. The statement in the Learning

Community factor of the SAI2 was, “My school system has policies and procedures that support the vision for learning communities in schools” (Learning Forward, 2014a, p. 24). The statement in the Learning Design factor was, “Participation in online professional learning opportunities is considered as a way to connect with colleagues and to learn from experts in education” (Learning Forward, 2014a, p. 26). The last factor, Resources, included the following statement: “Time is available for teachers during the school day for professional learning” (Learning Forward, 2014a, p. 25).

The second phase of the typological analysis of the SAI2 summary report involved reviewing the survey questions using the already calculated and reported mean and frequency scores for each survey statement. The frequency scores were reviewed using survey statements within each category. The frequency scores appeared to be either mostly above 5.0 or mostly 4.0 or below. Purgato and Barbui (2013) stated that continuous variables can be dichotomized into two categories for data management and analysis; moreover, they can help the reader understand and apply the results (see Appendix M for frequency scores). Therefore, I categorized each SAI2 survey statement’s reported average score into two categories—strengths (above 4) and areas of opportunity (4 and below). The statements were put into tabular form. Next, I ranked each PLC characteristic on the basis of the percentage of survey statements located within the areas of opportunity category, where the highest percentage of statements within the areas of opportunity category had a score of 1, and the lowest percentage had a score of 6 (1 = weakest to 6 = strongest). The rankings indicated level of strength or weakness of the characteristic in the PLC. Characteristics were scaled for levels of strength and categorized according to the levels of opportunity that the characteristic

represented. Areas of opportunity were defined as an average score of 4.0 or below. The rankings were again put into tabular form. The frequency scores within each statement were compared to give further details regarding participant's consensus on survey statements within each characteristic. The frequency scores were also put into tabular form.

Results from the Review of the Archival SAI2 Survey

The preliminary review of the SAI2 survey summary report indicated that all PLC dimensions, except shared beliefs, values, and vision, were being implemented at the LES. However, certain characteristics displayed marked weaknesses (see Appendix M for each survey statement's frequency score). For the characteristic of shared practice, 100% of the survey statements fell within the area of opportunity category, as was the case for collegial and relational conditions, making both categories the weakest PLC characteristics. Intentional collective learning (60%) and structural or physical conditions (67%) were also within the area of opportunity category (see Table 3).

The results from the review of SAI2 summary report indicated a need to include interview questions regarding how teachers think each typology could be improved to enhance their PLC. In addition, a survey statement on shared beliefs, values, and vision included a question about peer-to-peer accountability, which was an area of weaknesses noted for the school of study and not previously included in the original interview protocol. Therefore, a question was added to the interview protocol that asked how teachers hold each other accountable. Based on the review of the SAI2 summary report, relational and collegial conditions was also a noted weakness. Therefore, for each

interview I attempted to make participants feel comfortable, develop further rapport, and remind participants about their rights to decline participation at any time.

Table 3

Results from Review of the Archival SAI2 Survey Based on SAI2 Survey Summary Report

Characteristic of Professional Learning Community	Strength	Area of Opportunity	% of Statements in Areas of Opportunity	Ranking by % of Statements within Areas of Opportunity
Shared and supportive leadership	4	6	60	5
Shared beliefs, values, and vision	3	1	25	6
Intentional collective learning	4	8	75	3
Shared practice	0	2	100	1
Collegial or relational conditions	0	2	100	1
Physical or structural conditions	1	2	67	4

Note. $N = 46$.

In sum, a review of the SAI2 summary report was conducted to inform the development of this qualitative formative program evaluation. Typological analysis was also conducted on the SAI2 summary report. The typological analysis and review of the SAI2 summary report informed the interview questions for this qualitative formative

program evaluation research. After reaching a refined interview protocol, I was prepared to conduct the interviews. Next, 10 certified teachers were invited to be a participant in the interview. The 45 minute to 1 hour interviews were also analyzed using typological analysis to answer the research questions.

Typological Analysis of In-Depth Interviews

I conducted a typological analysis of the interviews using features in Microsoft Word and Excel (Hatch, 2002). I read each transcript and coded data within each predefined theme. I created a separate spreadsheet to keep track of data. I categorized the codes based on the patterns identified as subthemes emerged and were noted. The relevance of each quote was defined by whether it aided in answering the following research questions (Creswell, 2012):

RQ1: How do teachers describe their PLC in terms of supportive and shared leadership?

RQ2: How do teachers describe their PLC regarding sharing beliefs, vision, and values?

RQ3: How do teachers describe their PLC regarding collectively learning and applying new knowledge and skills?

RQ4: How do teachers describe their PLC regarding shared practice?

R5: How do teachers describe their PLC regarding collegial or relational conditions?

RQ6: How do teachers describe their PLC regarding physical or structural conditions?

To analyze data in this qualitative study, I used Hatch's (2002) typological analysis procedures and organized data into predefined categories. Typologies must be created before data collection to provide a framework for coding and analyzing the data (Ayres & Knafl, 2008; Hatch, 2002 The typologies, gleaned from the conceptual framework and research questions used in this qualitative data analysis, were the following: "supportive and shared leadership; shared beliefs, values, and vision; intentional collective learning; shared practice; physical or structural conditions; and collegial or relational conditions" (Hord & Tobia, 2011, Location p. 486-498)..

Data analysis began with transcribing the interview digital recordings word-by-word. After transcribing, I chose one transcript at a time to read with one typology in mind. Then, on the second reading, I read the transcript with the same one typology in mind and highlighted relevant data related to the specific typology. Hatch (2002) recommends researchers repeat the first two steps for each of the remaining typologies. For the remaining interview data, I repeated the process of reading, rereading, highlighting relevant data, and copying and pasting the relevant data into the appropriate document according to typology.

After recording the main ideas in the document, I looked for and noted patterns among the participants as subthemes began to emerge within each predefined theme. I then coded entries according to the identified subthemes and based on the research questions. The research questions, based on the conceptual framework, informed the typologies in this study. I reread the subthemes within each typology to ensure data supported the pattern. I also looked for nonexamples and set aside these entries into a separate group to maintain records. Next, I wrote a generalization for each subtheme to

describe the participants' perceptions. I highlighted and linked powerful interview quotes to the subthemes and reanalyzed for verification and to answer the research questions (Creswell, 2012). The entries provided rich, thick data that supported the identified subthemes (Merriam, 2009).

Evidence of Quality

Measures taken to ensure quality and integrity of the data and subsequent analysis included member checking; providing rich, thick descriptions; and peer review of the interview protocol methodology and outcomes. Rich and thick descriptions of the settings and findings were provided in this study to bolster accurate and credible findings (Merriam, 2009). Using the conceptual framework and research questions in the data collection and analysis phase produced a substantial database that was used to provide rich, thick descriptions.

Member checking was also conducted. Once the project study was completed, I emailed participants the interpretations and findings and gave them the opportunity to give input on the accurateness of the report in terms of their experiences and intended communication (Creswell, 2012; Merriam, 2009). Participants were able to read the document and either confirm or disconfirm the interpretations. Participants did not offer any changes that were needed.

In addition, construct validity ensured the typological analyses of the SAI2 summary report and interview data were done with integrity. Construct validity is achieved when the constructs in a study are properly defined (Creswell, 2012; Merriam, 2009). I wrote the interview questions on the basis of each research question and results from the typological analysis of the SAI2 summary report. Potential threats to construct

validity were reduced by using predetermined typologies that were directly matched to the data collection and analysis strategies.

Peer review of the methodology section and interview questions was also conducted. I submitted a draft of the project to PhD holders who were familiar with the qualitative research design. I also met with a PhD holder familiar with semistructured interview formats to review the initial design of the interview questions. In addition, I met with a PhD holder who had chaired and served on dissertation committees to discuss the methodology section in conjunction with university research reviewer (URR) feedback to improve the study in its final stages.

Procedures for Dealing with Discrepant Cases

The purpose of the formative program evaluation was to uncover the weaknesses and strengths of a PLC at one LES based on teachers' perceptions. I used the same interview protocol for all participants. During the typological analysis, I examined the interview data for nonexamples of the patterns that emerged from the interviews (Hatch, 2002). I did not use the nonexpamles in the data analysis; however, discrepant cases were discussed in the findings.

Program Evaluation Limitations

This research study had two limitations related to the sample and the survey. This project study focused on one elementary school in one urban district. Purposeful sampling for the qualitative design limits the generalizability of the results (Creswell, 2012). In addition, qualitative data consisted of interviewing 10 certified teachers. Therefore, the sample used in this study may not be representative of other populations. As such, the study will not be generalizable to a larger population. I conducted a

typological analysis on an archival summary report of the SAI2. The SAI2 summary report evaluated professional learning in general, not PLCs exclusively, which also limits this study (Elder, Pavalko, & Clipp, 1993). Some questions within the survey pertained to PLCs; therefore, I used typological analysis to extract those questions that aligned with typologies derived from the conceptual framework.

Qualitative Data Analysis

I conducted 10 one-on-one, in-person interviews that lasted from 45 to 60 minutes in length. The participants' professional characteristics are summarized in Table 4. Based on data gathered during the interviews, I determined how teachers perceived their PLC based on Hord and Tobia's (2011) six characteristics.

Table 4

Interview Participants' Professional Characteristics

Characteristic	*n*	%
Content Area Teacher	8	80
Support Teacher	2	20
1–4 years	3	30
11–16 years	4	40
17–25 years	4	30

I recorded and transcribed the interviews. Next, I analyzed the interviews by hand using a typological analysis (Hatch, 2002). I read each transcript and coded data within each predefined category. I created a separate spreadsheet to keep track of data. I categorized the codes based on the patterns identified as themes emerged and were noted.

The relevance of each quote was defined by whether it could be used to provide answers to the questions below (Creswell, 2012):

RQ1: How do teachers describe their PLC in terms of supportive and shared leadership?

RQ2: How do teachers describe their PLC regarding sharing beliefs, vision, and values?

RQ3: How do teachers describe their PLC regarding collectively learning and applying new knowledge and skills?

RQ4: How do teachers describe their PLC regarding shared practice?

R5: How do teachers describe their PLC regarding collegial or relational conditions?

RQ6: How do teachers describe their PLC regarding physical or structural conditions?

Data Collection, Analysis Procedures, and Emerging Subthemes

The data collection process began after IRB approval. Permission to conduct the study at the LES was granted and submitted with the IRB application (see Appendix L). Walden University's IRB approved the study and granted permission to collect data. After approval was granted, the data collection process proceeded.

I emailed teachers a letter of invitation and asked them to respond within one week if they were interested in learning more about the study for possible participation. Ten teachers expressed interest. I replied to teacher emails with the consent form after they requested additional information pertaining to the study. Each potential participant, who either consented by email or chose to consent in person, was contacted to schedule

the interview and review the consent form. Teacher participants were given a 3-week period to schedule their interview at a time that was convenient for them. Interviews took place during the week of June 30, 2014, at the LES in a conference room or classroom.

The interview protocol (see Appendix F) was used and the informed consent form was signed and discussed. The interviews lasted between 40 min and 1 hr. All interviews were audio recorded. The interviews were transcribed within 1 week after each interview to ensure participants' words were accurately transcribed.

To analyze data in this qualitative study, I used Hatch's (2002) typological analysis procedures, which organizes data into predefined categories. The conceptual framework and research questions, based on Hord and Tobia's (2011) six characteristics of a PLC, guided the data analysis for this qualitative study. Typologies must be created before data collection to provide a framework for coding and analyzing data (Ayres & Knafl, 2008; Hatch, 2002). The typologies gleaned from the conceptual framework and research questions and utilized in this qualitative data analysis included the following: "supportive and shared leadership; shared beliefs, values, and vision; (c) intentional collective learning; shared practice; physical or structural conditions; and collegial or relational conditions" (Hord & Tobia, 2011, Location p. 486-498).

First, I read, reread, and then marked data within each typology using each interview transcript. I copied and pasted highlighted data into a new document. This enabled me to keep track of data relevant for each typology. I used the definitions for each typology and the literature review to select examples and nonexamples throughout the typological analysis. After recording the main ideas in the document, I looked for and noted patterns among the participants as subthemes emerged. I then coded entries

according to the identified subthemes and based on the research questions. The research questions, based on the conceptual framework, informed the typologies in this study. I reread the subthemes within each typology category to ensure data supported the subthemes. I also looked for nonexamples and separated these entries into a separate group to maintain records. Next, I wrote generalizations for each subtheme to support the findings. I highlighted and linked powerful interview quotes to the subthemes and reanalyzed for verification and to answer the research questions (Creswell, 2012). The entries provided rich, thick data that supported the identified subthemes (Merriam, 2009).

Outcomes

Theme 1: Supportive and Shared Leadership

RQ1: How do teachers describe their PLC regarding supportive and shared leadership?

The first theme uncovered during data analysis was supported and shared leadership. This subtheme was related to RQ1. Supportive and shared leadership is when principals share power with teachers to make decisions, including decisions concerning their own learning experiences that focus on improving student learning (Hord & Tobia, 2011). School leaders play a key role in ensuring teachers have resources available to make necessary decisions. The data analysis revealed strengths and weaknesses within the supportive and shared leadership characteristics of the LES. Teachers described supportive and shared leadership within their school as providing professional learning opportunities without follow-up actions to support the application of new learning, as well as providing opportunities to give input without opportunities to give input into decisions. Several subthemes emerged, including (a) the absence of input into decision

making and (b) a lack of support for the application of new learning. When teacher participants were asked how to improve supportive and shared leadership, the subtheme of additional support needed for applying new learning emerged.

Subtheme 1a: Absence of input into decision making. Results showed that teacher participants indicated structures for giving input are highly important. However, with the exception of one teacher, no evidence emerged that teachers felt they were able to give input into decision making. Ten teachers described shared leadership as having structures and opportunities to give input within the grade-level collaboration teams. Eight teachers stated that the school's instructional leadership team (ILT) allowed for shared leadership. Ten teachers expressed that they felt their voices were heard. For example, T1 described how input is given during professional learning teams:

> Administrators come in and sit in during each grade-level [team meeting] for just a small period of time. Whatever we need, they usually have their tablets and they write or type [what we say]. They get back to us and make sure that need is met.

With the exception of T9, there was no evidence indicating that teachers were able to provide input regarding the decision-making process. T9 explained, "There is not a great opportunity for teachers to have input in decisions." T2 and T3 mentioned that, although they give input, the decisions about instructional practices are issued in the form of mandates, even if they voice their concerns. T3 stated, "Why don't you [administrators] ask us to try it [instructional techniques] and … not just [give us] a mandate? Because things that apply to third to fifth grades may not apply to my grade level." Another

barrier to giving input was fear, as noted by teachers T8 and T5. T5 elaborated on supportive and shared leadership, providing the following accounts:

> [Teachers] share [concerns] with the administrators, but oftentimes our concerns are not addressed in just the way that we would like for them to be addressed … some of them [are] … put down. Or, our grade-level manager does not necessarily feel comfortable sharing with administrators or with other teachers because . . . there's not … [a] level of trust or because we're afraid that we will be the only ones to think or feel that way.

Subtheme 1b: Lack of support for the application of new learning. When asked how they would describe their school's supportive leadership in terms of supporting teachers with school-wide professional learning, all 10 teacher participants overwhelmingly voiced that leadership supported their learning by offering a plethora of job-embedded professional learning opportunities. T1 and T7 stated that the professional learning choices met their individual needs. T1 mentioned, "Yes, that's how I know they [administrators] are supportive because they hear us [teachers] … on what we voiced. They'll find someone who is an expert in that area or that field or that person will come and do training."

However, nine teachers indicated that the support received through the optional sessions for professional learning lacked follow-up. Three teachers perceived the support from coaches to be ineffective. When asked about the type of support received for applying new practices, nine teachers stated that they did not receive the necessary support to apply new learning. T10 stated that more time should be devoted to helping teachers apply new practices. In addition, T6 explained, "I don't know if I see that [help

with applying new learning] so much. The most that I can say that I've seen is … getting encouragement to do it. They [teachers] are told to do it."

T4, T5, T6, T8, and T9 agreed that leadership provides teachers support via literacy coaches. However, T8 said that although coaches are on staff, they are often busy and unavailable to support teachers. T5 and T9 also discussed what they perceived to be ineffective observational practices conducted by coaches. T9 stated the following:

> I do feel like … the way that we were split into groups may not have been the most appropriate. I did have someone [an instructional coach] come into my classroom and observe me for 15 minutes, then decide that I was a beginner in an area. And I just thought that 15 minutes was not [appropriate]. It may have been a better fit had I been moved up a group and seen some stuff [instructional strategies] that I really could have turned around and used in my classroom.

Subtheme 1c: Additional support needed for applying new learning. When teachers were asked for recommendations on improving shared and supportive leadership, the subtheme of additional support needed for applying new learning was formed. Six teachers (T2, T3, T1, T10, T8, T6 and T4) agreed that leadership could be more supportive in providing assistance for applying instructional strategies through modeling and tangible experiences. T6 stated the following:

> I think it could be more supportive. Like for example for a teacher who is struggling or just having a difficult time, if somebody could come and talk to them before say it gets to the point where [the teacher] might get not a good evaluation. If they need support in teaching a lesson to make sure that somebody

comes in and models that lesson to have some discussions about it to have someone hands-on support.

Theme 2: Shared Beliefs, Values, and Vision

RQ2: How do teachers describe their PLC regarding shared beliefs, values, and vision?

To create a shared vision, the principal must bring all stakeholders together to collaborate on the shared vision (Hord & Tobia, 2011). Collaboration requires productive conflict and openness to others' opinions to arrive at one common theme or purpose (Lencioni, 2011). Therefore, shared beliefs, values, and vision are contingent on collegial and relational conditions. Hord and Tobia (2011) suggested that shared beliefs, values, and vision require a total commitment to improving student learning and evidence of this should be present in staff members' daily work. The data analysis determined weaknesses and strengths within the characteristic of the shared beliefs, values, and vision. Teachers described the shared beliefs, values, and vision of their PLC as helping students succeed, but they did so without follow-up actions with colleagues to ensure everyone is accountable. The following subthemes emerged: (a) a collaboratively written statement; (b) shared beliefs, values and vision stated as individualized beliefs; and (c) lack of peer-to-peer accountability. When teachers were asked how to improve shared beliefs, values and vision, the subtheme of improved open communication emerged.

Subtheme 2a: Collaborative written statement. The results show that teachers described shared beliefs, values, and vision as a collaboratively written statement with an emphasis on improving student learning. Eight teachers agreed that within their school, the creation of the vision statement had been a shared process. For example, T1 discussed

the collaborative nature of creating the beliefs, values, and vision statements and stated, "We [teachers] were divided into groups in one of the large staff meetings. We [teachers] met together, and we took those values and beliefs [from each group] and put them together as one."

