IMPLEMENTING A PROFESSIONAL LEARNING COMMUNITY: A CASE STUDY

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Abstract

Teaching, in the 21st century is a complex vocation that necessitates high quality professional development to fortify and sustain it. As a core profession, and a critical representative of change in contemporary society, it is apparent that leaving no child behind also entails leaving no teacher behind (Stoll & Seashore-Louis, Eds, 2007). Implementing a professional development model, which empowers staff, diminishes the opportunities for isolation and abandonment, while increasing the potential for optimal student learning.

This doctoral thesis employs a qualitative case study methodology to document the experiences of a purposefully selected group of elementary educators, working within a small special education collaborative setting. The application of case study methodology aligns with the following research questions: How can organizations change their professional development practices to become more learner-centered? How can changes in staff development promote a collaborative learning model? This methodology utilized the theoretical framework of educational change theory (Fullan, 2007) and a comprehensive literature review of Professional Learning Communities, reflective practice, collaboration and culture. Data sets included participant interviews and reflective memos, which were accumulated throughout the 2010-2011 school year, and collected by a special education organization that is located in Southeastern Massachusetts. This compendium of data, accentuate the numerous factors involved in Professional Learning Community design, implementation and assessment. As a critical component of the continuous improvement process initiated by the organization, this project emphasizes how changes made to the professional development model increased staff empowerment, reflection, collaboration and collegiality within a special education environment, during an academic year.

Keywords: professional learning communities, case study, reflection, educational change theory, culture
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The collective support and dedication demonstrated by each of the aforementioned individuals has culminated in this Doctoral thesis. Thank you, all!
Chapter One: Introduction

Problem of Practice

According to the Massachusetts Department of Elementary and Secondary Education (DESE), the majority of special education students throughout the Commonwealth's 392 public school districts, 62 charter schools and 31 educational collaboratives who have participated in the Massachusetts Comprehensive Assessment System (MCAS) have not demonstrated adequate yearly progress (AYP) requirements in performance and improvement targets since 2006 (DESE, 2010). Federal mandates, as delineated in the No Child Left Behind Act (NCLB, 2001) require that all U.S. students demonstrate proficiency in reading and math by 2014. In order to graduate from publicly funded schools in the Commonwealth of Massachusetts, students must meet these standards. This apparent discrepancy between federal expectations for all students to meet proficiency targets and the performance of the Commonwealth's special education students has prompted the educational community to question how this vulnerable population of learners will meet proficiency expectations within the specified period.

Motivated by the imminent IDEIA (2004) accountability mandates, as well as a quest to implement educational equality standards for the Nation's learners, the National Governors Association for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) united with teachers, school administrators and the educational community to develop the Common Core Standards Initiative. Stakeholders throughout the Commonwealth of Massachusetts have articulated concerns relative to the expectations delineated in the Common Core Standards. Given the imminent mandate for students to achieve federal proficiency expectations in reading and math, the educational community remains concerned that students...
who qualify for special education services will not demonstrate optimal outcomes within the designated period.

**Educational Significance**

As the complexity and diversity of students' needs continue to be a concern and federal proficiency mandates encroach, school administrators recognize the needs of the 21st century differ from those of the last century. Today’s students, particularly those in vulnerable groups, such as special education, need to be educated within environments that promote collaboration and collegiality through teaching and learning.

