Case Study of the Process and Product of Teacher Engagement in a Professional Learning Community

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Abstract

Professional development opportunities for teachers have long been viewed as passive efforts to engage teachers, and have failed in that regard as evidenced by the literature reviewed in this study. The problem of practice explored in this case study focused on the lack of merit for large group, all-day professional development for teachers, as well as the inconsistent scheduling of previous attempts to institute professional learning communities. Findings revealed that professional learning communities (PLC) based on an adult process model of learning, and a specific focus for in-depth study, could be successful. This case study focused on the experiences of three participants in a PLC based on a process model of adult learning theory (Knowles, 1973). The implications of this study are that an effective PLC, which is founded on a traditional professional development workshop that segues into Knowles’ (1971) theory of adult learning process model, can be an effective vehicle for teachers to support student learning. Four categories, four themes, and ten sub-themes emerged from the data in this investigation. This PLC enabled the participants to make the necessary changes to their teaching styles, beliefs and understandings of dyslexia, and reading problems in young children. The results of this research study range from creating a climate of collaboration, to engaging teachers in the work of the PLC, to changing the values and professional beliefs of the participants, and to the longer range planning of sharing their learning with the teaching community at large. Further implications indicated the need for teachers to work collectively on school issues so that they can, together, work toward solutions in the best interest of the students.

Keywords: professional learning communities, teacher engagement, collaboration, adult learning theory, dyslexia
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Chapter One: Introduction

Education is rapidly changing. Teachers are held accountable to Common Core Standards, evaluation systems, and student growth measures (New Jersey Department of Education, 2014). Professional development is needed to help teachers grow professionally and understand these changes in an effort to respond to the needs of today’s classrooms (DuFour, 2004). Even though professional development is much needed, teachers frequently are dissatisfied with the usefulness of professional development, thus precipitating a need for a new model (Darling-Hammond, 2009).

One size fits all professional development is becoming extinct in the 21st century education system. In Change Wars, Shirley (2009) wrote:

The approach of using accountability data to create an exogenous shock to propel educators to embark upon ambitious reforms all too often sparks short-term gains that plateau after a few years and fail to build momentum and capacity for sustainable learning over time (p. 137).

Therefore, it is important for administrators to apply a recognized theory of practice to create and sustain change in their organizations.

High stakes accountability for students and teachers is the new world order in educational settings (DuFour, 1998). Professional development and the impact on student performance continue to be hot topics for educational leaders, and leaders are faced with determining how to meet school needs through teacher development. DuFour (2004) posits that professional learning communities (PLCs) are a way to foster school and district improvement by utilizing data to inform staff development efforts.
A PLC is defined in the literature in several ways (Darling-Hammond, 2009; DuFour, 2004, Wells & Feun, 2008) but the overriding themes of these definitions include organizing to promote learning, and cooperating to build collaboration among teachers and administrators for the purpose of improving teaching and learning for students and the larger school community (Kruse, Lious, & Bryk, 1995). These descriptors are consistent with current theories of adult learning, education, and change (Fullan, 2007; Knowles, 1973). This study embodied each of these stages; the goal was to create a better system of participation, cooperation, and collaboration among teachers.

PLCs are becoming increasingly important in supporting teachers in developing their professional practice (DuFour, 2004). PLCs can provide a forum for sustainable professional development, unlike past professional development practices that were one size fits all (DuFour, 2004). The research on teacher engagement identified the role of school leadership and choice as key factors in openness to professional learning (DuFour & Eaker, 1998; Hargreaves, 2004). Teachers’ use of data to inform decision making has also been demonstrated in the research as a means of bringing about necessary changes in instructional practices (Shen & Cooley, 2008).

**Statement of the Problem**

The research problem. Although PLCs have intentions of being timely, collaborative, and in the best interest of students; for teachers, their implementation has not met these goals (DuFour, 2011). Mohabir (2009) identified strategies and challenges to effective implementation of professional learning communities. Of particular note was the challenge of finding the time necessary to be effective in a contractual atmosphere. Reflection is critical to self-growth and time constraints prevented teachers from fulfilling this agenda item at the conclusion of each PLC meeting. Collaboration was perceived as difficult to attain (Brunner, 2009; Mohabir, 2009).
Conviviality and cooperation were perceived as attainable yet the real meaning of collaboration was not achieved in several studies (Brunner 2009; Kaminski, 2011; Mohabir, 2009). Overall, PLCs are supposed to be conducive learning environments for teachers as adult learners.

The school district in this study had previously attempted to implement PLCs, but the anticipated experience did not occur. Based on my observations, as the Director of Curriculum and Special Education, the PLCs were loosely structured and dyadic; similar to professional development activities. Teachers were passive participants and few implemented the strategies presented. Further, meetings were held at scattered times in different places as rooms were available. These challenges did not reflect the tenets of adult learning theory nor did the attempt adhere to the definition of a PLC.

Based on preliminary feedback from teachers, the school district PLCs have been challenged due to timing and structure. The scheduling of PLCs made it difficult to attend. Also, PLCs were not implemented with clear structure and procedures. The PLCs were not clearly explained to the participants. Because teachers were not able to attend PLCs during the week and because they were inefficient, teachers began to feel disenfranchised and overworked. As described by teachers, and based on my experience, PLCs as currently implemented in the district were missing the mark for productive teacher collaboration on big topic initiatives.

At the outset of this study, one priority initiative for the district was to develop a model professional learning community based on the Knowles (1973) process model of adult learning. Therefore, the researcher, as the Director of Curriculum and Special Education for the District, and the administrator responsible for professional development, took the opportunity to examine PLCs. The intent of this new model was to provide structure, collaboration, a positive climate, goals to address overriding themes, and evaluation. Adult participants assumed a learner-
centered role. We, the district, wanted PLCs to provide a forum for use of data to support discussion about how to meet curriculum standards and support instructional practices in teaching students with dyslexia. Past professional development practices were based on the traditional model of professional development and teachers were left taking a passive role in professional learning with little accountability for next steps (DuFour & Eaker, 1998). As such, this study was designed to examine this newly designed PLC model.

**Purpose statement.** The purpose of this research was to explore how PLCs currently function as a place for adult learners learning about dyslexia, a major state initiative. We believed that PLCs can provide a forum for use of data to support discussion about how to meet curriculum standards and support instructional practices in teaching students with dyslexia, and this research study examined how the PLC model helped support teachers in this endeavor. The district moved away from the traditional model to the use of PLCs, but there was still a need to understand how these communities could be better forums for learning and development.

**Evidence justifying the research problem.** This section defines professional learning community and compares and contrasts it with traditional professional development opportunities. Further, teacher roles are described as well as the intended outcomes of professional learning communities. Literature has shown that professional development offered in isolation is not impacting student outcomes (DuFour & Eaker, 1998). Hargreaves (2010) defined professional learning communities as “living communities and lively cultures dedicated to improving the lifelong learning of students and adults where data inform but do not drive judgments about practice” (p. 31). Teachers come together for professional collaboration to share resources and improve educational programs. The combined efforts of teachers can lead to the development of relevant and comprehensive curricula, often using student data to evaluate
and redefine instructional practices for efficiency (DuFour, 2011). In the past, popular professional development focused on one-day workshops where teachers had to listen and then were left without supports to implement change in the classroom.

Of interest as well to researchers has been in the “content and process” of professional development, informed through formal training and workshops; however, it was found that this piece of the model serves only as the foundation for professional learning (Lumpe, 2007, p. 127). The purpose of this study was to use a traditional professional development opportunity in the form of a teacher workshop as a springboard to a professional learning community, which is consistent with Lumpe (2007). The core of professional development is building-based professional learning communities that are engrossed in practice, feedback, results, and reflection (Lumpe, 2007). Lumpe also described the content of professional development surrounded by the curriculum, assessment, and instruction (p. 127).

**Deficiencies in evidence.** There exists a lack of research that establishes a connection between professional learning communities and instructional practices. Although this study focused on the identification of dyslexia and strategies for assisting kindergarten through third grade students in reading, actual instruction will not be part of this study. Minimal research attention has been directed towards the impact of professional learning communities on identifying and addressing student learning disabilities. Existing studies focus on design, implementation, and effectiveness of professional learning communities that bring about school-wide change and teacher engagement (Lumpe, 2007). An area cited for future research is teacher engagement in professional learning communities as it relates to using data to help change instructional practices for students with dyslexia. The next step was to investigate teachers’ investment in data-informed decision making and the influence it had on instructional practices.
Professional learning communities can be the vehicle for educators to obtain the skill set necessary for making data-informed instructional decisions.

**The Audience**

By conducting a case study using qualitative approaches we can better understand how a professional learning community may support student learning outcomes. District and school level administrators can use this information to better plan for collaborative opportunities for teachers. Teachers can use the study’s findings to identify their own learning needs and habits. Finally, researchers in professional development may find this study of interest because of the need for teachers to be collaborative reflective practitioners.

**Positionality Statement**

At the outset of the study, the researcher reflected and took note of beliefs and experiences as a scholar in practice that would inform the design, analysis, and approach to the study. As a scholar-practitioner studying PLCs within the school district in which the researcher currently works, there were many experiences that the researcher had that informed her position in conducting this study. The researcher taught elementary school for five years, in three districts. The researcher has been a building level administrator for two years and a central administrator for six years. The researcher held various positions within public education that influenced her thoughts and feelings about productive use of professional learning time.

As a former teacher, the researcher believed strongly in the need for professional development, but she believed development should be something that the teacher could use immediately in the classroom. The researcher has participated in one-day, two-day, and three-day workshops where she viewed many slides and listened to authorities on how to teach. This type of professional development was not useful to the researcher. The researcher would have
preferred learning something, going back into the classroom and using it, and then having a mentor or guide to discuss her efforts. The researcher believed that the new model, professional learning communities, would give teachers a voice in their professional development, and would give them a forum that is effective for their needs. As a researcher throughout the study, she made efforts to remain aware that her bias was based upon many of her own personal experiences with wasted time spent in boring and untargeted professional development days.

The researcher has a heart for early childhood education, and as a teacher she saw children struggle with the reading process. During a time when there were limited resources for young children with dyslexia, she attempted to research strategies to assist students but these types of learning challenges were unique to each child. At that time, she would have welcomed traditional professional development on dyslexia.

**Administrative experiences.** Currently and at the beginning of the study; the researcher serves as the Director of Curriculum and Instruction and Special Education for the school district, and she is responsible for designed interventions in regular education in response to district needs and legislation. In her role, she is responsible for administering the dyslexia initiative and planned to use the professional learning community as a forum for teachers to develop skills in serving children with this challenge. From the initiation of the study, the researcher believed that this forum would be effective, and that teachers participating in the PLC would be able to discuss and share strategies to help children. The researcher’s desire was to see an effectively run PLC that incorporated all of the stages of adult learning theory that would create a climate for teachers to move from the cooperative level to one of collaboration.

Lastly, the researcher was and still is responsible for designing and overseeing all professional development for district employees. Given this role, the researcher was in strong
support of PLCs because professional learning reinforces school district initiatives and financial investments in assessment and curricular resources. The researcher also believed the current climate in New Jersey, with plans for calculated teacher evaluation reform with weighted student performance growth indicators, would influence teachers’ engagement in practice. Therefore, the researcher strived as an educational leader to identify how to find solutions for this problem and move towards a greater connection between professional learning and the impact on classroom instruction and student achievement. As Collinson and Cook (2007) suggested, “Organizational learning is neither a quick fix nor a one-time experiment; rather, it is a continuous process of renewal that moves members toward greater professional knowledge and wiser actions” (p. xv). As such, this study represented the beginnings of an ongoing inquiry process for the researcher as she continually improves in using school district resources for the betterment of teachers.

**Research Central Questions**

The researcher’s personal experiences as a teacher and administrator coupled with the need to understand how PLCs work locally as documented in the literature (Darling-Hammond 2009; DuFour 2004; Wells & Feun 2008), led her to the following research questions:

1. How do PLCS in this school district use andragogy to support the needs of adult learners?
2. How do PLCs support teachers in developing an understanding of dyslexia?
3. How do PLCs support district goals in developing an understanding of dyslexia?
4. How can focused professional development opportunities provide support for teachers in a professional learning community in making informed decisions about instruction?

**Theoretical Framework**

The theoretical framework of this research study is based on the adult education theory of
Malcolm Knowles (1970). Since teachers were the focus of this study, professional development was the venue for the introduction and evolution of the anticipated change and collaboration. Professional learning communities were the vehicle for effecting change. Knowles has often been referred to as the father of adult education (Carlson, 1989). Much of his research related to the differences between pedagogy (the teaching of children) and andragogy (the teaching of adults) (Knowles, 1970). Over the course of his career, he has written a number of books and articles, all related to the process model of teaching adults (Knowles, 1969; Knowles, 1970; to name a few).

**Andragogy as a process model.** Knowles’s Andrological Model of Human Resources Development (Knowles, 1973) is a process model as opposed to a content model. The content model takes the form of a body of knowledge that has been broken down into manageable units of instruction, then lessons, with the knowledge imparted by the transmitter (Knowles, 1973). The literature is rife with research about the content model as a delivery method for professional development of teachers. Later researchers confirmed the need for more than a content model (Lumpe, 2007). A process model was appropriate for this study for several reasons. First, the study focused on adults as participants. In this situation, a process model allowed the participants to participate in all elements of the process model described below rather than participate in the content model. By participating in a professional learning community, participants were fully engaged in the process of planning, formulating objectives, creating a schedule and agenda for learning, making modifications, testing the learning, and evaluating the professional learning community as a vehicle for deeper understanding and collaboration.

Knowles (1970) process model is designed to involve the learners in the following elements of the model:
(1) Establishing a climate conducive to learning; (2) creating a mechanism for mutual planning; (3) diagnosing the needs for learning; (4) formulating program objectives (which is content) that will satisfy these needs; (5) designing a pattern of learning experiences; (6) conducting these learning experiences with suitable techniques and materials; and (7) evaluating the learning outcomes and rediagnosing learning needs (Knowles, 1974, p. 117).

This framework was a sound and effective choice for exploring the problem of practice in this study and contributed to the answers to the research questions. The elements of the process model lent themselves to an adult educational setting because they gave participants the latitude to participate in the formulation of the plan as well as the subsequent evaluation of the plan. At all checkpoints, the input and collaborative efforts of the participants were respected and there was a sense of ownership in the process for all parties involved.

**Climates conducive to learning.** Knowles’s (1973) first step of the process model is to establish a climate conducive to learning. The quality of learning is impacted by the organization itself. Therefore, it is important that learning environments are designed in a way that ensures learning can occur. Knowles (1970) posited that every organization exists to get work done but a further purpose is to create a social system that meets the needs of the humans involved. In other words, in order for goals to get achieved, adults need environments where their basic needs are met. Knowles (1970) references Maslow’s hierarchy of needs (Maslow, 1970), which suggests that the physical environment, the abundance of appropriate resources, the human and interpersonal climate, and the organizational climate must be attended to in order for optimal functioning.
Physical climate. Physical climates of learning spaces must be adequate in order to create an atmosphere conducive to learning (Knowles, 1974). Comfortable physical climates include appropriate lighting, temperature, ventilation, and access to restrooms. Knowles also cited ecological psychologists who emphasize that size and layout affect learners (Alford, 1968; Knowles, 1970). Also important are behaviorist concepts of immediate feedback and the active role of the learners in the process. Finally, humanistic theory, respecting the integrity of the social system and providing encouragement and mentoring, and field theory, learning and change occurring in the actual setting, are noted in providing a constructive force in groups (Bany & Johnson, 1964; Bergevin & McKinley, 1965; Leypoldt, as cited in Knowles, 1974).

Appropriate resources. This aspect of Knowles’s (1974) climate of learning focuses on the “richness and accessibility of resources—both material and human” (p. 118), which can be accomplished with a basic learning resources center with all necessary resources and technology. Learners should be encouraged to be proactive in their use of the resources. In this study, participants took part in a two-day professional development seminar on the topic of K-3 dyslexia, received handouts and access to websites. The school district assembled a number of reference books for teachers’ use. These resources were explored more fully in the collaborative climate of the professional learning community.

Human and interpersonal climate. Knowles (1974) cited the theoretical concepts of several schools of thought in this aspect of climate control. Behaviorists, cognitive theorists, personality theorists, and humanistic psychologists all contribute to “An Atmosphere of Adultness” (p. 119). Behaviorists acknowledged that an institutional philosophy that supports innovation will reinforce desired behaviors in learners (Mager, 1972). Cognitive theorists support structure and openness, multidirectional communication, and experimentation conducted
in a tolerant atmosphere (Brunner, 1966). Personality theorists focused on individual and cultural respect. They prescribed a “mentally healthful” climate (Wactjen & Leeper, as cited in Knowles, 1974). An environment where individuals feel safe, supported, respected, and understood is the focus of humanistic psychologists (Bany & Johnson, 1964; Bergevin & McKinley, 1965; Leypoldt, as cited in Knowles, 1974). Field theorists highlight collaboration, particularly “encouragement of group loyalties, supportive interpersonal relations, and a norm of interactive participation” (Rogers, as cited in Knowles, 1974, pp. 118-119).

The vehicle for professional development in this study was the formation and evolution of a professional learning community of three to five teachers in an elementary school with a shared professional development experience. While Knowles (1970) used the term committee in his earlier works to describe the formation of a group for learning purposes, the later research leans toward professional learning communities. Professional learning communities are becoming increasingly important in supporting teachers in developing their professional practice (DuFour, 2004). Professional learning communities can provide a forum for sustainable professional development unlike past professional development practices that were one size fits all (DuFour, 2004). This is consistent with Knowles’s (1970) theories of adult education. Later researchers have built upon Knowles’s (1970) process model (Lumpe, 2007; Wells & Feun, 2008).

The organizational climate. Knowles (1970) stated: “A democratic philosophy is characterized by a concern for the development of persons, a deep conviction as to the worth of every individual, and faith that people will make the right decisions for themselves if given the necessary information and support” (p. 60). He further posited that in order to foster adult learning to the fullest extent, the organization must move beyond the democratic philosophy and
provide a climate for self-renewal, e.g., helping its citizens to become lifelong self-directed learners. Knowles (1970) compared and contrasted static and innovative organizations. Innovative organizations have a flexible structure, an informal and people-centered atmosphere, and a management philosophy that is experimental, interdependent and “releases the energy of personnel” (p. 62). Further, decision-making is participatory and focuses on problem solving. Communication is multidirectional.

The organizational climate in this school district setting was committed to providing collaborative opportunities for teachers. For the past few years, the school district has recognized that non-funded initiatives must be implemented to assist teachers in creating a functional teaching and learning environment for students. Hence, this researcher has been charged with implementing a professional learning community as a pilot study for the school to determine the best strategies for creating school-wide professional learning communities to address current needs.

**Mechanism for mutual planning.** The second step in Knowles’s (1973) process model is the creation of a “mechanism for mutual planning” (p. 120). He cited humanistic and adult education theories as well as behavioral science research stating that participation in the planning and decision-making leads to greater commitment to the activity. The role of the learner in the planning is “a cardinal principle” in the pedagogy vs. andragogy theories of learning (Knowles, 1974, p. 120). Of significance is a Knowles statement: “One of the basic findings of applied behavioral science research is that people tend to feel committed to a decision or activity in direct proportion to their participation in or influence on its planning and decision-making” (p. 120). He cautions that the participation must be done in good faith and with real influence.
The contemporary research on teacher engagement supports Knowles’s (1970) theory of adult education in that it also identifies the role of school leadership and teacher choice as key factors in openness to professional learning (DuFour & Eaker, 1998; DuFour, 2011; Hargreaves, 2004; Hargreaves, 2010; Reeves, 2010). Previous attempts at establishing professional development in-house opportunities in this district were less than productive with little to no outcomes because top-down decisions were made regarding time, topics, and membership requirements for teachers, thus creating limitations.

**Diagnosing the needs for learning.** The third step in Knowles’s (1973) process model is diagnosing the needs for learning. There are two sub-steps. These include constructing a model and assessing discrepancies.

**Constructing a model.** Knowles (1974) cited the earlier works of cognitive, humanistic and adult education theorists in describing the data sources for constructing the model: “the individual, the organization, and the society” (p. 120). In this study, the individual was the teacher; the organization, the school district; and the society, the students. These combined theorists agreed that the perceptions of need, level of performance and desired outcome were the starting point in developing competencies for the individuals. It is critical that the facilitator enable this development by providing opportunities for information, both internal and external, and opportunities to observe the desired behaviors (Knowles, 1974, p. 120).

The second source for data collection is the organization. The organization has available the necessary data, analyses, job descriptions, personnel evaluations, and financial data, to name a few (Knowles, 1974). The third source, societal perceptions of need, come from different sources including experts in the field, research, current trends, and governmental mandates.
The term “diagnostic” in this element of the process model is an important distinction. Knowles (1974) cautioned that conflicting perceptions of the three sources—individual, organization and society—must be resolved at this point.