Subtheme 2b: Shared beliefs, values, and vision stated as individualized beliefs. When probed, teachers elaborated on how they describe shared beliefs, values, and vision; the responses varied. For example, T3 and T6 agreed that teachers have a common goal and believed that all students can learn. However, T7, T8, and T9 felt that the path to a common goal may be different on the basis of student needs. T5 and T8 stated that beliefs, values, and vision are reflected in teaching practices. T4, T2, and T6 agreed that beliefs, values, and vision are evident in teachers' focus on student learning. The common thread in the statements that follow was a focus on students:

- "Just everyday doing your best as an educator."
- "Well, I think we're all working towards a common goal; I mean I hope we are."
- "Take care of the students and help them be successful."
- "Every teacher in this school has just about the same vision."
- "All of that is reflected in our teaching."

These statements indicate that individual teachers had unexamined mental models of the shared vision. A mental model helps people explain and describe their environment (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000). In addition, in several of the teachers' statements, no mention was made of the school improvement process. T10 described vision as, "Something that is definitely stated. I don't think it is something that

we talk about on a daily basis. When certain situations come up, [such as a school] visitation, we focus on our vision." In the absence of a shared mental model, or vision, individuals draw on their own knowledge for decision making (Mathieu et al., 2000). As such, implementation of that vision is likely to vary among teachers (Mathieu et al., 2000).

Subtheme 2c: Lack of peer-to-peer accountability. Hord and Tobia (2011) stated that peer-to-peer accountability, which is not present in most schools, involves more than minimal tasks such as bringing materials to a collaborative meeting, but rather focuses on holding colleagues accountable for improving their teaching and student learning. Based on the interview data, there was minimal evidence indicating that teachers hold each other accountable. T1, T2, T5, T7, and T10 agreed that teachers hold each other accountable within PLC team meetings; however, the descriptions of accountability were merely related to the premise that the meeting took place. As an illustration, T7 said that they held each other accountable, "I guess by collaborating together." In addition, T1, T5, and T6 expressed that teachers keep each other accountable through their students' test scores. The current climate of accountability and high-stakes testing perhaps creates conditions in which schools perpetuate competition, which might hamper collective work and collegiality (Barth & Rieckman, 2012). T6 stated, "You'd never want to be that one that is called out. That's seen like your kids are not doing as well. And that keeps you on track. Sometimes it keeps you up at night. It can be very stressful." Meanwhile, T5 stated, "Knowing that your [students'] test score is [going to] show up somewhere and everybody is going to be ranking you against the person next to you … I think that keeps you in line." According to T4, "It's a hard

conversation when I have to hold someone accountable. A lot of people are scared of change. So when you go in and say, 'Hey let's try this,' that opposition might create ruffled feathers."

Lencioni (2011) stated that for teammates to hold each other accountable, team members must have a clear sense of expectations and not be afraid to fail. Team members must also be committed to those expectations and not be afraid to engage in productive conflict. Only through productive conflict can a person gain a team member's perspective, thereby creating the environment in which teams can buy into decisions made with the knowledge that all ideas have at least been considered .Team commitment, accountability, and productive conflict all require the foundation of trust.

Subtheme 2d: Improved open communication. When teachers were asked how to improve their school's shared beliefs, values, and vision, the subtheme of communication emerged. Five teachers (T9, T8, T4, T3, and T10) stated that shared beliefs, values, and vision could be improved through open communication between administrators and teachers, as well as between teachers. T4 discussed how teachers and instructional coaches should communicate and stated, "Again, you know having that conversation, the open conversation, when I say this to you, I'm not trying to say XYZ, and I'm just saying this is what I've seen that works." Similarly, T8 added the following:

> I guess just to keep that open communication going. Definitely, it will help. You have to have those vertical alignment meetings where everybody can say…or I need you guys to work on this right now. They need to come in stronger with this.

Theme 3: Intentional Collective Learning

RQ3: How do teachers describe their PLC regarding intentional collective learning?

The practice of intentional collective learning involves staff members engaging in collaborative efforts during the continuous improvement cycle (Hord & Tobia, 2011). Moreover, with intentional collective learning, the school leader creates an environment of trust that is conducive to collaboration (Cranston, 2011). Staff members (a) use student data to plan lessons precisely targeted to meet individual student needs, (b) apply new knowledge and skills to that effort, and (c) evaluate that progress using feedback from self-reflection and other staff members (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a). Student learning, therefore, is the catalyst and is encouraged by using multiple sources of data. The data analysis revealed both weaknesses and strengths of collective learning in this PLC. Teachers described the intentional collective learning in their school as informally sharing teaching strategies, using student data, and learning new teaching strategies during professional learning—however, this occurred without follow-up actions for applying data or new learning, along with ineffective observations for personalized learning. The following themes emerged: (a) lack of collaboration and collective work, (b) absence of applying data to increase student learning, and (c) lack of applying new learning. When teachers were asked how to improve intentional collective learning, the subtheme of teacher input needed for professional learning emerged.

Subtheme 3a: Lack of collaboration and collective work. Ten teachers said that their collaborative meetings mostly entailed keeping each other informed about the pacing of the curriculum, with some mention of sharing instructional practices. In

addition, there was no evidence of using data during the meetings or of professional learning within the grade-level professional learning teams. When asked how they would describe intentional collective learning at LES, T4 stated, “Just kind of sharing information and not necessarily collaborating all the time. I mean there were some times sprinkled in there, but not necessarily all the time collaborating with specific strategies that helped.”

The lack of collaboration and intentional collective work is evident during lesson planning and when evaluating each other’s implementation of lessons. Nine teachers stated that lesson plans are written by individual teachers assigned to a particular subject. Ten teachers stated that the teachers did not evaluate each other’s implementation of new learning. T9 provided additional insights into how teachers create individual lesson plans: “We have a roadmap [pacing guide]. Each teacher creates their own lesson plans based on the needs of the students in their classroom.”

Hord and Tobia (2011) stated that professional learning in a PLC is a process in which teachers collaborate and develop a common understanding of what concepts to teach, how to teach concepts, and how to evaluate their impact as well as which steps, if any, are needed to readjust instructions on the basis of the results. There was no evidence that the teachers collectively apply new learning, evaluate the effects of the application, or readjust practices because of the evaluation. As T10 explained, “I think on a whole, it [professional learning] is like a blanketed concept that is taught throughout the school.”

Subtheme 3b: Absence of applying data to increase student learning. Data analysis is the starting point for collaborative discussions (Hord & Tobia, 2011). When participating teachers were asked how they engaged in data analysis, all 10 teachers said

they viewed data during data meetings—yet there was no further application of that data analysis. In addition, there was no evidence that teachers use data in grade-level planning or quality plus team meetings. The majority of teachers said that data analysis occurs only in the data room. As T1 pointed out, "We are a model, data-driven school that other schools are trying to model after, and we keep the data room updated as much as possible." T8 stated, however, that using the data room does not inform instructional practice, adding, "Again, we're not really told how to help them other than keep doing what you're doing or make sure you read to them every day." T2 discussed the amount of time spent collecting data:

> We spend so much time inputting the data, analyzing the data, someone else can analyze that data and just tell us what it says and then go from there. You don't have a lot of time to implement what you need to do as the result of the data.

Subtheme 3c: Lack of applying new learning. Professional learning in a PLC is supposed to increase teachers' effectiveness (DuFour, 2007; Hord & Tobia, 2011). However, Darling-Hammond, Wei, Andree, Richardson, and Orphanos (2009) pointed out that rarely do teachers apply new learning systematically. When new learning is not used, its impact on teaching is not evident. When prompted to describe how new learning is applied, nine of the interviewed teachers agreed that implementation was the task of the individual teacher because of a lack of follow-up. T7 stated, "It is applied individually. I don't know if there's any accountability, but you know what was learned I guess maybe during your evaluation. That's how it's monitored, I'm thinking."

Subtheme 3d: Teachers' input needed for professional learning. When teachers were asked how to improve intentional collective learning, the subtheme of teacher input into professional learning activities emerged. Six teachers (T5, T9, T10, T4, T3, and T6) stated that teacher input into professional learning is needed to improve their PLC. T9 stated, "There could be more options, more opportunity for teachers to pick the areas that they think they need." T10 further added, "I think getting teachers to [give] their input in is going to have a lot more teachers on board as opposed to someone from the outside saying this is what we're going to do because you're going to have people that will buck the system."

Theme 4: Shared Practice

RQ4: How do teachers describe their PLC regarding shared practice?

Shared practice is demonstrated when teachers support each other by observing each other's classroom and giving feedback that will improve the teachers' instructional techniques to address students' needs (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a). Shared practice is often the last component to develop in a PLC because it is contingent upon trust (Hord & Tobia, 2011). Trust is required for team members to take the risk of engaging in the productive conflict that will lead to collective commitment and members holding each other accountable for reaching goals (Hord & Tobia, 2011; Lencioni, 2011). The data analysis revealed strengths and weaknesses within shared practice, and the following subthemes emerged: (a) peer-to-peer observations as a new initiative, (b) a lack of peer feedback, and (c) informally sharing instructional practices. In addition, when teachers were asked how to improve their PLC's shared practice, the subtheme of feedback needed for peer observations emerged.

Subtheme 4a: Peer-to-peer observations as a new initiative. When asked to describe their school's shared practices, all participating teachers agreed that they observed other teachers' classes and provided feedback on a form that had been given to them by the administration as a new initiative implemented this school year. Teachers' responses to the effectiveness of the experience varied. T4 provided the context in which the initiative took place, stating that administrators chose the grade levels, and then, from the preassigned grade levels, teachers selected which teacher they wanted to observe. T1, T2, T3, T4, and T10 raved about the positive benefits gained from observing other teachers' classroom. T2 discussed the benefits gained from the shared experience, "I think that it [peer-to-peer observation] gives you another outlook on how you could go about teaching something. It opens your eyes, makes you more aware that there are other strategies [to use]." Data did not reveal whether the peer observations were based on teacher or student data. Hipp and Huffman (2010) stated that teacher learning is not a casual experience, but rather intentional and should be based on teachers' targeted learning needs.

Subtheme 4b: Lack of peer feedback. T2, T4, T6, T5, T8, and T9 all mentioned the feedback forms teachers were required to complete during the peer-to peer observation; however, the feedback forms were given to administrators after being filled out, and teachers did not have the opportunity to learn about their observers' feedback. T1 did not know what happened to the feedback forms. T10 recommended that a debriefing session take place after the peer-to-peer observation. T7 gave oral feedback to the observed teacher. T8 and T9 had mixed feelings about the experience connected to the lack of feedback. T9 stated, "In this school we had the opportunity this year to

observe, but I don't think it's something done effectively. I had teachers come and observe me, but I never got feedback from it, but we were all required to give feedback."

Subtheme 4c: Informally sharing instructional practices. When asked how teachers share instructional practices at their school, the responses were mixed between not being aware of sharing practices and informally sharing practices within the grade level's professional learning team. T, T2, T3, T5, T7, T9, and T10 agreed that the grade-level planning teams provide opportunities to share instructional strategies. T4 and T6 agreed that sharing instructional practices occurs after teachers attend a professional development course and share their new learning. T3, T4, and T6 said sharing instructional practices takes place through informal conversations. T1 and T6 stated that teachers share instructional practices during professional learning sessions. T3, T7, and T8 were unsure whether sharing practices takes place. T10 explained, "The wealth of information you're getting from collaborating with one another on the best practices that you're seeing within your classroom, to me, that's just invaluable." In addition, T6 said, "When we come together in our collaborative meetings, we sometimes talk about what we're doing in our classrooms."

Subtheme 4d: Feedback needed for peer observations. When teachers were asked how to improve shared practice, five teachers agreed that a follow-up session should be provided so that teachers can discuss the observation that took place. T7 stated that teachers should report "back as a group and talk about what we've observed." T9 echoed T7 and voiced, "I do think that it's important to share the feedback with whomever it concerns."

Theme 5: Collegial or Relational Conditions

RQ5: How do teachers describe their PLC regarding collegial or relational conditions?

Collegial and relational conditions involve leadership supporting the staff in developing high regard, respect, and trust for one another, which requires modeling, development, and patience (Hord & Tobia, 2011). The trend of locally managed schools and the collective responsibility for teachers to implement a mandated curriculum places a greater need for the development of collegiality (Hargreaves, 2000). However, the data analysis revealed weaknesses within collegial and relational conditions. Teachers described collegial or relational conditions in their PLC as adversarial and fragmented with low tolerance for valuing differences and giving critical feedback. The following themes emerged: (a) low levels of trust, (b) lack of reflective collaboration, and (c) intolerance of differing perspectives. In addition, when teachers were asked how to improve collegial or relational conditions, the subtheme of collegial and relational conditions begins with leadership emerged.

Subtheme 5a: Low levels of trust. Six teachers agreed that low levels of trust existed at the school. Three teachers gave advice on how trust should look in a PLC. T10 noted the following:

> It appeared within the school that the [administrators] had a favorite teacher or favorite teachers. So in that regard the other teachers sensed that, and when that was sensed, it kind of put up a wall or barrier. It didn't feel like a harmonious unit, [with the] same level of respect and commitment.

T9 added,

> I don't think trust as a whole, I [don't] see very much at my current school. Unfortunately, even in professional learning, you have to be careful what you say. So I think there a lot of people who don't want to collaborate and share in the professional development type of situation because they don't want anything to be misconstrued. And I feel like, again, that goes with the whole feeling and building of community, and there is a lack of that, which affects, you know, how teachers interact and work in professional situations, such as professional learning groups and that sort of thing.

Subtheme 5b: Lack of reflective collaboration. When asked how teachers give feedback to each other, eight teachers stated that at LES, peers did not give each other feedback on instruction. T4 encapsulated the responses and gave an account of the type of feedback received and said, "I mean, there can't be any feedback because there's no conversation about strategies [or] conversations about instruction or collaboration. So it makes it very difficult." One example of given of how feedback has occurred in this PLC was an instance in which T5 suggested that students bring in an additional box of crayons for school supplies. A coworker's response was that T5 should manage crayons better.

Subtheme 5c: Intolerance of differing perspectives. When asked how teachers handle differences of opinions, eight teachers stated that the teachers at their school did not respect differences of opinions. T1 and T2 gave suggestive responses that included using norms and respecting others' opinions. T1 advised,

> Well, you can agree to disagree … but that doesn't mean you have to step on someone's toes or you have to belittle them. One thing I do like about professional learning, [is that] it does teach you about professionalism.

T4 stated how a teacher can be viewed as untrustworthy because of a difference of opinion, stating, "It's not that fair just because [a teacher] believes instructions should go one way [that I] can't be confidential or you can't trust me." T10 gave accounts of expressing differences through the tale of a popular television show, *The Mole*:

> You're maybe a little hesitant in really expressing anything you may feel differently because you don't know if, by you expressing something different than what everyone else is saying if it will get to a higher power or to someone you may not necessarily have wanted it to get to. I think it's a way of handling if you don't necessarily agree. And through humiliating someone or belittling or making them feel as if they are inadequate, or you don't know what you're talking about, to me, that's definitely going to make that rift even bigger.

T5 gave insights into how collaboration is affected by the handling of differences of opinions: "Probably within all grade levels, there are certain people who just learned to be quiet because you know that whatever you say is going to be overridden or dismissed." T6 echoed T5's sentiment and stated, "You just don't know if you are going to be shut down or they will take it personally. You can't be honest. You just have to toe the line." Although T8 had not witnessed confrontations regarding differences of opinions, on one occasion T8 witnessed objections to others' opinions in suggestive ways, such as eye rolling and negative looks. The lack of collegial or relational conditions causes many problems in a school that can result in teacher isolation, stress,

job dissatisfaction, and teachers leaving the teaching profession (Schlichte, Yssel, & Merbler, 2005). T8 stated that teachers are in their "grade level bubbles," which makes trusting other teachers difficult.

Subtheme 5d: Collegial and relational conditions begins with leadership. When teachers were asked for recommendations on how to improve collegial and relational conditions at their school, four teachers stated that improving collegial and relational conditions begins with school leadership. T3 stated that administrators should be "leading by example. Don't say do it and you're not doing it yourself. You're just giving lip service and only when it's convenient." Similarly, T6 explained,

> I think that would have to start from the top, you know. If the people [administrators] at the top treat those staffs with respect, then I think sometimes more people would respect each other and feel safer. You have to create that climate, that environment, where people feel safe to say what they have to say with respect, but knowing you know whatever you have to say has to do for the benefit of the kids. I think if you create that climate where there is a freedom … to be honest because all of this is about children and about their education.

Relationships are essential to preventing teacher isolation (Schlichte et al., 2005). The school principal has been identified as the key to establishing a culture of trust so that collegial relationships can develop (Hord & Tobia, 2011). In line with this, many teachers recommended that collegial or relationship conditions can be improved, and that improvement should start with school leadership. T9 noted, however, that the school leadership has not established a foundation for collegial relationships: "A lot of things that we do are micromanaged, and we are stressed to the max." Mathieu et al. (2000)

argued that successful teams include people who care for one another as they collectively work toward a common task. T9 asserted that collegial or relational conditions need repair because the school lacks a "sense of community." When trust is established through supportive and shared leadership, teachers feel safe exposing their vulnerabilities and engaging in productive conflict that can result in true collaboration (Tschannen-Moran, 2001).

Theme 6: Physical or Structural Conditions

RQ6: How do teachers describe their PLC regarding physical or structural conditions?

Physical or structural conditions include the time, space, resources, and communication needed for teachers to engage in intentional learning (Hord & Tobia, 2011). The data analysis showed strengths and weaknesses within physical or structural conditions. Teachers described physical or structural conditions in their PLC as unintentional and as underutilized online collaborative tools. The following themes emerged: (a) numerous structures provided for, (b) lack of focused collaboration, and (c) underutilized opportunities for online collaboration. In addition, when teachers were asked how to improve physical or structural conditions, the subtheme of e-communities needed for collaboration emerged.

Subtheme 6a: Numerous structures provided for collaboration. All 10 teachers agreed that the school provides the place and time for collaborating within various professional learning teams. T9 discussed the formation of teams and their different purposes and outcomes related to teacher learning:

> There are plenty of different teams. You sign up at the beginning of the year . . . you can sign up for the team, the quality team that most interests you. Then you have the grade-level team. You've a staff, a whole staff meeting that you go to. We have professional development though.

T1 added, "The grade-level teams … meet on another morning, and they meet in the grade-level chair's room. The recorder [types] the grade-level notes, and then they email to administration."

Subtheme 6b: Lack of focused collaboration. When prompted to describe how the teams collaborate on student learning, nine teachers said the teams lacked time to collaborate. Only two teachers mentioned the quality plus learning team and the school-wide professional learning sessions; those two teachers agreed that there was enough time allotted. T6 pointed out that structure is evident in both teams:

> Yeah, there is definitely structure in those meetings. Sometimes the coaches have meetings, and it's like professional development. [In quality plus learning team] meetings, we think of what it is we want to roll out this year. We are always thinking what we can do to support those teachers in the classroom.

Teachers' responses painted a different picture in terms of the grade-level collaboration meetings. T8 provided a glimpse into how time is not adequately used during grade-level planning, stating, "I mean, sometimes we would come into the group . . . we would be just grading papers or . . . doing what they need to do." When prompted to tell more about who decides the agenda, T8 stated the following with uncertainty:

> As far as I know, it is the grade-level chair who comes up with what we need to talk about or she would take notes from the leadership meeting and bring that

> back to us and say this is what the administration wants us to talk about or what we need to do.