For generations, the need for global education reform has been well documented in literature and research, (Fuhrman, 1988; Fuhrman & Elmore, 1990; Clune, 1989 as cited by Odden, Allan, Ed., 1991). However, U.S. federal laws and current accountability mandates have intensified the need for swift action. This unified urgency, coupled with the multifaceted needs of 21st century learners, has prompted a comprehensive examination of historical and current practices throughout the nation's schools. Impressions garnered from these examinations suggest to the educational community that a direct correlation between the professional development practices of educators and mediocre student outcomes exists (Armour-Thomas, 2008). Educational reformers and professional development experts suggest to the global education community that transformation in the field of professional learning is necessary to improve student outcomes (Barth, 2005; DuFour, DuFour, & Eaker, 2005; Hord & Sommers, 2008; Elmore, 2004). According to the National Staff Development Council's (NSDC) 2001 standards, professional development should be ongoing, job-embedded, and results-driven (Hord & Sommers, 2008. p.35).
Experts suggest embedded learning has the most significant impact on teaching practices and learning outcomes (DuFour, DuFour, & Eaker, 2005; Hord & Sommers, 2008) because formative and summative data are used to guide instructional practices. Consistent analysis of real-time data, which emerges in collaborative and collegial environments, promotes increased student outcomes because educators possess an increased capacity to modify their practices to facilitate increased learning. Bryk & Schneider (2002) & Garet, Porter, Desimone, Birman, & Yoon (2001) suggest that professional development models, which encourage teachers to engage in discourse that is topic-specific, or pertains to a particular innovation among colleagues from the same school or district, promotes successful implementation. With the impending federal expectation for all students to demonstrate proficiency in reading and math, it is necessary to examine the extent to which transformation in professional development practices that promote collaboration and collegiality impact the learning environment.

**Practical and Intellectual Goals**

The practical goal of this thesis was accomplished by creating an ongoing, job-embedded, learner-centered, results-driven, professional development model, which fosters collaboration and collegiality among staff in the special education setting.

The intellectual goal of this thesis was accomplished by contributing to the existing body of research that informs 21st century professional development practices.

**Research Questions**

Throughout recent decades, a paradigm shift in professional development models has emerged throughout the global education community (Vescio, Ross, & Adams (Eds.), 2006). The increased obligation to demonstrate measurable outcomes and meet the needs of 21st century learners has culminated in a transformation of existing practices. This case study was designed to identify (a)
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how teachers perceive the PLC environment, (b) the similarities and differences that exist between current professional development practices and those that the NSDC has deemed pertinent, (c) the pertinent changes that are necessary in existing professional development practices to ensure alignment with the NSDC's 2005 standards (Fullan, 2007), and (d) the impact that collaboration and collegiality have on the learning environment. Teachers' perceptions, regarding the change process and how it impacted their practices, behaviors and relationships are used to inform the continuous improvement cycle that was initiated by the organization as a conduit to meet the complex and diverse needs of 21st century learners. This investigation was guided by the following research questions:

1. How can organizations change their professional development practices to become more learner-centered?

2. How can changes in staff development promote a collaborative learning model?

Organization of the Document

This document is comprised of the following six sections: introduction, theoretical framework, literature review, research design, report of research findings and discussion of research findings. Contained within the second section is a comprehensive review of the theoretical framework that guides this investigation, educational change theory (ECT). Literature and research, pertaining to Professional Learning Communities and school culture, are examined as the educational community seeks to enhance student outcomes through increased staff collaboration and reflection. Following the literature review is the research design of a qualitative single case study, which is focused upon how professional development has the capacity to influence the teaching and learning environment. Next, the data collection and analysis techniques are introduced, as is the plan for preserving the validity and credibility of the
Theoretical Framework

Educational change theory (Fullan, 2007) is the theoretical framework, which guided this thesis. This theory is based upon the premise that organizations should be prepared for a change in practice (Fullan, 2007) when staff collaborates. This change is initiated when organizations increase their capacity for shared meaning, through the cultivation of relationships, rather than mandated reform imposed by administrators (Fullan, 2007). This notion suggests individuals and organizations can create an atmosphere where changing the culture of classrooms and schools encourages an emphasis on relationships and values, rather than structural change. The establishment of this environment enables the school community to contribute to the global transformation movement (Fullan, 2007).