**Assessing discrepancies.** Adult education theory considers assessment of what the learner knows before the intervention and what the learner needs to know to be successful with the intervention as a critical step. Self-assessment, using specific data-collection tools and processes, provides a beginning point. Humanistic psychologists call for a “safe, supportive, non-threatening” atmosphere while behaviorists support self-assessment processes with feedback (Knowles, 1974, p.121).

Later researchers support Knowles’s (1970) process model step of including the individual, organization, and society in the data collection and assessment of needs (DuFour, 2004; Klusmann, Kunter, Trautwein, Ludke, & Baumert, 2008; Reeves, 2010; Wells & Feun, 2008).

**Formulating program objectives.** The fourth step in Knowles’s (1973) process model is formulating program objectives. In this step, Knowles cited other seminal behavioral theorists (Gagne, 1965; Mager, 1962) who posited that terminal, or exit learning behaviors, should be established prior to teaching and learning. Knowles balanced this position with cognitive theorists who prefer that the content of the learning be reflected in “knowledge, reflective thinking, values and attitudes, sensitivities and feelings, skills” (p. 121). He cites Taba (1962) and Houle (1972), cognitive theorists, for this position. Knowles (1973) attempted to reconcile these differences by stating that by “assigning more terminal-behavior-oriented procedures” (p. 121), rather than objectives, adults are less likely to resist.
More contemporary researchers also support the use of formulating program objectives or procedures (DuFour & Eaker, 1998; Wells & Feun, 2008). Participants were advised that the focus of the professional learning community would be on the identification of dyslexia in K-3 students and effective strategies for teaching these children.

**Designing a pattern of learning experiences.** The fifth step in Knowles’s (1973) process model is designing a pattern of learning experiences. Here, again, there are many facets that lend themselves to the androgogical theory of learning. Behaviorists rely on program design (Taba, as cited in Knowles, 1974); cognitive and inquiry theorists (Brunner, as cited in Knowles, 1974) rely on stages of development and provision of the necessary resources to achieve solutions. Knowles (1973) refers to yet another group as third force psychologists (Rogers, as cited in Knowles, 1973) who believe that supportive and unstructured environments guide direction of learners and trainers (p. 121). Adult education theorists (Ingals & Arceri, 1972; Knowles, 1970; Tough, as cited in Knowles, 1973) designed models incorporating different aspects of the behaviorist, cognitive, and inquiry approaches. These models involve self-identification of learning needs by participants, input into the format for the delivery of the new knowledge or skills, and the selection of resources and methods that are experiential (Knowles, 1973). Knowles (1973) added to this formula Tough’s (1971) concept of “a learning project consisting of a series of related episodes” (p. 121). This is Tough’s basic program design framework, with which Knowles concurs. The concept of collaboration is introduced. Tough (1971) believed that a collaboratively planned project that includes learners and others identified as helpful to the project as well as the availability of all necessary material resources would be used “proactively rather than reactively by a self-directed learner” (p. 121).
Contemporary researchers and theorists support Knowles’s process model. The 21st century learner requires teacher collaboration that stimulates students’ interests and real world applications to the curriculum (Darling-Hammond, 2009; DuFour, 2004; Schmoker, 2004).

Participants in this study participated in individual interviews at the inception of the program of study and at the end. They participated in two-day professional development seminars, and then segued into the professional learning communities. Participants were guided at the start of the experience by the researcher, who recorded interviews and meetings, transcribed notes, and prepared transcripts for later approval by the participants. The researcher had the role during PLCs only as an observer. Participants maintained an electronic journal of their feelings, perceptions, attitudes, and involvement toward the process of a professional learning community.

*Operation of the program.* The sixth step in Knowles’s (1973) process model is the operation of the program. Knowles (1973) considered the quality of the faculty a critical element in the operation of the program. Knowles (1970) states “the single most critical aspect of your role as program administrator is your function as a developer of human resources development personnel” (Knowles, 1970, pp. 166-174).

Proper orientation to one’s role, that is, experience teaching adults, understanding the objectives of the program, and a grounded philosophy of education are characteristics that the facilitator of the program should have (Knowles, 1970). The ability and the time to conduct individual conferences, arrange for the duplication and dissemination of materials, generate correspondence, plan the course, and meet with faculty are part of the plan of action. The ability to observe and take cogent notes and assemble narrative records are skills the facilitator should also possess (Knowles, 1970).
Program evaluation. The seventh step in Knowles’s (1973) process model is program evaluation. Knowles (1973) cited Kirkpatrick’s (1971) four stages of assessment as “congruent with andrological principles” (p. 122). These steps, or stages, include reaction evaluation, learning evaluation, behavior evaluation, and result evaluation. Evaluation serves several purposes: (1) improvement of the processes, (2) improvement of the program, and (3) stimulating growth and improvement (Knowles, 1970). Knowles (1970) stated: “Every person who is in a position to make any kind of judgment about a program should be brought into the evaluation process in some way” (p. 225). Various stakeholders, including the participants, the program director and staff, outside experts, supervisors and management personnel, and community representatives, should conduct evaluation. Knowles (1970) emphasized that evaluation questions should be designed at the beginning of the process when the intended outcomes are established.

Summary

Knowles’s (1970) theory of adult education was an appropriate framework for this case study that involved teachers who participated in a professional learning community. The need for an appropriate climate is evident in that educational leaders hold the responsibility to help stakeholders see the authentic need for change. Emotional responses to change also have an impact on the teachers’ levels of engagement in the process. These responses can be tempered by using the tenets prescribed by Knowles (1974) in establishing a physical and emotional climate. In the case of professional learning communities, the literature points to the idea that engaging the heart and mind of individuals can bring groups together to take a closer look at real solutions. This can be accomplished through the third step of Knowles’s (1970) process model, creating a mechanism for mutual planning. The study adds to the body of research on the theory of adult
education as a framework for professional learning communities. It also supplements the research on how teacher engagement in professional growth takes place via the professional learning community. The study describes how teachers’ attitudes, feelings, perceptions, and involvement in professional learning communities influence instructional decisions.

Significance Statement

As Director of Curriculum, Instruction, and Special Education, the researcher had a direct interest in the subject matter because of a need to design and implement more effective professional development for teachers. The New Jersey Department of Education has created specific guidelines for the use of professional development time. As such, there was a need to create an environment where data-informed professional learning supports student growth.

The research is significant for teachers, school level leaders, district administrators, and teacher preparation programs. Teachers have a vested interest because of the increasing requirements to participate in mandatory professional learning. As curriculum changes and rigor increases in all content areas, teachers have a vested interest in assuring their time spent in professional learning opportunities is productive and is pointed towards current needs. School level leaders need teachers to participate in valuable learning experiences to keep up morale, prevent teacher attrition, and align building level goals to increasing accountability regulations. Like the school level leaders, district administrators need professional learning experiences to be the vehicle for promoting student growth. The most often forgotten stakeholders in professional learning design are teacher preparation programs at the bachelor’s and master’s degree levels. Our colleges and universities need to teach our future educators about best practices for growing their skill set beyond the college experience to remain successful and competitive in their careers.
Beyond the researcher’s interest there is a broader need to investigate the use of professional learning communities. Though many researchers have examined professional learning communities (DuFour, 2011; Hargreaves, 2010) and general uses of professional learning communities to support school change (Reeves, 2010); there appears to be little research done on focused professional learning to support teacher engagement in professional learning communities.
Chapter Two: Literature Review

Context Statement

This study was conducted in a small kindergarten through eighth grade school district. The researcher’s district is home to a population of approximately 1,000 children from diverse ethnic backgrounds. Special education makes up approximately 15% of the population. In addition, students reported as socioeconomically disadvantaged make up 50% of the school population. The district made Annual Yearly Progress (AYP) in 2007, 2008, and missed AYP by two indicators in 2009. The two years that followed, the school district entered safe harbor for both Language Arts and Math. However, test scores continued to decline, and less than 5% of students reached advanced proficiency. In an attempt to remediate this recurring problem, the school district mandated that teacher professional learning must be organized to support student outcomes.

Significance Statement

The researcher, Director of Curriculum, Instruction, and Special Education, has a direct interest in the subject matter because of a need to design and implement more effective professional development opportunities for teachers. The New Jersey Department of Education has created specific guidelines for the use of professional development time. A need existed to create an environment where data-informed professional learning supported student growth.

Beyond the researcher’s interest, there is a broader need to investigate the use of professional learning communities in supporting children with reading disorders. Though many researchers have examined professional learning communities (DuFour, 2011; Hargreaves, 2010), and general uses of professional learning communities to support school change (Reeves,
there appears to be little research done on focused professional learning to support teacher engagement in use of data to support instructional practices.

**Problem Statement**

The thesis of this literature review was that professional learning communities could serve as a vehicle to engage teachers in professional learning that utilizes data and impacts instructional practices. The purpose of this literature review is to determine the rationale, design, and effectiveness of professional learning communities. In addition, the literature reviewed provided evidence of a need to consider factors that led to greater teacher engagement in learning and to show the purpose of using data to make decisions to improve instruction.

The study adds to the body of research on professional learning communities while supplementing the research on how teacher engagement in professional learning takes place via the professional learning community that uses data to support student learning outcomes.

**Organization Statement**

The following literature review addressed professional learning communities, teacher engagement, and data-driven decision making. The first topic, professional learning communities, revealed the literature on the definition and design (DuFour, 2011; Hargreaves, 2010; Reeves, 2010). Next, practices for effective implementation of professional learning communities were discussed. The literature review on professional learning communities led to a discussion of factors associated with teacher engagement and data-driven decision making.

The third topic, teacher engagement, discussed the challenges, opportunity for choice, and collaboration as key areas of the research (DuFour & Eaker, 1998; Hargreaves, 2004). The challenges associated with engaging teachers in professional learning communities include frustration, lack of time, and support (Boykin & Noguera, 2011; Klusmann et al., 2008).
The fourth topic, data-driven decision making, discussed the role of the teacher as active in using data to inform decisions about instructional practices (Reeves, 2010; Nelson, Slavit, Perkins & Hawthorn, 2008). The value of using data to discuss student performance and the impact this can have on teachers’ attitudes about next steps for improvement is also reviewed (McTighe & Emberger, 2006; Shen & Cooley, 2008).

**Professional Learning Communities**

Professional learning community is a term broadly defined in the research and inclusive of various terms. Hargreaves (2010) defined professional learning communities as “living communities and lively cultures dedicated to improving the lifelong learning of students and adults where data inform but do not drive judgments about practice” (p. 31). Teachers come together for professional collaboration to share resources and improve educational programs. The combined efforts of teachers can lead to the development of relevant and comprehensive curricula, often using student data to evaluate and redefine instructional practices for efficiency (DuFour, 2011, p. 61).

Reeves (2010) wrote “High-impact professional learning has three essential characteristics: a focus on student learning, rigorous measurement of adult decisions, and a focus on people and practice, not programs” (p. 21). The big ideas associated with schools as learning communities include: student learning, collaborative culture for school improvement, and a focus on results with hard work and commitment (DuFour, 2004; Reeves, 2010).

DuFour (2004) cautioned those involved in design and implementation of PLCs to keep the big ideas at the heart of intention.

In this all-too-familiar cycle, initial enthusiasm gives way to confusion about the fundamental concepts driving the initiative, followed by inevitable
implementation problems, the conclusion that reform has failed to bring about the desired results, abandonment of the reform, and the launch of a new search for the next promising initiative. (DuFour, 2004, p. 1)

In other words, DuFour (2004) is cautioning PLC developers to omit elements of the traditional professional development model and to adhere to the goal of the PLC and listen to the participants as they attempt to develop skill in the new initiative.

A variety of protocols exist that incorporate information from practice, strategy, and research (Lumpe, 2007). The “content and process” of professional development is informed through formal training and workshops, however this piece of the model serves only as the foundation (Lumpe, 2007, p. 127). The core of professional development is building-based professional learning communities that are engrossed in practice, feedback, results, and reflection (Lumpe, 2007).

**Effectiveness of Professional Learning Communities**

The effectiveness of a professional learning community is rooted in collaboration. Even after self-selection, staff will still be faced with the challenge of sustaining collaborative inquiry over time (Nelson et al., 2008). However, the collaboration can become more meaningful over time because the learning community pushes against isolation that is part of common practice (Lumpe, 2007). To be effective, a professional learning community engages teachers in working together to discuss topics that promote a solid learning environment (Schmoker, 2005; Wells & Feun, 2008). As Schmoker (2005) notes,

True learning communities are characterized by disciplined, professional collaboration and ongoing assessment. This is the surest most promising route to better school performance, and the reasons are compelling. Teachers do not learn best from outside
experts or by attending conferences or implementing “programs” installed by outsiders.

Teachers learn best from other teachers in settings where they literally teach each other the art of teaching. (p. 141-142)

In other words, Schmoker (2005) reiterated the findings of those involved in traditional professional development that teachers learn best from each other in a climate of trust and sharing. This is consistent with Knowles’s (1973) androgogical model of adult learning, the theoretical framework of this study.

The design of a professional learning community lends itself to problem solving for shorter-term assessment and adjustment to practice (Schmoker, 2004). Practitioners are given the opportunity to learn and allow for fluid improvement with short-term effort and time to monitor results (Schmoker, 2004). Schmoker (2005) and DuFour (2004) point out that teachers working with teachers can share their perspectives on classroom problems and their strategies for solving them in the short term and report back to each other the results of trying the strategies.

**Teacher Engagement**

Engaging teachers becomes easier with their ability to self-select goals for their professional learning; however, several studies (Brunner, 2009, Kaminski, 2011) found that this was a challenge in their research. Teachers often did not agree on the topic and the administration was required to select the goal that supported the district’s initiatives. Teacher engagement was both an effective strategy and a challenge in those studies. Time was often a critical and challenging element. Even though teachers bore responsibility in establishing goals, school administration also had a responsibility to support and structure the goals within the objectives of the school.
A need exists for leadership to help create a shared vision and set clear expectations for the purpose of collaboration and group work in professional learning (Wells & Feun, 2008). When a shared vision is missing, the effectiveness of the professional learning community diminished and teacher perception of the usefulness of the professional learning community declined (Wells & Feun, 2008). Once there is a shared vision, PLCs should use their goals as a guide towards meeting their specified aim.

Wells and Feun (2008) studied high school professional learning communities to identify if they were following through on the intention in which they were created. They found that the PLC concepts were often misunderstood (Wells & Feun, 2008). Teachers reported the resistance was not to the learning; instead, it was rooted in trying anything new (Wells & Feun, 2008). Some of the professional learning communities studied revealed that they were not utilizing time to study student learning (Wells & Feun, 2008). Embedded in each of these were teachers’ experiences, perceptions, ability to work with others, and commitment to student learning. The goal of most of the studies included key words such as collegiality, reflection, and collaboration. Major themes identified across the literature included organizational support, culture, and leadership.

Establishing norms in professional learning communities was found to be essential to the productivity of the collaboration. Collaboration that hits the surface level and remains superficial over time does not produce results (Wells & Feun, 2008). Careful planning is needed in structuring protocols, selecting groups, and identifying goals (DuFour & Eaker, 1998). Leadership must find ways to provide for professional learning in a timely and productive fashion (DuFour & Eaker, 1998). By working together, teachers and administrators can accomplished effective working groups through the application of the third step of Knowles’s
(1970) process model, creating a mechanism for mutual planning. This step, based on behavioral science research, supports the fact that participation in planning and decision making leads to greater commitment.

**Challenges with teacher engagement.** Lack of engagement can occur for a variety of reasons. Often teachers are disengaged when they avoid being part of the learning and growing process (Boykin & Noguera, 2011). The avoidance of participating in professional learning tasks can add to emotionality that does not lend itself to learning. Teachers are less likely to engage in change when emotions of anger and resentment are built from micromanagement and pressure (Hargreaves, 2004). Wells and Feun (2008) noted that schools more likely to embrace professional learning community concepts that did not change their culture, but instead, engaged staff in tasks that had direct impact on their day-to-day responsibilities such as curriculum pacing and organization of materials were most effective. The literature described frustration as a block to teacher engagement with change and involvement in the process of extending professional learning (DuFour & Eaker, 1998; Hargreaves, 2004).

**Leadership and opportunity for choice.** The research on student engagement showed that there was an increase in teacher involvement when learning and performance demands were more challenging (Boykin & Noguera, 2011). Boykin and Noguera (2011) described functions that could dampen or deepen engagement as “self-efficacy, self-regulated learning, and incremental ability beliefs” (p. 51). This meant that teachers were more likely to be involved when they participate in all elements of planning and decision making, such as formulating objectives, creating a schedule and agenda, testing the learning, and providing input into the professional learning community as a forum for deeper understanding and collaboration (Knowles, 1970).
The support of the principal led to greater levels of teacher engagement in professional learning opportunities (Klusmann et al., 2008). The level of importance of the school principal is consistent throughout the literature (Brunner 2009; Kaminski, 2011). Hargreaves (2004) found “the importance of teachers’ feeling that, whatever the obstacles or the difficulties, they are still driving the change themselves cannot be overstated if change is to secure positive emotional engagement from them” (p. 302). The power of the principal to engage staff in the effective use of data-informed decision making had an impact on the effectiveness of results-oriented professional learning communities (Anderson, Leithwood & Strauss, 2010). Anderson et al. (2010) found that the principals’ role in analyzing data was not as influential as their leadership in showing staff members how to use data. Administrators can maximize professional learning by building their own capacity for instructional leadership to support teachers in the design and collaboration (Wells & Feun, 2008). Leadership is important in balancing accountability with professional learning and agency (Stillman, 2011). Teacher engagement in professional learning was more likely with the support of the principal; participation alone did not necessarily lead to improved instruction (Stillman, 2011).

Physical, social, and organizational demands on teachers impact the psychological engagement of teachers in their work (Klusmann et al., 2008). The motivational functioning in teaching is impacted by the individual’s emotional well-being at the time when demands are placed upon the teacher (Klusman et al., 2008). Teachers defined exhaustion and engagement differently depending on how they described principal’s support, cooperation among colleagues, and student discipline; they differed greatly in their descriptions of exhaustion and engagement (Klusmann et al., 2008). The findings supported personal factors related to individuals that impacted their level of stress and ability to engage in change (Klusman et al., 2008). Klusman et
al. (2008) also found that “absence of burnout symptoms does not necessarily mean that teachers have high work engagement, and that teachers showing highly engaged teaching behavior might at the same time be experiencing emotional exhaustion” (p. 147).

Engaging teachers in professional learning involved identifying an authentic need for change. As DuFour and Eaker (1998) suggest “Creating a PLC is not advancing through a checklist of tasks to be accomplished. It is a passionate nonlinear, and persistent endeavor” (p. 201).

**Data-Driven Decision Making**

DuFour (1998) wrote about school district improvement and the importance of utilizing data to inform staff development efforts in professional learning communities. McTighe and Emberger (2006) discussed the benefits of having teacher teams evaluate student performance, response, and products together in professional learning communities. They described the contagion that occurs when teachers feel validated through professional dialogue. How data are used for decision making differs based upon expectations for analysis and how processes are facilitated and modeled for teachers (Anderson et al., 2010).

Teachers were more likely to use data to inform decision making in educational settings where school leaders articulated the connection of data use for specific purposes (Anderson et al., 2010). The likelihood that data were used for instructional decisions increased with organization of data; however, the use of data to inform professional development plans of teachers was still lacking (Anderson et al., 2010).

**Management of data.** A need exists for an organizational change to develop user-friendly systems for data management that is modeled by administrators (Anderson et al., 2010). A disconnect between data and the instructional model can exist due to inefficient methods of
sharing information and an informal analysis processes. Anderson et al. (2010) found that complicated systems for collecting data did not support how they were used for analysis. “In higher data use, schools’ expertise in data use is more widely distributed and less dependent upon the principal or key teacher designated as a data expert” (Anderson et al., 2010, p. 319). A need exists to gather, consolidate, and share data with the staff in order to inform decision making and promote gains in student learning. The action of collecting quality data and availability of appropriate tools to analyze the data were identified as important factors that often got left behind (Anderson et al., 2010).

Without a clear process for managing the data, teachers and administrators will continue to become more frustrated and less inclined to use the information that has been collected. Data inform professional development, school wide initiatives, curriculum development, assessment, and teaching. Anderson et al. (2010) discussed the conditions needed such as accessibility and timelines of data, staff capacity, time, culture, and district and state policy support of data use as influences in data management.