T6 clarified T8's uncertainty regarding how the agenda is created:

> Usually the agenda is created from whatever happens in the ILT meeting. Then, outside of that, we meet to plan for the next quarter or to plan for the next week. So the agenda is created based on the curriculum what is it that we need to teach or what is coming up [such as] a [class field] trip. . . . Or, if there's a problem on the grade level, that would be included [on the agenda] to give people a chance to talk about whatever is bothering them.

T10 and T1 agreed that distractions were evident within the grade-level professional learning team. T10 stated, "For true collaboration, you have to be really collaborating and sometimes you get a little sidetracked and people are talking about other things that may not necessarily be on the curriculum, on the academics." T1 pointed out that the well-intended practice often causes distractions, and voiced, "There are so many things to be discussed at times. There might be other [staff members] coming in during that meeting. It varies on how many people will come into the meeting to share." T9 stated the quality plus team was a planning team that did not improve instructional practice. T9 stated, "It wasn't something that supported my specific students' learning."

Subtheme 6c: Underutilized online collaborative opportunities. The data analysis revealed that teachers perceived online collaboration opportunities as underutilized. When teachers were asked to describe their online communities, T9, T8,

T10, and T7 agreed that the e-learning community was underutilized or not used effectively because of a lack of training. T7, T2, T3, T5, T8, and T10 agreed that the e-learning community was available for web-based training. According to T5 and T10, a lack of time prevents teachers from attending web-based trainings. T10 stated, "The time that the course [on learning about the e-learning community] was being offered was at a time that I couldn't go." T7 discussed how the e-learning community is used by stating, "There are things available, but I haven't utilized them." T9 added, "I don't think they [online collaborative communities] have been introduced or used effectively. I know I had to post something two years ago and that was the last time I was on it."

Subtheme 6: E-communities needed for collaboration. When asked how to improve physical and structural conditions, the subtheme of needing e-communities for collaboration emerged**.** Four teachers (T9, T7, T5, and T2) noted that e-communities could be improved to enhance the PLC. T5 stated that the school needs to "maximize online opportunities for teachers here at school." T9 further elaborated, "I do think that we could establish a better learning community online … where people can share ideas, products and websites."

In sum, teachers stated that collaborative time is not adequate because of distracted participants and frequent interruptions, and the online opportunities are underutilized because of a lack of training. Hord and Tobia (2011) argued that a PLC determines its norms for functioning. Teachers indicated no evidence of norms, as determined by the descriptions of those collaborative meetings. In addition, the interview data showed that the meeting agendas were composed of administrative recaps from the

instructional leadership team and a review of the standards to be taught, along with exchanging lesson plans.

Conclusion

The main finding from this qualitative formative program evaluation was that the site's PLC was not a true PLC based upon Hord and Tobia's (2011) framework. Although structures of time and space were implemented, the PLC showed weaknesses within all six characteristics, preventing the teachers from functioning as a true PLC. .

The findings of this research support Hord and Tobia's (2011) assertion, "Members of effective PLCs focus attention on themselves: to acquire specific new content knowledge, new skills, processes, and approaches. They deliberately and intentionally determine their target(s) for their own adult learning" (pp. 675–676). The findings also support DuFour's (2007) work, who asserted the following:

> A school staff must focus on learning rather than teaching, work collaboratively on matters related to learning, and hold itself accountable for the kind of results that fuel continual improvement. When educators do the hard work necessary to implement these principles, their collective ability to help all students learn inevitably will rise. (p. 7)

The PLC of the LES, based on the results of this study, resembles a pseudocommunity—which is the first stage of community development (Grossman, Wineburg, & Woolworth, 2001; Peck, 2010). The attributes of a pseudocommunity include (a) everyone plays community and (b) people avoid conflict (Grossman et al., 2001; Peck, 2010). The contrived collegiality and lack of collaboration, peer-to-peer accountability, and feedback in the LES's PLC are in line with a psuedocommunity's

attributes. According to Peck (2010), when members in a community play community, they pretend that problems do not exist, as one participant stated that people just "toe the line."

In the era of high-stakes testing, accountability, and enhanced teacher evaluation systems that weigh student progress, teachers are prone to focus on themselves and operate in isolation. As noted by teachers in this study, peer-to-peer accountability is perceived as their test scores being made visible to their peers. Isolation faced by teachers was also evident in this study, as participants operated alone when creating learning plans and applying new learning. One teacher stated that knowing whom to trust was an issue because teachers are in their grade level "bubbles." T10 provided insights into accountability and its effect on collegial or relational conditions:

> You want to be able to close that achievement gap, and you want teachers to be knowledgeable, but then at the same time I have to think to myself, at what cost are we getting all of this accomplished? Is it all being accomplished and we're still being respectful, we're still being professional, we're still being objective, and not subjective? What costs have we paid to get the achievement that we have? Do we still have teachers that still have a passion for what they are doing? Or do we have teachers [who] are possibly looking to get into another career because they feel slighted or they feel as if they've been made to feel incompetent or that they are not being professional? So that has really brought up a lot of, you know, just different negative feelings and negative comments and remarks that I've heard just throughout the school. You can sense it, you can feel it, you can—you

know, you can sense the strain that's there. So I have to think to myself, at what cost have we gotten our success?

Collegial or relational conditions, a professional learning characteristic that is broken within the LES, along with supportive and shared leadership can help reduce teacher isolation (Schlichte et al., 2005). When trust is established in a school, teachers are able to expose their strengths and weakness and engage in productive conflict to create and move a vision forward (Lencioni, 2011). When teachers buy into the shared vision, they are empowered with a purpose; therefore, they can hold each other accountable because they understand expectations (Fullan, 2001). Rosenholtz (1985) argued that organizational conditions such as teacher isolation, the lack of opportunities for professional development, and a lack of collaboration, affect teacher commitment. In a PLC, the purpose is an undeviating commitment to student learning.

Teachers can better collaborate with a focus on results when they are truly committed, are trusting, are empowered to make decisions and give input without being afraid of repercussions, are tolerant of differing perspectives, and can truly understand expectations (DuFour, 2007; Hord & Tobia, 2011; Lencioni, 2011). Then, the process of shifting the PLC from the traditional bureaucratic culture to a collaborative culture is possible and sustainable through ongoing formative and summative evaluations of the PLC (Fullan, 2006; Hord & Tobia, 2011). Rebuilding collegial and relational conditions through supportive and shared leadership will enable the LES to move toward, becoming a true PLC rather than a pseudo-community built on contrived collegiality and sustained through teacher isolation (Grossman et al., 2001; Hargreaves, 1994; Hord & Tobia, 2011; Mathieu et al., 2000; Peck, 2010; Schlichte et al., 2005).

Section 3 includes a subsequent literature review that informed the white paper project. This doctoral study included a white paper project, intended to serve as a tool that the LES and other stakeholders can use to guide their decisions on how to improve the PLC. Section 3 includes goals, rationale, supporting literature, implementation, evaluation, and implications for social change. The white paper project can also help teachers to improve the conditions of the school so that it can move toward becoming a true PLC. Section 4 contains an analysis of the project's strengths and limitations; the scholarship of the study; recommendations for future research; a redefinition of the problem and possible solutions; an analysis of myself as the project developer and scholar; the project's development as it relates to social change; implications, applications, and directions for future research; and a summary and concluding thoughts about the project.

Section 3: The Project

Introduction

Section 3 includes a description of this study's formative program evaluation project and the resulting white paper (see Appendix A). This study consisted of an evaluation of a professional learning community (PLC) conducted at an urban elementary school in Georgia, Local Elementary School (LES). This evaluation was conducted to inform leaders at LES of the weaknesses and strengths of their school's current PLC. The white paper draws on the study findings detailed in Section 2, as well as the study's literature review of prior research on PLCs and educational change knowledge. The literature review in Section 3 uses the qualitative findings and results in Section 2 to provide research-based recommendations for program improvement. In addition, I discuss in Section 3 the implementation plan recommended for the school under study, including (a) potential resources, (b) barriers, (c) proposal for implementation and timetable, and (d) roles and responsibilities. This section also includes discussion of implications for positive social change and concludes with a summary of the project study.

Description and Goals

The formative program evaluation served as the project for this study. The resulting product from the evaluation is a white paper that includes my findings and recommendations. This white paper was designed to empower LES school leaders to use its recommendations to create a sustainable PLC. LES officials previously used the SAI2 to conduct a summative evaluation of professional learning in general with some questions that relate to PLCs. However, the SAI2 results were insufficient for improving

the PLC implementation because they evaluate professional learning in general and not specifically the PLC. A formative evaluation of the school's PLC had not been conducted at the time of this study. Therefore, this research project study filled a gap in research at the study site by conducting a qualitative formative program evaluation to determine the weaknesses as well as the strengths of the PLC based on teachers' perceptions.

I used a qualitative approach within the overall formative program evaluation design. Hord and Tobia's (2011) six characteristics of a PLC informed the conceptual framework of this study, as well as informed the literature review, research questions, and typologies for analyzing the data. The goal of the white paper was to create awareness of the strengths and weaknesses of the PLC based on the findings from the formative evaluation, as well as to provide research-based recommendations. The format of the white paper is (a) introduction, (b) background of the study, (c) research problem, (d) data collection tools and analysis, (e) findings, (f) recommendations, (g) conclusion, and (h) supporting references. I will present the complete white paper (Appendix A) to LES school administrators upon final approval of this project study.

Rationale

A PLC is a professional development reform strategy touted as a way to improve adult learning and thereby improve student academic achievement (Berryhill et al., 2009; Cruz & Brown, 2010; Davidson, 2009; Jones & Egley, 2009). Many schools only fragmentally implement a PLC because of a lack of knowledge of the facets of a true PLC; as a result, many schools miss the benefits of improved teacher and student learning that PLCs are intended to provide (DuFour, 2007). At the time of this study, teachers at

LES received professional learning through PLC at the LES, but student achievement gaps still existed.

A formative evaluation determines the worth of a program and can result in recommendations toward improvement (Spaulding, 2008). A PLC should be evaluated because they are often implemented fragmentally (DuFour, 2007; Hord & Tobia, 2011). This research study addressed a gap in practice at the LES. The purpose of this research study was to conduct a formative evaluation in order to determine the weaknesses as well as the strengths of the PLC, and to offer recommendations for program improvement.

For this research study, I used a qualitative design as the primary component of the formative program evaluation to understand teachers' perceptions of their PLC. As a starting point for the data collection and subsequent qualitative analysis, I first conducted a typological analysis and review of the SAI2 summary report. Specifically, I retrieved the archival survey data report of the SAI2, which had already been administered and its data analyzed by the RSD. The RSD used the SAI2 to evaluate professional learning in general. Because of the general nature of the SAI2 survey, I conducted a typological analysis to determine which survey statements aligned with typologies in this study. Next, I reviewed the mean and frequency scores for each related survey statement to gain initial insights about the strengths and weaknesses that already exist within the PLC. I then refined my interview questions based on the strengths and weaknesses established through my typological analysis of the SAI2 summary report.

For the qualitative phase of this research study, I conducted in-depth teacher interviews with 10 teachers. Data collected from the interviews provided elaboration on the typological analysis of the SAI2 summary report and more strongly identified

strengths and weaknesses of the LES's PLC. I subsequently used these qualitative data findings to answer the research questions. After analyzing these findings, I conducted the literature review below to inform the development of the white paper project. This literature review focuses on literature that pertains to educational change within the context of creating an effective PLC.

The white paper that resulted from the review of literature herein and the project evaluation results is an effective product to communicate the results of the qualitative formative evaluation. Both the formative evaluation and the white paper address a gap in practice by providing stakeholders with the key information and recommendations regarding the PLC at the LES. The research-based recommendations included in the white paper can immediately be applied to strengthen the program, thereby strengthening the teachers, and subsequently strengthening student learning.

Review of the Literature

The research questions were based on Hord and Tobia's (2011) six characteristics of a PLC and guided the formative program evaluation. A PLC has six interdependent characteristics, namely "supportive and shared leadership; shared beliefs, values, and vision; intentional collective learning; shared practice; collegial or relational conditions; and physical or structural conditions" (Hord &Tobia, 2011, pp. 486-498). A PLC is made up of teachers, along with the administrator and other stakeholders, who share in a collaborative process to improve both teacher and student learning. The school principal's leadership is vital in order to cultivate a positive school climate wherein adults can learn in a PLC. Moreover, a collegial environment based on trust is the thread that unites a PLC. In fact, a collegial environment is cited as the precondition of true

collaboration (Hord & Tobia, 2011). To establish a true PLC, a school must shift from teaching in isolation to that of a collective group that collaborates for improved student learning. The PLC at the LES has the potential to become a truly collaborative community if leadership serve as change agents and guide the implementation processes.

The literature review in Section 2 focused on the facets of a PLC. This literature review describes the purpose of the white paper as the product of the qualitative formative program evaluation. Literature regarding white papers is scarce: few appear in peer-reviewed journals, articles, books, and websites sources. Nonetheless, a review of literature demonstrated that a white paper is the appropriate genre for delivering the results of a formative evaluation of a school's PLC.

The project study revealed weaknesses within all six characteristics of the PLC at the LES. I concluded that the PLC was in the beginning stage of community development—a pseudo-community. The pseudo-community at the LES is marked by contrived collegiality and teacher isolation—collegial and relational trust was one of the weakest characteristics found. Therefore, this review of literature discusses educational change knowledge and implementing a PLC. Educational change characteristics, as noted by various researchers, are also presented in the discussion. This second review of literature was conducted to provide additional context for the design and content of the white paper project.

Several resources informed the literature review. Databases included ERIC, EBSCOhost, Walden dissertations, and ProQuest Central. Search terms included *white paper*, *educational change*, *teacher empowerment*, *change agents*, *leading change*, *sustaining change*, *leadership*, *leadership and change*, *teacher change agents*, *principal*

and change, *schools*, and *change agents*. Keywords used were *capacity building*, *professional development*, *professional learning*, *sustainability*, *concerns based model*, *innovation configuration*, *moral purpose*, *motivation*, and *trust*.

White Paper

White papers are widely used in government agencies, businesses, and professional arenas. The white paper originated in England as a short text purposed to provide information about government policy (Sakamuro & Stolley, 2010). The components of a government white paper include the government's background and rationale (Willerton, 2013). See Table 5 for the components and organization of a typical white paper of the 21st century (Sakamuro & Stolley, 2010).

Table 5

White Paper Components

Component	Explanation of Component
Introduction / Summary	Readers can better understand the main idea of the paper if a summary of the contents is at the beginning of the white paper.
Background / Problem	A white paper should provide an overview of the facts regarding an issue. The document provides background information that will help the reader to make a decision. It also offers evidence that the writer is an expert on the subject. Problems are presented from the reader's perspective and only the problems for which the writer can offer solutions.
Solution	Tell the readers how the problem will be solved.
Conclusion	You can further enhance the readers understanding by including a conclusion.
Works Cited	Include a works cited at the end of the white paper.

Note. Adapted from *White Paper: Purpose and Audience*, by S. Sakamuro and K. Stolley, 2010.

White papers may provide different purposes for usage based on the context of the organization. Willerton (2013) described a white paper as a relatable marketing document in the business community. Sakamuro and Stolley (2010) explained that a white paper intended for commercial purposes informs decision making. According to Sakamuro and Stolley, a white paper should include the author's position and provide a solution to the problem. J. M. King (2006) explained that white papers can assist in planning the implementation of an industry change. In an educational context, white

papers can aid school leaders in their decision making based on the recommendations so that the school culture can develop, implement, and sustain a true PLC.

Though white paper examples are lacking in peer reviewed methodological research, numerous white papers are available across all government and nongovernment agencies. One in particular that informed the white paper in this study was that of Howley (2012), which compared and contrasted various change models to inform choosing the best theory for motivating personnel and achieving goals. The white paper developed as part of this project will provide recommendations to inform the LES about the best practices in implementing a PLC.do the same because the findings of the project evaluation indicated a call for change. A change agent, the school principal, is warranted to reinvent and create anew a truly collaborative culture within the PLC at the LES.

Background on Change Knowledge and Professional Learning Communities

Leading change during an era of accountability with the added pressures of a new teacher evaluation system, further complicated by the new Common Core Standards Curriculum, can indeed be difficult (Fullan, 2006; Tanner, 2013). Fullan (2011) stated that the new requirements mandated by Race to the Top does not take into consideration the culture of the school, whether trust exists in schools, or increasing student performance. In fact, as the findings from this research study show, even when good evaluations are implemented within schools that have bad cultures, there is increased alienation between school staff (Fullan, 2011). Moreover, school principals are dealing with changes in student demographics, further contributing to the complexity of creating and maintaining real change (Tanner, 2013).

A PLC is a reform strategy aimed at improving teacher learning (Hord & Tobia, 2011). Teachers' professional learning needs are based on the context in which they teach, coupled with the expectations placed on them from external and internal entities. Interview data collected during the formative program evaluation of the LES's PLC provided findings that call for change. Teachers desired supportive and shared leadership to individualize professional learning, cultivate a caring and trusting environment, and build structures to support input into decision making. The principal is charged with creating an environment conducive to trust so that relationships and collegial conditions can develop and flourish (Harris, 2011; Hord & Tobia, 2011).

The purpose of a PLC is to share knowledge for improved learning for students and teachers. Information becomes knowledge when shared through a social process (DuFour & Mattos, 2013; Fullan, 2002). Thus, for this reason, collegial and relational conditions in a PLC are paramount because trusting relationships are a prerequisite for true collaboration (Fullan, 2002; Hord & Tobia, 2011). The results of this study showed that all six characteristics of the LES's PLC were weak. The school, therefore, is what DuFour (2007) would refer to as a PLC in name only. The LES needs a change in culture to establish a well-functioning PLC (DuFour & Fullan, 2013). Schools can begin to establish and sustain PLCs based on sound models developed from theory. Fullan (2006) noted that theory serves to provide a rationale for decision making. Therefore, school leaders are charged with applying theory to implement change.

School leaders' understanding of a culture of change is prerequisite to leading change (Fullan, 2002; Fullan, Cuttress, & Kilcher, 2005). Fullan's (2006) educational change model has influenced the creation of several PLC models. Therefore, the next

section proceeds with typologies gleaned from Fullan's (2006) educational change knowledge model positioned in the context of additional literature on implementing a PLC.

Educational Change Model: Building a Professional Learning Community

Fullan (2006) used an extensive review of literature to develop his educational change theory, explicating essential elements of change knowledge. Change knowledge does not guarantee the success of building and maintaining the PLC—however, in the absence of change knowledge, the PLC is sure to fail (Fullan et al., 2005). DuFour, a PLC expert, posited that Fullan has helped educational institutions around the world in enacting and sustaining change (DuFour & Fullan, 2013). Hipp and Huffman (2010) "used Fullan's (1990) three phases of change—initiation, implementation, and institutionalizing"—to define, establish, and manage professional learning communities (Location 504). The three phases follow:

1. Initiation phase: Based on identified need for change, the school connects the Initiative to both student's needs and the school's vision.
2. Implementation phase: Leaders shares leadership with staff in setting high expectations in order to meet defined goals. The leaders provide resources that includes timely feedback, which continuously improves student learning.
3. Institutionalization phase: During this phase the change initiative is integrated within the school culture wherein the school is accountable for student learning. As such they continuously identify problems to solve and risk taking is encouraged. (Hipp & Huffman, 2010).