Education significantly influences societal development (Fullan, 2007), and the impressions of authors, scholars, administrators, and practitioners suggest flaws in the system have existed for generations. Although Fullan posits educational change is "technically simple", he adds it is "socially complex" (p.86). Fullan (2007) suggests countless attempts to change the education system have failed because a distinction between theories of change (what causes change) and theories of changing (how to influence those causes) is lacking. Additionally, he posits success is propelled by moral purpose and knowledge (p.21). Fullan contends both change and the change process must be understood in order to generate sustainable transformation. Theories of action build capacity to focus on results and educators' capacity to learn will cease unless they cultivate their theoretical understanding of pedagogy and these theories (Fullan, 2007).

Consumers, Fullan (2007) suggests, who have become so intimately acquainted with change, often neglect to consider the personal impact. Change, which is propelled by moral purpose and
knowledge (Fullan, 2007) is multi-dimensional and typically happens because of imposition (natural form or deliberate action) or, voluntarily (initiated from dissatisfaction with the current situation). Marris (1975) contends innovation "can not be assimilated unless its meaning is shared" (p.121). Fullan (2007) posits genuine change, regardless of desire, represents a thoughtful personal and collective experience, which is characterized by ambivalence and hesitation; however, when positive outcomes are actualized because of this change initiative, pride, mastery and personal growth emerge, enabling educational change to occur.

Educational change theory (Fullan, 2007) is constructed on the premise that innovation is a complex, multidimensional process, comprised of three critical components: 1) the use of new or revised materials (e.g., curriculum or new technology), 2) the probable use of new teaching approaches (e.g., teaching strategies or activities), 3) the transformation of beliefs (e.g., pedagogical changes) (p. 30 ). Changes in educational practice are only achieved when these components are implemented, simultaneously. Accomplishment of educational change occurs when a fidelity approach is implemented and consistently applied to practices. Fullan (2007) contends incomplete implementation does not permit the adequate recognition of the complexities involved in the change process; consequently neglecting the behavioral and conceptual implications of change.

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 (Fullan, 2007); however, these changes are essential for the achievement of desired outcomes. Initiating changes in core values throughout organizations is especially difficult because these are steeped in traditional beliefs and practices pertaining to the purpose of education (Fullan, 2007). McLaughlin & Mitra (2000) support Fullan's assertion that reform must be "deep" and add, true reform occurs when staff not only know how to implement change, but also why it is necessary.
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Changes, which occur in the first dimension (beliefs and understanding), are considered foundational for achieving sustainable reform. Ball & Cohen (1999), the National Research Council (1999), Stigler & Hiebert (1999) and McLaughlin & Mitra (2000) concur with Fullan's belief that fundamental changes in conception (beliefs), eventually relate to skills and materials (the first dimension) and are pertinent for the establishment of Professional Learning Communities. Abandoning these former beliefs and understandings, while assuming new ones, establishes an increased capacity to plan valuable learning opportunities.

Learning organizations emerge when educators demonstrate a comprehensive understanding of the aforementioned change process. Knowledgeable educators serve as the catalyst for continuous improvement in their organizations because they are capable of persistent adaptation and the promotion of progress. Organizations, which focus upon the process of continuous improvement, concentrate on the discovery of successful implementation strategies for critical student learning goals (Fullan, 2007). Operating in methodical fashion, these organizations focus upon learning, employing a persistent, collaborative and effective approach that facilitates reflection among all members of the learning community (Fullan, 2007).

Fullan's (2007) educational change theory, suggests the following elements for a successful change: 1) identify closing the achievement gap as the primary goal, 2) attend to the basics (literacy, numeracy and student well-being), 3) be motivated by accessing the dignity and respect of others, 4) ensure the most appropriate people are partnering to solve the problem, 5) recognize all problems are socially based and action oriented, 6) consider the lack of capacity is the primary problem, 7) maintain continuity by accessing appropriate leadership, 8) build links between internal and external accountability, 9) construct conditions that promote positive pressure and 10) use the aforementioned strategies to fortify public confidence (pp. 44-62). Implementing these particular
elements of change help people and organizations shift singular pronoun usage (e.g. me/my) towards collective pronouns (e.g. ours), which Fullan (2007) refers to as "meaning writ large" (p.63). Motivating staff, which have discovered the moral and intellectual benefits of collaboration and shared meaning, increases the capacity to eradicate the status quo and construct an interactive culture (Fullan, 2007).