Advocacy Argument

**Implementation of professional learning communities.** Educational leaders need to empower and promote teacher collaboration to create effective and lasting change. “Teams must be granted collective autonomy” (Schmoker, 2004, p. 86). Teachers become their own greatest resources by examining the reality as it relates to structure, time and best practices. Professional exchanges empower teachers to evaluate curriculum, student progress, and effective strategies. Lumpe (2007) described the purposeful use of distributed leadership in scheduling time and building incentives for building-based professional learning communities. Darling-Hammond (2009) supported the job-embedded meetings and professional discussion centered around...
effective practices (p. 64). Teachers need to engage students by stretching their teaching beyond the way in which they were taught. The 21\textsuperscript{st} century learner requires teacher collaboration that stimulates students’ interests and real world applications to the curriculum.

DuFour (2004) emphasized the need for teams to focus their questions and exploration on generating products and processes that impact student learning. Removing barriers to gain greater success in professional development included giving teachers the opportunity to review curriculum documents and compare them with implementation (DuFour, 2004). Learning communities were cautioned in how time was spent, and discussions should extend beyond sharing and stay instructionally focused (Schmoker, 2004). The focused collaboration among teachers can lead to greater understanding of assessment with shorter-term effort and possibility of quicker results (Schmoker, 2004). “We can’t arrange for teacher to meet and then assume that close scrutiny and productive adjustment of teaching practices will automatically ensue” (Schmoker, 2004, p. 86).

A strong professional learning community needs the leadership of administrators and teachers who are mutually invested in the process (DuFour, 2004; Schmoker, 2004; Wells & Feun, 2008). Teachers’ capacity for participating in structured collaboration related to bringing about improvement in student achievement is rooted in the support of instructional leadership (Wells & Feun, 2008). Engaging teachers in professional learning communities is a delicate balance of guiding teachers while allowing for their autonomy.

**Teacher engagement through collaboration.** Collaboration is defined as two or more participants voluntarily engaging in shared decision making while working toward the attainment of a common goal (Friend & Cook, 1996). Collaboration is a key element in successful PLCs. In the previous studies cited, fully collaborative PLCs include trust building, shared
concerns, and beliefs in each other. Collaboration is often misused to describe attributes such as participating and cooperation. Teachers feel accomplished and invested in their professional growth and contributions to the school culture when they can help colleagues change their thinking and gain respect for initiatives (Hargreaves, 2004). “Trust is an important role as teachers review what is being asked of them in professional learning community work” (Wells & Feun, 2008, p. 58). Administrators need to also be engaged in helping staff identify goals that fall in accordance with the norms and expectations. Educational leaders benefit from their own involvement in professional learning communities that examine the complexity of change in professional development (Wells & Feun, 2008).

Learning is a shared goal in schools; however, professional development rarely specifies the type of learning that is being examined over time. The burdens of the day-to-day tasks and demands often overpower discussions of real problem solving that could benefit student achievement. DuFour and Eaker (1998) cautioned leaders of professional learning communities to avoid a fixation with results without paying attention to people.

Federal and state requirements are holding districts accountable for justifying their goals and plans for improvement. Standards-based assessments pinpoint targets and goals for teachers to help all students achieve. Efforts to improve student learning were more effective when analysis of results led to specific actions based on data-informed decisions (Anderson et al., 2010). Results-oriented professional learning communities are a place to engage teachers in this type of dialogue about professional practice.

**Data driven decision making and self-selection.** Teachers’ ability to choose their own professional development needs through analysis of a variety of student data is an important part of the design. The process begins with administrators modeling for teachers how to set goals
using data to determine needs (Reeves, 2010). The next step is for teachers to use data about student learning to determine their own professional goals for improvement. This effort should be directly tied to gains in student achievement. The data collection, analysis, and dissemination should provide a picture of continuous improvement in teaching, learning, and assessment (Reeves, 2010).

Instructional leaders can enable teacher engagement by helping individuals identify what prior experiences they bring to the table that are related to the goals (Wells & Feun, 2008). Teachers who engage in action research have experiences to bring to professional learning communities that can bring authenticity to the time spent in collaboration. Professional learning communities need to be organized so that action research is directly related to the goals being studied with groups of teachers (DuFour & Eaker, 1998). A need exists for a strong understanding of instructional practices, and often can be found within the staff instead of from outside experts (Wells & Feun, 2008).

Action research can be translated into greater professional understanding through established protocols in learning communities. The protocols can support the function of the groups of teachers who are tasked with analyzing a topic related to student achievement (Nelson et al., 2008). For example, specific protocols exist for “looking at student work” and case study analysis that promote deep conversation in collaborative environments. The critical piece of the professional learning is the time spent on engaging in reflection (Nelson et al., 2008).

In addition to reflection, timely feedback is a critical element in promoting continuous learning. Staff and teams need access to information in the form of data to assist in making decisions about the work they are engaged in while it is occurring (DuFour & Eaker, 1998). One model of getting professional learning communities engaged is through the “plan, do, check, and
act” model (DuFour & Eaker, 1998). Waiting for summative results does not allow for change to occur successfully. It also can lead to additional feelings of frustration to see a goal through and then be surprised by the lack of results. It does not make sense for teachers in professional learning communities to collect information, discuss, and ignore results along the way (DuFour & Eaker, 1998).

Hargreaves (2004) wrote, "Sustainable improvement now calls for leaders who can build and defend improvement that lasts by drawing on and developing commitment and community among students" (p. 307). Anderson et al. (2010) found in their study that the majority of staff externalized the conditions that affected data use and suggested “an orientation toward data use as an externally imposed expectation or requirement to which they must comply, but over which they have little control” (p. 306). Although there was argument for doing something because you are directed to do it, change that is sustainable has the people involved with the change invested in the process. The change is that instead of the abstract discussions among colleagues, professional learning communities will have access to information to focus and inform their efforts. The information will serve as the catalyst for creating plans to set measurable goals leading our school towards greater gains in student achievement. Shen and Cooley (2008) discussed the need for use of data as a tool to “connect achievement with curriculum, instruction, remediation, acceleration, teacher professional development, and the allocation of human and fiscal resources for school improvement” (p. 320). The plan included stakeholders throughout the process; therefore, easing worry and anxiety along the way.

Darling-Hammond (1999) stated: "The central problem with the bureaucratic solution is that students are not standardized; thus, effective practice cannot be reduced to routines" (p. 48). McTighe and Emberger (2006) discussed the benefits of having teacher teams evaluate student
performance, response, and products together in professional learning communities. The research described the contagion that occurs when teachers feel validated through professional dialogue (McTighe & Emberger, 2006).

**Related Studies**

Mohabir’s (2009) interpretive case study focused on research questions that attempted to determine the strategies that were essential and the challenges that were encountered in implementing learning communities. The elementary school principal was the facilitator of the initiative. Barriers in the school prior to implementation of the learning community included “communication barriers and build[ing] collegiality and rapport among staff” (Mohabir, 2009, p. 138). The principal used processes already in place to change the culture from “isolationistic” to collaborative. By renaming existing groups and creating grade level teams, the principal was able to encourage some levels of academic collaboration, attempting to move on a continuum from conviviality to collaboration (Parson, 1999).

Strategies that proved successful and were thus deemed essential included school-wide implementation to involve all teachers and administrators in learning communities, building staff capacity so that a climate of trust was developed, and allowing teachers the opportunity to interpret student data. Other strategies identified as essential included the provision of trust-building activities as part of the agenda for meetings, and providing a uniform foundation of shared purpose. One of the findings identified was the professional relationships that were developed with peers. Providing a shared educational purpose allowed teachers to select different, yet related, topics to study in their classrooms, then share with the learning community. On-going support for PLC coaches, in the form of a coaches learning community, enabled coaches who were unclear of their role to participate in small professional development groups to
develop their skills. On the continuum of congeniality to collegial collaboration, it was recognized that this was an ongoing effort and that learning communities moved in both directions on this continuum during this study.

Challenges encountered included setting a goal, encouraging authentic participation, and assessing the coach’s level of leadership. Finding time to implement effective learning communities was also a challenge. Open-ended opportunities for setting a goal were recognized as a challenge. An overriding theme connected the learning communities to an educational purpose, but there were no consistent goals for each group. While considered an essential strategy, the coaches’ abilities to facilitate groups were also a challenge, thus precipitating a learning community for coaches. Another challenge also considered to be an essential strategy was the movement toward creating a culture of collaboration. The principal’s efforts to create a collegial atmosphere were well documented, but using this momentum to create a collaborative atmosphere failed. According to Mohabir (2009), levels of collaboration fluctuated at various times. Learning communities evolve in four stages toward collaboration: no relationship with each other, cooperation, coordination, and collaboration. (Shiu, 2003, as cited in Mohabir, 2009). Reasons for this challenge included member lack of confidence in the educational purpose and goal, while others did not find the concept of learning community worthwhile. Coaches were criticized for lack of facilitating skills. Members failed to recognize that they participated in different ways.

The biggest challenge in Mohabir’s (2009) study was the time element. Because of contractual obligations, teachers were limited in the time they could participate. Often the agendas were not completed in the allotted time. Reflection was the last agenda item and often
that was eliminated because of time constraints. Whenever time was available for the reflective activity, results were disappointing.

In another related study, Brunner (2009) conducted a comparative case study to determine the impact of professional development on various beliefs and attitudes of school personnel. The research questions focused on what changes, if any, the professional development had on teacher and principal beliefs, attitudes, actions, and behavior around the topic of Balanced Literacy in two different schools (Brunner, 2009), and what factors influenced the variability of response across two schools. Major themes were identified as a result of this study: “organizational support, accountability, culture and leadership” (Brunner, 2009, p. 135).

Organizational support was different in the leadership of each school. In one school, the principal assumed leadership and in the other school it was assigned to a knowledgeable teacher. Accountability was different in both schools as well. One school used a collaborative model to facilitate the process and the other used a more laissez-faire model that allowed for independence on the part of participants but little or no feedback. The culture of both schools was different as well. One school was in a suburban area while the other was located in the city. The culture of one school was described as “a barrier to change” (Brunner, 2009, p. 136), while the other school reported that “90% of the staff said they believed their school ran smoothly” (Brunner, 2009, p. 136). In the theme of leadership, the data showed that leadership differences were the greatest. Only 47% of one school’s staff ‘believed their principal supported efforts to successfully implement Balanced Literacy” (Brunner, 2009, p. 136), while the other staff viewed its principal as involved, having expectations, working closely to provide assistance, and supporting teachers. Seventy-three percent reported support of their efforts.
Kaminski (2011) conducted a qualitative single case study on the implementation of a professional learning community to determine if changes made to an existing professional development model would garner increased collegiality, collaboration, and reflection. This study was conducted in a special education collaborative. The theoretical framework of this study was based on Fullan’s (2007) theory of educational change and was used to guide the change process. Research questions focused on creating more learner-center professional development practices, and whether changes to existing practices would increase outcomes. Teachers participated in four professional days and were asked to implement the strategies learned in their classrooms. Previous evaluations were pre-post tests, but the change model required reflective responses.

Kaminski (2011) found that the participants were consistently focused on students, and that they perceived that they embedded the tenets of professional learning communities into their practices. They also perceived themselves to be more collaborative.

Based on these studies and other studies referenced in this research, it is apparent that case studies are used in a variety of educational research for different reasons. Professional learning communities, while not new to the educational arena, are also a focus of case study research as schools attempt to change their culture. The overriding theme of each of these studies is the search for systemic collaboration and the development of a climate of shared trust using professional learning communities as the vehicle. Other emerging themes included the willingness of the participants to participate, and the various levels of participation they actually contributed. The findings in these similar studies focused on the challenges to effective groups, the level of administrative support, time constraints, facilitator aptitude, and willingness of individuals to cooperate.
Summary

The thesis of this literature review was that professional learning communities could serve as a vehicle to engage teachers in professional learning that utilizes data and impacts instructional practices. The purpose of this literature review was to determine the rationale, design, and effectiveness of professional learning communities. In addition, the literature reviewed provided evidence of a need to consider factors that lead to greater teacher engagement in learning and to show the purpose of using data to make decisions to improve instruction.

Educational leaders hold the responsibility to help stakeholders see the authentic need for change. Emotional responses to change also have an impact on the teachers’ levels of engagement in the process. In the case of professional learning communities, the literature pointed to the idea that engaging the heart and mind of individuals can bring groups together to take a closer look at real solutions for making gains in student learning (DuFour & Eaker, 1998).

Hope drives the quality that keeps the leaders and staff involved in learning communities alive. It is vital to remember, engagement and exhaustion differ both in the context of the culture of the school and the individual (Klusmann et al., 2008). The psychological functioning of the teacher impacts his or her abilities to meet demands. “General demands” and “differential demands” impact the willingness of teachers to attach to new ideas such as professional learning (Klusmann et al., 2008, p. 128). Modeling the belief that change is possible with goal setting, action research, targeted reflection, and data analysis through collaboration gives educators impetus to participate and contribute.

Elements of the androgogical process model of adult learning (Knowles, 1973) are identified in Mohabir’s (2009) interpretive case study. The principal attempted to establish a school-wide climate of conviviality. Learning community objectives were identified and
learning experiences were configured. Coaches were identified to conduct the learning communities; however, they did not have “suitable techniques and materials” (Knowles, 1973, p. 117). Mohabir’s (2009) interpretive case study served as an evaluation of the outcomes and the identification of future needs. Elements not apparent included the “mechanism for mutual planning” (Knowles, 1973, p. 117), and diagnosing the need for the learning communities.

Brunner (2009) referenced Knowles’s (1973) adult learning theory in her study. She referenced Knowles by stating that adults learned best when self-directed, build on previous knowledge, find the learning relevant, and can apply the learning to the current situation. Brunner (2009) also cited current researchers (Guskey, 2002; Lieberman, 1995) as contributors to adult learning theory. Lieberman (1995) posited that adults need to be actively involved in their learning and the subject matter must have meaning to them. Environmental support and social interaction are consistent with Knowles’s (1973) process model (Lieberman, 1995).

Brunner’s (2009) conceptual framework for the study was based on Guskey’s (2002) framework as it applies to professional development. There are five levels of evaluation: teacher reaction, teacher learning, organizational support, classroom implementation, and student learning outcomes (Guskey, 2002). Of note, these levels were applied to the adult learner in a professional development situation after the process had been implemented and completed.

The use of Fullan’s (2007) theory of educational change was the guiding factor in Kaminski’s (2011) study. The premise of this theory was that organizations could change when staff collaborates. While not referenced as an adult learning theory, Fullan’s theory of educational change focused on organizations and staff, e.g., adults, and the transformation of beliefs. “Change in the three critical dimensions: teaching style, beliefs and understanding, are
particularly difficult because they require a transformation of established practices, core values and understanding” (Kaminski, 2011, citing Fullan, 2007).

It was evident in the structure of educational research that the case study method and adult learning theory, or andragogy, were present. They were strongly present in the studies of Kaminski (2011) and Brunner (2009), and implied in Mohabir’s (2009) research.

Implications

One implication of the literature on PLCs is that professional learning communities may provide teachers with the opportunity to engage in collaboration and use data to bring about change in instructional practices. The teachers’ view of professional development is influenced by the leadership role of the principal, personal ownership in learning, and ongoing collaboration with colleagues. An implication for school districts and administrators is that data are necessary for informing professional development as well as instructional practices. Further study is needed to explore how professional learning communities may become a vehicle for supporting teacher collaboration, data informed decision making, and professional learning that could impact instructional practices.
Chapter Three: Methodology

Chapter Three addressed the methodology used in this study, the research design, and the research tradition. This chapter also further described the participants, the sampling strategy and the rationale for the sample size. Recruitment procedures and access to the research site were discussed. Ethical considerations were presented. And finally, data collection, data storage, data analysis, validity and trustworthiness of the data were explained. Protection of human subjects including confidentiality, informed consent and IRB approval were included.

The research questions in this study were as follows:

1. How do professional learning communities (PLCs) in the district use andragogy to support the needs of adult learners?
2. How do PLCs support teachers in developing an understanding of dyslexia?
3. How do PLCs support district goals in developing an understanding of dyslexia?
4. How can focused professional development opportunities provide support for teachers in a professional learning community in making informed decisions about instruction?

The purpose of this study was to describe how teachers’ attitudes, feelings, involvement, and perceptions of a professional development opportunity support student learning.

The worldview (Creswell, 2007) or paradigm (Guba, 1990) influencing this study was social constructivism. Guba (1990) referred to this as “a basic set of beliefs that guide action” (p.17). According to Creswell, social constructivism is a philosophical assumption in which individuals “seek understanding of the world in which they live and work” (Creswell 2007, p. 20). The lived experience of research participants helps them shape meanings towards their surroundings providing the researcher with a complexity of beliefs. These beliefs are formed through interactions with others; hence, the term social constructivism. The context of work and
classroom, the use of open-ended questions, and the culture of the individual enable an understanding of the meaning of the individual’s world. Therefore, in this study, the focus was on the subjective meanings of the participants towards the process and topic of the PLC (Creswell, 2012). There were multiple meanings and a complexity of views that provided the impetus of categorizing, developing themes, and drawing conclusions (Creswell, 2012). This means in this study, the researcher attempted through interviews using open ended questions, observations of PLC meetings, and reading participant’s journals, to interpret the experience of the participants, recognizing and guarding against her own culture and beliefs that could shape her interpretations.

**Research Design**

A qualitative design was selected for this study. The intent of the study was to document the effects of a professional learning community learning how to use knowledge and strategies for the identification of dyslexia and its effects on student outcomes. Creswell (2007) suggested that qualitative research is “a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible” (p. 36). In this study, the researcher was situated in the PLC setting with the teachers as the note taker and observer. Being in the midst of the learning community with the teachers allowed her to assure that the climate was one conducive to adult learners and to record and observe the interactions of the participants. As such, this study was situated in a natural setting, the school, and the teacher participants attempted to interpret knowledge and strategies on dyslexia among themselves.
Research Tradition

Case studies are a research methodology used extensively in education to enhance the understanding of individuals and groups in their particular setting (Yin, 2009). Several prominent theorists emerge in the research of the case study as an appropriate qualitative research method (Creswell, 2007; Merriam, 1998; Stake, 1995; and Yin, 2009). While these theorists support case study as an acceptable methodological approach, each offers comparable and differing perspectives.

Case study research relies strongly on the basic structure of qualitative methodology with rich descriptions, keen understanding, and thorough explanations (Tellis, 1997). Yin (2009) suggested that the major purpose of a successful case study research design was to enable the researcher to collect data and form conclusions that support the original research questions. Creswell (2007) supported a “holistic account” (p. 176) in case study research. This allowed the researcher to address the circumstances under study in a number of ways.

This case study was within a “bounded system;” it involved multiple sources of information as a within-site study (Creswell, 2007, p. 73). In this instance, the bounded system was the school district and the teachers. More specifically, this study was confined to the teachers participating in the PLC during the summer of 2015. Case study is justified as the methodology for this research since it meets the criteria for a study that describes, understands, and explains (Tellis, 1997). Other theorists point to the study of a specific phenomenon (Stake, 1995) which is tied to a particular event. Yin (2009) stated that the case study methodology was appropriate to measure small group behavior against a real-time event. The goal of this case study was to describe and explore teachers’ reactions to a PLC around a specific topic using an
adult learning environment. Therefore, this was a descriptive, single-case study (Yin, 2009) that examined a small group of three to five teachers as they engage in the PLC.

The case study was selected as the methodology in this research. The study was within a “bounded system,” involving multiple sources of information as a within-site study (Creswell, 2007, p. 73). The bounded system was three teachers in the professional learning community in one school. This case study was descriptive in nature, set within a particular school around a trending topic, and was rich in description. Case study meets the criteria for a study that describes, understands, and explains (Tellis, 1997). Other theorists point to the study of a specific phenomenon (Stake, 2006) which is tied to a particular event. Yin (2009) stated that the case study methodology was appropriate to measure small group behavior against a real-time event. In the field of education, case study aids in the understanding of school performance in the context of the larger organization.

According to Stake (1995), case study research investigates and analyzes the complexity of the object under study. Stake conveyed further that qualitative case study research brings together a variety of qualitative methods. Merriam (2009) described case study research as particular and descriptive. The design of a case study is prompted by individuals, e.g., the researcher, and depends on interactions of an individual or individuals in a natural setting (Merriam, 1995). Multiple sources of data are collected and analyzed (Creswell, 2012). Yin (2009) stated that case study research is derived from many sources and data collection is more complex than other qualitative methods. Yin (2009) referred to six types of data collection: documents, archival records, interviews, direct observation, participant observation, and physical artifacts (Creswell, 2007, p. 132), all of which were appropriate to this study. In this study, the researcher used interviews, electronic journals, and observation. Yin (2009) called for a case
study report that is rich in narrative of the experiences of the participants as they seek to understand a new strategy. Merriam (1995), too, described the report of case study as richly descriptive.

The case study continues to gain prominence as a valid research methodology; yet there are those theorists who do not subscribe to this method because it lacks specific criteria and rigor. The credibility of the case study has been questioned by a number of researchers. Denzin & Lincoln (1994) allowed that there is creative freedom in qualitative methods. Others (Morse, 2001; Webb & Kevern, 2000) found that case study methodology lacked seminal theorist foundations and adequate description.