Educational programs fail because leaders fail to understand the change process and human factors of change. Hipp and Huffman (2010) also suggested that the lack of resources and technical assistance causes frustration and setbacks in implementation. The following sections give insight into essential elements for implementing change in school culture.

Focus on Motivation

To implement the process of changing a PLC, the school leader must galvanize and motivate personnel with a moral purpose of raising student achievement—in other words, closing student achievement gaps (Fullan et al., 2005). Subsequently, Fullan (2006) warned that moral purpose does not motivate people unless combined with other factors, such as "capacity; resources; peer and leadership support; identity and so on" (p. 8). However, Hargreaves and Fink (2012) suggested that the purpose of education is deep learning and the moral purpose is sustainability. Bottery, Wright, and James (2012) added that leaders should be directed by a purpose that is morally appropriate that involves "engaging and re-engaging with each situation, entering into a dialectic with others' visions, leading to the re-conceptualization of problems in different ways" (p. 227).

The results of this doctoral study support the research of Fullan (2006) and Bottery et al. (2012), as teacher participants stated that change within LES's climate must begin with leadership. Hord and Tobia (2011) posited that culture changes over time, and teachers' response to change depends on their connection to their calling that is supported by the school leaders and the principal's connection to teachers' needs. DuFour and Fullan (2013) further stated that leaders must explain moral purpose by stating long- and short-term goals and giving the implementers clear, actionable steps to bring those goals

into fruition. Teachers want to know exactly what is expected—fuzzy messages deter progress. Case in point, T8 stated the following concerning teacher evaluations, "We need to know what they [administrators] want, because how are we going to be better for doing something [if]… we don't even know it?" Moreover, involving teachers and other implementers in creating action steps and processes for evaluation will increase motivation and ownership. The teachers in the qualitative project study supported this notion of buy-in as they voiced their desire to offer input in decision making. In fact, one participant stated that teacher input was essential for shared vision.

Leaders must therefore create the capacity for teachers to buy-in to any change initiative. Thoonen, Sleegers, Oort, and Peetsma (2012) found that though capacity developed, teacher motivation and engagement in professional learning did not improve. Regarding teacher motivation, it seems that teachers did not buy in to the implementation process, or the work may not have been engaging. Fullan (2006) suggested leaders provide conditions such as meaningful work that aligns with teachers' values. Teachers become motivated through practicing new learning. Teachers are also motivated when they are able to see the benefits of their work (Fullan, 2006). Murray et al. (2009) conducted a study to determine how to build research capacity for teacher educators and found that capacities should include motivation, social networks, and professional learning (Murray et al., 2009). Their conclusions are similar to those of Fullan (2011) and other researchers who proclaimed that a PLC provides the structure for social networks through which teachers share knowledge to improve teacher and student learning (DuFour & Fullan, 2013; Hord & Tobia, 2011). As such, it can be concluded that building a PLC is not simply implementing a prepackaged professional learning program.

Rather, a PLC's development is an intrinsic and intentional process that involves changing the culture of the school using human and social resources (DuFour & Fullan, 2013; Fullan, 2006; Hord & Tobia, 2011).

Capacity Building with a Focus on Results and Teacher Empowerment

Fullan (2006) argued that along with moral purpose, leaders must attend to capacity building within the school. The purpose of capacity building is to increase collaboration and interaction among stakeholders and improve the context in which the school operates. Capacity building includes equipping individuals and the collective whole with "knowledge and competence, resources and motivation" (Fullan, 2006, p. 9). Harris et al. (2013) argued that schools build capacity by investing in and empowering teachers to lead. Additionally, teacher empowerment means teachers have control over, and support for decisions, combined with the necessary knowledge and skills to help students learn and achieve (Tonso, Jung, & Colombo, 2006).

Although Fullan's (2006) educational change model did not include the explicit terms of teacher empowerment, the model's characteristics directly relate to Harris et al.'s definition. As such, the notion of teacher empowerment deserves a place in the discussion of capacity building. Lee, Yin, Zhang, and Jin (2011) found that professional learning based on curriculum reform empowered teachers. As such, teachers showed a positive outlook towards the curricular reform and the outcomes of the reforms (Lee et al., 2011). This highlights the importance of building capacity using professional development based on the reform during implementation. Song (2012) found contrasting results related to how teacher empowerment develops. Song (2012) found teachers were empowered when are involved in a professional learning; tasked with helping manage

school change, and therefore, feel interested and connected to the curriculum; and value the reform efforts. According to Song (2012), a PLC provides the knowledge and skills needed to improve teacher and student learning and, as such, motivated and empowered teachers to persist and accept reform.

Furthermore, several studies reveal that professional development that is systematic and long term builds capacity and is required for sustainable change (Barth & Rieckmann, 2012; Fullan, 2006; Jones, Stanley, McNamara, & Murray, 2011; Mayotte, Wei, Lamphier, & Doyle, 2013; Thoonen et al., 2012). Mayotte et al. (2013) assessed a professional development program touted for building capacity for school improvement: the Collaborative for Academic Excellence (ACE), which focused on enhancing the capacities of teachers, groups, and vision. Mayotte et al. (2013) found that overall, teachers favored group and teacher capacity as helpful, yet they hardly mentioned vision capacity. The participants in the Mayotte et al. (2013) study held somewhat similar beliefs to the teachers at the LES, given that in the current study, teachers were unable to describe shared vision as it related to student learning and school improvement. In fact, one teacher at the LES stated that a vision statement is just a "piece of paper" and is unnecessary because the vision is in a teacher's heart. Perhaps teachers at the LES view vision as Fullan (2006) does, in that a shared vision is an outcome rather than a prerequisite to change; or, maybe teachers at the LES do not see their work as in alignment with the shared vision.

As in many cases, capacity building is often the missing element when implementing a change to a program or process. The lack of capacity building often leads to too much accountability (pressure) and a lack of support and resources (Fullan et al.,

2005). As a result, teachers lack the motivation to sustain the implementation of any type of educational change. Fullan (2006) stated that school leaders should first focus on building capacity before judging teachers on their ability to implement changes to processes or procedures. Specifically, school principals should support educators with pertinent information needed and resources to implement the new program or process. Teachers in this research study overwhelmingly claimed that they did not receive the necessary support to apply new practices. T6 stated the following regarding the lack of support or capacity in the face of demands to implement the new Common Core Curriculum:

> You want the teachers to feel confident, and if you don't … you're [teacher] not [going to] do your best work. Then [I] feel like when [implementing] Common Core, it needed to be more gradual opposed to right now … get it done, get it done right now, and that was hard for a lot of people including myself.

Indeed, there is a delicate balance between applying pressure (moral purpose) and support (capacity building). If there is too much pressure and not enough support, change efforts will suffer.

Change agents must build the capacity to function as a PLC, and there must be a transformation in the school's culture from isolation to collaboration DuFour and Fullan, 2013). A PLC necessitates that school personnel collaborate together to increase teacher and student learning. Therefore, capacity building and support for building a PLC include (a) meaningful team assignments, (b) collaboration time, and (c) a focus on collaboration (DuFour & Fullan, 2013). The teachers in this project study called for increased

collaboration time and more opportunities to give teacher input on professional learning topics within their PLC.

Additionally, change agents, as Hipp and Huffman (2010) asserted must build the capacity for changing into a PLC that includes providing teachers with planning tools to set goals, timelines, and benchmarks. They created the Initial Plan for Creating a PLC to use after formal assessments of their PLC. Teachers can use the Initial Plan for Creating a PLC as an initial guide to establish a PLC or as a progressive plan that changes according to formative data collected during implementation (Hipp & Huffman, 2010). School leaders can benefit from using an already tested PLC model that will enable the LES to create a flexible plan that can sustain implementation (Ermeling & Gallimore, 2013).

Clearly, leaders are charged with capacity building and ensuring the necessary resources to implement a program or process. All too often, school leaders are not cognizant of adult learning theories nor have they been trained on how to support adult learners. The findings in Section 2 supported this, in that the participating teachers viewed the professional learning they received as incompatible with their individual needs. Drago-Severson and Blum-DeStefano (2014) offered the following key takeaways for organizational and personal transformation that are aligned with the literature on educational change, PLCs, and trust:

- Leaders should understand the principles for teaching adult learners so that they can lead effectively (DuFour & Fullan, 2013; Fullan, 2006; Hord & Tobia, 2011).
- School leaders and educators can deep their understanding about developmentally appropriate adult learning as they experience the phenomena as they learn about it (DuFour & Fullan, 2013; Fullan, 2006).

- School leaders should take the time to create opportunities for teacher collaboration (DuFour & Fullan, 2013; Fullan, 2006; Harris, 2011; Hord & Tobia, 2011).
- Adult learners thrive in well-respected environment (Cranston, 2011; DuFour & Fullan, 2013; Fullan, 2006; Hord & Tobia, 201; Tschannen-Moran, 2001).
- When educators and leaders further develop their knowledge and skills, children, teachers, leaders, the community and parents can benefit (DuFour & Fullan, 2013; Fullan, 2006; Hargreaves & Fink, 2012; Hord & Tobia, 2011).

The fourth takeaway particularly helps us to understand that developing collegial relationships is a necessity for sustaining the change of an innovation. Adults need to feel respected if they are to reciprocate respect for others (Drago-Severson & Blum-DeStefanom, 2014). In addition, the fourth takeaway is consistent with Fullan's (2006) and DuFour and Fullan's (2013) stance on capacity building, as it relates to building and changing a culture so that PLCs can flourish. A PLC is premised on knowledge sharing (DuFour & Fullan, 2013; Fullan, 2006). Fullan (2006) believed that change is about the interactions of people. Because trust is a prerequisite to the honest sharing of knowledge, collegial and relational conditions are paramount for teams to collaborate effectively (Cranston, 2011; DuFour, 2007; Hord & Tobia, 2011; Tschannen-Moran, 2001).

Learning in Context and a Bias for Critical Reflection

Various professional learning teams exist at the LES, and teachers meet most often in grade-level teams. However, teachers do not participate in true collaboration that involves critical reflection using student data to guide the discussion. The findings from Section 2 indicated teachers are intolerant to differences of opinion and do not engage in

critical and reflective feedback when sharing instructional strategies. Carrington, Deppeler, and Moss (2010) concluded that professional development programs should develop teachers' critical reflection skills so that they can analyze their own teaching so that teachers can develop the necessary collaborative skills to challenge the status quo and make quality decisions. Without a shared common purpose and collective responsibility, a PLC team will be dysfunctional, or at best, a gathering of exchanged ideas (DuFour & Fullan, 2013). The results of this study show that grade-level team meetings are spent discussing administrative details, exchanging lesson plans, and ensuring that all teachers are in step with the RSD's pacing guide. However, true professional learning teams must focus on student or teacher learning (Hord & Tobia, 2011). School leaders must ask pertinent questions regarding how to improve student learning, during PLC meetings (DuFour & Fullan, 2013).

Forming a shared vision requires teachers critically reflect on how their beliefs and assumptions are similar to each other's and those of the school (Hord & Tobia, 2011). DuFour (2004) also noted that leaders must have a bias for deep learning or reflection to promote change. Typically, a behavior change precedes changes in teachers' beliefs; therefore, a school's vision is an outcome rather than a prerequisite of change (DuFour, 2004). People learn best when they apply new learning, reflect on the evidence of new learning, and reapply new learning gained from the reflection (DuFour, 2004).

Learning in context, according to Fullan (2006), is the staple of sustaining change. In a study that provided teachers opportunities to reflect after using a consultancy protocol to discuss dilemmas and collaborate on various perspectives for handling them, it was found that teachers can be motivated by offering real dilemmas that affect their

specific professional learning needs based on their teaching experiences—hence, personalized learning (Kagel, 2014). In a PLC, adult learning should meet the learning needs of the adults based on student learning (Hord & Tobia, 2011).

Changing Context: Trilevel Development and a Focus on Leadership

By changing a context, behaviors are also changed (Fullan, 2006). To develop a PLC, school leaders must change their context by communicating among all levels with an undeviating focus on a shared commitment for school improvement (Fullan et al., 2005). When teachers see school leaders reaching out to other constituents, they become motivated because inherently people identify with larger parts of the system (Fullan et al., 2005). However, Fullan et al. (2005) cautioned school principals to stay focused on their change progress and not become distracted because of trilevel development. Trilevel development is developing capacity at the following three levels: school, district, and state (Fullan et al., 2005). To enact change, schools principals must be willing to collaborate through a trilevel approach (Fullan, 2006). To begin the process of developing trilevel support, school leaders should ask probing questions about the problem at hand, including what has happened at all levels within the educational system (Fullan et al., 2005). Although the principal's focus is facilitating teacher change that change must occur within the context of where teachers work. Hord and Tobia (2011), stated that the school improvement strategy for developing a PLC should include a different three levels: teachers' classrooms, the school in which teachers work, and the RSD.

Fostering Coherence: Continuous Evaluation and Persistence

In order to build and sustain a PLC, there needs to be collective commitment in changing the culture of a school. Change does not simply happen because someone calls for that change. Instead, school leaders must change the culture of school using collaborative planning and execution through a social process (Fullan, 2006). Building and sustaining a PLC also requires continuous evaluation. At the LES, there was a lack of a formative evaluation of the PLC. Various types of formative and summative evaluations of the LES's PLC should be ongoing; moreover, tools for progress monitoring should be available throughout implementation. Program evaluations can inform on-going decision making to enhance a program (Spaulding, 2008). A culture of evaluation and learning is a simultaneous process that deepens meaning (Fullan et al., 2005). Furthermore, after evaluation data are collected, they should be disaggregated for knowledge and understanding, used for further action planning, and discussed with all stakeholders (Fullan et al., 2005).

Many schools are PLCs in name, but not in practice (Hord & Tobia, 2011; DuFour & Fullan, 2013). Professional learning communities should be evaluated continuously to determine if they are truly functioning as PLCs (Hellner, 2008). In the white paper project, I recommend that the LES use continuous evaluations and research various tools for continuous evaluations. Hall and Hord (1987) created the concerns-based model (CBMA), which can be used to measure school program innovation. The Research and Development Center for Teacher Education at the University of Texas, Austin, developed an Innovation Configuration (IC) map that schools used to further their understanding of what constitutes a PLC (Hord & Tobia, 2011). An IC map is a rubric

type instrument that explains the PLC characteristics in action and provides a basis for self-analysis (Hord & Tobia, 2011). Hall (2013) provided a reflective summary of the usage of IC maps in a study along with two other diagnostic dimensions of the CBMA—"Stages of Concern (SoC) and Levels of Use (LoU)" (p. 264). SoC address the personal side of change and measure concerns using a range from awareness (Stage 0) to refocusing (Stage 6; Hall & Hord, 1987). LoU depict and profiles both users and nonusers' behavior. IC represents the various ways in which change can be operationalized (Hall, 2013).

Hall (2013) stated that these evaluation tools would be useful when schools implement any school change. The SoC evaluation tool provides teachers an opportunity to voice their personal struggles and victories during the change process (Roach, Kratochwill, & Frank, 2009). School leaders and teachers can use the SoC as a formative evaluation throughout the implementation process and assist teachers where they need support.

Saunders (2012) used SoC and LoU to determine how teachers changed during professional learning within a vocational education and training program. Saunders (2012) found that the SoC and LoU enabled them to determine what support teachers needed during the change process. The CBM was also found useful in providing feedback that called for an adjustment in teacher support. Furthermore, the SoC and LoU provided insight of how each individual and the overall group experienced change (Saunders, 2012). The CBAM tools can provide insight to the complexity of change and monitor the human factor: teachers who are implementing the change to ensure fidelity (Hord, 1987; Ringwalt et al., 2010).

Researchers have developed several tools for evaluating PLCs in specific. The PLC Organizer (PLCO) is a formal diagnostic tool that measures the progress of development along a continuum (Hipp & Huffman, 2010). Although Hipp and Huffman used Hord's (1997) attributes of a PLC, they combined shared practice and intentional collective learning because they felt that the two constructs were closely related. Moreover, the instrument is aligned with Fullan's (1991) stages of change, or the phases of implementing a PLC (Hipp & Huffman, 2010). Schools can use the PLCO to measure their development toward becoming a PLC.

Hipp and Huffman (2010) developed another evaluation tool using Hord's (1997) characteristics of a PLC as a foundation, called the PLC Assessment-Revised (PLCA-R). This tool adds a data usage component. The PLCA-R may provide the elaboration needed within a survey geared specifically to measure teachers' perception of their PLC. The PLCA-R can be a summative or formative program evaluation. When schools use the PLCA-R to evaluate their PLC, the results can provide meaningful feedback on the school's progress as well as teachers' needs and concerns (Hipp & Huffman, 2010). After each evaluation, there should be a plan of action to mediate any shortcomings.

In alignment with Fullan's (2006) factors for social change, teachers should be involved with selecting PLC evaluation tools, deciding how to use the tools, and creating an evaluation calendar. Moreover, teachers should assist in creating the IC map after formal training in PLCs and communication skills, as a means to reflect on their learning and set their own goals towards improvement. Similarly to IC maps, the LoU and SoC also can be used as progress-monitoring tools that can identify additional support or professional learning needed for teachers. Foulger and Williams (2007) posited the

CBAM tools help university professionals collaborate better during the change process. Based on the findings in Section 2, teachers did not collaborate and there was a lack of focus and fear of giving input. The CBAM tools are a potential option that could provide the structured focus needed for these teachers.

A PLC should not be viewed as another mandated program that is done to teachers, rather teachers should see the opportunity as a means to enhance their professionalism through collective commitment with a focus on improving student learning (Hord & Tobia, 2011). The aforementioned evaluation tools can be used to create coherence and build capacity in teachers' professional learning teams (Fullan, 2006). By being included in planning the continuous evaluation cycle, teachers learn how to learn within the context of their PLC.

During evaluation, school staff should commit collectively to critical reflection and collaboration in order to improve student achievement (Fullan, 2006; Hord & Tobia, 2011). The evaluation results will require shifts and changes along the way; rigidity will only undermine the collective will of the teachers (DuFour & Fullan, 2013; Fullan, 2006). A plan of action is necessary to continue progress and make decisions about what is or is not working. The continual evaluation process requires leaders to be persistent and flexible with a focus on attaining results (DuFour, 2007; Fullan, 2006; Hord & Tobia, 2011).

Summary

Implementing and sustaining educational change requires that implementers maintain continuous focus on feedback or evaluation (Fullan, 2006). Leaders should distribute leadership and create other leaders within the PLC (DuFour & Fullan, 2013;

Hord & Tobia, 2011). Teachers must learn how to learn about PLCs within their individual contexts and have the necessary tools and support in order to learn (Fullan, 2006). Leaders must balance support and accountability (Fullan, 2006). Changing the culture of a school into a PLC requires a shift from a traditional to a collaborative community culture (DuFour & Fullan, 2013; Hord & Tobia, 2011). Change does not occur overnight and must involve all personnel at all levels within the educational system (Fullan, 2006). Teachers are the ones who are expected to implement the change in culture (DuFour & Fullan, 2013). Coupling moral purpose with supporting factors must be enacted in order to change a school (Fullan, 2006). Finally, school change is about mobilizing the collective will of all stakeholders (Fullan, 2006).