In order to sustain critical changes in beliefs, Fullan (2007) suggests the following interconnected fundamentals be established in educators' professional learning models: revamped standards, incentives, and qualification systems and renovated teachers' working conditions (p.283). Fullan believes practices and standards, which are continuously reassessed, help to replace dysfunctional culture with new criteria and methods of collaborating. These changes emerge when profound reciprocity between individual and social (shared) meaning is the objective (Fullan, 2007). The ultimate ambition of change is for staff to envision themselves as shareholders consistently seeking meaning in an intact system. According to Fullan (2007) "Meaning is motivation; motivation is energy; energy is engagement; engagement is life" (p.303). Fullan (2007) explains the change occurs in three phases, as depicted in the following graphic.

Figure 1 Fullan's Change Process applied to this Research Project

Each of Fullan's phases are mutually influential and focused upon outcomes. Phase 1 (initiation) includes the decision making process and change adoption. Phase 2 (implementation) pertains to
initial experiences and impressions that are actualized in practice. Phase 3 (institutionalization) pertains to change being adopted as part of the organization. Fullan (2007) reports the institutionalization phase of the change model can be as minimal as 2-4 years for moderate changes and as many as 5-10 for complex, large scale initiatives.

Fullan (2007) cautions that change can only be realized when improving classroom practices becomes the primary focus, ultimately eliminating variations in practices by increasing consistency (p.55). The complexities and intricacies pertaining to contemporary educational change theory necessitate a dramatically revised approach to learning that "guides the development of individual minds through many minds working together" (Fullan, 2007. p.301). The emphasis on collaboration, which is embedded throughout educational change theory, made it an ideal framework to guide this study.

Summary of Theories

Educational change is a "learning experience" for all adults and students involved in the process (Fullan, 2007.p. 85). Fullan's theory influenced this project because it supports the notion that changes made to the professional development model will enhance the teaching and learning environment for 21st century learners. This study focused upon gathering data that pertains to ensuring the appropriate people are collaborating to solve the problem and constructing conditions that promote positive pressure. Fullan (2007) believes those administrators, who ensure the appropriate staff is collaborating and employ affirmative pressure as a motivator, facilitate increased collaboration and talent exponentially throughout the organization because staff capacities are revealed (Fullan, 2007). The design of this study facilitated this process throughout the organization.
Chapter Two: Literature Review

Maxwell (2005) suggests to researchers that there is a dual purpose for the literature review. He explains researchers' work should demonstrate how the proposed study aligns with existing research and how the theoretical framework fortifies it. Mertens (2005) concurs with Maxwell's assertion that the literature review serves a dual purpose. Mertens also adds that the literature review provides an historical perspective pertaining to the proposed research as well as a vision for additional research and a pertinent conceptual framework for the project. Additionally, the literature review provides the structure for establishing the significance of the study, as well as a standard for comparison, relative to existing outcomes (Cooper, 1984; Marshall & Rossman, 2006). Hedrick, Bickman & Rog (1993) suggest that the literature review functions as the basis for the research questions and presents a taxonomy for categorizing them, while Creswell (2009) claims it serves as a structural catalyst for establishing the significance of the study, as well as a standard for comparison. The theoretical framework of educational change theory (Fullan, 2007) guided this literature review. The following questions were designed to support the aforementioned research questions throughout the literature review:

1. What does existing research reveal about the professional development of educators?
2. How are outcomes altered when PD becomes embedded within learning organizations?
3. What does existing research conclude are the essential characteristics of professional development models in contemporary schools?