“Triangulated research strategy” is a descriptor given to the data collection of a case study (Stake, 1995). Data are collected from a variety of sources. Effective triangulation insures accuracy and other explanations (Stake, 1995). Yin (2009) posited that triangulation meets an ethical obligation to insure accuracy and validate the process. In this study, triangulation occurred through the analysis of interview notes, observation notes, and teachers’ journals.

Analysis of the data collected in a case study is a complicated component for new researcher and multiple sources must be utilized (Yin, 2009). Yin offers analytic techniques for case study data analysis. These techniques are pattern matching, explanation building, time series analysis, logic models, and cross-case synthesis. These techniques provide the opportunity to strengthen internal validity, clarify the case, reflect time for research, provide chronology, and to compare and contrast multiple case studies. In this study, the researcher looked for broad categories, significant themes, and then compared the categories. This was consistent with Yin’s (2009) cross case analysis.
Stake (1995) cautioned researchers that analysis should not be viewed as a separate segment. He stated that analysis begins with “first impressions” (p. 71). Saldaña (2013) encourages the researcher to “trust your instincts when coding” (p. 9). Using the qualitative data in interviews, the focus must be on the topics not the content (Saldaña, 2013). “Descriptive Coding is a straightforward method for novices of qualitative research particularly those first using CAQDAS programs” (Saldaña, 2013, p. 91).

The case study method is supported in the literature by prominent theorists such as Creswell, (2007, 2012), Merriam (1995) Stake (1995), and Yin (2003), to name a few. Even these theorists differ in their positions on the analysis of the case. While Stake (1995) favored the object of study over the methods of investigation, Yin (2003) focused on methods and techniques. Because qualitative researchers promote a “subjective research paradigm” (Stake, 1995, p. 45) there are detractors to this methodology. Thus, triangulation is routine, and observations need validation.

**Context of the Case**

The school district in which this case study took place serves a population of students that are over 50% socioeconomically disadvantaged. The district is located in a suburban area of the Northeastern United States. The school has not been sanctioned as a priority or focus school; however, it has missed Annual Yearly Progress and Annual Measureable Outcomes for the past four years, which means state determined performance targets in Language Arts and Math were not met. Student mobility rates continue to rise, and student attendance has declined in recent years. Elementary School A, the site of this study, is the only elementary school in the district serving preschool through fourth grade. Teacher turnover is not a problem in this school. Overall, the district and Elementary School A are struggling with meeting the literacy needs of a
diverse student population. There is a large percentage of English Language Learners and the district serves a transient population of families.

The school district has been willing to implement PLCs in the past but leadership and teacher interest did not emerge. Currently, no PLCs are meeting in the district. Based on preliminary feedback from teachers in the latest request for suggestions, PLCs were ranked high and teachers were willing to try this venue as opposed to all day workshops that were speaker centered. Therefore, PLCs were seen as a way within the district to provide needed development to teachers on critical issues.

Currently the state of New Jersey’s priority is the early identification and intervention for young children with reading difficulties. The state of New Jersey has enacted three laws with the goal of improving the identification and remediation of reading disabilities (NJ Department of Education, 2014). Professional development opportunities were conducted during the spring of 2015 on a voluntary basis. As such district and school administrators, as well as teacher leaders, determined that a PLC model might be effective for learning about dyslexia and literacy. The particular focus of the PLC was to translate traditional professional development knowledge into collaborative strategies for teaching children with dyslexia. The PLC was initiated and formed by this researcher, who was and still is the Director of Curriculum and Special Education.

The current PLC model was based on an androgogical model of learning (Knowles, 1973) and followed seven steps of Knowles’s process model (Appendix A). The researcher was the facilitator of the process model, observer at the meetings, and note taker. Once teacher participants were identified and agreed to their role in the PLC, the administration, consisting of the Principal, the Director of Curriculum and Special Education, and teachers met for mutual planning and goal setting. There is currently a plethora of research and articles related to
dyslexia in young children (Elde & LD 2011; Feifer & DeFina 2002; Foss, 2013; Mather & Wendling, 2011), and the participants had an opportunity to peruse the materials before the planning and goal setting meeting. At the meeting, teachers’ input on mutual goals was refined and aligned with school district and state initiatives on the topic. Agendas were mutually formulated. The researcher facilitated the physical space and resources.

**Participants and Access**

The teachers in this school, from whom the participants were solicited, range in teaching years from five to twenty-five years. The teaching staff is predominately female (90%). Teachers were invited to participate in the PLC and the study if they were teaching grades kindergarten through third grade, thus forming a purposeful sample (Creswell, 2007). All of the teachers have taught at Elementary School A for at least one year. All teachers are full time classroom teachers with full licensure.

**Recruitment**

The school district gave preliminary permission to conduct this study at Elementary School A (Appendix B). The principal of Elementary School A also indicated support of the study (Appendix C). Three participants were recruited from the current staff of kindergarten through third grade from Elementary School A. An email letter was sent to teachers informing them of the formation of the PLC to study dyslexia and the research that would be conducted during the PLC. Details as to commitment were included and teachers were invited to participate (Appendix D). Those teachers who indicated a willingness to participate met individually with researcher and were given an oral overview of the research study (Appendix E). Their role in the study was defined. If still interested, they were given an informed consent form to review and sign (Appendix F) or at that time, they could decide not to participate in the study. They were
further notified in the informed consent that there was no compensation for participating. Teacher participants were told they may derive enhanced professional development through the sharing of ideas, impressions, and formative outcomes, in a collegial atmosphere.

**Population and Sampling Strategy**

The population of this case study was focused on one professional learning community, with a maximum of three teachers at staggered points in their career teaching the same subject matter.

Three sampling strategies were appropriate in this case study. Purposeful sampling in qualitative research relies on the researcher’s selection of individuals and sites “because they can purposefully inform an understanding of the research problem and the central phenomenon in the study” (Creswell, 2007, p. 125.). One type of sampling used in this study was maximum variation (Marshall & Rossman, 1989). Participants’ years of teaching experience and levels of education achieved differentiation. This strategy is used to increase the likelihood of differences in perspectives, which Creswell (2007) stated is “ideal in qualitative research” (p. 126). Another sampling strategy used in this study was convenience. Marshall and Rossman (2006) described this strategy as one that “saves time, money, and effort, but at the expense of information and credibility” (Creswell, 2007, p. 127). However, Creswell (2007) stated that the convenience sampling strategy is frequently used because of the easy access to the researcher and the availability of data.

**Data Collection**

Data were collected in a variety of ways, including pre and post interviews, meeting observations, and participants’ journals to insure triangulation.
**Journals.** Teachers maintained an electronic journal about their attitudes, feelings, perceptions, and involvement in the PLC and with the professional development topic, the identification of dyslexia in K-3 students and strategies to assist in learning. The journals were introduced to teachers at the first mutual planning session (Appendix G). Teachers were asked to record their feelings and perceptions of the process and products of the meetings, their role in the PLC, and their participation in an adult learning environment. Teachers were asked to reflect at a minimum at least once a week; however, they were able to do so more if they desire. By giving teachers an opportunity to reflect on the PLC and its activities and outcomes, the study provided another opportunity to capture their beliefs based on their professional and personal experiences. Journals were submitted after the final individual interview. These reflections enabled the researcher to triangulate the collected data and enrich the categories and themes of the data collection and analysis.

**Interviews.** In the preliminary interview, open-ended questions (Appendix H) were asked to highlight the participants’ current knowledge of dyslexia, experiences, if any, teaching children with dyslexia, and the participants’ understanding of adult learning theory. The discussion also included the teachers’ perception of professional learning communities, their previous experience with professional learning communities, and obstacles faced in the classroom with children with reading disorders. The researcher took notes, asked probing questions as necessary, and otherwise did not add value to the participants’ responses. All 45-minute interviews were audio-taped and conducted at the participants’ selected location and time. The notes were transcribed by the researcher, and participants had an opportunity to review and accept or modify their interview notes. Once completed, the results of the interviews
allowed the teachers to develop an agenda and objectives for the PLCs in accordance with adult learning theory (Knowles, 1973).

At each of the three PLC meetings, which were established according to Knowles’s (1973) process model, the climate was established, the resources were available, and the meetings were held in the same place at the same time. Meeting notes were audio-taped, and the facilitator also took written notes. Notes were transcribed before the next meeting and participants had an opportunity to review, accept, or modify those notes.

The final interview included open-ended questions (Appendix I) based on the participants’ experiences with the professional learning community, the process model of adult learning theory, and their knowledge of effective strategies for reaching children with dyslexia. Additionally, questions based on the initial interview were asked to determine if the responses had changed. The discussion was guided by the interviewer, transcribed, and audio recorded. Teachers had an opportunity to review and accept or modify the transcripts.

Observations. Field notes were recorded at all meetings in accordance with data collection activities for case studies (Creswell 2007). The researcher assumed the role of the complete observer; she did not participate in the meetings. In addition to note taking in the meeting of the conversations of the participants, and the activities and events of the meetings, the researcher also included intuitive remarks and reactions. Creswell (2007) described a protocol, or predesigned form, used for recording information that enables the recorder to write descriptive notes (what is actually being said) and reflective notes (the environment, body language) (Appendix J). Critical to this process is recording quotes accurately and summarizing conversations from broad exchanges to more succinct captions of the essence of the discourse (Creswell, 2007).
Data Storage

An audio recorder was used to record meetings and interviews. The tapes were locked in a file cabinet in the school district administrative office. All transcribed notes were copied to a flash drive and stored in the same file cabinet. Digital recordings and researcher and teacher participant notes were erased and/or destroyed following their review and approval by teacher participants. The researcher was the transcriber of the documentation and held all information confidential.

Data Analysis

In Vivo coding. Stake (1995) cautioned researchers that analysis should not be viewed as a separate segment. He states that analysis begins with “first impressions” (p. 71). The data analysis process included a combination of inductive processes. In Vivo Coding was first to involve the participants’ before making decisions about codes (Saldaña, 2013). Working through In Vivo Coding led to the beginning stages of themes to draw ideas and begin to develop insight into the research questions.

Transcribed data using a template and two types of coding were used. The process began with reading the interview transcriptions. Then In Vivo Coding was used and, as Saldaña (2013) discussed, codes were selectively during the first round.

Saldaña (2013) encouraged the researcher to “trust your instincts when coding” (p. 9). Coding was based upon the philosophy that more is not better. The coding was selected to represent less frequency than every single line of the interviews. The purpose employed was to ensure that the focus was also be on the writings and the analysis that could be drawn from the specific words of the participants’ analysis.
**Provisional coding.** Once the data collection was completed and accepted by the participants, a start list of codes, based on elements of the study and the researchers’ knowledge of the topics, was generated. The starting codes included: professional learning communities, knowledge of andragogy, content knowledge (dyslexia), and teachers’ experiences with reading disorders. This preliminary process is known as provisional coding (Saldaña, 2012). It was anticipated that more categories would emerge.

The second cycle of coding looked at the previously coded data to eliminate repetitiveness of categories and identify significant themes. The next step required a comparison of themes and categories to determine similarities and differences among the participants. Creswell (2007) defined this as cross-case analysis.

**Cross-participant analysis.** In Vivo and Provisional Coding were used as the first two steps for coding the data, including journals, field notes, and interviews. Once compiled, the researcher created a profile of categories and themes for each participant. Cross-participant analysis was then performed across participants by comparing themes and examining outliers.

**Trustworthiness and Verification**

Trustworthiness is defined as the “credibility, authenticity, transferability, dependability, confirm ability, the naturalist’s equivalents for internal validation, external validation, reliability and objectivity (Lincoln & Guba, 1985, p. 300, as cited in Creswell, 2007). Credibility in this study was established through prolonged engagement and authentic attention to details in data collection and transcription. The study took place over three PLCs. The researcher observed meetings, took notes, and transcribed the notes. Additionally, all meetings were audio recorded. Three teachers engaged in learning about, planning, implementing and evaluating topics around
dyslexia. Working closely with the researcher/facilitator in the PLC provided opportunities for collaborative engagement not normally afforded teachers.

Criteria to measure the trustworthiness of data collection included internal and external validity, objectivity, and reliability, all of which start at the beginning of the research study and continued throughout the study. Member checking occurred in this study. Participants were asked to review all transcripts for accuracy and to clarify their comments and the researcher’s conclusions. Peer review from interested researchers was solicited to further assess the validity of the findings. These steps also established a level of credibility to the study and to the researcher. Prolonged engagement with the participants enabled the researcher to build trust, understand the culture of the PLC, and be alert for misinformation (Creswell, 2007, p. 207). Triangulation occurred in the study because there were multiple sources of data (interviews, informal meetings and participant reflective journals) and methods (individually, orally and in writing, and in groups, peer review) to gather data to identify and verify themes and perspectives (Creswell, 2007).

Rich thick descriptions were provided through detailed descriptions of the school district, the researcher, the participants, and the process so that future readers may replicate the study by identifying “shared characteristics” (Erlandson et al., 1993, p. 32, as cited in Creswell, 2007, p. 208). Potential threats to internal validity included subject characteristics, mortality, location, instrumentation, testing, history, maturation, attitude of subjects, implementation, researcher bias and familiarity, to name a few. These threats were minimized. Subject characteristics in a professional setting included state-certified teachers with varying years of teaching experience and levels of education teaching the same subject matter in the same school. The location was one school in the school district, and teachers’ preparation time had been conveniently scheduled
so that their PLC time was dedicated. Researcher bias was self-monitored throughout the study to insure the highest level of objectivity.

**Protection of Human Subjects**

The protection of human subjects is a fundamental tenet of conducting legitimate research. Human subjects must be assured that their participation will remain confidential and their input and reactions will not be held against them. Teacher participants were assured anonymity throughout the process through the assignment of a letter for identification purposes. Teacher participants were assured verbally and through the written consent form that the results of their participation would in no way impact their annual teacher observations or status in the school district. All transcribed notes were provided to participants for their review and approval. Once achieved, the notes and tapes were destroyed.

Teacher participants had the opportunity to opt out of the research portion of the study but not the professional learning community, since their preparation time was scheduled to facilitate the professional learning community.
Chapter 4: Research Findings

Introduction

The purpose of this qualitative case study was to explore how a professional learning community could function as a place for adult learners to explore a current state initiative, identifying dyslexia in young children. The study further assessed the professional learning community as a forum for the use of data to support discussion about how to meet curriculum standards and support instructional practices in teaching K-3 students with dyslexia. It also provided an opportunity for the school district to move away from the traditional form of professional development and commit to using professional learning communities as forums for learning and development. In an effort to support the state initiative and the school district’s goals of improved professional development, this study documented how the researcher designed a PLC around an andragogical model to address the research questions by demonstrating how this study supported the needs of adult learners and how the resources provided aided teachers in their understanding of dyslexia.

1. How does a professional learning community (PLC) focused on dyslexia in the School District use adult learning theory to support the needs of adult learners?

2. How do PLCs support teachers in developing an understanding of dyslexia?

3. How do PLCs support district goals in developing an understanding of dyslexia?

4. How can focused professional development opportunities provide support for teachers in a professional learning community in making informed decisions about instruction?

It also demonstrated how the efforts of the participants supported the school district’s goals of developing an understanding of dyslexia, and how the participants provided support for each other in a professional learning community in making informed decisions about instruction.
Additionally, the study examined the teachers’ attitudes, feelings, perceptions and engagement in the professional learning community as a process, their understanding of dyslexia, and strategies to address children with the disorder, as the product.

**Context of the Study**

In an effort to understand and interpret the findings of this case study, the context of the study was examined. The school district’s previous attempts at establishing and maintaining professional learning communities were not successful. The model was didactic in nature, and the PLCs were more professional development activities rather than a collaborative effort of the participants. Teachers were passive recipients of the topics and few, if any, attempted the new strategies presented. Meetings were large group with a facilitator and in different locations and at different times. Feedback on these early attempts indicated that time and structure were inhibitors to developing collaborative efforts, as was the lack of coordination. The theory behind PLCs and their purpose was not explained to the teachers.

The researcher was charged with establishing and maintaining a model professional learning community. Coincidentally, the state, at the same time, mandated that all teachers become knowledgeable about identifying dyslexia in primary grade students. Toward that initiative, the state held a series of statewide professional development days, and schools were encouraged to send teachers. Knowing this model of professional development would not be effective, the researcher developed a model of professional learning communities based on the theory of adult learning and subscribed to each of the seven tenets of Knowles’s Androgogical Model of Human Resource Development (Knowles, 1973), a process model as well as a content model. Thus, this study and the state mandate provided an impetus for the school district to provide a forum to support discussion regarding meeting curriculum standards and supporting
instructional practices in teaching young children with dyslexia. This study was an opportunity to understand how these communities can be better forums for learning and development.

**Participant Profiles**

Three teachers volunteered to participate in this study. Their pseudonym, current assignment, years of teaching experience, and state teaching certifications are presented in Table 1.

Table 1

*Profile Information of Participants*

<table>
<thead>
<tr>
<th>Participant by Pseudonym</th>
<th>Current Teaching Assignment</th>
<th>Years of Teaching Experience</th>
<th>State Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Basic Skills</td>
<td>13 years</td>
<td>Elementary Education K-8</td>
</tr>
<tr>
<td>B</td>
<td>Resource and Child Study Team</td>
<td>16 years</td>
<td>Elementary Education K-8, Special Education, Learning Disabilities Teacher Consultant</td>
</tr>
<tr>
<td>C</td>
<td>Resource</td>
<td>25 years</td>
<td>Elementary Education K-8, Special Education</td>
</tr>
</tbody>
</table>

**Phases of the Program**

This study was conducted in several phases. These phases included participant selection, a series of activities, and the transcription and multi-layered coding of the collected data. Table 2 presents the activity schedule for this study.
### Activity Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
<th>Person(s) Involved</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview 1, Participant 1</td>
<td>August 2015</td>
<td>Participant 1, Pseudonym</td>
<td>Meeting notes, transcribed, reviewed by Participant 1</td>
</tr>
<tr>
<td>Interview 1, Participant 2</td>
<td>August 2015</td>
<td>Participant 2, Pseudonym</td>
<td>Meeting notes, transcribed, reviewed by Participant 2</td>
</tr>
<tr>
<td>Interview 1, Participant 3</td>
<td>August 2015</td>
<td>Participant 3, Pseudonym</td>
<td>Meeting notes, transcribed, reviewed by Participant 3</td>
</tr>
<tr>
<td>Orientation to Andragogy</td>
<td>August 2015</td>
<td>Researcher, Participants</td>
<td>Understanding of process model of adult learning</td>
</tr>
<tr>
<td>Journaling</td>
<td>August 2015</td>
<td>Participants</td>
<td>Reflective feelings, perceptions, attitudes, engagement</td>
</tr>
<tr>
<td>PLC 1</td>
<td>August 2015</td>
<td>Participants, Researcher</td>
<td>Creating the PLC meeting agenda and topics</td>
</tr>
<tr>
<td>Journaling</td>
<td>August 2015</td>
<td>Participants</td>
<td>Reflective feelings, attitudes, perceptions, engagement</td>
</tr>
<tr>
<td>PLC 2</td>
<td>August 2015</td>
<td>Participants</td>
<td>Review and acceptance of previous meeting notes and discussion of (agenda items)</td>
</tr>
<tr>
<td>Journaling</td>
<td>August 2015</td>
<td>Participants</td>
<td>Reflective feelings, attitudes, perceptions, engagement</td>
</tr>
<tr>
<td>PLC 3</td>
<td>August 2015</td>
<td>Participants</td>
<td>Review and acceptance of previous meeting notes and discussion of (agenda items)</td>
</tr>
<tr>
<td>Journaling</td>
<td>August - Sept 2015</td>
<td>Participants</td>
<td>Reflective feelings, attitudes, perceptions, engagement</td>
</tr>
<tr>
<td>Interview 2, Participant 1</td>
<td>September 2015</td>
<td>Pseudonym, Participant 1</td>
<td>Meeting notes transcribed, reviewed by Participant 1</td>
</tr>
<tr>
<td>Interview 2, Participant 2</td>
<td>September 2015</td>
<td>Pseudonym, Participant 2</td>
<td>Meeting notes transcribed, reviewed by Participant 2</td>
</tr>
<tr>
<td>Interview 2, Participant 3</td>
<td>September 2015</td>
<td>Pseudonym, Participant 3</td>
<td>Meeting notes transcribed, reviewed by Participant 3</td>
</tr>
<tr>
<td>Journaling</td>
<td>September 2015</td>
<td>Participants</td>
<td>Journals submitted</td>
</tr>
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During the second phase of this study, the data assembled in this qualitative case study were collected in a variety of ways by the researcher and by the participants. Pre- and post-interviews were conducted by the researcher with individual participants. The researcher recorded meeting observations. Note-taking was performed by the participants, and participants maintained their own reflective journals. This variety was selected to ensure that triangulation would occur. Data collection began in August 2015 with individual interviews with each participant. Three professional learning community meetings were scheduled for that month, and journals were submitted in September 2015.