Implementation

Potential Resources, Existing Supports, and Barriers

Implementation of the recommendations proposed within the white paper was based on the formative program evaluation that utilized a qualitative design to determine teacher's perceptions of the strengths and weakness of their PLC. The typological analysis of qualitative in-depth interviews used typologies derived from the conceptual framework of Hord and Tobia's (2011) six characteristics of a PLC. The recommendations are outlined in the white paper (see Appendix A) and will be distributed to the school administrators for further implementation considerations, including a continuous evaluation cycle. I will make myself available to answer any questions and present the information to the school staff, if requested.

Distribution of the white paper does not require resources or support other than delivering the documents. However, resources and support were necessary to conduct the

formative program evaluation and develop the subsequent white paper. First, to conduct the research study, I needed support and resources from the chairpersons on my doctoral committee, URR, and IRB, and the RSD, so that I could request archival SAI2 summary report and conduct a typological analysis; review the archival SAI2 summary report to refine interview questions; and conduct the in-depth interviews at the LES. In addition, I used Walden's library to conduct the review of literature that informed the recommendations made in the white paper and the formative evaluation project. The school provided the archival SAI2 summary report; the report did not include raw data. The school also provided access and space to interview teachers for the qualitative formative program evaluation. Each school leader will receive a copy of the white paper.

The potential resources needed to implement the recommendations will include PLC training for school leaders and staff members. The existing support includes the RSD's office of professional development to conduct PLC training. However, if an outside consultant is needed, funds will be needed, which could pose a barrier. To overcome this barrier, the school principal may elect to send teams of teachers to learn from outside consultants and redeliver the content to the entire staff. Because of possible conflicts in scheduling, substitutes may be needed to provide staff with job-embedded professional learning. The training should include communication skills, the use of protocols and norms to guide data driven meetings, training in analyzing and using data results, training in creating innovative configurations and CBAM evaluation tools, training for school leaders in how to include teachers in the decision making process, and training for school leaders in creating educational change.

A potential barrier could be that the school principal does not allow the distribution of the recommendations to the other school leaders and the school's professional development team. Distribution of the results is based on the principal's preference.

Proposal for Implementation and Timetable

I implemented the project immediately after receiving IRB approval to conduct the study. First, I requested and obtained a copy of the SAI2 summary report. While reviewing the SAI2 summary report and conducting a typological analysis to determine which survey items aligned with the typologies, I also scheduled interviews with teachers. After the review and analysis of the SAI2 survey summary report, I refined the interview questions and proceeded with conducting the in-depth interviews. Data were immediately transcribed and analyzed. The qualitative findings and results were used to direct the focus of the second literature review to provide research-based recommendations for program improvement. After completing the second review of literature, I wrote the white paper.

I will give the school principal a copy of the white paper upon final acceptance and approval of the project research study. I will extend to the principal the opportunity to request a meeting or a presentation of the results, including a chance to ask questions. I will also work with the PLC at the LES and offer additional assistance with developing a continuous evaluation schedule and conducting any evaluations that are needed to sustain the progress of this PLC.

Roles and Responsibilities of Student and Others

I conducted a formative program evaluation using a qualitative design. First, typological analysis was conducted on the archival SAI2 survey data summary report. Based on the strengths and weaknesses established through the typological analysis, the interview questions were refined. Next, to conduct the qualitative program evaluation, I conducted in-depth interviews in an attempt to answer the research questions. The LES, including the school principal and teachers, played an important role in implementing the formative evaluation. The school principal provided access to the SAI2 summary report and permitted me to use the school site to conduct the interviews. The teachers provided the insight needed to answer the research questions that enabled me to determine the PLC's strengths and weaknesses. The teachers' responsibilities included being open and honest in their responses. I will give the school principal a copy of the white paper and make myself available to present the findings to the school staff, during which I will answer any questions and provide additional follow-up support if the school decides to implement the recommendations made in the white paper report.

Implications Including Social Change

Local Community

This study aimed to determine how teachers perceived their PLC. The teachers at the LES are involved in weekly adult learning opportunities within their PLC. The new Common Core Curriculum, the new teacher evaluation system, and continuous demands to close the achievement gap have put teachers on the front line of improving student achievement (Kober & Rentner, 2012). In this study, evaluating how teachers perceived their PLC provided startling evidence that, although existing supports and resources are

available, the school was not functioning as a true PLC. The recommendations offered in this study could produce changes that would ensure teachers' learning needs are met, thereby improve student academic learning. Moreover, the recommendations have the potential to end teacher isolation at the LES and improve collegial and relational conditions. Within a true PLC, teachers are empowered to make decisions, particularly regarding their own learning and student learning, through shared and supportive leadership. Moreover, continuous evaluations of the PLC are needed to ensure sustainability of the community (DuFour, 2007; Hipp et al., 2008; Hord & Tobia, 2011).

Far-Reaching Implications

Professional learning communities have become a school reform aimed at increasing teacher learning and improving student achievement (Aubusson et al., 2007; DuFour & Fullan, 2013; Hord & Tobia, 2011). The success of a PLC is contingent upon utilizing a model—this ensures that all stakeholders know the definitions and working aspects of a PLC (Hipp et al., 2008). The literature revealed that often, schools name themselves as PLCs only because they provide opportunities for teachers to meet; however, key components such as data analysis, shared leadership, and supportive conditions are missing (DuFour, 2007; DuFour & Fullan, 2013; Hord & Tobia, 2011). Therefore, a PLC should be consistently evaluated to ensure that it has been effectively implemented and all necessary components are present (DuFour, 2007; Fullan, 2006; Hipp et al., 2008; Hord & Tobia, 2011). Frequent evaluations and adhering to recommendations for program improvement will ensure the sustainability of the PLC (Aubusson et al., 2007; DuFour, 2007; Fullan, 2006; Hipp et al., 2008; Hord & Tobia, 2011). This research adds to the body of literature as it confirms the importance of

evaluating a PLC for program improvement. In addition, this project study fills a gap at the LES in that I conducted a formative evaluation of the PLC to determine its strengths and weaknesses, on which recommendations for improvements were made.

Conclusion

Section 3 contains a second review of literature that guided the development of a white paper that acted as the product of the formative program evaluation project. The review of literature included a discussion of the purposes of a white paper and typologies gleaned from Fullan's (2006) educational change model contextualized with additional research on the implementation of a PLC. The information gained from the review of literature gave further insight into the need for school principals to understand educational change and change knowledge to develop their PLC effectively. Furthermore, Section 3 provides recommendations on how to change the traditional bureaucratic culture to a collaborative culture; such recommendations were based on the findings from the formative program evaluation—specifically, that teachers at the LES work in isolation without collaborating or sharing their focus on student learning. The recommendations in the white paper were aimed to help the school principal work toward developing a true PLC. Section 4 is a scholarly reflective discussion about the project's doctoral study.

Section 4: Reflections and Conclusion

Introduction

In this qualitative program evaluation, I investigated teachers' perceptions of their professional learning community (PLC) at a local urban elementary school that I was employed at. This section includes my reflections and conclusions on the formative program evaluation project. In addition, an analysis of my experiences as a scholar, practitioner, and project developer throughout the writing of this doctoral study is included.

Project Strengths

This project is relevant for educators because of the recent demands for teachers at Local Elementary School (LES) to learn new pedagogical approaches for teaching the new Common Core Standards Curriculum. These teachers were also required to simultaneously close student academic achievement gaps while being evaluated using a revised teacher evaluation system focused on student achievement growth (Kober & Rentner, 2012). These conditions necessitated that teachers at the study site collaborate as a team to meet students' individual needs while implementing the Common Core Standards Curriculum, as recommended by Hanover Research (2012). Although a group described as a PLC was thought to exist at the school under study, it had not been specifically evaluated prior to the implementation of this research project study. This project meets the need for a PLC to be evaluated to avoid being a PLC in name only—a concern noted in the literature (DuFour, 2007).

This formative program evaluation was grounded in the work of Hord and Tobia's (2011) research on what makes an effective PLC. The strength of the project lies in the

typologies derived from Hord and Tobia's six characteristics of a PLC, which formed the conceptual framework for the project. The research questions, interview questions, and literature review were framed using the six typologies based on Hord and Tobia's six characteristics of a PLC.

The findings from this qualitative program evaluation provided stakeholders with rich, descriptive data on the status of their PLC. The project adds to the body of literature in terms of confirming the importance of evaluating a PLC to determine strengths and challenges so that the PLC may be improved (Spaulding, 2008). The project also addressed a gap in practice at the research site, given that a formative evaluation had not been conducted on the LES's PLC prior to this study. The LES and the RSD may use the research-based recommendations made in the white paper to better understand the key characteristics of a PLC. They may also use it to develop a true PLC by using an educational change model to guide the process.

Limitations and Recommendations for Remediation

A formative program evaluation had not been conducted on the LES's PLC prior to this study. Some questions related to a PLC are included in the SAI2, which was previously administered at the study site. I first conducted a typological analysis on the SAI2 summary report. A significant limitation of using the archival SAI2 summary report was that this survey was originally intended to evaluate professional learning in general, not specifically a PLC. In addition, I was unable to conduct any statistical analysis because raw data were not provided in the copy of the report that I obtained. One recommendation for remediating the limitation of the survey in the future is to use

another survey, such as the PLCA-R, which evaluates a PLC specifically. Moreover, it is framed around Hord and Tobia's (2011) six characteristics of a PLC.

Another potential limitation of the project was that participants may have not been honest in their answers during the interview. Breakwell, Hammond, and Fife-Shaw (1995) noted interviewees might not be truthful when answering questions because they lack knowledge of a topic or feel inadequate. To remediate this limitation, member checking was conducted, as described in Section 2 of this project study. In future studies, further evaluations could be conducted using an anonymous questionnaire.

An additional limitation was that only 10 teachers out of 53 were interviewed; therefore, they cannot represent all teachers at LES. The 10 participating teachers represented only two of the LES's three subgroups of teachers (instructional support and classroom teachers); the sample notably did not consist of specials teachers (e.g., art, music and physical education teachers). Likewise, because the formative program evaluation was conducted at only one school, the results cannot be generalized to the larger population. However, the purpose of this project was to evaluate the PLC at the LES, not PLCs as a whole. Other districts should use the thick, rich description of the LES demographics and findings to consider if the results apply to their specific school (Merriam, 2009).

Redefined Definition of Problem and Solutions

The problem addressed by this project was that a formative evaluation had not been conducted on the PLC at the school under study. Another potential method of addressing this problem would be to investigate teams of teachers as they progress toward becoming a PLC. In this case, the Professional Learning Community Organizer

(PLCO) could have been used to determine at what stage the school is in becoming a PLC based on dimensions such as initiating, developing, and implementing (Hipp & Huffman, 2010). The PLCO can also be used to determine the presence of specific components of the PLC, such as the degree to which collegial collaboration resulted in changes in actual classroom practice (Hipp & Huffman, 2010). The most important aspect of a functioning PLC is the scope of teacher collaboration because collaboration leads to greater teacher learning and, therefore, improves student learning (Hipp & Huffman, 2010; Hord & Tobia, 2011).

Scholarship

In the process of this project, I learned that scholarship means engaging in an idea with critical and reflective thinking while researching the idea. I began with the idea that a formative evaluation was needed in order to sustain the LES's PLC. To ascertain if my idea was research-worthy, I reviewed current peer-reviewed literature on the topics of PLCs and evaluations of PLCs. I also reached out to Dr. Shirley Hord to discuss if the topic of evaluating a PLC was research-worthy. Shirley Hord is an expert in the field of PLCs, and she is one of Learning Forward's scholar laureates. Once I determined that the idea was research-worthy, I expanded my literature review to include information on program evaluations. I joined blogs and professional associations that discussed PLC research to stay current and gain perspectives from practitioners in the field. Through peer review of my proposal, I reflected on my work. Committee members, URR, and peers challenged me to think about and justify my work through each stage.

In addition, I learned that scholarship involves taking knowledge and applying it to solve a real problem to promote social change. As a practitioner of peer-reviewed

research, I was able to complete the study and create a project that provided research-based recommendations to assist the LES with becoming a functioning PLC.

Project Development and Evaluation

I learned important lessons about the process of developing an evaluative project. Some of the things that I learned included the importance of

- obtaining buy-in from the organization, which ensures that the evaluation is relevant and based on the organization's needs;
- being flexible during data planning; and
- ensuring that the evaluation report is based on sound research.

In developing the formative program evaluation, I first met with the principal to determine if I could obtain the necessary support to conduct the evaluation at the LES. Initially, I was going to the use the PLCA-R, a PLC survey. However, the principal suggested that I use the SAI2 summary report to prevent teachers from being overtaxed with multiple surveys.

Spaulding (2008) discussed that sometimes evaluators may not be able to collect the data they wish and must be creative in deciding alternative approaches. Ultimately, I conducted a typological analysis on the archival SAI2 summary report. Based on the strengths and weaknesses established through the review of the SAI2 summary report, I then refined my preliminary interview questions. Next, I conducted in-depth interviews for the qualitative program evaluation in order to answer the research questions. Because I did not have access to the raw data, my initial plan to conduct a mixed-methods study changed because I did not collect or analyze data from the SAI2. Rather, I conducted a typological analysis of the archival SAI2 summary report and reviewed the report to get

an initial indication about the strengths and weaknesses of the PLC. Therefore, I changed the design of the study to that of a qualitative design using in-depth interviews to answer the research questions.

Another lesson learned from developing the project was the importance of creating a clear and concise data collection plan. My systematic data collection plan enabled me to carry out each stage of the evaluation systematically (Spaulding, 2008). Moreover, the data plan built trust with the LES (Spaulding, 2008). The data plan was a tool to communicate to the LES what I was actually going to execute so that there would be no surprises or unexpected inconveniences.

I chose a white paper to communicate the findings and recommendations of the qualitative formative program evaluation. In developing the white paper, I learned that the findings from the data collection and analysis phase of the study provided an assessment of the organization's needs. With the findings of my research in hand, I conducted a second literature review research to assist me in providing evidence-based recommendations that would improve the LES's PLC. I also learned that the white paper was more than merely writing recommendations. Through research, I noted that the white paper was a communication tool to provide information and based on the school's needs. Contemplating its format, I researched the organization of a white paper. There is no single format of a white paper; however, I realized that it needed to be persuasive in nature, and therefore based on sound research. Too often, recommendations for school improvement lack the research necessary to convince educators of their merit, which ultimately results in failed implementation of those ideas. I realized that the white paper should be in easily understood language and a conceptually easy-to-digest format.

Leadership and Change

I learned that to promote social change, honing my leadership skills was a priority: namely, effective written, listening, and oral communication, and decision-making skills. I used a combination of written and oral communication throughout the project. Primarily, I had to articulate orally the purpose for conducting the study clearly at the LES to get approval from the principal. In addition, I learned how to utilize detailed facts and research to support the proposal. From this experience, I also learned that leaders share decision making to promote change. For instance, during our discussion, the principal and I collaborated on the best options for conducting the study without overtaxing teachers while still gathering solid data for the study. I also learned that shared decision making helps with buy-in.

Choosing the type of interviews to conduct, I had to determine how I would interview, whom I would interview, what questions to ask, and when the interviews would take place. Ultimately, I decided to conduct semistructured interviews on a one-to-one basis to provide privacy. I created an interview guide based on the typologies derived from the conceptual framework. I determined the interviews would take place after the typological analysis and review of the archival SAI2 summary report. During the interview process, I learned that if I were to gain the necessary information, and ultimately provide recommendations that could promote social change, I needed to be a particularly excellent listener.

After writing the recommendations that would promote change, I needed to verify that the content in the white paper would actually be received and interpreted as I intended, so peer review and feedback from URR were critical. Any unclear message was

swiftly changed. Good leaders who guide change understand that the message that promotes change needs input from stakeholders for that change to work, and the message must be clear, complete, and convincing.

Analysis of Self as Scholar

I have learned that I have the capacity to create social change through the scholarly process of researching, analyzing literature, critical reflection, collaboration, and writing. I immersed myself in classical and current literature on PLCs to understand my research problem and create the research questions that guided this study. I discovered that ideas about the PLC materialized because of my interactions with various researchers and analyzing their work. I also immersed myself in literature on program evaluations and qualitative studies to develop the research design and methods, as well as gain ideas for analyzing and writing up data. My confidence on the topic grew through literature immersion, and I gained authority on the topic, which enabled me to speak confidently about my research.

I am a skeptic by nature, which had both advantages and disadvantages while creating the project. One advantage is that I do not take ideas at face value; therefore, I seek alternative ideas. This proved beneficial while researching because I was able to reflect critically on the various literatures to determine their worth. I consistently read books on PLCs while waiting for feedback. I also delved into blogs dedicated to PLCs to gain additional insight, ask probing questions, and provide my ideas for feedback. I joined Learning Forward, a professional learning organization. The Learning Forward organization provided information about PLCs and kept me abreast of new professional learning developments.

A disadvantage was my tendency to seek a wide range of possibilities: seeking alternative ideas, I found myself delving into other related areas that diverted my attention from the main topic of research. Once I learned how to stay focused on the one topic, I learned a great deal about PLCs and developed command of the topic.

While creating the project, I learned that collaborating with other scholars was essential to gaining a deeper knowledge and understanding of the PLC concept. Dr. Shirley Hord and personnel at Learning Forward responded enthusiastically to my contact and quickly networked me with other scholars in the field for resources. After emailing these scholars and practitioners about PLCs, I became passionate about my topic; moreover, I became energized to learn more from other scholars' literature. This newfound enthusiasm helped me to persist through minor setbacks and delays while writing the proposal.

Through the interactions with my chairpersons, peer reviewers, scholars, and practitioners of PLCs, literature, data, and research participants, I grew into a scholar who has gained a tremendous amount of knowledge and skills about evaluating PLCs, which I have applied to solve a real problem, thereby resulting in social change. The PLC at the LES may use the white paper to make future decisions about implementation. Moreover, the paper will spark a dialogue and, it is hoped, create a universal understanding and language about the components of a successful PLC.

Analysis of Self as Practitioner

I learned that scholarship informs practice. First, I conducted research on PLCs how they are evaluated. I then used the existing literature to create a framework from which to evaluate the PLC at the LES. The framework included the conceptual

framework for the literature review, research questions based on the conceptual framework, and data analysis plan that enabled me to put into practice a solid evaluation plan. After data analysis, I made interpretations using research that supported the results. I concluded that the PLC resembled that of a pseudo-community and, therefore, required extensive support to move towards becoming a true PLC. I conducted further research on how to conduct school change innovations, namely a PLC. With the new research literature review, I created research-based recommendations within a white paper, which, when applied, may enhance the PLC at the LES, thereby improving teacher and student learning. The research provided a wealth of knowledge that I put into practice to conduct the program evaluation.