Extensive research and literature pertaining to professional development practices from national and international authors Rebecca DuFour (2006), Robert DuFour (2004a), Robert Eaker (2006), Roland Barth (2005), Andy Hargreaves (2005), Richard Elmore (2004), Shirley Hord (2008), among others, provide pertinent insights throughout this project. Contained within the preceding literature
review is the examination of reflective practice, collaboration and collegiality as significant contributors to development of successful, sustainable Professional Learning Communities. Their influences emerged throughout the study and are subsequently documented throughout this report.

**Professional Development**

Many traditions, since the founding of the first American public school in the mid 17th century, have been preserved in 21st century schools (Mitchell & Sackney, 2000). Although most modern educational community members marvel at the perpetuation of steadfast traditions, they also question whether these ideals can sufficiently sustain contemporary learners.

Historically, attempts to improve the practice of teaching have transpired under the auspices of professional development (Graham, 2007). These professional development activities are characterized as school, or district-wide events or conference-based workshops (Ball, 1996; Darling-Hammond, 1996; Garet, Porter, Desimone, Birman & Yoon, 2001; Graham, 2007; Little, 1994; Sparks, 1994). In order to meet the diverse needs of 21st century learners, administrators are considering alternative professional development models, which promote collaboration and collegiality. Contemporary professional development activities include study groups, professional networks and mentoring relationships, (Loucks-Horsley, Hewson, Love, Mundry & Stiles, 2003) in an effort to respond more effectively to the needs of teachers (Ball, 1996). In addition, they sought strategies to improve the instructional behaviors of teachers (Darling-Hammond, 1996, Loucks et al., 2003; Stiles, Loucks-Horsley, & Hewson, 1996). In their examinations of alternative models, administrators discovered reliable and effective school-based professional development programs are uncommon (Ball, 1996; Darling-Hammond, 1996; Garet et al., 2001; Little, 1994; Sparks, 1994; US Department of Education, 2000).
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In 2005, the National Staff Development Council (NSDC) established Standards of Practice for Professional Development (Fullan, 2007) for the educational community to embrace as it seeks to improve the learning of all students. With the insurgence of innovative models, the NSDC believed it was imperative to develop standards that could provide continuity and structure throughout 21st century schools. The model is comprised of standards in the following three strands: context, process and content. Reflected throughout these strands is the capacity to implement learning communities, which are enhanced by effective leadership and improved resources. These objectives, in conjunction with an increased focus on the use of data, evaluations, evidence-based instruction, design, learning, collaboration, equity, quality teaching and family involvement, promote effective staff development. Previously, the NSDC (2001) established professional development must be ongoing, job-embedded and results driven (Hord & Sommers, 2008, p.35). Analyses of existing professional development models indicate the implementation of the NSDC's standards requires changes in professional development practices throughout many U.S. schools. Research evidence and literature, provided throughout the succeeding literature review, will document the educational communities' efforts to implement tenets of these standards.
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Figure 2 National Staff Development Council's Professional Development Standards (2001; 2005)

- Organizes staff into learning communities whose goals align with the school & community (learning communities)
- Leaders who guide the continuous improvement process (leadership)
- Requires resources to support adult learning and collaboration (resources)

- Uses student data to establish learning priorities, monitor progress, and sustain continuous improvement.
- Uses multiple sources of information to guide improvement and demonstrate its impact. (Evaluation)
- Prepares educators to apply research to decision making. (Research-Based)
- Uses learning strategies appropriate to the intended goal. (Design)
- Applies knowledge about human learning and change. (Learning)
- Provides educators with the knowledge and skills to collaborate. (Collaboration)

- Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement. (Equity)
- Deepens educators’ content knowledge, provides them with research-based instructional strategies to assist students and prepares them to use various types of classroom assessments appropriately. (Quality)
- Provides educators with knowledge and skills to involve families and other stakeholders appropriately. (Family Involvement)