The third phase of the study was that of coding. Basic steps in coding qualitative data were used to organize the data for later fuller analysis. Transcripts of interviews were listened to and then transcribed into text. The researcher performed all of the transcription against notes and recordings. Field notes were transcribed into expanded text to enable clarity. Reading and re-reading the transcripts was necessary in order to ensure accuracy and to make note of emerging themes. Participants read the transcripts and edited as necessary. Several methods of analysis were engaged in this study. The initial coding was done with a focus on recurring words and chunks of data to discover patterns. Codes were divided into two major stages, first cycle and second cycle coding (Saldana, 2013). Initial coding, or first cycle, was reserved for the recurring chunks of data that were later summarized into more accurate descriptors. The codes were given labels to assign meaning to the chunks of data. Miles et al. (2014) called for assigning codes to the data chunks to retrieve and assemble similar information so the researcher could identify and cluster data and assign it to the various research questions. The method of clustering enabled the researcher to set the stage for more in-depth analysis from which the conclusions of this study were made.
What emerged from the first and second cycle of coding were categories, themes and sub-themes, which are presented in Table 3 with the related research question and their reference to the elements of the process model of adult learning theory.

Table 3

*Categories, Themes, Sub-themes, Research Questions and Adult Learning Theory*

<table>
<thead>
<tr>
<th>Category</th>
<th>Themes and Sub-themes</th>
<th>Research Question</th>
<th>Adult Learning Theory Process Model</th>
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<tr>
<td></td>
<td>1.1 Trust</td>
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<td></td>
<td>1.2 Change</td>
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<td>1.3 Positive Climate</td>
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<td>PLC</td>
<td>2. Teacher Engagement</td>
<td>2., 4.</td>
<td>3., 5., 6.</td>
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<td></td>
<td>2.1 Revisiting Topic Outside of PLC</td>
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<td></td>
<td>2.2 Freedom to Disagree</td>
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<td>Teachers’ Experiences With Reading Disorders</td>
<td>3. Changing Assumptions</td>
<td>1.</td>
<td>1., 2.</td>
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<td></td>
<td>3.1 Respect</td>
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<td></td>
<td>3.2 Meaningful Connection with Support Staff</td>
<td></td>
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<tr>
<td>Content Knowledge (Dyslexia)</td>
<td>4. PLC Outcomes</td>
<td>1., 2., 3.,</td>
<td>4., 7.</td>
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<tr>
<td></td>
<td>4.2 Identifying Screening Tools</td>
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<td></td>
<td>4.3 Designing Intervention Pull-Out</td>
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The following sections will present the findings by research question, and then provide an analysis of the individual participants’ interviews, journaling, meeting notes, and observations by themes and sub-themes. Categories and themes will be highlighted in each section. The responses will be linked to the theory of adult learning where apparent (Knowles, 1971).
Teacher participants’ remarks are presented in the broad categories of adult learning theory, professional learning communities, teachers’ experiences with young children with reading disorders, and knowledge of dyslexia.

Research Question 1. Findings and Analysis

The first research question was stated as follows: How do professional learning communities (PLC) in the school district use andragogy to support the needs of adult learners?

The coding for categories, themes, and sub-themes revealed that all participants were comfortable with the process model of adult learning and embraced the elements of the model, particularly the creation of a climate conducive to learning, the ability to mutually plan, and to learn about identifying and remediating dyslexia in young children. Further, because the participants were adult professionals, they assumed the remainder of the elements of the process model, such as identifying learning tools and experiences for young children with dyslexia, and evaluating the outcomes of the PLC.

Research Question 2. Findings and Analysis

The second research question was stated as follows: How do professional learning communities (PLC) support teachers in developing an understanding of dyslexia?

The initial coding for categories, themes, and sub-themes revealed that working together in dedicated time and place were benefits to the participants in exploring dyslexia in young children. Having materials and tools readily available for them to study was a positive factor. Further, sub-themes emerged that included the knowledge that the participants were meeting and discussing the efforts of the PLC in the course of their day as well as making meaningful connections to other support personnel in the school district who could aid in the identification and intervention for young children with dyslexia.
Research Question 3. Findings and Analysis

The third research question was stated as follows: How do professional learning communities (PLC) support school district goals in developing an understanding of dyslexia?

The initial coding of the data revealed that learning more about dyslexia was important to the participants and that working together on identifying strategies and resources would further the school district’s goals. As noted previously, the school district’s efforts with the establishment, maintenance, and evaluation of professional learning communities was sporadic at best. The state’s mandate to provide identification and intervention services to young children with possible dyslexia was the catalyst to form a PLC to address this mandate. As a result of this study, it was determined that a PLC was the appropriate forum for teachers to develop knowledge, strategies, and tools to meet the requirements of the mandate.

The initial coding for categories, themes, and sub-themes revealed that in an atmosphere of collaboration, trust and respect were developed, which facilitated the work of the PLC and, ultimately, the school district’s goals and the state’s mandate. Further, the financial support of the school district in the form of reading material and tools for identifying reading disabilities made the work of the PLC easier. Developing new teaching strategies for teaching young children with dyslexia demonstrated the willingness of the participants in the PLC to enrich their teaching repertoire, thus enhancing the image of the school district.

Research Question 4. Findings and Analysis

The fourth and final research question was stated as follows: How can professional development opportunities provide support for teachers in a professional learning community in making informed decisions about instruction?
The initial coding revealed that the PLC was an appropriate and appreciated forum for the study of dyslexia for the participants. Participants stated they were able to share ideas, test theories, and practice strategies. In addition to the research on professional learning communities, the researcher of this study examined the tenets of adult learning theory (Knowles, 1971), which was used to guide the structure and process of this study. By creating a climate conducive to learning, establishing a constant meeting place and time, and garnering the support of the school district, participants were able to establish their own norms, volunteer as note-takers, establish their own agendas for each meeting prior to the meeting, and select the strategies and tools that they would use in the forthcoming school year to identify young children with possible dyslexia. In addition, participants determined that a professional development day in the spring would be an excellent time to share their efforts with the larger teacher population.

Thematic Analysis

In order to fully explore these research questions, individual teacher participants were interviewed prior to the PLC meetings and then after the PLC meetings. Each was queried about their years of teaching, experiences with professional development, and their current knowledge of dyslexia in young children. Participants were then asked to define what a professional learning community was to them.

More probing questions included their willingness to work with other teachers to solve instructional problems and what some of the previous experiences with this dynamic were like. Each was asked to define her characterization of collaboration and to offer perceptions of what the essentials were to an effective professional learning community. A rich description of the teacher participants’ experiences in each of the categories emerged. Each major theme
(collaboration, teacher engagement, changing assumptions, and PLC outcomes), with several sub-themes, evolved in the multi-cycle coding process, and these are presented in the next section.

**Adult Learning Theory**

Andragogy, or adult learning theory, as both a category and a theme, was apparent in each aspect of the study. Knowles (1971) defined andragogy as a process model, which was appropriate for this study for several reasons. First, the study focused on adults as participants. In this situation, a process model allowed the participants to participate in all elements of the process rather than passively participate in a content model. By participating in a professional learning community, participants were fully engaged in the process of planning, formulating objectives, creating a schedule and agenda for learning, making modifications, testing the learning, and evaluating the professional learning community as a vehicle for deeper understanding and collaboration.

All of the participants stated that they appreciated the process model of adult learning theory, and that they were empowered by the process. For example, Teacher A described the benefit of participating in the PLC because unlike other professional development that often did not give her, as the learner, the opportunity to discuss her thoughts and ideas prior to learning new information, the PLC was a forum. Teacher A reflected "It is helpful to have an open discussion and prepare thoughts and ideas around a new topic before new learning takes place." Participant A felt that discussing the ideas and research helped her to come to conclusions later, and this was so different from the didactic model of traditional professional development where she was a passive listener. Participant A emphasized further that the desire when learning as an adult to “see and hear what other teachers are doing in relationship to the topic helps me learn so
much more because I have more of an open mind for new ideas.” This is consistent with the first steps of the process model (Knowles, 1971) wherein adults are encouraged to collaborate and discuss ideas, set agendas, and plan mutually before arriving at conclusions.

Participant A stated that her learning style changed throughout her participation in PLCs as she found that the process of the PLC forced her to think differently about her own bias towards learning a certain way was impacting her teaching.

My learning style I feel has actually changed a little bit since being in the PLC. It is more on the forefront of my brain that how I learn is impacting my teaching and that, in fact, it may be creating a situation where I'm doing something that isn't working. I need to figure out if Plan A isn't working what I need to do to get to Plan B.

Participant A explained that the PLC opportunity empowered her to reach out to the other participants and really listen to their thoughts on teaching children with dyslexia. While the reading program that she currently used and believed in was working for the majority of children, she came to realize that her bias would not be reaching children with dyslexia. Thus, the group process enabled her to examine her own styles and biases and become open to new ways of presenting reading strategies. The other teachers in the PLC expressed these same and similar thoughts.

**Theme 1. Collaboration**

Collaboration was mentioned by all of the participants and they provided cogent definitions of what collaboration was to them. Participant A described what happens when collaboration wasn't present as a “lack of flexibility” and described past experiences of working in other small groups where “teacher resistance” interfered with the group's ability to learn together and from one another. However, Participant A described how the “advantages of
collaboration deeply outweigh the challenges” which drove her desire to be a part of a collaborative PLC. The PLC established in this study created true collaboration where, according to Participant A, “Teachers were able to learn from one another and get ideas and take them back to their classrooms.” Participant A reflected on the value of being part of a collaborative group:

Many of my experiences and personal growth happened outside of workshops on dyslexia. Our PLC was so great because my colleagues took their own journey in learning about dyslexia and then we all came together at various times to share and bounce our new knowledge and energy off of each other.

Participant A explained that learning happened both inside and outside of the PLC. The informal learning activities outside of the PLC were key to her professional learning in a collaborative group.

Participant B also reflected about the power of collaboration:

This experience has taught me that working together we can do this work. We've talked about being collaborative and open as the avenue for making progress and accomplishing goals. This experience opened my mind to new thoughts I've never had before.

Participant B made two points that demonstrate the importance of collaboration in PLCs. First, she indicated that teachers are able to accomplish more when they are working together, and she also believed that working collaboratively enhanced her own thinking.

Participant C concurred with her colleagues in the PLC opportunity but spoke of what it takes to be collaborative. “In order to have collaboration, everyone has to be willing to participate, give opinions, ask questions, and be vulnerable. It is ok to not know something or
be wrong.” Participant C also indicated that to be collaborative you don’t have to have all of the answers.

All of the participants stated that working together was a synergistic opportunity and that they shared and discussed ideas with open minds.

Because of the pre-planning undertaken in this study, participants were given an overview of the process model of adult learning theory (Knowles, 1971) and were willing to participate in this new model of professional development. Overall, all of the participants seemed to suggest that even though collaboration at times had its challenges, working with peers created deeper learning and growth, as well as opportunities to collaborate with colleagues on an ongoing basis. This is consistent with the tenets of the process model (Knowles, 1971) wherein the adult learner takes charge of his or her learning, mutually plans, and expects to collaborate. Ideas are discussed, there is no evaluation of ideas, and the atmosphere is one of respect and trust. Collaboration as a theme resulted in two sub-themes of trust and willingness to embrace change.

**Sub-theme 1.1. Trust.** The adult learning environment established for this study provided the groundwork for the participants to develop a sense of trust that they would be respected in their opinions without censure. The overview of the process model (Knowles, 1971) gave participants an opportunity to understand that this model was different from previous professional development attempts and that their ideas, opinions, and even disagreements with ideas and opinions were acceptable. All were willing to participate in this model. In the preliminary interview and the first meeting, all participants reflected on the importance of trusting one another as a vehicle moving them closer to being able to help their students.
Participant A described her experience with trusting her colleagues within the PLC:

“Even if my opinion isn't the outcome, we have trust, and can come to a consensus on a next step to support our students.” In other words, trusting your colleagues includes being able to choose someone else’s opinions over one’s own. This consensus allows teachers to help their students in ways beyond what they would be able to do on their own. As a participant in the PLC, she found “listening was an extremely important part of the PLC” because she trusted and valued her group members. This trust may have been a part of their professionalism prior to the PLC opportunity, but all agreed that they established a trusting environment. Participant A further stated she wanted to go home and use their experiences and ideas as “food for thought” when she reflected on how her own thinking about her own values related to teaching struggling readers. When queried about these feelings, she explained that what she learned from the other participants, the discussions of the research and strategies, and being open and receptive to new ideas, developed a sense of trust not only in her colleagues and the PLC but in her own value system.

Participant B reflected on trust as well:

Our collaborative efforts were based on the shared mindset that everyone has a valued experience with working with students who struggle with reading. Those collaborative efforts helped propel the discussion further and deeper because we were open minded and trusted one another. We were free to disagree and that is what made the PLC take off and be so successful.

Participant B was saying that as experienced teachers working with struggling readers, the collaborative efforts and trust in each other moved them along quicker than she anticipated and she felt that this contributed to the success of PLC.

Participant C’s reflections on trust were similar to those of the other participants.
As a participant I was able to be myself. I never had to think about being chastised for an idea or my idea being negated. We were free to have conversation and everything that was said was listened to by the other group members and considered.

Participant C’s statements regarding the trust established in the PLC were similar to those of the other two participants. They all spoke of the freedom to express themselves without censure. They listened to each other and considered the information they were hearing.

The sub-theme of trust emerged in the reflective statements and in the post-interviews of all the participants. They consistently stated that the elements of the process model revolving around collaboration enabled them to develop a trusting atmosphere that enhanced their understanding of each other and of the topic of dyslexia. Listening to one another, sharing their own thoughts, and expressing disagreement in a positive atmosphere established a trusting environment that was appreciated by the participants. In addition, this collaborative atmosphere and the trust building experiences facilitated their willingness to change their teaching strategies for young children with dyslexia.

**Sub-theme 1.2. Willingness to change.** All of the participants discussed, some with surprise, that they had to change their way of teaching a young child with dyslexia and that they had difficulty coming to terms with the change that would be involved. However, all agreed that the changes would be in the best interest of the child with dyslexia. Participant A reflected when describing how she was more flexible than she could have imagined: “Opening myself up to another theory I found conflicting with my own beliefs was challenging, however, the PLC helped because it gave me an opportunity to think about readers in a different way.” Working with the other participants gave this participant an opportunity to stretch her thinking and look at herself as a reading teacher in different ways. While initially a conflict in her thinking, she
explained that the process allowed her to think about other ways and eventually plan to adopt methods that would enhance her skills teaching young children with dyslexia. Participant A also shared her thoughts on best practices for teaching struggling readers: “I learned by being open, that if I only focus on a student's weakness… [that it would be difficult] to balance and think about their strengths.” This can be interpreted as Participant A being willing to change her teaching methodologies to accommodate struggling readers as a result of the collaboration and trust engendered in the PLC. Without the additional knowledge shared by those colleagues, she might never have become open in her thinking. Participant A incorporated the brain research on dyslexia that she was learning when stretching herself to think about the purpose of doing what felt “boring and repetitive,” but actually was necessary to reach the student with dyslexia. This is consistent with the sub-theme of change, as this teacher was willing to change her teaching strategies based on the group input, the research, and the students’ needs.

Participant B shared her thoughts on having to change strategies for assisting young children with dyslexia.

If I didn’t participate in the PLC, I probably would have planned for selecting a Dyslexia Screener and Professional Development Plan for the staff that looked very different. As a result of our collaboration, I moved away from the idea of having a formal in-service in the fall and instead joined the group on the idea of using some of the informal/formal data points to determine student placement and later sharing case studies to illustrate the concepts teachers need to understand.

This statement can be interpreted as a PLC victory. Participant B, if working alone, would have chosen a different model and plan for the staff but her participation in the PLC opened her thinking to other ways of reaching struggling readers. She also moved away from a formal in-
service in the fall, the more traditional professional development day, as a result of the dialog of the PLC, and opted for more informal meetings with teachers to spread the word on teaching reading to young children with dyslexia.

Participant C spoke of the challenge she faced before and as a result of participation in the PLC. “Believing in one attempt or approach to working with a struggling reader was challenged through my participation in the PLC. I realized that this [one approach] isn't for everyone and it was not solving everyone's problem.” This statement was interpreted to mean that Participant C was willing to change her stance on one approach to teaching reading. The information and ideas discussed in the PLC was the catalyst for changing her mindset.

While the willingness to change was a sub-theme in this study, it is important to note that it was not in the participants’ repertoire of teaching skills to begin with. However, they quickly adapted to the notions that young children with dyslexia needed different strategies to learn to read, and when they studied the research and examined the tools for assisting these children, they were willing to embrace change for the good of the students as well as for their own expanded professionalism.

Collaboration as the major theme, and the subthemes of trust and willingness to change, were major indicators that the PLC was a working group in many ways. The development of the sub-themes was fostered by the additional sub-theme of positive climate, in which the participants could discuss ideas, examine research and tools, and reach consensus.

**Sub-theme 1.3. Positive climate.** The participants were enthusiastic about the professional learning community as a forum to speak and be heard, to listen and contribute, and to feel safe in doing so. More specifically, Participant A responded:
I feel I can openly and freely discuss my opinions regardless if everyone agrees. We can have a healthy disagreement. I say or ask about whatever I want and it is well received by the members of my PLC. It is essential that the players all have an open mind and respect, and I found even greater respect was earned from working together in the PLC. Participant A’s emphasis that having “respect” was consistent with the other participants’ responses as it related to the necessity for a positive climate for adult learning in the PLC. The participant also described the respect she had for the other two participants in the study. She described their backgrounds as “invaluable,” and the “extensive experience” she felt led her to gaining “precious advice” through the collaboration. The three participants had a shared value for one another's roles and responsibilities within the school district, which also contributed to the positive climate of the PLC.

In summary, the tenor of the school district as well as the PLC enabled a positive climate in which teachers could agree, discuss, disagree, expand each other’s ideas, and reflect on the research and tools for dyslexia, all in a wholesome environment. Their testimonials support their positive feelings. Participant B added similar thoughts to the climate established by the participants.

It feels good that we accomplished something really meaningful for the learners. It was a success because we were consistent, gave one another feedback, kept checking the pulse, and brainstorming along the way. We questioned things we were learning, and heard one another's viewpoints. My impression overall it was a great experience. Only makes our school district stronger working together, things can't be done in isolation.

Participant B’s statements were interpreted to mean that the positive climate fostered in the PLC enabled the participants to focus on the topic, ask questions, offer ideas, and listen to each
other’s views. Her broader view of the school district becoming stronger for the PLC efforts was viewed as a commitment to working together for the good of the students.

Participant C summed up her feelings about the climate the participants established for learning.

It gets a little emotional when you realize just how strong your colleagues are and how respected they made me feel throughout the PLC. It hit me professionally and made me want to be as strong or as good as the people in my PLC. It drove me to question myself more about how to proceed with working with students who are struggling readers.

Participant C was overwhelmed by the positive aspects of the PLC and held her colleagues in high esteem. She stated that she wanted to emulate them and continue working with them to help young children with dyslexia.

All of the participants consistently agreed that the tenor of the process was a positive climate that they themselves and together established. They respected one another, they trusted the judgments of each other, and hence, established a positive climate in which to master teaching young children with dyslexia. Establishing a positive climate in which to accomplish the work of the group is an element of the process model of adult learning theory (Knowles, 1971). An effective atmosphere facilitates the work of the group and each of the participants spoke of the respect they had for each other as professionals and they were grateful to share ideas with each other and discuss their points of view in a trusting and positive environment.

Collaboration summary. Collaboration as a theme, with the subthemes of trust, willingness to change, and positive climate were spoken of in interviews, PLC meetings, and written about in the participants’ journals. There was consistency in their thoughts about the experiences and willingness to discuss the challenges. The lesson learned in the theme of
collaboration was that there is an inter-connectedness among the sub-themes that created a synergistic energy in this PLC. In the process of participating in the PLC, setting their own parameters, and in fact, owning the outcomes, gave the participants a freedom never enjoyed in daily, routine interactions. Being able to professionally disagree was noted as a freeing experience by all of the participants. Because of the trusting environment they created, they came to rely on each other’s strengths and expertise in order to better help the children with reading problems, thus fostering a climate where they were willing to change their teaching practices. These traits were a direct result of the positive climate engendered in the PLC by the participants. Going forward, it will be imperative to attempt to create these bonds in new PLCS. By giving the participants the leeway and the permission to set their own agenda, police their own actions, and speak freely on ideas and strategies, enabled the participants to forge alliances beyond the PLC.