To uncover phenomena, I questioned, analyzed, and synthesized information; this experience has prepared me to model for teachers the essential skills needed for collaborating in a PLC. I have already started sharing knowledge through modeling how to question one's practice. My understanding of the literature has taught me that trust is the foundation for collaboration. With this in mind, as a practitioner, I conducted a professional development for my grade level professional learning team at the LES wherein I modeled how to question one's practice, after which, teachers in the session began to share their misunderstandings. Following the meeting, teachers expressed how much they liked the session and that sharing experiences and formulating plans for improvement is needed during the collaborative sessions. As a practitioner, I have learned to share my understandings about a PLC using research as the foundation for solving problems. This has helped me to develop into a scholar-practitioner.

Analysis of Self as Project Developer

I learned that a project begins with a problem, and that developing any project requires involvement of those who are affected by the problem. I learned that I am resourceful in finding research to support or refute claims, and knowledgeable in the area of PLCs and project planning because of my educational experiences at Walden University. However, a problem needs to be verified; therefore, I used research literature to verify that the problem in fact exists. I learned that a project developer must have a sound plan to solve the problems within an educational setting. In order to conduct this formative program evaluation, I had to collaborate with school staff who were affected by the problem. As a project developer, I also learned that evaluation results must be further supported with additional review of literature to make sound program recommendations. I used my research, analytical, and reflection skills to immerse myself in literature that coincided with my research findings. I noted that recommendations also need the support of sound research and must match the needs and school culture. I also learned that with the passage of time to complete the project study, new information is bound to surface; therefore, as a project developer, I must continue to research and learn.

Study Reflection and Impact on Social Change

The formative program evaluation of PLCs filled a gap in practice at the LES. To improve a PLC's continuous improvement process and expose the strengths and weaknesses of the community, a program evaluation is needed (Aubusson et al., 2007; DuFour, 2007). Evaluation of a PLC will ensure program sustainability. The qualitative project study was important in that it ultimately produced a white paper detailing recommendations that, if implemented, could improve the PLC at the LES. A PLC is

touted to improve teacher and student (Hord & Tobia, 2011). The recommendations may change the culture and delivery of education and increase teacher learning that could lead to greater student learning. Other schools can benefit from this study if they judge their local context similar to the one described in the research study. As such, the recommendations could lead to closing of the achievement gap because increased teacher collaboration could lead to greater understanding of how to implement the new Common Core Curriculum.

While developing the project study, I learned that when a problem in an educational setting is identified, it is important to get background information to understand fully the problem. Examining previous research to identify commonalities and similarities is crucial to determining how to formulate a solution. Also, in conducting the interviews, I realized that if participants were unwilling to acknowledge and voice their experiences, I would not be able to determine the best solutions. The only way to change a program or process is first to recognize its strengths and weaknesses. Social change requires all of the aforementioned conditions, especially action and collaboration.

Implications, Applications, and Directions for Future Research

The formative program evaluation determined how teachers at LES perceived their PLC. I used a qualitative approach to understand the research problem and address the research questions (Creswell, 2012). The findings from this study suggest that school leaders and staff need training to apply the PLC concepts effectively. There were weaknesses found in all six dimensions of a PLC. Moreover, school leaders need to develop change knowledge and use an educational change model—such as Fullan's (2006) educational change model—to facilitate changing the culture of their school in

order to improve collaboration. The findings will be shared with the LES principal who may elect to share the results with the school staff and other school leaders. Another implication for application includes the need to develop and apply a continuous evaluation cycle when developing and implementing a PLC. The evaluation conducted in this study used Hord and Tobia's (2011) model of a PLC to reveal the strengths and weaknesses of the LES and provide recommendations in the white paper, which school leaders may choose to use to build and maintain a true PLC.

Future research should include an in-depth PLC survey, such as the PLCA-R. When funding is inadequate, using an already established survey such as the SAI2 can provide some indications, but the overall evaluation must also include a qualitative portion that has questions directly linked to a PLC model. In addition, because a standard definition for a PLC does not exist, it is incumbent upon future research to use both qualitative and quantitative methods to capture the experiences and lives of teachers. Future research could use a survey and follow-up with questions directly related to the findings from the survey to give participants opportunities to provide elaboration or explanations.

Conclusion

In this formative program evaluation, I investigated teachers' perceptions of their PLC within a local urban elementary school. The doctoral study filled a gap in practice by conducting a qualitative formative program evaluation and the findings will add to the body of literature on PLCs. The evaluation yielded strengths and severe weaknesses in the LES's PLC. Based on literature reviews of research on educational change and PLCs and the findings in Section 2, I provided recommendations for program improvement.

The recommendations were written in the context of a white paper. This white paper will be made available to the LES principal. The school may use the recommendations in the white paper as a guide to enhance the PLC.

One important lesson I learned from conducting the doctoral study was that integrity is required of researchers so that they can honestly evaluate the strengths and weaknesses of a study. Future researchers may want to replicate this study; as such, they may be able to mitigate the limitations cited as they proceed with advancing this doctoral study. The reflections in this section helped me determine and understand the strengths and weaknesses of the program evaluation project. I learned that no project is without limitations; however, some limitations can be overcome by acknowledging shortcomings and using existing literature as a guide. Through the process of redefining the problem and creating recommendations for future research, the process of creating a sustainable PLC can be continued through further research.

In addition, I learned that scholarship should be used to inform educational practices. However, to enact change based on scholarship, leadership is required. A leader who enacts change must understand change knowledge to be an effective change agent (Fullan et al., 2005). Although the change of an innovation is informed by theory, a focus on those who will implement change is imperative. Any type of educational change must therefore include a focus on the social and human sources of change. Therefore, the recommendations cited in the white paper focus on enhancing the PLC by first enhancing the knowledge of school leaders and teachers.

A PLC is a collaborative culture designed to engage school staff in continuous learning. The school leader is charged with creating an environment that empowers

teachers to share in decision making so that an environment of trust can flourish and result in true collaboration. Such collaboration is also required when school leaders create a continuous evaluations cycle throughout the development and implementation of a PLC. Program evaluations enable school leaders and school staff to determine a program's strengths and weaknesses so that action plans for improvement to support building and maintain a PLC. The recommendations in the white paper product (see Appendix A), if applied, can help change the school's culture to one wherein trust is strengthened and collaboration is truly enacted, so that teacher and student learning can improve.

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Appendix A: White Paper

Introduction

This white paper presents the findings and recommendations of a formative program evaluation that used a qualitative design. The goal was to conduct a formative evaluation of the school's PLC in order to determine its weaknesses and overall strengths. To this end, I conducted and analyzed semistructured interviews. Before the interviews, a typological analysis was conducted on the archival SAI2 survey summary report. Based on the strengths and weaknesses established by the typological analysis of the SAI2 summary report, the interview questions were refined. Next, I conducted 10 in-depth interviews in order to answer the research questions. Figure A1 displays the research questions that guided the program evaluation.

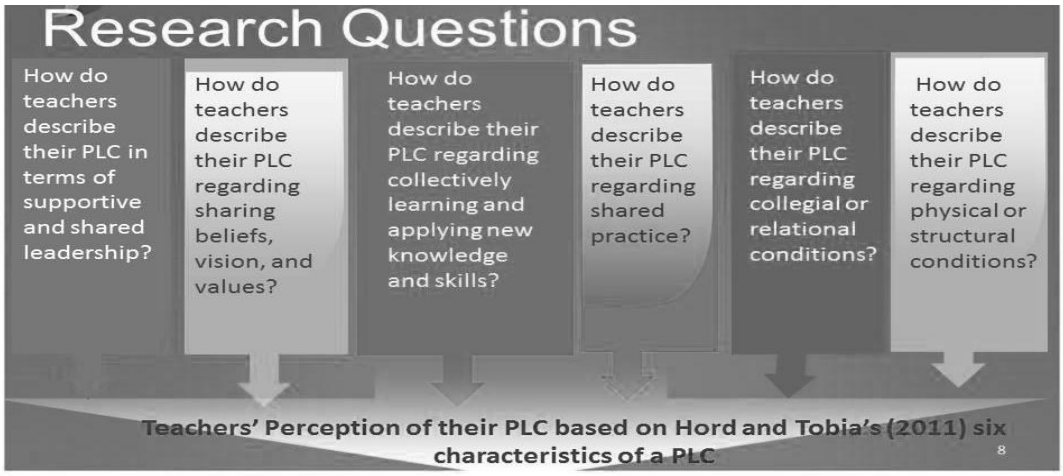

Figure A1: Research questions.

The vision of the LES is to promote excellence in education by "developing life-long learners and productive citizens who are valued as individuals" (LES, 2013, p. 4). A PLC is touted by researchers in the field to improve adult learning based on their specific learning needs; as such, teachers will be prepared to assist student learning based on

individual student needs (Hord & Tobia, 2011). The qualitative data collection and subsequent analysis answered the research questions and highlight the strengths and weaknesses of the PLC at the LES. The subsequent recommendations are derived from the findings and a literature review that focused on school change and PLC development, and they may support the LES's vision that focuses on valuing individuals and developing lifelong learners.

Background to the Study

What Is a Professional Learning Community?

Figure A2 displays the PLC model used in the analysis of this research study and described herein. A PLC is a culture in which teachers are empowered to share in decision making and supported with professional learning based on student and teacher data. The new learning in a PLC is immediately applied to increase student learning. Supportive and shared leadership involves principals sharing power with teachers to make decisions about their learning experiences with a focus on improving student learning (Hord & Tobia, 2011). School leaders are important and need with ensuring that teachers have the available resources to make necessary decisions. Leaders are charged with developing shared assumptions, values, and vision with the entire LES's staff. Hord and Tobia (2011) proclaimed that such sharing requires total commitment to improve student learning and staff members' daily work.

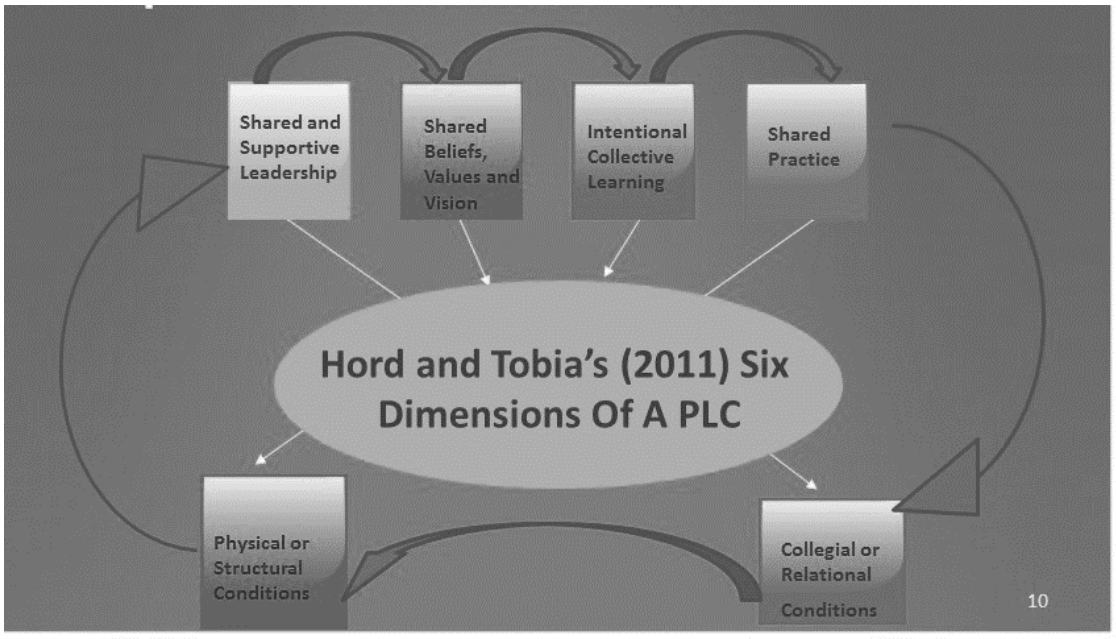

Figure A2. Hord and Tobia's six characteristics of a professional learning community. Adapted from *Reclaiming Our Teaching Profession: The Power of Educators Learning in Community,* by S. M. Hord and E. F. Tobia, 2011.

Teachers' daily work involves intentional collective learning focused on student achievement. Intentional collective learning refers to staff collaboration during the continuous improvement cycle (Hord & Tobia, 2011). This involves staff members using student data to plan lessons precisely targeted to meet individual student needs, applying new knowledge and skills to that effort, and evaluating that progress using self-reflection and feedback from other staff members (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a). In this culture of collaboration, teachers also share practice by observing each other's classroom and giving feedback on improving instructional techniques that address students' needs (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a). Collegial and relational conditions

holds a PLC together. Collegial and relational conditions involve leadership supporting the staff in developing high regard, respect, and trust, which requires modeling, development, and patience (Hord & Tobia, 2011). Physical or structural conditions are another characteristic of a PLC. These include the time, space, resources, and communication necessary for school staff to participate in intentional learning (Hord &Tobia, 2011).

Why Evaluate a Professional Learning Community?

With increased accountability measures in place from the local, state, and national government as well as educational entities, teachers are further pressured to increase student achievement and close achievement gaps (Berryhill et al., 2009; Cruz & Brown, 2010; Davidson, 2009; Jones & Egley, 2009). Teachers at the LES are involved in professional learning within a PLC. A PLC is touted to boost teacher and student learning (DuFour & Fullan, 2013; Hord & Tobia, 2011). Schools around the globe implement PLCs, often without knowledge or understanding of the components (DuFour, 2007; Hord & Tobia, 2011). As a result, school leaders implement a PLC based on ill-conceived ideas that result in unrealized benefits of increased teacher and student learning (DuFour, 2007; Hord & Tobia, 2011). Hellner (2008) suggested school officials evaluate a PLC to inform school leaders of its weaknesses as well as the strengths. A formative evaluation of the LES's PLC had not been conducted and was needed to determine its strengths and weaknesses, so that recommendations could be made regarding program improvements (Joyce & Calhoun, 2011). A formative evaluation is conducted during implementation and the outcomes can be immediately applied to improve a program (Spaulding, 2008).

How was the Evaluation Implemented?

The lack of a definition added to the complexity of examining a PLC (Stoll et al., 2006). A qualitative strategy was chosen to capture the complexity of the phenomena (Creswell, 2012). Hord and Tobia's (2011) six characteristics of a learning community was the conceptual framework that informed the research questions, guided the literature review, and formed the basis for the data analysis.

This formative program evaluation determined the weaknesses as well as the strengths of the PLC at the LES. Data collection began by first requesting access to the SAI2 summary report from the spring of 2014. Only a summary report of the SAI2 was provided, not the raw data. Since some questions on the SAI2 survey related to PLC, a typological analysis was conducted to align survey statements with the typologies of a PLC. The typologies from the conceptual framework—Hord and Tobia's (2011) six characteristics of a PLC—were used for the typological analysis. Then, a review of the SAI2 summary report was conducted to establish the weaknesses as well as the strengths of a PLC to refine the interview questions. First, definitions for each typology were created using the review of literature. Then, the definitions provided the foundation to align the survey statements from the SAI2 with the typologies within the conceptual framework.

Results from the Review of the Archival SAI2 Survey

The data review of the survey summary report indicated that all PLC characteristics are being implemented. However, certain characteristics displayed marked weaknesses. For the characteristic of shared practice, 100% of the survey statements fell within the area of opportunity category, as did for collegial and relational conditions,

making both categories the weakest PLC characteristics. Intentional collective learning (60%) and structural or physical conditions (67%) were also within the area of opportunity category.

Table A1
Results From the Review of the Archival SAI2 Survey Based on the SAI2 Survey Summary Report

Characteristic of Professional Learning Community	Strength	Area of Opportunity	Percentage of Statements in Areas of Opportunity	Ranking by Percentage of Statements within Areas of Opportunity
Shared and supportive leadership	4	6	60	5
Shared beliefs, values, and vision	3	1	25	6
Intentional collective learning	4	8	75	3
Shared practice	0	2	100	1
Collegial or relational conditions	0	2	100	1
Physical or structural conditions	1	2	67	4

Note. $N = 46$.

The results from the review of SAI2 summary report indicated a need to include interview questions regarding how teachers think each typology could be improved so that the PLC could be improved. In addition, a survey statement on shared beliefs, values, and vision included a question about peer-to-peer accountability, which was an area of weaknesses noted for the school of study and not previously included in the original interview protocol. Therefore, a question was added to the interview protocol that asked how teachers hold each other accountable. Based on the review of the SAI2 summary

report, relational and collegial conditions was also a noted weakness. Therefore, for each interview I attempted to make participants feel comfortable, develop further rapport, and remind participants about their rights to decline participation at any time.

In sum, a review of the SAI2 summary report was conducted to inform the development of this qualitative formative program evaluation. Typological analysis was also conducted on the SAI2 summary report. The typological analysis and review of the SAI2 summary report informed the interview questions for this qualitative formative program evaluation research. After reaching a refined interview protocol, I was prepared to conduct the interviews. Next, certified teachers were invited to be participants in the interview. The 45-min to 1 hour interviews were also analyzed using typological analysis to answer the research questions.

Typological Analysis of In-Depth Interviews

I conducted a typological analysis of the interviews using features in Microsoft Word and Excel (Hatch, 2002). I read each transcript and coded data within each predefined theme. I created a separate spreadsheet to keep track of data. I categorized the codes based on the patterns identified as subthemes emerged and were noted. The relevance of each quote was defined by whether it aided in answering the following research questions (Creswell, 2012):

RQ1: How do teachers describe their PLC in terms of supportive and shared leadership?

RQ2: How do teachers describe their PLC regarding sharing beliefs, vision, and values?

RQ3: How do teachers describe their PLC regarding collectively learning and applying new knowledge and skills?

RQ4: How do teachers describe their PLC regarding shared practice?

R5: How do teachers describe their PLC regarding collegial or relational conditions?

RQ6: How do teachers describe their PLC regarding physical or structural conditions?

To analyze data in this qualitative study, I used Hatch's (2002) typological analysis procedures and organized data into the predefined categories. The conceptual framework and research questions based on Hord and Tobia's (2011) six characteristics of a PLC guided the data analysis for this qualitative study. Typologies must be created before data collection to provide a framework for coding and analyzing the data (Ayres & Knafl, 2008; Hatch, 2002). The typologies gleaned from the conceptual framework and research questions used in this qualitative data analysis included the following: "supportive and shared leadership; shared beliefs, values, and vision; "intentional collective learning; shared practice; physical or structural conditions; and collegial or relational conditions" (Hord & Tobia, 2011, Location p. 486-498).

Data analysis began with transcribing the interview digital recordings, word-by-word. After transcribing, I chose one transcript at a time to read with one typology in mind. Then, on the second reading, I read the transcript with the same one typology in mind and highlighted the relevant data related to the specific typology. Hatch (2002) recommends researchers repeat the first two steps for each of the remaining typologies. For the remaining interviews, I repeated the process of reading, rereading, highlighting

relevant data, and copying and pasting the relevant data into the appropriate document based on and saved according to typology.