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In a quantitative study conducted by Armour-Thomas (2008), correlational improvements between teacher knowledge and student outcomes were examined. Researcher and study author Armour-Thomas, whose work was guided by the theory of successful intelligence (Sternberg, 1997), reports consistency with other studies (Birman et al., 2000; Kennedy, 1999) that have documented “teachers’ positive reactions about professional development experiences in which they have participated” (p.9). Throughout the twelve-month study within five suburban New York School districts, “Dynamic Pedagogy” (DP) was introduced as a new approach to understanding teaching and professional development activities. Quantitative analysis of teacher surveys, pertaining to DP, and student Tera Nova scores were used to document study results.

Armour-Thomas designed study surveys to measure the following critical domains: Helpfulness of DP Professional Development; Frequency of use of DP strategies in teaching; Impact of DP on teaching; Impact of DP on student learning. In addition, the author analyzed the results obtained from a Teacher-Student Rubric. The purpose of the rubric was to document comparisons between staff who implemented the DP approach and those who did not. Finally, Armour-Thomas analyzed the test scores of students who were in the classes of those teachers who implemented the DP strategies and those who did not, to determine whether changes occurred. Armour-Thomas’ (2008) study fortifies the research of her colleagues (Garet et al., 2001; Penuel & Means, 2004; Penuel, Fishman, Yamaguchi & Gallagher, 2007) which revealed professional development can influence the practice of classroom teachers (p.10).

Motivated to transcend the previously established notion of professional development, DuFour (2004b) suggested that professional development should not be regarded as a distinct or detached experience to improve teaching practices, rather it should be regarded as an inherent outcome of organizational management strategies (Graham, 2007). Although DuFour's professional model is
consistent with reform focused professional learning, his model differs because leaders are able to address teacher improvement tangentially, while encouraging activities such as teacher collaboration, dialogue and reflection through less prescribed and scheduled professional development experiences (Graham, 2007). Consequently, professional development activities become a fundamental component of daily routines, making them indistinguishable from the typical behaviors and structures of the organization. DuFour (2004b) suggests this style of professional development, which is embedded in the structure of the organization, is the best type of professional development because it occurs in the workplace, rather than a workshop (p.63).

DuFour's contention that educational outcomes are linked with organizational structure and philosophy is an emergent theme in contemporary literature (Darling-Hammond, 1996; Graham, 2007; Hord, 1997a; Little, 1994; McLaughlin & Talbert, 1993; Rosenholtz, 1989). McLaughlin and Talbert (1993) noted teachers' responses to students, and their ideas of appropriate teaching practices, are influenced, significantly, by the quality of the Professional Learning Communities in which they work, particularly at the Center for Research on the Context of Secondary School Teaching (Graham, 2007). Lee, Smith, Croninger (1995) examined high school restructuring efforts and discovered schools that were organized using an "organic" model (e.g., diminished hierarchy and increased collaboration) experienced greater levels of student achievement and smaller gaps than their more traditionally structured equivalents (Graham, 2007).

Senge (1990) suggests growth in learning organizations is propelled by the following five learning disciplines: 1) personal mastery, 2) mental models, 3) team learning, 4) building shared vision, and 5) systems thinking. The application of these disciplines enables people to learn from one another and devise new practices. Elmore (2004) believes the practice of improvement is centered upon professional development, while Roberts & Pruitt (2009) posit continuous
professional development is fundamental for the learning community due to curriculum standards and increased demands for accountability. Birman, Desimone, Porter & Garet (2000) identified the following three structural characteristics as necessary design features for effective professional development programs: form, duration and participation. In addition, they suggest three supporting core features for professional development programs: content focus, active learning and coherence. Each promotes learning rather than teaching because they focus on the process of improvement.