**Theme 2. Teacher Engagement**

Teacher engagement emerged as the second major theme of this study. After analyzing the data from interviews, meetings, and journals, teachers praised the level of engagement afforded by the PLC. Sub-themes emerged as well: Teachers willingly revisited the topic outside of the PLC meetings, and applauded their ability to disagree. Participant A described her feelings about the level of teacher engagement afforded through this PLC opportunity:

I feel empowered and supported as part of the PLC. I'm grateful to be able to be a part of the opportunity to learn about dyslexia. I've gone to other workshops before but this experience still has me thinking about how to reach my struggling readers.

Similar thoughts were expressed by Participant B, who termed the PLC meetings “great” and said the “conversations focused on bringing us a step closer to providing specific services to
our students.” She stated that all participants were focused and kept notes of their recommendations. Participant C added to the positive teacher engagement of this PLC. “I was engaged because the topic was very near to me; one that I have experiences with, so the topic is important to me. I want to constantly know more, and the PLC helped me learn more.”

Teacher engagement was highlighted throughout the interviews, meeting notes, and journals. All of the participants spoke highly of the experience of working with each other on such an important topic that would impact their teaching strategies and help children.

**Sub-theme 2.1 Revisiting topic outside of PLC.** It is interesting to note that even though the participants were housed in different buildings in this school district and assumed different roles, they all found the time to meet beyond the PLC to discuss the work of the PLC. Participant A stated: “We came together outside of the PLC at various times throughout the school day to share and bounce our new ideas off of each other.” She further stated that many of her experiences and growth happened outside of the PLC based on reflection from working with colleagues who also took their own journey in learning about dyslexia. Participant A summed her experiences outside the PLC as feeling blessed that she had many opportunities this year to learn so much about dyslexia. Her thoughts were interpreted to mean that the PLC was a positive force in learning about herself, her colleagues as professionals, and teaching young children with dyslexia. She also spoke of reflection and this is explained as hearing an idea or someone else’s thoughts on a topic and thinking about it, weighing its merits, and coming back to the originator for more information.

Participant B also spoke highly of the time outside the PLC as being reflective of others’ input.
I've always known the other two participants and this experience has really given me a chance to develop a friendship and collaboration with them. It has helped me in my new position as well. Outside of the PLC we've discussed how to reach parents. I find myself talking to parents now more about dyslexia after this study and I really feel breaking it down for learners and offering parents support has been helpful.

An additional benefit of the PLC and the study of dyslexia was the ability to speak with parents about dyslexia. Prior to the PLC, participants were uncomfortable approaching the subject with parents and did not have enough information to have meaningful conversations with parents.

For Participant B, it became a daily activity for the participants to touch base outside of the PLC. They talked about what was successful that they tried and asked one another questions about how to tweak something and make it better. “We also talked about students, based on criteria we learned about dyslexic tendencies. All conversations in and out of the PLC came back down to how to best reach and teach our struggling students.”

Time spent outside of the PLC meetings was mentioned by all of the participants as an addendum to the meetings that further facilitated the work of the PLC. Being able to discuss thoughts, reflections, and topics on dyslexia beyond the parameters of the scheduled meetings was beneficial to all the participants.

**Sub-theme 2.2 Freedom to disagree.** This sub-theme emerged in these words from all participants. The norms of the PLC were such that respectful disagreement occurred and was respected by the participants. They all felt that the PLC was an opportunity to consider new options or to disagree in a safe environment. Participant A stated: “Even if my opinion wasn’t the outcome, we have trust and feel safe disagreeing and coming to a new way of thinking that maybe we haven’t considered before in regard to how we approach struggling readers.”
Participant A was respectful of the process and understood that she was heard even if her input was not adopted. Participant B iterated the same views: “The experience was collaborative and an open avenue for thinking about things in a different way. Getting different perspectives and having fresh eyes on the topic helped me think differently.” Thinking differently was a common reflection by all of the participants. They were able to listen to each other’s ideas and reflect on them. All noted that they changed their thinking based on new information.

Participant C summed up the sub-theme of freedom to disagree by stating that the participants had their own perspective formed about their views on at-risk readers, formed from their own experiences, education, and observations. “We were interested in each other’s input even when ideas were presented differently.” By differently, it was interpreted that the input was not part of the other’s current bank of ideas but they were willing to ask, listen, and amend their thinking for the betterment of the students.

**Teacher engagement summary.** The second major theme of teacher engagement, with its two sub-themes of revisiting the topic outside of the PLC and the freedom to disagree, were consistent with Knowles (1971) Process Model of Adult Education. The elements of creating a mechanism for mutual learning and designing a pattern of learning experiences led to greater commitment to the activity and thus more engagement on the part of the teachers. The lesson learned here was that in forging a cohesive PLC, the participants were comfortable meeting and discussing dyslexia in young children outside of the PLC, thus engaging in additional behaviors for the benefit of the PLC and students. As participants became more enmeshed in the strategies for teaching young children with dyslexia, they developed a freedom to disagree with each other on professional practices related to reading and the tools available to assist the children. While this is similar to the sub-theme of willingness to change, where the notion of disagreement first
appeared, this sub-theme emerged as a stand-alone and the participants all felt that the PLC was a safe environment in which to disagree. The fourth research question focused on teachers’ experiences with reading disorders and this translated into the major theme of changing assumptions with sub-themes of respect and PLC outcomes.

**Theme 3. Changing Assumptions**

Prior to participation in the PLC, participants described their reading strategies as current and inclusive even though struggling readers were still struggling. Participant A described the notion of opening her mind to new possibilities, which Participant B described her view of reading instruction as narrow minded. Participant C forced herself to adapt her “ingrained approaches.”

Participant A described her evolution to adopting new teaching strategies.

At this point in time, I started to open my mind to new possibilities and the notion of changing my teaching practices for children with dyslexia. Perhaps the holistic meaning-based approach, while it is completely individualized instruction, is not a one size fits all fix.

Participant A was willing to be open to new ideas of teaching young children with reading problems. She came to the understanding that her preferred method of teaching reading was not reaching all of the children and she was willing to try new strategies to reach all children.

Participant B described her participation in the PLC as a benefit, and hearing the experiences of others as a catalyst to examine her teaching strategies. For example, she said,

It brought me back to the puzzle of working with struggling readers and not just my narrow minded view of what dyslexia was as a teacher in third or fourth grade, but what it could look like in preschool and Kindergarten.
Collaborating with her colleagues allowed her to re-examine her own beliefs.

Participant C described her enjoyment in being given the opportunity to talk about her lessons and ideas and what she has tried and experienced, and well as the possibilities that can occur with students. She said,

Explaining the theory behind some of my suggestions in the PLC makes me better at what I am doing. I am continuously asking myself why, why am I making this decision with the lesson or a response from a student. I am forced to adapt my ingrained kindergarten approach to second graders.

These statements were interpreted to mean that all of the participants agreed that they needed to question their approaches to teaching children in general and children with reading problems in particular. The PLC and the dialog they enjoyed throughout the process enabled them to question, expand, and develop new strategies for teaching young children with reading problems.

**Sub-theme 3.1 Respect.** Emerging in the discussions of adaptation was the common element of respect. While there is overlap in the previous themes that allude to respecting each other, their opinions, and the ability to disagree, it was apparent in the analysis of the data that respect emanated from the changing of assumptions; respect for both the teachers and for themselves.

Participant A discussed respect in the PLC.

All players in a PLC must have an open mind and respect that grows through time and observation of working so closely with colleagues. The respect leads to being receptive to one another and makes us more productive.
This statement can be interpreted to mean that the PLC members came to the PLC with an open mind and a theoretical foundation for dyslexia in young children. They recognized that they would be working closely with each other and because of their common goal they were respectful to one another and this respect was a catalyst for getting the work of the PLC accomplished.

Participant B also spoke of respect as a singular element. “In order for people to be vested, they need to feel like they are being listened to and that colleagues are willing to bounce ideas off of one another. Different perspectives have to be respected.” Participant C, while not actually using the word respect, stated: “If you had something to say, it was listened to. This made me look forward to working with my PLC group.” Respect, as a sub-theme, was evident in the interviews, meeting notes, and demeanor of all of the participants. The developing respect for each other as teachers and as individuals with professional attitudes appeared to be a growth opportunity for all of the participants.

**Sub-theme 3.2 Meaningful connection with support staff.** The ability to make meaningful connections with support staff, reading specialists, special education teachers and supervisors, and tutors, was facilitated by the PLC because the participants were empowered by the thorough study of dyslexia in small children and were able to discuss strategies and tools for reaching these children. Participant A stated:

I like being able to talk with different people in different settings, it helps me prioritize and think about students differently. Teaching and planning look different for each of my colleagues and I learned a lot through listening to other perspectives.

A fundamental element of the PLC, using the theory of adult learning (Knowles, 1971), was the availability of the necessary resources. In this interpretation, the resources included
human resources, the support staff that assisted the classroom teachers in remediating reading difficulties in young children. Their presence at PLC meetings expanded the dialog and conversations regarding identifying and remediating dyslexia in young children and provided the added bonus of developing a better understanding of the work of the support professionals.

Participant B was enthusiastic about the opportunity to work with other professionals in the school district to address dyslexia in small children and was empowered by the study undertaken in the PLC as well as the resources made available to the participants. She stated:

It takes good interpersonal skills, shared goals, and a vested interest to change and move towards a vested interest around dyslexia for our school district. Working together we created a positive climate and connected our ideas.

Connecting ideas was interpreted as building on the theoretical foundation of dyslexia to include strategies for teaching children with reading disorders. Because they all shared a goal, helping struggling readers, they were able to focus and share their individual expertise for the greater good.

Participant C had a different view of the role of support staff. “A strong PLC is more defined and can take other routes as you are talking; however, it has a goal. Our participants had a shared goal in learning more about dyslexia to benefit our school district.” This statement can be explained by stressing the importance of the goal of the PLC; it was always in the forefront of discussions. By sharing the goal with the PLC members and support staff, the work was facilitated by the genuine concern for doing a good job for the children in the school district.

In the past, working with support staff was an individual opportunity that was more reactive than proactive. In this research study, teachers were proactive in seeking the input and
advice of support staff as they worked through the resources and strategies associated with dyslexia in young children.

**Changing assumptions summary.** The third major theme of changing assumptions, with its two sub-themes of respect and meaningful connections with support staff, was consistent with Knowles (1971) Process Model of Adult Education. The elements of creating a respectful environment in which to conduct business and the willingness to use available human resources in their quest for information and strategies allowed the participants to learn and grow in their knowledge of reading strategies and tools for children with dyslexia. The lesson learned here was that by providing the environment and the resources needed, participants were able to change some of their long held assumptions about the teaching of reading.

The fourth research question addressed the level of content knowledge participants had on dyslexia in young children, thus projecting the fourth major theme of PLC Outcomes, with the sub-themes of new teaching methods, identifying screening tools, and designing intervention pull-out.

**Theme 4. PLC Outcomes**

A number of outcomes emanated from participation in the PLC. Participants were able to examine research, hear speakers provided by the state of New Jersey, and examine tools and try strategies to become proficient in teaching reading to young children with dyslexia. Participant A stated:

As a result of participating in the PLC, I find my thinking is morphing more into thinking about ways to provide students with opportunities to highlight their strengths instead of just focusing on weaknesses. If I'm focused on weakness how can I balance and think about using their strengths to accommodate their weakness?
Participant B wrote in her journal, “This PLC has allowed me to receive professional development in dyslexia and take what I’ve learned and hear it from the other participants. It has given me a broader perspective to really define what dyslexia is and means for our students.”

Participant C’s take-away was the research about the physiological part of dyslexia and how it led her to be more patient and accepting of dyslexia. “I wanted to know more about how to best serve a student who had characteristics of dyslexia. Our PLC led me to think outside of the box because I have to in order to meet the needs of my struggling readers.”

Each of the participants explained the need to change their approaches to teaching children with reading problems and each made the commitment to do so for the good of the students. They learned new ideas from each other, the research on dyslexia, and from the support staff, and all were willing to try these new strategies even though some felt they were outside of their comfort zone.

**Sub-theme 4.1. New teaching methods.** One easily identifiable outcome of the PLC was the identification of new teaching strategies and tools to accomplish reading success for young children with dyslexia. As noted previously, teachers were reluctant originally to change their preferred methods of presenting reading lessons, but using the available resources and understanding brain paths, they slowly came to the realization that there were different methods to reach the at-risk child. Participant A shared her realization that a better understanding of dyslexia and the input from other participants helped her to adopt new teaching methods.

In the sequential order of learning, the most important skill for the student to develop is letter-keyword-sound memory and letter formation. I am happy to know more about
dyslexia and it will help me understand how to group efficiently and what level of intervention to start with for my struggling readers.

This statement is interpreted to mean that the participant was willing to take the information learned in the PLC and adapt it to her teaching strategies. It also meant that she would be more careful in grouping and the identification of the need for, and level of, intervention for her students.

Participant B focused on the program designed for learners who need explicit, systematic, and targeted instruction using multi-sensory techniques.

*Fundations* is the program I will use for struggling readers. Knowing what we know about the brain, students can make deeper connections to develop fluency more quickly. *Fundations* has shown multiple times to be an optimal pathway to help students with dyslexia.

Being able to examine resources that would be helpful for students with dyslexia was a highlight of the PLC. *Fundations* was one of the resources that participants became adept at using and were ready to adopt it in their reading classes in the coming school year.

Participant C focused on a more interactive approach with students.

One of the biggest changes I've made is asking students for explanation. How did you get the answer, why did you write that? I've learned through our PLC that with students with dyslexia, their thinking path is not as clear or the same as yours.

All of the participants agreed that young children with dyslexia had a different pathway to identifying and understanding the written word. For some, it was a revelation and an awakening that the preferred way of teaching reading was not always the best way to reach all children.
Sub-theme. 4.2 Identifying screening tools. The PLC meetings provided opportunities for participants to examine, test, and identify appropriate screening tools for struggling readers. One of the PLC members had already been thinking about Dyslexia Screening Tools prior to the first PLC. Participant A stated:

She brought ideas and samples for us to review and discuss. We would stop and discuss questions, thoughts, and ideas around a potential assessment tool that would help us identify students in need of intervention and avoid child study team referrals.

Participant B was grateful for the input of the PLC participants. She appreciated the collaboration of the PLC and added: “The selection of a dyslexia screening tool was an established outcome of the PLC efforts.” This statement can be interpreted that the participants knew, at the onset of the PLC, that there would be an outcome and it would be a dyslexia screen tool. This is consistent with Knowles’s (1971) theory of adult learning wherein the outcomes or goals of the PLC are established prior to the first meeting.

Participant C described why she chose a particular tool:

We chose the FAR (Feifer Assessment of Reading) tool because it would give the teacher information about how to help the student in the classroom as well as give us information if a pull-out intervention like Fundations would be appropriate. It also gives us information to use when talking with parents who have expressed concern about their child's ability to read.

These statements made it clear that being able to identify teaching tools was significant for all of the teachers involved in the PLC. They were able to study and try the different tools and learn first-hand how they would help students with reading problems.
Sub-theme 4.3. Designing intervention pull-out. Another anticipated outcome of the PLC was the design of a pull-out intervention where students with reading difficulties would meet one on one with a reading specialist who was proficient in the use of the new strategies identified by the PLC participants.

Participant A justified the decision to adjust the intervention program:

One of the biggest problems we see with struggling second graders in our school district is dis-fluency. I read that prerequisite skills for fluency are accurate and automatic word identification, which is strongly taught in levels K and One. As the second graders’ writing demands increase, they will not be able to keep up with their ideas. A need exists to create an intervention using the first grade kit for a pull-out for second grade so the foundation skills can help them with their writing in class.

The explanation for the change in intervention was a direct result of the work of the PLC in its study of dyslexia. By knowing more about brain paths and preferred learning techniques for children with dyslexia, a more focused intervention was planned. The PLC participants also made recommendations for the intended use of the pull-out intervention based on their efforts in the PLC. Participant B stated:

We’ve identified tools to use to pinpoint with more specificity the content and strategies that students weren’t exposed to in the classroom and make recommendations for how students should be included in the pull-out intervention.

The PLC participants agreed that they wanted teachers to have a positive experience with the reading interventions. Participant C stated: “Pull-out can’t bombard them; we need to have a conversation to screen who should be part of it. For example: Which students need skill and drill and which students did better with the holistic approach?”
The participants were in agreement that the interventions needed to be focused on the particular needs of the child with the reading difficulty. The work of the PLC gave them an opportunity to examine different approaches to different needs and plan for specific interventions.

**PLC outcomes summary.** Professional Learning Community Outcomes as a theme, with the subthemes of new teaching methods, identifying screening tools, and designing intervention pull-out, were spoken of in interviews, PLC meetings, and written about in the participants’ journals. Knowles (1971), in the Process Model of Adult Education, stressed the need for measurable outcomes at the conclusion of the process. Thus, following the model, the PLC anticipated formative and summative outcomes based on discussions, research, theory, tools, and support staff input. There was consistency in their thoughts about the experiences and willingness to discuss the challenges. The lesson learned here was that by establishing outcomes at the onset of the PLC the participants were able to focus on their particular needs and desires throughout the PLC. Everything that occurred in the PLC was according to their plan and their agenda. By focusing on their needs, the participants were able to concentrate on the most important aspects of the PLC, teaching young children with dyslexia, expanding their professional horizons, and identifying strategies and tools for both the children and the resource teachers who would assist the children.

**Chapter Summary**

This chapter summarized the analysis of the four themes and ten subthemes that emerged in the study of the data collected in pre and post interviews, in PLC meetings, and in the reflective journals of the three participants. The process of the PLC was explained in detail, as was the theory of adult learning (Knowles, 1971) and how all of this relates to the research.
questions of this study. The goals of the PLC were explained in the framework of the adult process model (Knowles, 1971) as they related to teaching reading to young children with dyslexia. Four major findings became evident in the cycles of coding and analysis of the various data documents: the success of the PLC, the collaboration among the participants as a result of the PLC model, the increased knowledge of dyslexia, and plans for disseminating the knowledge, strategies and tools gathered in the PLC.

The data also showed that the success of the PLC was based on the participants’ willingness to be part of this study as well as their need to know how to teach reading to young children with dyslexia. Their enthusiasm and commitment was evident in pre and post interviews, in the PLC meetings, and in their reflective journals. The data indicated that the thorough grounding in dyslexia theory and research was a purposeful agenda for the PLC, which kept the participants focused and was a main consideration for developing new teaching strategies for young children with dyslexia.

The participants in this study also enjoyed the additional benefits of trust in each other’s opinions, respectfulness to disagree or offer a different opinion, and a spirit of collaboration even outside the PLC meetings. The participants further discovered that getting to know support staff as a result of the PLC and the PLC topic enabled them to build stronger relationships in their buildings to support at-risk children.

The resources made available to the participants as a result of modeling the PLC after the process model of adult learning (Knowles, 1971) enabled the participants to examine research, strategies and tools to aid young children with dyslexia. Participants were able to work with the resources together and share their insights with each other.
Finally, the data showed, in journals and in post interviews, that the participants reflected on their experiences in the PLC, and shared how their perceptions and attitudes changed over the time of the PLC, their openness to entertain others’ points of view, and make suggestions for disseminating the information to the teaching staff.

The first noteworthy finding, the success of the PLC, was related to all other findings. The PLC was the foundation on which the participants built strong connections with each other and support staff in the school district. With a thorough grounding in the theory and research of dyslexia in young children, the participants were able to forge bonds with each other beyond the PLC for the success of at-risk students. Further, they developed trust and respect for one another and felt the freedom to disagree without censure.

The findings of this study will enable the school district to move forward on different initiatives following the model developed, implemented, and evaluated during and after the PLC on dyslexia in young children.
Chapter Five: Discussion of Research

Introduction

This qualitative case study examined how a professional learning community could function as a forum for teachers to explore a current state initiative, identifying dyslexia in young children. In the past, attempts at professional development had been one day, large group, facilitator-run efforts with little or no follow up with the teachers. Also, the school district’s previous attempts to organize professional learning communities were difficult to manage and did not lend themselves to developing a collaborative atmosphere because of mandated attendance, scheduling problems, location, and lack of knowledge of how adult learners learn best. The study assessed the professional learning community as a model to support discussion about how to meet curriculum standards and support instructional practices in teaching K-3 students with dyslexia. By supporting the state initiative and the school district’s goals of improved professional development, this study documented how the researcher designed a PLC around an andragogical model to address the research questions by demonstrating how this study supported the needs of adult learners and how the process and resources provided aided teachers in their understanding of dyslexia.