After recording the main ideas in the document, I looked for and noted patterns among the participants as subthemes began to emerge within each predefined theme. I then coded entries according to the identified subthemes and based on the research questions. The research questions, based on the conceptual framework, informed the typologies in this study. I reread the subthemes within each typology category to ensure the data supported the pattern. I also looked for non-examples and separated these entries into a separate group in order to maintain records. Next, I wrote a generalization for each subtheme in order to describe the participants' perceptions. I highlighted and linked powerful interview quotes to the subthemes and reanalyzed for verification and to answer the research questions (Creswell, 2012). The entries provided rich, thick data that supported the identified subthemes (Merriam, 2009).

Qualitative Data Analysis

Theme 1: Supportive and Shared Leadership

RQ1: How do teachers describe their PLC regarding leadership?

The data analysis revealed strengths and weaknesses inherent to the supportive and shared leadership characteristic. Teachers described the current state of supportive and shared leadership as the provision of professional learning as well as opportunities to give input—however, there were no follow-up actions to support the application of new learning or opportunities to give input into decisions. Several subthemes emerged, including (a) absence of input into decision making, (b) lack of support for the application of new learning, and (c) additional support needed for applying new learning.

Ten teachers stated that professional learning is provided; however, nine of those same teachers voiced that follow-up of the application of newly learned teaching strategies learned during the professional learning sessions was lacking. In addition, 10 teachers stated that structures to give input are present within the PLC; however, there was no evidence that supported the existence of teachers giving input into decision making. One teacher stated, "There is not a great opportunity for teachers to have input in decisions." In fact, teachers perceived there were barriers to giving input, such as fear of reprimand and having mandated policies regarding teaching. In order to improve shared and supportive leadership, teachers recommended that leadership be more supportive with helping teachers apply new learning. As an example, one teacher stated, "If they [teachers] need support in teaching a lesson, make sure that somebody comes in and model that lesson."

Theme 2: Shared Beliefs, Values, and Vision

RQ2: How do teachers describe their PLC regarding sharing beliefs, values, and vision?

The data analysis revealed strengths and weaknesses within the characteristic of shared beliefs, values, and vision. The following subthemes emerged: (a) a collaborative written statement, (b) shared beliefs, values, and vision stated as individualized beliefs, (c) lack of peer-to-peer accountability, and (d) improved open communication. Teachers described shared beliefs, values, and vision as helping students succeed. Eight teachers voiced that at the LES, the shared beliefs, values, and vision were a collaboratively written statement. However, 10 teachers talked about the shared vision using individualized statements. For example, three teachers stated that the shared vision

embodied a common goal that was different based on students' needsf. On the other hand, two teachers stated that beliefs, values, and vision are reflected in teaching practices. Lastly, the responses in this category generated another subtheme that indicated a lack of peer-to-peer accountability. Although eight teachers stated they keep each other accountable, the teachers perceived accountability in term of teachers simply meeting during collaborative planning. As an illustration, one teacher stated peer-to-peer accountability was when teachers collaborated together. Three teachers also felt peer-to-peer accountability occurred through of use of their students' test scores made visible for colleagues to view and discuss during data meetings. One teacher stated, "Knowing that your [students'] test scores are [going to] show up somewhere and everybody is going to be ranking you against the person next to you . . . I think that keeps you in line." Finally, teachers recommended that to improve shared beliefs, values, and vision, improved communication between staff members as well as between staff and administration is needed.

Theme 3: Intentional Collective Learning

RQ3: How do teachers describe their PLC regarding intentional collective learning?

Teachers described intentional collective learning at the LES as informally sharing teaching strategies, student data, and new teaching strategies during professional learning meeting. However, they noted this occurred without follow-up actions to apply data or new learning coupled with ineffective observations for personalized learning. The following subthemes emerged: (a) a lack of collaboration and collective work, (b) absence of data applied to increase student learning, (c) lack of applying new learning,

and (d) of teacher input needed for professional learning. The data within this category revealed a lack of collaboration and collective work. Nine teachers stated that teachers create lesson plans individually based on their assigned subject, then swap lessons plans so that all teachers have plans for each subject. Ten teachers stated they did not evaluate each other's work. There was no evidence that supported the existence of teachers collectively applying new learning or evaluating each other's work. Also, the findings in this category revealed a lack of using data to improve student learning. There was also no evidence that supported the existence of teaching using data or applying data during collaborative meetings, although a majority of teachers stated that data analysis occurred during data meetings in the data room. Nine teacher responses in this category revealed teachers thought they lacked support for applying new practices. Finally, teachers recommended that teacher input into professional learning is needed. One teacher stated, "I think getting teachers to put their input in is going to have a lot more teachers on board."

Theme 4: Shared Practice

RQ4: How do teachers describe their PLC regarding shared practice?

The data analysis revealed strengths and weaknesses within shared practice. The following subthemes emerged: (a) peer-to-peer observations as a new initiative, (b) a lack of peer feedback, (c) informally sharing instructional practices, and (d) feedback needed for peer observations. During the writing of this research study, peer-to-peer observations were implemented at the LES as a new initiative. Ten teachers stated that the school offered peer-to-peer observations. Five teachers raved about the positive experience of observing another teacher's classroom. However, six teachers stated that the initiative

lacked peer feedback. One teacher stated, “In this school … we had the opportunity this year to observe, but I don’t think it’s something done effectively. I had teachers come and observe me, but I never got feedback from it, but we were all required to give feedback.” As such, teachers recommended that feedback should be given after observations. One teacher voiced, “I do think that it’s important to share the feedback with whomever it concerns.” Another finding in this category was that seven teachers responded that instructional practices were shared informally during collaborative planning meeting; however, evidence that the sharing of instructional practice was consistent or resulted in feedback was not evident. Moreover, three teachers were not sure if the sharing of instructional practices existed.

Theme 5: Collegial or Relational Conditions

RQ5: How do teachers describe their PLC regarding collegial or relational conditions?

Data analysis revealed weaknesses within collegial and relational conditions. Teachers described collegial or relational conditions at the LES as adversarial and fragmented with low tolerance for differences and giving critical feedback. The following subthemes emerged: (a) low levels of trust, (b) lack of reflective collaboration, (c) intolerance of differing perspectives, and (d) collegial and relational conditions begins with leadership. Six teachers stated that low levels of trust existed within the PLC. One teacher stated, “I don’t think trust [exists] as a whole. I [don’t] see very much at my current school.” Eight respondents also revealed that peers did not give each other feedback. One teacher stated, “I mean, there can’t be any feedback because there’s no conversation about strategies and conversations about instruction or collaboration.”

Finally, the respondents revealed that there is an intolerance of differing opinions. Eight teachers stated that teachers did not respect each other's opinions. One teacher stated, "You can't be honest . . . you just have to toe the line." As such, teachers recommended that school leaders set the tone for improved collegial and relational conditions. For example, one teacher stated, "If the people (administrators) at the top treat those staff with respect, then I think sometimes more people would respect each other and feel safer."

Theme 6: Physical or Structural Conditions

RQ6: How do teachers describe their PLC regarding physical or structural conditions?

The data analysis revealed strengths and weaknesses within physical or structural conditions. Teachers described the physical or structural conditions of their school as unintentional and underutilizing online collaborative tools. The following subthemes emerged: (a) numerous opportunities for collaboration, (b) lack of focus for collaboration, (c) underutilized opportunities for online collaboration, and (d) e-communities needed for collaboration. Ten teachers voiced that there are structures in place and the school has numerous professional learning teams. One teacher stated, "There are plenty of different teams." Although structures are in place for collaboration, nine teachers stated that the collaboration lacked focus. One teacher stated, "I mean sometimes, we would come into the group . . . we would be just grading papers or . . . doing what they need to do." Finally, the responses in this category revealed that online PLC opportunities are underutilized due to the lack of training on how to use the online program. As such, four teachers recommended that e-communities be improved. One

teacher stated that the school needs to "maximize online opportunities for teachers here at school."

Recommendations

This project study revealed that the LES's PLC is in the beginning stages of community development: teachers continue to work in isolation because there is no true collaboration, only contrived collegiality. In addition, low levels of trust existed as amongst and between school staff. Because of these conclusions, the primary recommendation is that the entire LES's staff, faculty, and leaders work together to re-culture the school. A PLC requires a change to a school that embraces collaboration rather than teaching in isolation (DuFour, & Fullan, 2013; Hord & Tobia, 2011).

Recommendation 1

Collegial and relational conditions indicated low levels of trust. Trust is the foundation for collaboration (Tschannen-Moran, 2001).School leaders at LES should hire an outside agency to provide team building exercises as both teachers and school administrators undergo PLC training. School leaders and teachers need to understand the stages of group development if they are to truly engage in collaboration within their PLC (Roberts & Pruitts, 2008).

Recommendation 2

The LES's school leaders must become familiar with change knowledge and adopt an educational change model that will ensure proper implementation of a PLC (Fullan et al., 2005). School leaders at the LES must attain professional learning and training about how to implement a PLC. This will enable school leaders at the LES to collaborate with

school staff to develop a tested model for their PLC that can guide implementation in detail for program sustainment (Ermeling & Gallimore, 2013).

Recommendation 3

School leaders at the LES should provide faculty and staff with ongoing professional learning about the concept of a PLC, with an emphasis or focus on collaboration techniques and tools, problem solving, giving critical feedback, and analyzing and using data. Productive collaboration skills build trust (Carrington et al., 2010). Hord and Tobia (2011) asserted that protocols that enable all members to participate in a discussion can build trust during collaboration.

Recommendation 4

Building cultures of evaluation and learning are simultaneous processes (Fullan et al., 2005). To develop and sustain implementation and deepen teachers' and school leaders' meaning of learning about the PLC, the LES's faculty and staff should create a system in which continuous evaluations occur to monitor and evaluate the implementation (Fullan et al., 2005). When school leaders and teachers collect and analyze data, the facilitation of knowledge and understanding of the data can result in action planning for continued program improvement (Fullan et al., 2005).

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Appendix B: School-wide Professional Learning Community Teams

Title	When	Frequency	Description
Faculty Meetings	Tuesday/ Before School	Monthly	These meetings will be facilitated by the Administrative Team for the purpose of disseminating important information and staff recognition (staff member of the month, perfect attendance, and staff spotlights).
Quality Teams Meetings	Tuesday/ Before School	Monthly	These meetings will provide staff members with county- and school-wide information specific to each core subject area along with AKS-CQI, school culture, discipline, and media and technology.
Vertical Team Planning	Tuesday/ Before School	2–3 Times a Year	Grade level teachers will participate in planning sessions that will focus on instructional practices that provide a seamless transition from grade to grade. Professional development for staff to enable all children in the school to meet the state student academic achievement standards. These sessions will focus on sequencing, or linking grade level curriculum across the school and with pre-K and middle level curriculum.
Professional Book Studies	Tuesday/ Before School	2–3 Sessions a Year	Administrators and teachers will have an opportunity to engage in professional discourse around a specific topic of teaching and learning. Staff members will be committed to reading and discussing a selected book. Professional book studies initiate the opportunity to examine and discuss a professional topic selected by a cohort of peers. It offers a supportive environment for staff members to engage in job-embedded practices for personal and professional growth.

Name of Activity	When	Frequency	Description
Literacy Professional Learning	Thursday/ During Planning	1–2 Times a Month	Teachers in grades K-5 will receive year-long professional learning that will offer job-embedded training in using the Readers' and Writers' Workshop model and Research School District Balanced Literacy Framework. This course will help teachers develop practical techniques, instructional strategies, and routines that allow them to work with their students in small groups at their level of understanding and need. Teachers will be able to differentiate literacy instruction in ways that better meet the diverse needs of the students. These sessions will also include opportunities to observe teaching and learning as peer observations, several book studies by author Jeff Anderson, and opportunities to make and take materials to use in the classroom.
Math Professional Learning	Tuesday/Before School	1–2 Times a Month	K-5 teachers will receive year-long staff development that will offer job-embedded training in using the Math Workshop Model and Research School District Balanced Numeracy Framework. This course will help teachers develop practical techniques, instructional strategies, and routines that allow them to work with their students in small groups at their level of understanding and need. Teachers will be able to differentiate math instruction in ways that better meet the diverse needs of the students. These sessions will also include opportunities to observe teaching and learning as peer observations, a book study and opportunities to make and take materials to use in the classroom.

Note. Adapted from School-wide Title 1 Plan, by Local Elementary School, 2013.

Appendix C. Grade-Level Professional Learning Community Teams

Name of Activity	When	Frequency	Description
Instructional Focus Team Meeting	Wednesday /During Planning and Thursday/ During Planning	Weekly	The Instructional Focus Team Meeting time is designed so grade level teams have weekly team instructional planning. This job embedded staff development focuses on planning common units of study using Research-Based Instructional Strategies and common formative assessments.
Collaborative Planning Sessions	½ Day	Twice Yearly	Certified teachers will participate in half day collaborative planning sessions. These sessions will be based on school data to address the needs in numeracy, literacy, and Science. It is also a time in which school leadership can update the staff on current trends in their respective areas.
Team Collaboration	Thursday/ Before School	Weekly	Grade level planning sessions will provide opportunity for collaboration with EIP, ESOL, FOCUS, and Special Education Resource teachers to increase consistency of curriculum and instruction school-wide.
Literacy Professional Learning	Thursday/During Planning	Weekly August-December	Teachers in grades K-5 will receive year-long professional learning that will offer job-embedded training in using the Readers' and Writers' Workshop model and Research School District Balanced Literacy Framework. This course will help teachers develop practical techniques, instructional strategies, and routines that allow them to work with their students in small groups at their level of understanding and need. Teachers will be able to differentiate literacy instruction in ways that better meet the diverse needs of the students. These sessions will also include opportunities to observe teaching and learning as peer observations, several book studies by author Jeff Anderson, and opportunities to make and take materials to use in the classroom

Name of Activity	When	Frequency	Description
Math Professional Learning	Thursday/ During Planning	Weekly January-May	K-5 teachers will receive year-long staff development that will offer job-embedded training in using the Math Workshop Model and Research School District Balanced Numeracy Framework. This course will help teachers develop practical techniques, instructional strategies, and routines that allow them to work with their students in small groups at their level of understanding and need. Teachers will be able to differentiate math instruction in ways that better meet the diverse needs of the students. These sessions will also include opportunities to observe teaching and learning as peer observations, a book study, and opportunities to make and take materials to use in the classroom.
Data Days/Kid Talk (RTI Process)	Thursday/ During Planning	Monthly	Data analysis sessions will focus on interim assessment results, national and state assessment disaggregated data, and student class performance. Grade levels will also have an opportunity to meet with a member of the RTI Team to discuss student academic and behavioral concerns and interventions to meet the needs of students.

Note. Adapted from Title I School-Wide/School Improvement Plan, by Local Elementary School, 2013.

Appendix D: Institutional Review Board (IRB) Approval Letter

From: **IRB** <IRB@waldenu.edu>
Date: Thu, Jun 19, 2014 at 5:46 PM
Subject: IRB Materials Approved - Cherie Ameyaw

Dear Ms. Ameyaw,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Formative Evaluation of a Professional Learning Community in an Urban Elementary School."

Your approval # is 06-19-14-0018499. You will need to reference this number in your doctoral study and in any future funding or publication submissions. Also attached to this email is the IRB approved consent form. Please note, if this is already in an on-line format, you will need to update that consent document to include the IRB approval number and expiration date.

Your IRB approval expires on June 18, 2015. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application document that has been submitted as of this date. This includes maintaining your current status with the university. Your IRB approval is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, your IRB approval is suspended. Absolutely NO participant recruitment or data collection may occur while a student is not actively enrolled.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu: http://researchcenter.waldenu.edu/Application-and-General-Materials.htm

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Please note that this letter indicates that the IRB has approved your research. You may not begin the research phase of your doctoral study, however, until you have received the **Notification of Approval to Conduct Research** email. Once you have received this notification by email, you may begin your data collection.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Sincerely,
Libby Munson
Research Ethics Support Specialist
Office of Research Ethics and Compliance
Email: irb@waldenu.edu
Fax: 626-605-0472
Phone: 612-312-1341
Office address for Walden University:
100 Washington Avenue South
Suite 900
Minneapolis, MN 55401

Appendix E: Alignment of Standards Assessment Inventory 2

Professional Learning Community Characteristics/ Definition	Research Question	SAI Questions
Shared and supportive leadership involves the principal sharing in the responsibility with teachers to make decisions that will improve student learning (Hord, 1997; Hord & Tobia, 2011, Learning Forward, 2014a).	How do teachers describe the PLC regarding supportive and shared leadership?	S14: My school's leaders consider all staff members to be capable of being professional learning leaders. S10: My school's leaders advocate for resources to fully support professional learning. S38: Teachers in my school receive ongoing support in various ways to improve teaching. S9: My school's leaders are active participants with other staff members in the school's professional learning. S24: In my school, various data, such as teacher performance data, individual professional learning goals, and teacher perception data, are used to plan professional learning. S19: Teachers in my school are involved with the decision making about how professional learning resources are allocated. S33: In my school, learning in my school includes various forms of support to apply new practices. S36: Teachers' input is taken into consideration when planning school-wide professional learning. S30: In my school, teachers' backgrounds, experience levels, and learning needs are considered when professional learning is planned and designed. S16: Teachers in my school are involved with monitoring the effectiveness of the professional learning resources.
Shared beliefs values and vision is total commitment and belief of school staff that improving student learning is shared by all and reflected in their work (Hord, 1997, Hord & Tobia, 2011 Learning Forward, 2014a).	How do teachers describe their PLC regarding sharing in the beliefs, vision, and values?	S3: Learning community members in my school believe the responsibility to improve student learning is shared by all stakeholders, such as all staff members, district personnel, families, and community members. S7: All members of the learning communities in my school hold each other accountable to achieve the school's goals. S47: All professional staff members in my school are held to high standards to increase student learning. S40: My school's professional learning plan is aligned to school goals.
Professional Learning Community Characteristics/Definition	Research Question	SAI Questions
Intentional collective learning is the staff involved in collaboration	How do teachers describe the	S5: My school's learning communities are structured for teachers to engage in the continuous improvement cycle (i.e., data analysis, planning, implementation, reflection,

during the continuous improvement cycle, which involves staff members using student data to plan lessons targeted to meet individual student needs, apply new knowledge and skills, and evaluate their progress using feedback from self-reflection and other staff members (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).	PLC regarding members collectively learning and applying new knowledge and skills?	and evaluation). S2: Learning communities in my school meet several times per week to collaborate on how to improve student learning. S23: In my school, teachers have an opportunity to evaluate each professional learning experience to determine its value and impact on student learning. S32: Teachers in my school are responsible for selecting professional learning to enhance skills that improve student learning. S25: My school uses a variety of student achievement data to plan professional learning that focuses on school improvement. S42: Professional learning experiences planned at my school are based on research about effective school change. S37: A primary goal for professional learning in my school is to enhance teaching practices to improve student performance. S44: Professional learning at my school focuses on the curriculum and how students learn. S45: Professional learning in my school contributes to increased student achievement. S48: In my school, professional learning supports teachers to develop new learning and then to expand and deepen that learning over time.