Elmore (2004) echoes the sentiments of Birman et al., (2000) when he reminds the educational community of the following “…you can’t improve a school’s performance, or the performance of any teacher or any student in it, without increasing the investment in teachers’ knowledge, pedagogical skills, and understanding of students” (p.207).

Professional Learning Communities, which are anchored in teachers' reality, and are sustainable and designed to facilitate peer collaboration, have emerged as the most accepted model of 21st century professional development in schools (Chan & Pang, 2006; Richardson, 2003). According to Stoll & Seashore –Louis (Eds.) (2007), collective learning necessitates a departure from traditional professional development, enabling staff to refine their knowledge and practices within and beyond their schools.

**Professional Learning Communities**

The Professional Learning Community model (DuFour & Eaker, 1998a), embedded in an organization's structure encourages staff to focus their work upon practices and organizational behaviors. DuFour (2004b) claims:

When teachers work together to develop curriculum that delineates the essential knowledge and skills each student is to acquire, when they create frequent common assessments to monitor each student's learning on a timely basis, when they collectively analyze results from those assessments to identify strengths and weaknesses, and when
they help each other develop and implement strategies to improve current levels of student learning, they are engaged in the kind of professional development that builds teacher capacity and sustains school improvement (p.63).

Professional Learning Communities are considered a vital component of the contemporary education community (Stoll & Seashore –Louis (Eds.), 2007) because they entail inclusive, broad connections. Kruse, Louise & Bryk (1995) believe professional learning communities are focused upon the cultivation of learning and the interactions of teachers and administrators who seek to improve learning outcomes. Additionally, Kruse et al., (1995) cite the following five critical components of professional learning communities: 1) reflective dialogue, 2) focus on student learning, 3) interaction among teachers & colleagues, 4) collaboration, and 5) shared values and norms (Roberts & Pruitt, 2009. pp.6-7). Advocates of PLCs are confronted with three significant challenges as they strive to implement this model throughout the nation's schools. These challenges include developing and applying shared knowledge; sustaining the hard work of change, and transforming school culture (Barth et al., 2005. p.9).

One of the foremost and globally recognized initiatives to improve schools is the adoption of Professional Learning Communities (Stoll & Seashore Louis (Eds.) 2007) as a professional development model. According to Hord (1997, 2004a) Professional Learning Communities are formidable conduits for contemporary school change and improvement. School improvement, which results from the establishment of PLCs, necessitates the unification of staff for the purpose of a collaborative and collegial response to improve student outcomes (Blase & Blase, 2003). The catalyst for PLCS evolved from an understanding that teachers who consistently and effectively collaborate have the capacity to convert typical organizations into those that learn and are dedicated to continuous improvement (Stoll & Seashore Louis (Eds.), 2007). According to Barth and
associates (2005) PLCs are representative of practices that rely upon beliefs, assumptions, and expectations.

Morrissey (2000) suggests that PLCs experience, commonly, an identity crisis because they lack an adequate term to define themselves. Stoll & Seashore Louis (Eds.), (2007) suggest the educational community does not possess a universal definition of a Professional Learning Community (PLC); however, they add that the community does share consensus that there are specific, distinguishable principles of engagement, relative to PLCs. Successful PLCs share the following five critical components: shared values and vision, collective responsibility, reflective professional inquiry, professional collaboration and promotion of group, and individual learning (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006a; Hord, 2004a; Louis et al., 1995a). Andrews & Lewis (2007) believe common vision and commitment are essential for the development and sustainability of PLCs. A shared vision and focus on student learning prevents the inclination towards autonomy, which is suggested to minimize teacher efficacy (Louis et al., 1995b; Newmann & Wehlage, 1995). In the schools where these components are visible and paired with a focus on student learning, there have been improved, sustainable outcomes that have demonstrated increased student achievement (Bredeson & Scriber, 2000; Louis, Toole & Hargreaves, 1999). Cowan, Fleming, Thompson & Morrissey (2004) and others have suggested additional characteristics that are evident within PLCs, however, the aforementioned are most effective and commonly observed.