In Chapter 4, the findings from pre and post interviews, meeting notes, and reflective journals of participants were analyzed and presented. The four research questions were answered in the themes of (1) collaboration, (2) teacher engagement, (3) changing assumptions, and (4) PLC outcomes. Additionally, ten sub-themes were identified. This chapter discusses the significance of the findings, incorporates the previous literature review as well as more current literature, and reflects the driving theoretical framework. Areas of future research and professional practice are identified as well as limitations of this study.
Relationship of Research Questions and Themes

Four research questions guided this study. This section contains a discussion of the relationship of each of the research questions to the categories, themes, and sub-themes that emerged in response to the research question. Four themes with ten sub-themes emerged from the data analysis.

Research Question 1

The first research question was posed as follows: How do professional learning communities (PLCs) in the school district use andragogy to support the needs of adult learners? Andragogy is the theory of adult education. The PLC in this study was based on the process model of adult learning theory (Knowles, 1971). The first major theme was that of collaboration and the sub-themes in this category were respect, willingness to change, and positive climate.

Collaboration is at the heart of the process model of adult learning theory. Knowles (1971) found that an effective group is one that is willing to work together for the common goal. By following all of the elements in the process model, this PLC was able to achieve its goals and develop skills in collaboration, respect for one another’s ideas, a willingness to change their beliefs and practices, all in a positive climate. These factors specifically address Knowles’s (1971) elements 1, establishing a climate conducive to learning; and 2, creating a mechanism for mutual planning. Thus, it is determined that this research question was answered.

Collaboration. All of the participants explained how the professional learning community was modeled on a process model of adult learning (Knowles, 1971). They were enthusiastic about this model because they would have an active part in the process and the learning and outcomes. This enthusiasm was evident in all of the meetings and outside of the meetings. This can be attributed in part to the different model of professional development they
were engaged in. With a more active role, the participants were able to discuss, disagree, collaborate, and reach consensus. This is consistent with the literature on collaboration in PLCs. For example, Kruse et al. (1995) stated that cooperation to build collaboration among teachers and administrators for the purpose of improving teaching and learning was a hallmark of a successful PLC. Nelson et al. (2008) stated that the effectiveness of a PLC is rooted in collaboration.

Fully collaborative PLCs include trust building, shared concerns, and beliefs in each other (Friend & Cook, 1996), ideas echoed by theories of adult learning and change (Fullan, 2007; Knowles, 1973). According to Nelson et al. (2008) the participants will still be faced with the challenge of sustaining collaborative inquiry over time. However, Lumpe (2007) found that the collaboration can become more meaningful over time. Collaboration as a major theme is echoed in the studies of many researchers and national professional associations (Eastwood & Lewis, 1992; Fullan, 1992; Newman & Wehlage, 1995).

Social interaction was important to the teachers in this study. For instance, all of the participants reported that getting to know their colleagues and learning their personal philosophies of education, and in particular reading strategies, had an energizing and positive effect on each of them. The ability to interact with each other in an environment they created in the PLC enabled them to freely express their interests and concerns on the topic of dyslexia. Similarly, the National Staff Development Council (2001) described the social interaction as interpersonal support with ensuing synergy. In a report of a two-year study of more than 47 PLCs, the National Commission on Teaching and America’s Future (2012) concluded that the key to a rewarding career in teaching was collaboration and that teachers who collaborated with their peers were more likely to remain in the profession and enjoy a deeper understanding of
teaching and student learning. Similar results were reported in the work of Newmann and Wehlage (1995) where participants stated that they learned from each other, respected each other’s ideas and opinions, and benefitted positively from their participation in the PLC. Likewise, in this study, participants stated similar thoughts and felt that collaboration was the key to their success as it permeated all of the other themes and sub-themes of this study.

**Trust.** Trust emerged as a sub-theme of collaboration. All of the participants agreed that this model of professional development, the professional learning community, fostered an atmosphere of trust in each other’s thoughts and opinions, and in the process. The participants shared a mindset, were willing to listen to one another, and reflected on what they heard from their colleagues. Giving credence to the opinions of others enabled them to trust one another. This development is supported in the literature. As Wells and Feun (2008) put it, “Trust is an important role as teachers review what is being asked of them in professional learning community work” (p. 58). For the teachers in this study establishing a climate conducive to learning (Knowles, 1973) by ensuring that the PLC met their needs was key. Participants in the PLC created a conductive environment by adhering to the elements of the process model of Knowles’s (1973) adult learning and mutually planning for their meetings with a goal toward established outcomes. Further, this PLC supported openness, multidirectional communication, and experimentation in a tolerant atmosphere (Brunner, 1966). For this particular study, participants learned about the process model of adult learning theory and all of the elements involved in implementing a successful professional learning community. Participants embraced the ownership of the PLC based on this model before the implementation of the PLC gave the participants the necessary tools to make an effective PLC happen.
Willingness to change. Another sub-theme of collaboration was willingness to change, which was not originally in the participants’ selection of teaching tools at the onset of the PLC. However, they quickly adapted to the notions that young children with dyslexia needed different strategies to learn to read, and when they studied the research and examined the tools for assisting these children, and spoke with support staff, they were willing to embrace change for the good of the students as well as for their own expanded professionalism. This is consistent with the literature on PLCs. McTighe and Emberger (2006) described the contagion that occurs when teachers feel validated through professional dialogue. This is consistent with the findings of this study wherein participants stated that they felt that they were heard, they felt validated in their beliefs, and that they learned from each other. Hargreaves (2004) wrote of the accomplishment and professional growth teachers felt when they can help colleagues change their thinking. Changing thinking about reading strategies and dyslexia was another highlight of the findings of this study. Participants stated that they were forced to examine their own professional beliefs in the face of new information from other participants and to reflect on the new knowledge.

The third sub-theme under collaboration was the establishment of a positive climate for the PLC. The participants were enthusiastic about the professional learning community as a forum to speak and be heard, to listen and contribute, and to feel safe in doing so. Participants expressed their ability to speak freely and share their opinions even if no one agreed with them. One participant referred to it as healthy disagreement. The participants emphasized that having “respect” was consistent with the other participants’ responses as it related to the necessity for a positive climate for adult learning in the PLC. The three participants had a shared value for one another’s roles and responsibilities within the school district, which also contributed to the
positive climate of the PLC. This is consistent with the first step of the Knowles (1971) process theory of adult learning in which he states that creating climates conducive to learning impacts the quality of learning itself. These environments need to be established in a way that ensures learning can occur. Schmoker (2005) supported this theory by stating “Teachers learn best from other teachers in settings where they literally teach each other the art of teaching” (pp. 141-142).

Establishing a positive climate in which to accomplish the work of the group is an element of the process model of adult learning theory (Knowles, 1971). Cognitive theorists (Houle, 1972; Taba as cited in Knowles, 1973) posited that the content of the learning be reflected in “knowledge, reflective thinking, values and attitudes, sensitivities and feelings, skills” (Taba, p. 121). A positive, supportive atmosphere facilitates the work of the group and each of the participants spoke of the respect they had for each other as professionals and they were grateful to share ideas with each other and discuss their points of view in a trusting and positive environment.

Research Question 2

The second research question was posed as follows: How do professional learning communities (PLCs) support teachers in developing an understanding of dyslexia? The second major theme to emerge in this study was teacher engagement, with revisiting the topic outside of the PLC and freedom to disagree as sub-themes. A basic understanding of the content of the PLC, dyslexia in young children, was established prior to the inception of the PLC by sending the participants to state-level workshops and presentations on this topic. The participants had an empirical understanding of the research and strategies before the PLC began, thus enabling them to be able to share their insights on the topic as it relates to the children in this school district. This is consistent with Knowles’s (1971) elements 3, formulating content that will satisfy the
needs of the group; 5, designing a pattern of learning experiences; and 6, proceeding with suitable techniques and materials (p. 117). Working together in the PLC gave the participants an opportunity to engage with each other on their established and preferred strategies, share information and ideas in encounters outside of the PLC, and the freedom to professionally disagree with each other on strategies and tools for assisting young children with dyslexia. Thus, it was determined that this research question was answered.

**Teacher engagement.** DuFour and Eaker (1998) cited as a best practice in PLCs the “process of searching for answers [as being] more important than having an answer” (p. 44). All of the participants were fully engaged in the process and in participating in the PLC. Their level of engagement was reflected in the meeting notes and their willingness to connect in the study of dyslexia in young children outside of the scheduled PLC meetings. Knowles (1974) wrote, in reference to applied behavioral science research, “that people tend to feel committed to a decision or activity in direct proportion to their participation in or influence on its planning and decision-making” (p. 120). Participants noted that understanding their role in the process model of adult learning theory, and being able to set the agenda, objectives, and tone for the PLC meetings was an asset to the process since previous attempts at professional learning communities were not successful because of the facilitator-driven approach that left them listening and taking notes. Participants in this study indicated that they valued the opportunity to have a role in creating the objectives and setting the purpose for the PLCs. In interviews prior to the start of PLCs participants reflected on time wasted in professional development that was not connected with goals or interests that would directly benefit their own special interests or needs as they saw them for their students in the classroom. Lumpe (2007) believed the core of professional development is building-based professional learning communities are engrossed in
practice, feedback, results, and reflection. Wahlstrom and Anderson (2010), in their investigation of links to improved student learning, found that teachers who were committed to the “purposeful sharing of practices” also shared values, collaborated with each other, and remained focused on student learning. (p. 42) This study corroborated the findings of Wahlstrom and Anderson (2010) in that participants stated that the PLC was an opportunity to learn from sharing ideas, and to focus on teaching young students with dyslexia.

All of the participants spoke of and wrote in their reflective journals of the value of meeting and engaging outside of the PLC meetings. They found time to meet together to discuss an idea, or clarify a thought, even though they were housed in different buildings in the district. All of the participants expressed value in these outside meetings because they could reflect on ideas discussed in the PLC before the next PLC meeting. This is consistent with the literature on effective PLCs (DuFour, 1998; Dufour & Eaker, 2004; Hargreaves, 2004, 2010).

**Freedom of expression.** A sub-theme of the theme of teacher engagement was the freedom of expression that developed quickly among the participants in the PLC. The collaborative environment, and the trust in one another, imbued them with a freedom to disagree with ideas and opinions of each other in a healthy and positive environment. They spoke of this willingness to be able to disagree as a positive experience. Knowles (1974) called this “climate control.” Creating an environment where individuals feel safe, supported, respected, and understood is the focus of humanistic psychologists (Bany & Joynson, 1964; Bergevin & McKinley, 1965: Leypoldt, as cited in Knowles, 1974).

**Research Question 3**

The third research question was posed as follows: How do professional learning communities (PLCs) support district goals in developing an understanding of dyslexia?
Changing assumptions emerged as the third major theme with the sub-themes of respect and meaningful connections with support staff. Support staff included the school psychologist, resource room teachers, and reading specialists in the school district. Support staff had been attempting to address dyslexia in young children as part of their professional roles and the professional learning community participants’ inclusion of them in their study enabled them to garner support for their efforts and share information in meaningful ways. For instance, support staff shared student cases with results, strategies that they used or heard of, and lent moral support to the participants in their quest for more knowledge of dyslexia and strategies to teach struggling children. Since the state of New Jersey mandated that all school districts serve the needs of young children with dyslexia, the PLC was an appropriate forum in which to train teachers on the strategies and tools to assist these children. Not only did the participants, in their own words, fully understand dyslexia, but they also had to re-examine their own preferred reading strategies against the new information. By including support staff in their discussions, they were able to expand their thinking based on others’ input. This is a bonus to the district, in that teachers were able to collaborate, engage, and change their assumptions about reading practices. This is consistent with Knowles’s (1971) elements 1 and 2 of the process model. Teachers were able to change their thinking because the PLC climate was conducive to learning, and because they created their own mechanism of mutual planning. Thus, it was determined that this research question was answered.

**Changing assumptions.** In his ongoing exploration of PLCs, Morrisey (2000) found that the PLC was an avenue for making teachers more effective with students. The seasoned teachers in this case study began the PLC with the assumption that they were master reading teachers and were reluctant to change their preferred strategies. As the PLC progressed, and they
learned from support staff and shared more about the struggles of the young child with dyslexia, they became more willing to listen to, and then adopt new strategies.

**Respect.** Respect for one another and for the process, as a sub-theme, was evident in the interviews, meeting notes, and eagerness of all of the participants. The developing respect for each other as teachers and as individuals with professional attitudes appeared to be a growth opportunity for all of the participants. This is consistent with the school district’s mission to provide a safe and professional environment for students, teachers and staff. This is consistent with the literature related to effective PLCs, teacher engagement, and trust. Treating each other with respect was noted in the National Council of Teachers of English (2006) study on PLCs. In their report, they cited “collegial relationships, creating professional communities where teachers share knowledge and treat each other with respect” (p. 10) as indicators of an effective PLC. As in other studies by professional associations, it is noted that the NCTE also viewed participation in PLCs as a reason for teachers to stay in the profession. This, too, is consistent with the mission of the school district as retention of teachers has been an on-going concern. The PLC was an opportunity for teachers to bond around a topic and forge a better understanding of themselves, each other, and their students. Connecting with support staff through the PLC and the study of dyslexia in small children was another vehicle for the participants to develop meaningful relationships with other human resources in the school district, thus supporting the mission of the school district to provide the best possible education for all children. While previous connections were based on individual problems, the PLC provided an atmosphere for participants and support staff to be proactive and design strategies for teaching young children with dyslexia. All of the participants stated that it gave them a new respect for the work of support staff and insights into their professional responsibilities as teachers in the school district.
This is consistent with the school district’s goals of providing meaningful services to young children with dyslexia. They all expressed a desire to continue to work with support staff as they implemented the new strategies. The literature supports this sub-theme. Knowles (1971) cited the importance of the facilitator to enable opportunities for information, both internal and external. He also stressed that the climate of learning relied on “the richness and accessibility of resources—both material and human” (p 118). Tough (1971) believed that self-directed learners would use a collaboratively planned project that includes learners and others identified as helpful to the project, proactively. The need for outside knowledgeable sources was described by Feiman-Nemser (2001), as well as the need for local experts. However, she also emphasized “the collective wisdom that thoughtful teachers can generate by working together” (p. 1042). All of the participants in this study expressed their gratitude for support staff input to their professional learning community and added that getting to know them outside of their roles with individual children was a positive outcome.

**Research Question 4**

The fourth research question was posed as follows: How can professional development opportunities provide support for teachers in a professional learning community in making informed decisions about instruction? The fourth and final theme that emerged in this case study was that of PLC outcomes with sub-themes of new teaching methods, identifying screening tools, and designing intervention pull-out. Participants were able to examine research, hear speakers provided by the state of New Jersey, meet with school district support staff, and examine tools and try strategies to become proficient in teaching reading to young children with dyslexia. Two of the elements in Knowles’s (1971) theory of adult learning are specifically addressed: element 4, formulating the program objectives; and 7, identifying the desired
outcomes. These steps were planned at the inception of the PLC. Thus, it was determined that this research question was answered.

**PLC outcomes.** One of the outcomes of the PLC was the willingness to try new teaching methods. Participants collectively planned ways to provide students with reading opportunities that would emphasize their strengths. All agreed that the PLC, unlike the more traditional professional development venues, gave teachers an opportunity to learn from each other. Learning about brain paths in children with dyslexia was an enlightening experience for participants as well. It was assumed that new teaching methods would emerge. These findings are consistent with the literature of Louis and Marks (1998), Saphier (2005), and the American Educational Research Association (2005). All of these studies, under the aegis of restructuring for better schools, cited the PLC as a vehicle for raising the quality of teaching in the classroom, providing hope for students, and bring about change to their teaching practices. DuFour (2004) emphasized the need for members of the PLC to focus on their task and explore the generation of products and processes that impact learning. He called for reviewing curriculum documents and comparing them with best practices. During the 2016-2017 school year, the administration during committed to using professional development resources to support teachers in using data to inform their PLC work. The data from the Fundations program was used, along with other teacher-created assessments, to determine student eligibility for literacy support. The growing need to support struggling readers was the springboard for adding additional intervention periods before school, during the school day, and afterschool. PLC time will be used more for reviewing current curriculum documents to make sure the research basis for dyslexia has been taken into consideration.
**Screening tools.** A sub-theme emerging as an outcome of the PLC was the identification of screening tools for young children with dyslexia. The PLC meetings provided opportunities for participants to examine, test, and identify appropriate screening tools for struggling readers. Ideas and samples were explained and discussed in the PLC meeting by support staff. The ability to identify teaching tools was significant for all of the participants involved in the PLC. They were able to try the different tools and learn first-hand how these tools would help students with reading problems. This is consistent with Knowles’s (1971) theory of adult learning. His fourth step, designing a pattern of learning experiences, called for the provision of necessary resources to achieve solutions. In this instance, one of the resources needed to help teachers better serve dyslexic students was screening and teaching tools targeted towards dyslexic students. It was important for teachers to have access to these tools in the PLC because having resources readily available is one of the elements of an effective adult learning community (Knowles’s, 1973) and further, understanding the resources and how they could be used for students was critical for teacher implementation.

**Designing pull-out intervention.** The final sub-theme emerging as an outcome of the PLC was the design of a pull-out intervention where students with reading difficulties would meet one on one with a reading specialist who was proficient in the use of the new strategies identified by the PLC participants. This is another example of the collaboration among the participants and support staff that emerged as a result of this study. They also made recommendations for the intended use of the pull-out intervention based on their efforts in the PLC. The participants identified tools to use to pinpoint with more specificity the content and strategies that students had not been exposed to in the classroom and make recommendations for how students should be included in the pull-out intervention. All of the PLC participants
agreed that they wanted teachers to have a positive experience with the reading interventions and that more careful screening with the identified tools identified would enable a more individualized intervention.

**Implications of this Study**

**Implications for collaboration.** The professional learning community in this research study was a model attempt to create a process in the school district that would negate the use of traditional one-day professional development activities as well as loosely configured and unsuccessful attempts at previous professional learning communities. This research identified many times in the analysis of data where the participants noted the term, collaboration, and examples of collaborative activities. The participants’ descriptions of collaboration corresponded to the literature on collaborative communities (DuFour, 2011; Hargreaves, 2010). The implication of this is that an effective PLC, which is founded on a traditional professional development workshop that segues into Knowles’s (1971) theory of adult learning process model can be a forum for teachers to support student learning. Current research on the subject of collaboration in professional learning communities supported the findings of this case study. Goddard, Goddard and Tschannen-Moran (2007) conducted a theoretical and empirical investigation of collaboration for school improvement and student achievement in 47 elementary schools, over 450 teachers, and more than 2,500 fourth grade students. The findings indicated that by providing teachers the opportunities to collaborate on specifics of curriculum and instruction, that student achievement was higher. Collaboration is defined as two or more participants voluntarily engaging in shared decision making while working toward the attainment of a common goal (Friend & Cook, 1996). The key here is that PLCs must be *collaborative*, that is, teachers must work together in a collegial manner (Dufour, 2004; Hargreaves, 2010).
Implications for teacher engagement. The benefits of teacher engagement as a theme of this research study were numerous. Once an understanding of the process model of adult learning was established and the participants given their topic of study, they engaged with each other both within the PLC meetings and outside of the PLC meetings. They engaged with the support staff in the various buildings during their quest for knowledge and teaching strategies to teach reading to young children with dyslexia. They engaged with school administrators as they identified materials and resources they wanted to support their study. Data from this study indicated that the participants were fully engaged in the topic. This implies that teachers understood what teacher engagement was and that they participated fully. Therefore, as schools implement PLCs, it is important to consider, during the planning process, what teacher engagement looks like for the current topic and how to support teachers in understanding engagement and having the desire to engage. Current research indicates that teacher engagement is critical in reshaping schools and promoting higher levels of achievement in students. For instance, Fulton, Yoon and Lee (2005) urged teachers to share their knowledge with each other and create a “cohesive professional knowledge base” (p. 4). Similar studies (Barth, 2006; Vescio, Ross & Adams, 2008) also called for teacher engagement at the level where teachers share their knowledge, observe each other, and cheer each other’s successes. By empowering teachers, and providing for their ongoing learning, powerful PLCs are formed and nurtured. Because teacher engagement is central to the success of PLCs, future studies of PLCs should examine teacher engagement; more specifically, to what extent are teachers engaged and why do individual teachers decide to engage or disengage.

Implications for changing assumptions. As discovered in this research, changing their assumptions about teaching reading was not an easy change for the participants. However, the
forum of the PLC, based on the knowledge of the process model of adult learning theory, enabled the participants to slowly make the necessary changes to their teaching styles, beliefs and understandings of dyslexia, and reading problems in young children. The conclusion here is that the transformational process in previously established thinking did take place, albeit not immediately, and that participants needed time to reflect on the discussions with colleagues in order to change their core values and established practices. Therefore, it is recommended that teachers have time, support, and the opportunity for dialogue with their colleagues in order to support learning. Current research (Fullan, 2007) on changing beliefs and assumptions revealed that PLCs allow the participants to delve into the teaching and learning environment in order to help one another become better practitioners.