Shared practice is when teachers support each other by observing each other's classroom and giving feedback that will improve a teacher's instructional techniques that will address student needs (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).	How do teachers describe their PLC regarding shared practice?	S35: In my school, teachers have opportunities to observe each other as one type of job-embedded professional learning. S43: In my school, teachers give frequent feedback to colleagues to refine the implementation of instructional strategies.
Collegial or relational conditions is when a supportive, trusting atmosphere is created that sustains collaboration and collective learning (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).	How do teachers describe their PLC regarding physical or structural conditions?	S1: My school system has policies and procedures that support the vision for learning communities in schools. S34: In my school, participation in online professional learning opportunities is considered as a way to connect with colleagues and to learn from experts in education. S18: In my school, time is available for teachers during the school day for professional learning.
Physical or structural conditions is when the school has policies and procedures in place that provides for physical space, time and resources necessary for teacher collaboration (Hord, 1997; Hord & Tobia, 2011; Learning Forward, 2014a).	How do teachers describe their PLC regarding collegial or relational conditions?	S6: In my school, learning community members demonstrate effective communication and relationship skills so that a high level of trust exists among the group. S12: My school's leaders cultivate a positive culture that embraces characteristics such as collaboration, high expectations, respect, trust, and constructive feedback.

Note. Adapted from Standard Assessment Inventory 2 by Learning Forward, 2014b, retrieved from http://learningforward.org/standards/standards-assessment-inventory-sai#.UncFohBGYQd; *Reclaiming our teaching Profession: The Power of Educators Learning in Community* by S. M. Hord and E. F. Tobia, 2011.

Appendix F: Interview Questions for Professional Learning Community Participants

Research Questions	Semistructured Interview Questions
Shared and Supportive Leadership How do teachers describe the professional learning community regarding supportive and shared leadership?	How do teachers describe supportive and shared leadership? How can the school's shared and supportive leadership be improved to enhance the professional learning community? *Prompts:* How would you describe the school leadership? Is leadership shared at the school? Is school leadership supportive of the professional learning community?
Shared Beliefs, Values, and Vision How do teachers describe their professional learning community regarding sharing in the beliefs, vision, and values?	How do teachers describe shared beliefs, vision, and values? How do teachers hold each other accountable? How can the school's shared beliefs, vision, and values be improved to enhance the professional learning community? *Prompts:* How does the professional learning community reflect shared beliefs? How does the professional learning community reflect shared values? How does the professional learning community reflect shared vision
Intentional Collective Learning How do teachers describe the professional learning community regarding members collectively learning and applying new knowledge and skills	How do teachers describe intentional collective learning? How can the school's intentional collective learning be improved to enhance the professional learning community? *Prompts:* How do teachers learn together? How do teachers engage in student data analysis? How do teachers collectively evaluate the implementation of lessons? How is new learning applied by the professional learning community?
Shared Practice How do teachers describe their professional learning community regarding shared practice?	How do teachers describe shared practice? *Prompts:* What happens when teachers view the implementation of instructional strategies in another teacher's classroom? How do teachers share instructional practices? How do teachers improve their own teaching?

Research Questions	Semistructured Interview Questions
Collegial or Relational Conditions How do teachers describe their professional learning community regarding collegial or relational conditions?	How do teachers describe collegial or relational conditions? How can the school's relational conditions be improved to enhance the professional learning community? *Prompts:* How do teachers in the professional learning community enhance trust among one another? How do teachers express differences of opinions? How do teachers provide feedback to one another?
Physical or Structural Conditions How do teachers describe their professional learning community regarding physical or structural conditions?	How do teachers describe physical or structural conditions? How can the school's physical conditions be improved to enhance the professional learning community? Prompts: How are collaborative teams structured? Is there enough time set aside for collaboration? How can the school's physical conditions be improved to enhance the professional learning community?

Appendix G: Informed Consent

INFORMED CONSENT FORM

You are invited to take part in a research study of how teachers experience and describe their professional learning community. The researcher is inviting certified teachers at Local Elementary School to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Cherie Ameyaw, who is a doctoral student at Walden University. You may already know the researcher as a 1st grade teacher at Local Elementary School, but this study is separate from that role.

Background Information:
The purpose of this study is to understand teachers' perceptions of their professional learning community at the local research site.

Procedures:
If you agree to be in this study, you will be asked to:

1. Participate in a 45 minute to 1 hour interview. The interview will be scheduled at your convenience, at your place of work. The interviews will be digitally recorded with your permission. The information from the recorded interviews will be transcribed. The recordings will be destroyed as soon as transcribed. If recording is declined, the interview will be recorded by hand. The researcher will develop a way to code data to ensure that your name is protected. Your name will not be used in the research report. The school's name will not be used in the research report.
2. You will be asked to read the researcher's findings and interpretations and give feedback.

Here are some sample questions:
1. How do teachers describe shared beliefs, vision, and values?
2. How do teachers describe intentional collective learning?
3. How do teachers describe shared practice?

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at Local Elementary School or the researcher will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this type of study may involve some risk of the minor discomforts that can be encountered in daily life, such as such as fatigue, stress or becoming upset. In the event

you experience stress or anxiety during your participation in the study you may terminate your participation at any time. You may refuse to answer any questions you consider invasive or stressful. Being in this study would not pose a risk to your safety or wellbeing.

You are not anticipated to receive any direct benefits for participating in this study. However, this research may potentially yield valuable recommendations for the school to consider for program improvement of their professional learning community. The recommendations may change the culture and delivery of education and increase teacher knowledge and skills that could lead to greater student achievement. Other schools can benefit from this study if they judge their local context similar to the one described in the research study.

Payment:
There will be no compensation provided for your participation in this study.

Privacy:
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by Cherie Ameyaw. The data will be stored on a password protected computer and stored in a locked file inside the researcher's home. Only the researcher will have access to the data. Data will be kept for a period of at least 5 years, as required by the university. After 5 years, the data will be deleted from the computer. In the case of paper documents, all documents will be shredded.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at xxx@waldenu.edu or by telephone at 404-xxx-xxxx. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number 612-xxx-xxxx. Walden University's approval number for this study is **06-19-14-0018499** and it expires on **June 18, 2015**.

If you return a paper copy of this consent form, I will make a copy and give a paper copy back to you within one business day for you to keep for your records.

If you give your consent by replying this email, print or keep a copy of the consent form for your records.

Statement of Consent:
I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Printed Name of Participant _____

Date of consent _____

Participant's Signature _____

Researcher's Signature _____

You may also opt to send an electronic signature by including your email address here:_____ and emailing this document back to the researcher. Also, in the body of the email **write the words 'I Consent' to signify that you agree to participate.**

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

This has been approved by the Institutional Review Board of as acceptable documentation of the informed consent process and is valid for one year after the stamped date.
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Appendix H: Letter of Introduction and Recruitment for Participant Participation

Dear Colleague:

I am writing to you with great excitement and anticipation. Presently, I am a doctoral candidate at Walden University. I am involved in a very important research study designed to describe how teachers perceive their participation in a professional learning community at Local Elementary School. A professional learning community is synonymous for collaborative team planning teams, grade level collaborative teams, and other team meetings at Local Elementary School. A professional learning community is touted to improve teacher instructional practice and thereby increase student achievement.

Because you are a participant in the school's professional learning community, I would be honored to have you as a participant in this study. I invite you to participate in a single face-to-face interview. The interview will take you about 45 to 60 minutes. Starting (two weeks from dated letter of instruction), we will schedule the interview at a time convenient for you. Participation in this study is completely voluntary. Please note that I will keep all data related to this study completely confidential. Your name will not be used in the research report. The school's name will not be used in the research report.

If you would like to learn more about the study, please reply this email by_____.

For this study, I will use 10–12 participants. If more than 12 teachers volunteer to be interviewed, I will place all names in a bowl and randomly select 12 for inclusion. I will send a separate informed consent to those 12.

I look forward to having an opportunity to speak with you about your perceptions of the school's professional learning community. If you have any questions, please contact me by phone at 404-xxx-xxxx or by email at xxx@waldenu.edu.

Appendix I: Participant Demographic Form

DEMOGRAPHIC INFORMATION

Please take a few minutes to give your background information.

1. What is your current Role?
   1) Grade Level Teacher
   2) Special Area Teacher
   3) Instructional Support Teacher

2. What was your role during the 2013-2014 school year?
   1) Grade Level Teacher
   2) Special Area Teacher
   3) Instructional Support Teacher

4. What is your experience level as a teacher?
   1) Less than 1 year
   2) 1–4 years
   3) 5–10 years
   4) 11–16 years
   5) 17–25 years
   6) More than 25 years

5. How many years have you taught at The Local Elementary School?
   1) 0–1 years
   2) 2–4 years
   3) 5–9 years
   4) 10–20 years
   5) 21 or more years

6. What is the highest level of education that you have completed? Select only one.
   1) Bachelor's Degree
   2) Master's Degree
   3) Specialist Degree
   4) Doctoral Degree
   5) Other: _____

Appendix J: Participant Contact Form

Formative Evaluation of a Professional Learning Community in an Urban Elementary School

Participant Contact Form

Thank you for your interest in participating in the study, please complete and return this form along with your signed informed consent form by _____. I will meet with you one-on-one to answer any questions and clarify the contents in the informed consent form.

CONTACT INFORMATION:

Name:_____

Telephone Numbers:

Home:_____

Cell:_____

Email address:_____

Preferred day and time for your interview:

Specify the day of the week:

Monday	Tuesday	Wednesday	Thursday
Friday	Saturday	ANY DAY	

Specify time of day:

Morning	Afternoon	Evening	OTHER:_____

Appendix K: 2011 Standards for Professional Learning Standards in Brief

Learning Communities: Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment.

Leadership: Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate, and create support systems for professional learning.

Resources: Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring, and coordinating resources for educator learning.

Data: Professional learning that increases educator effectiveness and results for all students and uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning.

Learning Designs: Professional learning that increases educator effectiveness and results for all students integrates theories, research, and models of human learning to achieve its intended outcomes.

Implementation: Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long term change.

Outcomes: Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performance and student curriculum standards. (Learning Forward, 2014b)

Appendix L: Approval to Conduct Research at Local Elementary School

[redacted]

LOCAL SCHOOL RESEARCH REQUEST FORM

Name of School: [redacted]

Name of Researcher: Cherie Ameyaw

Position or Grade: 1st Grade Teacher

A. Research Project

a. Title: Formative Evaluation of a Professional Learning Community in an Urban Elementary School

b. Statement of Problem and research question:

On an annual basis the school conducts a professional learning summative evaluation- the Standard Assessment Inventory 2 or the SAI2. The SAI2 is a Likert-type, self-report that evaluates the professional learning program at the local school. All teachers are invited to take the survey. The survey does include some questions about the Professional Learning Community (PLC). However, a formative evaluation that evaluates the Professional Learning Community using the perspectives of the teachers has not been conducted and still is needed to determine teachers' perspectives of the PLC. Unlike summative evaluations, which are conducted at the end of a program, a formative evaluation is conducted while a program is in progress and thus allows for immediate feedback that can be considered for program improvement.

This formative program evaluation will be guided using the following research questions:

1) How do teachers describe their PLC in terms of supportive and shared leadership?
2) How do teachers describe their PLC regarding sharing beliefs, vision and values?
3) How do teachers describe their PLC regarding collectively learning and applying new knowledge and skills?
4) How do teachers describe their PLC regarding shared practice?
5) How do teachers describe their PLC regarding physical or structural conditions?
6) How do teachers describe their PLC regarding collegial or relational conditions?

The program evaluation will include a mixed methods design using an explanatory sequential approach. The research will be conducted in two phases. In the first phase, I will collect and analyze archival survey data (Standard Assessment Inventory 2-SAI2) collected from teachers at the research school during spring of 2014. I will use the survey for preliminary analysis. In the second phase, I will interview certified teachers at the local research site. I will use interview questions to add depth and elaborate on the survey findings

c. Subjects or population for the study: The researcher will attain the complete report from [redacted] 2014 Standards Assessment Inventory 2 (SAI2) survey results. After analyzing the SAI2, the researcher will conduct 10-12 teacher interviews.

d. Reason for doing this research:

X Graduate Study at Walden University/College

____ Publication/Presentation

____ Other (please specify) ____

e. Dates research will be conducted: June 2014 to September 2014

B. All research and researchers must a) Protect the rights and welfare of all human subjects, b) Inform students and/or parents that they have the right not to participate in the study, c) Adhere to board policies and applicable laws which govern the privacy and confidentiality of students records.

C. This request applies to research conducted within and by local school personnel. All other research requests must be submitted by completing a [redacted] Research Application and submitting it electronically according to instructions. For complete details and instructions, please visit our Web Page at the following link: [redacted] When you open our webpage, click on "I want to" section.....Apply for Research Approval. This will take you to our webpage.

D. Principals ONLY need to approve Local School Research Requests. The copy sent to the Research & Evaluation Office is for filing purposes only. No further approval is necessary.

E. After approval by the principal, please forward a copy of this completed form to:

_____ 4/24/14

Signature **Date of Approval**

Appendix M: Frequencies for Professional Learning Characteristics

Table M1

Frequencies for Shared and Supportive Leadership

Statement	Don't Know (0)	Never (1)	Seldom (2)	Sometimes (3)	Frequently (4)	Always (5)
S14: My school's leaders consider all staff members to be capable of being professional learning leaders.	0	0	4	8	13	20
S10: My school's leaders advocate for resources to fully support professional learning.	0	0	2	6	17	19
S16: Teachers in my school are involved with monitoring the effectiveness of the professional learning resources.	2	0	3	9	18	13
S38: Teachers in my school receive ongoing support in various ways to improve teaching.	1	0	2	6	19	15
S9: My school's leaders are active participants with other staff members in the school's professional learning.	0	0	3	7	11	24
S24: In my school, various data, such as teacher performance data, individual professional learning goals, and teacher perception data, are used to plan professional learning.	4	1	4	8	15	13

Table M1 continued

Statement	Don't Know (0)	Never (1)	Seldom (2)	Sometimes (3)	Frequently (4)	Always (5)
S19: Teachers in my school are involved with the decision making about how professional learning resources are allocated.	1	2	5	13	14	10
S33: learning in my school includes various forms of support to apply new practices.	1	1	3	11	16	13
S36: Teachers' input is taken into consideration when planning school-wide professional learning.	2	2	2	13	15	11
S30: In my school, teachers' backgrounds, experience levels, and learning needs are considered when professional learning is planned and designed.	2	2	2	13	17	9

Note. Don't Know = 0; Never = 1; Seldom = 2; Sometimes = 3; Frequently = 4; Always = 5.
Note. Local Elementary School. (2014). *Standards assessment inventory 2* [Data Summary Report]. Learning Forward: Survey Publisher.

Table M2

Frequencies for Shared Beliefs, Values and Vision

Statements	Don't Know (0)	Never (1)	Seldom (2)	Sometimes (3)	Frequently (4)	Always (5)
S3: Learning community members in my school believe the responsibility to improve student learning is shared by all stakeholders, such as all staff members, district personnel, families, and community members.	1	0	3	8	15	18
S47: All professional staff members in my school are held to high standards to increase student learning.	1	0	1	9	11	22
S9: All members of the learning communities in my school hold each other accountable to achieve the school's goals.	1	1	1	11	17	14
S40: My school's professional learning plan is aligned to school goals.	2	0	1	7	14	21

Note. Don't Know = 0; Never = 1; Seldom = 2; Sometimes = 3; Frequently = 4; Always = 5. Local Elementary School. (2014). *Standards assessment inventory 2* [Data Summary Report]. Learning Forward: Survey Publisher.

Table M3

Frequencies for Intentional Collective Learning

Statement	Don't Know (0)	Never (1)	Seldom (2)	Sometimes (3)	Frequently (4)	Always (5)
S2: Learning communities in my school meet several times per week to collaborate on how to improve student learning.	1	0	4	8	10	22
S5: My school's learning communities are structured for teachers to engage in the continuous improvement cycle (i.e., data analysis, planning, implementation, reflection, and evaluation).	1	1	1	7	16	18
S25: My school uses a variety of student achievement data to plan professional learning that focuses on school improvement.	1	1	0	8	16	18
S44: Professional learning at my school focuses on the curriculum and how students learn.	0	1	1	9	21	13
S45: Professional learning in my school contributes to increased student achievement.	1	0	3	8	21	12
S48: In my school, professional learning supports teachers to develop new learning and then to expand and deepen that learning over time.	1	1	3	6	17	17
S37: A primary goal for professional learning in my school is to enhance teaching practices to improve student performance.	1	0	3	12	15	13
S23: In my school, teachers have an opportunity to evaluate each professional learning experience to determine its value and impact on student learning.	0	2	1	10	18	14
S32: Teachers in my school are responsible for selecting professional learning to enhance skills that improve student learning.	1	0	3	12	15	13
S42: Professional learning experiences planned at my school are based on research about effective school change.	2	1	2	11	15	14

Note. Don't Know = 0; Never = 1; Seldom = 2; Sometimes = 3; Frequently = 4; Always = 5.
Local Elementary School. (2014). *Standards assessment inventory 2* [Data Summary Report]. Learning Forward: Survey Publisher.

Table M4

Frequencies for Shared Practice

Statement Number	Don't Know (0)	Never (1)	Seldom (2)	Sometimes (3)	Frequently (4)	Always (5)
S35: In my school, teachers have opportunities to observe each other as one type of job-embedded professional learning.	0	1	6	16	12	10
S43: In my school, teachers give frequent feedback to colleagues to refine the implementation of instructional strategies.	3	1	3	14	14	10

Note. Don't Know = 0; Never = 1; Seldom = 2; Sometimes = 3; Frequently = 4; Always = 5.
Note. Local Elementary School. (2014). *Standards assessment inventory 2* [Data Summary Report]. Learning Forward: Survey Publisher.

Table M5

Frequencies for Collegial or Relational Conditions

Statement Number	Don't Know (0)	Never (1)	Seldom (2)	Sometimes (3)	Frequently (4)	Always (5)
S6: In my school, learning community members demonstrate effective communication and relationship skills so that a high level of trust exists among the group.	0	0	4	8	17	16
S12: My school's leaders cultivate a positive culture that embraces characteristics such as collaboration, high expectations, respect, trust, and constructive feedback.	1	0	4	9	18	13

Note. Don't Know = 0; Never = 1; Seldom = 2; Sometimes = 3; Frequently = 4; Always = 5.
Note. Local Elementary School. (2014). *Standards assessment inventory 2* [Data Summary Report]. Learning Forward: Survey Publisher.

Table M6

Frequencies for Physical or Structural Conditions

Statement Number	Don't Know	Never (1)	Seldom (2)	Sometimes (3)	Frequently (4)	Always (5)
S34: In my school, participation in online professional learning opportunities is considered as a way to connect with colleagues and to learn from experts in education.	3	1	6	12	11	11
S18: In my school, time is available for teachers during the school day for professional learning.	0	0	5	13	15	12
S1: My school system has policies and procedures that support the vision for learning communities in schools.	0	0	0	4	18	23

Note. Don't Know = 0; Never = 1; Seldom = 2; Sometimes = 3; Frequently = 4; Always = 5.
Note. Local Elementary School. (2014). *Standards assessment inventory 2* [Data Summary Report]. Learning Forward: Survey Publisher.