**Implications for PLC outcomes.** The final theme emerging in this research centered on the outcomes of the PLC, which according to Knowles (1971) should be established during the planning stages of the PLC. The participants knew the direction they were going by learning new teaching methods, identifying and assessing new tools for identification and remediation, and planning an in-service day for the remaining elementary school teachers at a later date. Therefore, it can be concluded that establishing outcomes at the beginning of the process helped provide a focus on the learning to be accomplished and pushed the collective group toward that end. As such, it is implied that as PLCs are established, it is important to begin with intended, clear outcomes in order to provide guidance towards desired ends. Blanchard (2010) and Lencioni (2012) pointed out that goal setting provides the agenda for the entire team and the impetus to stay focused on the intended outcomes. Amabile and Kramer (2011) in their work on igniting joy, engagement, and creativity at work succinctly stated: “Employees left entirely to
their own devices, without any assistance or support from someone else, accomplish very little” (p. 105).

**Overall implications.** The implications of this research study range from the importance of creating a climate of collaboration, to engaging teachers in the work of the PLC, to changing the values and professional beliefs of the participants, to longer range planning of sharing their learning with the teaching community at large. There is no doubt that following the elements of the Knowles (1971) process model of adult learning in this PLC examined in this study provided a smooth transition with regularly scheduled meetings, times and places that were static, providing necessary requested resources in advance of meetings for study at the meetings, and scheduling support staff to attend meetings. Further implications based on the review of the literature and on the data collected and analyzed in this study indicate the need for teachers to work collectively on school issues so that they can, together, work toward solutions in the best interest of the students. This study also suggests that professional learning communities are a viable alternative to the more traditional formats of learning and professional development for teachers.

**Recommendations for Future Research**

This case study focused on the experiences of three participants in a professional development community based on the andragogical process model of adult learning theory (Knowles, 1973). The following recommendations and questions emerged that could guide future research.

**Collaboration.** This study looked at Knowles’s (1973) Process Model of adult learning to mutually plan for PLC outcomes. However, the researcher, an administrator in the school district, organized the PLC and was present at all meetings of the PLC. This presence leaves a
hole in the research regarding how teachers develop a collaborative PLC on their own. What levels of support are necessary from administration that support without limiting teacher collaboration within a PLC? The researcher’s role in explaining the adult learning process model supported the success of the PLC; however, did not allow discovery of what would happen in the absence of the structure.

**Teacher engagement.** This study found that teacher engagement outside of the PLC occurred, and can be explained, partially due to the relationships and respect the participants had for one another’s dedication to the topic of dyslexia and serving their students. However, this study did not include contingencies for teacher collaboration outside of the PLC beyond the scope of PLC. This study found participants developed trust, and valued the importance of having their opinions, thoughts, and feelings heard in the PLC, as well as the many opportunities they found outside of the PLC. Examining teachers’ informal relationships outside of PLCs would warrant further information. These informal conversations could be where they built the relationships. The researcher did not anticipate the teacher engagement outside of the PLC, yet it may be important to the work of a PLC.

**Changing assumptions.** The researcher did not plan to measure how teachers’ attitudes about their teaching philosophies would change when part of a PLC. In this study, the data suggested that teachers were surprised at how their reading philosophies and thoughts on best practices were challenged while engaging in conversations and research around dyslexia. Teachers walked away with more of an open mind about instructional shifts that needed to take place in order to reach and teach some of their struggling learners. It would be interesting to see how in another content area, for example, math, if teachers would demonstrate the ability to exhibit flexible thinking as it pertains to math instruction for students struggling in math.
**PLC outcomes.** This study only touched the surface of how assessment could influence PLC outcomes and improve student achievement. Participants in this study identified the FAR as the assessment tool for screening students who were struggling in reading and potentially dyslexic. A further area for research would be around the assessment tool and the data that it provides the PLC participants. How does the data from the FAR impact identification of students with dyslexia and program design? The researcher wonders how using the PLC as the vehicle to study specific cases and student data could inform intervention designs as well as child study team referrals.

**Reflections as a Scholar-Practitioner**

This case study focused on the feelings, perceptions, and involvement of participants in a professional learning community based on an adult theory of learning and the topic of dyslexia in young children. As a scholar practitioner, the researcher struggles with finding the right balance of moving district goals forward while giving teachers input into how they spend valuable professional development time. Studying a single PLC, that gave participants the autonomy to set their own goals and create their own agendas, inspires the researcher to design more professional development opportunities for all teachers. The researcher learned that decisions made in isolation could limit possibilities and opportunities to engage teachers in professional learning that might directly benefit student achievement. Teachers who participated in the PLC helped design the next steps for professional development in the school district for dyslexia requirements mandated by the state. We had a successful teacher-run workshop that led to follow-up discussion and programming that students directly benefited from because teachers were engaged in the learning process about supporting struggling readers. In addition, an additional intervention period was scheduled before school for students identified as struggling
readers. The program design to support the struggling readers came out of the PLC discussions using dyslexia research and experience trying the new strategies discussed in the PLC. As a school district, our next step is to provide meaningful professional development for teachers that will be based on the outcomes of this study.

Based on this, the following recommendations and reflections are offered to improve the use of professional learning communities built around a specific educational topic.

**For the District**

The results of this study will aid the school district in several ways.

1. The results of this study on PLCs will become part of the school district procedures for all professional learning communities going forward.

2. Those attempting to replicate the process should garner institutional support for the effort.

**For the Researcher**

The results of this study will aid the researcher in several ways. Now that the district is committed to this model of professional development, the researcher, in her professional role with the school district, will be the facilitator and one of the evaluators of all future PLCs.

1. In keeping with the process model of adult learning (Knowles, 1971), the researcher will work with the professional development communities to gather formative and summative feedback prior to, during, and at the conclusion of the work of the professional learning community, and revise and/or modify the parameters as necessary for future groups.

2. Those attempting to replicate the process should be thoroughly knowledgeable in the process model of adult learning (Knowles, 1971) and appoint a facilitator with the interest, time, and energy to maintain the necessary support for the participants.
Limitations

This study was limited to three elementary level teachers in various assignments in the school district. These assignments included classroom teacher, resource teacher, and child study team teacher. The data collected from the various sources, pre- and post-interviews, meeting notes, and reflective journals were analyzed, and demonstrated the thoughts, perspectives, opinions, and knowledge base of only the three participants. Therefore, the results of the study cannot be generalized to all elementary teachers.

Another factor present in this study was the support of the administration, recognizing the need to develop a model for professional learning communities that work for all teachers. Thus, the results of this study may not be generalizable to other school districts.

The state supported workshops on dyslexia identification and remediation for young children were a catalyst for the professional learning community by enabling the participants to have a grounded background in dyslexia before the first professional learning community meeting. The level of understanding of the topic of the professional learning community may not be generalizable to other school districts.

Additionally, the school district provided the necessary resources to enable the participants to grasp a first-hand knowledge of the strategies for teaching reading to young children with dyslexia and these resources may not be available to others wishing to replicate this study.

Finally, the volunteer participants in this study were guided by personal motivation to assist young children with reading disorders.
Conclusion

Professional development opportunities for teachers have long been viewed as passive efforts to engage teachers and have failed in that regard as evidenced by the literature review in this study. Efforts at professional learning communities that were loosely structured, didactic in nature, guided by one facilitator, with sporadic meeting places and times, also did not work as evidenced in the literature as well as previous attempts in the school district under study. Careful and thoughtful implementation of this professional learning community, after study of the adult learning theory process model (Knowles, 1971), and assuring that all of the elements would be met, provided for a successful attempt at establishing parameters for professional learning communities in this school district. Cogent implementation of this case study professional learning community and the collection and analysis of the data for this case study provided a thorough baseline from which to launch other professional learning communities in this school district. This model will add value to the efforts of the school district in the establishment of other best practices for small groups of teachers.

The problem of practice explored in this case study focused on the lack of merit for large group, all-day professional development for teachers, as well as the inconsistent scheduling of previous attempts to institute professional learning communities. Findings of this study revealed that professional learning communities, based on an adult process model of learning, and a specific focus for in-depth study can be successful. Future efforts at organizing and maintaining effective professional learning communities will depend on the personal commitment of participants to the topic under study, and the idea of collaborating with colleagues, as well as the continuation of collecting and analyzing data at various stages of the process.
References


DuFour, R. (2011). Work together, but only if you want to: We cannot waste another quarter of a century inviting or encouraging educators to collaborate. *Kappan*, 92(5), 57-61.


Appendices

Appendix A: Knowles Process Model

Knowles (1973) process model is designed to involve the learners in the following elements of the model. This case study will use as its framework the steps of the process model and details relevant to this study are presented below.

1. Establishing a climate conducive to learning includes the physical climate, the human and interpersonal climate, the organizational climate, and appropriate resources.

   • A dedicated meeting room will be scheduled for the duration of the PLCs. The room is air-conditioned, contains a coffee set-up, and is located near the restrooms. It is on a corridor that is generally less travelled.

   • The researcher will facilitate the interviews and the PLC meetings. The relationship with the faculty is supportive and since volunteers will be the participants, it is assumed that the interpersonal climate with the facilitator will be good. Efforts will be made to ensure the development of good group interpersonal skills.

   • The organizational climate, e.g., the district, is ripe for change and teachers’ suggestions included attempts at creating PLCs to study classroom practice new and emerging trends.

   • Resources related to dyslexia and other reading disorders have been accumulated. Resources will be contained in the meeting room identified for the PLC. Websites will be identified by the participants as part of the agenda for the first meeting if participants are agreeable.
2. Mechanism for Mutual Planning is the second step in the process model. This theory explains that participants included in the planning and decision-making lead to greater commitment to the activity.

- Once consent has been given and before the first interview, participants will meet with the researcher to determine the goals of the PLC and to identify possible agenda items. Participants will have an opportunity for input into the proposed goals and agenda items before the inception of the PLC.

3. Diagnosing the Needs for Learning has two sub-steps: constructing the model and assessing discrepancies.

- Diagnosing the current need and desired outcomes is critical for providing opportunities and information. It is critical in this step for the researcher to be aware of possible conflicting perceptions among the participants and the district.

- Self-assessment by the participants will manifest itself during the mutual planning and diagnosing of needs. Each participant might have a different level of knowledge on dyslexia and reading disorders in young children.

4. Formulating Objectives is the fourth step in Knowles (1973) process model. In this step, terminal, or exit objectives are established prior to learning. Knowles cautions that the term objectives should be substituted with the word procedures, thus thwarting any possible resistance to measuring teachers’ output.

- Along with Step 3, diagnosing the need and desired outcomes, participants will identify what they would like to see as an outcome of the PLC.

- Efforts will be made to refer to the terminal objectives as outcomes or procedures.
5. Designing a Pattern of Learning Experiences is the fifth step in the process model. Here several theories of adult learning are incorporated to include behaviorism, cognitive science, and field theory. Participants should have input into the delivery of the program. The program should be collaboratively agreed upon and includes learners and others identified as helpful to the project.

- Introduce the concepts of congeniality, cooperation and collaboration during the planning stages. Let the participants know that our goal is to be collaborative (which the literature indicates is difficult to achieve, but it can be a goal).

- Agendas will be formulated and strategies will be identified. In the event the participants feel they would like the insights of an expert, one will be secured to meet with them during a PLC.

6. The sixth step is Operation of the Program. Knowles (1973) describes the facilitator as a developer of human resources.

- The researcher has skills in observation and note taking. Participants will be told during the consent meeting that they will have the opportunity to review the notes and accept or modify them.

7. The last step in the process model is Program Evaluation. The model calls for four stages of assessment: reaction, learning, behavior and results.

- During the exit interview, participants will be asked open-ended questions relates to the four stages of assessment.

- Evaluation questions will be designed at the beginning the process when the intended outcomes are established.
Appendix B- Permission from School District to Conduct Study

Permission from School District to Conduct Study
Dear Nicole,
I have read your preliminary proposal to conduct a case study of teacher engagement in a professional learning community. We have talked often of starting this method of professional development and teacher collaboration and I am glad that you are undertaking a study. More important, using one of the current state initiatives in education, dyslexia and other reading disorders, as the topic will enrich our faculty’s understanding of these disorders. Therefore, pending approval by the Board of Education, I give my permission for you to conduct this study with volunteer teachers in the elementary school. Please be sure to follow district protocols and plan to make a presentation to the Board at the completion of your program of study.
Sincerely,

Dr. Roy A. Raksawski
Appendix C- Permission from the Principal of Elementary School A

Dear Nicole,
I have read your preliminary proposal to conduct a case study of teacher engagement in a professional learning community in our elementary school. This will be an exciting opportunity to introduce teachers to the concept of professional learning communities and a better model of professional development and teacher collaboration. We are fortunate that you are undertaking this study. Our elementary teachers need to know more about the identification of dyslexia and other reading disorders in young children. Therefore, I give my permission for you to conduct this study with volunteer teachers in this elementary school.

Please keep me informed of the progress of the professional learning community.

Sincerely,

[Signature]

Raymond Marini
Appendix D: Invitation for Teachers to Participate in Study

Invitation to Teachers to Participate in Study
I am a doctoral candidate in the Educational Leadership Program at Northeastern University. I am conducting case study research for my dissertation.

The title of my study is “A Case Study of the Process and Product of Teacher Engagement in a Professional Learning Community”. The topic of the professional learning community will be dyslexia and other reading disorders in young children.

I will establish a professional learning community that will meet three times over a nine-week period. There will be opportunities to ask questions and learn about how to journal and then for the study there will be two interviews, approximately 9 journals, and three PLC meetings. Following models of adult learning theory, you will be able to assist in the establishment of objectives, assess your own learning needs, and help set the agendas.

Teachers may feel that they are obligated to participate given that PLCs are a required initiative within the district. I, the student researcher, want to make it clear to all potential participants, that participation in the study is in no way connected to their employment with the district and school. Also note, there is no compensation, and results will not be shared with your supervisor. You would be free to withdraw at any time without consequence. Teachers can accrue professional development hours for their participation.

I am asking you to participate because you teach young children in the elementary school. Please let me know by Friday if you are willing to learning more about the study and if you will consider participating.

Very truly yours,

Nicole Inverso Vogt
Appendix E: Preliminary Individual Oral Interview

Participant Code: Date:

Thank you for volunteering to be part of my study on teacher engagement in a professional learning community. I’m going to ask you a series of questions related to the study. Please answer freely using your background, knowledge, and opinions as they relate to teaching, learning, and specifically ideas around dyslexia. The purpose of this research is to explore how professional learning communities function as a forum for adult learners in the context of learning about dyslexia and other reading disorders in young children. This study was designed with adult learning theory in mind and I hope you find your participation a good use of your time.

Because your responses are important and I want to make sure to capture everything you say, I would like to audio tape our conversation today. Do I have your permission to record this interview? [if yes, thank the participant and turn on the recording equipment]. I will also be taking written notes. I can assure you that all responses will be confidential and only a pseudonym will be used when quoting from the transcripts. I will be the only one privy to the tapes which will be eventually destroyed after they are transcribed. To meet our human subjects requirements at the university, you must sign the form I have with me. The document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm. Do you have any questions about the interview process or how your data will be used?

We have planned this interview to last no longer than about 45 minutes. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Do you have any questions at this time?

Teaching and PD Background

Describe your background as a teacher.

• College/teacher training

How many years have you been teaching?

• What grades have you taught?
• How many years at this school?
• What positions have you held at the school?

Describe your experiences with professional development.

• What has been your favorite PD? Why?
• What has been your least favorite PD? Why?
• If money and time weren’t an issue, how would you design a good PD session?

Professional Learning Community

Can you define in your own words what a professional learning community is?

What are the benefits of working collaboratively with teachers?
What are the challenges of working collaboratively with teachers?
What are your overall feelings about collaborating with teachers on instructional related issues?
  • Why/what previous experiences made you feel this way?
How would you characterize collaboration in a school setting?
What do you consider essential to an effective professional learning community?

**Dyslexia**

What do you know about dyslexia in young children?
Where did you learn what you know about dyslexia?
Have you worked with/taught dyslexic students?
How have you/would you teach/modify instruction for dyslexic students?
Is there anything else that you would like to share?

Thank you for participating in this interview. I’m going to end the recording now.
*Other probing or follow-up questions will be asked to follow up responses if appropriate.*
Appendix F: Introduction to Journaling

Dear Participants,

As part of this research study, you will be required to maintain a weekly electronic journal during the professional learning community with approximately 9 journal entries. You may make entries more often if you would like, in fact, that is encouraged. Journaling is your personal record of what is occurring in the professional learning community, your experiences in this forum and a reflection of your feelings, perceptions and personal level of involvement.

This information will not be shared with other participants in the professional learning community and your input will be used to record categories and themes not evident in the professional learning community meetings or interviews.

Submission of electronic journals will take place after the final interview. Please date all of your entries.

Thank you,

Very truly yours,

Nicole Inverso Vogt
Appendix G: Final Individual Oral Interview

Participant Code: Date:

Thank you for volunteering to be part of my study on teacher engagement in a professional learning community. I’m going to ask you a series of questions related to the study. Please answer freely using your background, knowledge, and opinions as they relate to teaching, learning, and specifically ideas around dyslexia. The purpose of this research is to explore how professional learning communities function as a forum for adult learners in the context of learning about dyslexia and other reading disorders in young children. This study was designed with adult learning theory in mind and I hope you find your participation a good use of your time.

Because your responses are important and I want to make sure to capture everything you say, I would like to audio tape our conversation today. Do I have your permission to record this interview? [if yes, thank the participant and turn on the recording equipment]. I will also be taking written notes. I can assure you that all responses will be confidential and only a pseudonym will be used when quoting from the transcripts. I will be the only one privy to the tapes which will be eventually destroyed after they are transcribed. To meet our human subjects requirements at the university, you must sign the form I have with me. The document states that:

1. all information will be held confidential,
2. your participation is voluntary and you may stop at any time if you feel uncomfortable, and
3. we do not intend to inflict any harm.

Do you have any questions about the interview process or how your data will be used?

We have planned this interview to last no longer than about 45 minutes. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Do you have any questions at this time?

Professional Learning Community

Describe your perceptions of a professional learning community.

How has the professional learning community changed your feelings and attitudes toward working with others?

Can you define in your own words what a professional learning community is?

How would you distinguish between a strong and weak PLC?

What have you learned from this experience?

How would you characterize collaboration efforts in this professional learning community given the understanding of cooperative and collaboration?

What do you consider essential to an effective professional learning community?

Adult Learning Theory

We used an adult learning model in the set up and delivery of the professional learning community.

• How did this work for your particular learning style?
• Did you experience any conflicts or struggles with your learning style?
  ○ If so, what was difficult or challenging?

**Dyslexia**
How has your knowledge about dyslexia in young children changed?
How have you/would you teach/modify instruction for dyslexic students?

Is there anything else that you would like to share?
Thank you for participating in this interview. I’m going to end the recording now.
*Other probing or follow-up questions will be asked to follow up responses if appropriate.*
Appendix H: PLC Meeting Script

Thank you for volunteering to be a part of this study. During our PLC meetings I will be taking field notes and recording the meeting conversations with an audio recorder. Transcribed notes will be sent to you in order to assure the integrity of responses. You may accept or modify my interpretations of observations. I will be taking field notes and audio recording to assure the accuracy of the spoken words. Audiotapes and transcriptions will be secured in a locked file cabinet in the district office and will be destroyed at the conclusion of my study.

There are no foreseeable risks or discomforts to you for taking part in this study. There are no direct benefits to you for participating in this study. There will be no compensation for you to participate in this study.

Your role in this study will be confidential and only a letter will identify you. Any reports or publications based on this research will use the assigned letters and will not identify you as part of this study.

The decision to participate in this research study is up to you. You do not have to participate and can withdraw at any time. Does anyone have any questions or wish to remove themselves from the study at this time with no repercussions?
### Appendix I: Study Design

<table>
<thead>
<tr>
<th><strong>Programmatic Activities</strong></th>
<th><strong>Research Activities</strong></th>
</tr>
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<tbody>
<tr>
<td>• Think about topics to discuss with colleagues around dyslexia</td>
<td>• Participate in an initial 45 minute recorded interview</td>
</tr>
<tr>
<td>• Give input to the time and location for the PLC meetings</td>
<td>• Keep an electronic journal of thoughts, feelings, and ideas from participation in the PLC on dyslexia</td>
</tr>
<tr>
<td>• Accrue professional development hours</td>
<td>• Participate in three, one hour PLC meetings that will be recorded by the researcher. PLC meeting 1 will be used to create agendas as part of the PLC</td>
</tr>
<tr>
<td>• Utilize knowledge of reading disorders and observations from the school year to prioritize next steps and district’s needs</td>
<td>• Participate in a follow-up 45 minute recorded interview</td>
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<tr>
<td></td>
<td>• Review transcriptions from PLC meetings</td>
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