Crowe, Hausman, & Scribner (2002) envision PLCs existing as three concentric circles. Within the innermost circle is the relationship that exists between students and teachers, the middle circle represents the relationship among staff, and the outer circle represents the relationship between the staff and the greater school community. The consistent presence of these ideals establishes a school-
wide culture that necessitates inclusive, genuine, consistent and focused collaboration, which encourages the examination of practices that improve outcomes.

While examining professional development models, structured in the parameters of qualitative research, some common trends emerged. These trends include the impact of collaboration, culture, collegiality and reflection on the learning environment, each of which are indicative of PLCs.

Historically, Professional Learning Communities have been identified, universally, as a group of teachers who are supported by leaders (Stoll & Seashore- Louis (Eds.), 2007). This rather insular impression of PLCs has been garnered from the notion that they fail to exist within a broader social context. Cranston (2009), who studied the impact of the principal on the PLC, used a naturalistic inquiry approach and thematic analysis to gain a better understanding of principals’ perceptions of PLCs, in an attempt to debunk these perceptions. Cranston discovered a principal who does not sustain the change process could hinder PLCs, which are committed to professional inquiries; data-based decision-making and best practices. In their research, Marzano, Waters &McNulty (2005) suggest effective culture is the chief instrument leaders use to facilitate change.

Cranston (2009), utilized Argyris' (2000) “theory-in-use” as his theoretical framework for examining principals’ perceptions of schools as Professional Learning Communities, and conducted individual interviews to solicit impressions from principals. In these voluntary interviews, which were collected for six months, Cranston sought answers to his general research question: “What characteristics are identified by principals in their conceptions of schools as professional learning communities?” (p.5). The following eight themes emerged from the principal participants in Cranston’s study: PLCs pertain to process; structural supports enable the development of PLCs; trust is the foundation for adult relationships; congenial relationships dominate conceptions of
community; learning is an individual activity; professional teaching is derived from attitudinal attributes; teacher evaluation shapes how principals think about learning in professional communities; and teacher evaluation impacts principal and teacher relationships in PLCs.

According to Cranston (2009), these themes provide a provisional framework for leaders to increase their understanding of PLCs. Cranston contends these beliefs could be used as a catalyst for those who wish to use them as a framework to initiate organizational transformation and improve outcomes.

While Cranston studied the principals’ role in the development of a PLC, Musanti & Pence (2010) studied the impact of teacher resistance to the PLC development process. Musanti & Pence’s (2010) analysis of the longitudinal qualitative study (Merriam, 1998), which integrated elements of narrative inquiry (Riessman, 1993) and critical incident methodology (Angelides, 2001; Tripp, 1993) revealed that resistance is essentially unavoidable in professional development models that cultivate collegiality and collaboration. Additional research conducted on teacher resistance indicates instances of conflict may arise when teachers attempt to maintain status quo (Achinstein, 2002; Hargreaves, 1994; Zellermayer, 2001) by questioning the efficacy of traditional professional development models (Richardson, 2003).

In their study, Musanti & Pence (2010) examined the partnership between a school district and a large southwestern university. Fourteen licensed, certified bilingual teachers participated in the three-year study, which was created to enhance the pedagogical practices of district teachers. Of those fourteen, seven teachers were selected and trained as co-facilitators for the project. Their accounts of the collaboration and partnership that evolved throughout this process were collected via individual and group interviews. The researchers analyzed their field notes, oral and written interview transcripts/assignments, which were obtained from the teachers, to determine the
outcomes of their research. They concluded that redefining resistance as a positive characteristic of transformation rather than as an obstacle for development is critical for success and positive outcomes for all. Considering the outcomes of these and other relevant studies, it is evident that cultivated relationships and informed perceptions have a significant impact on the successful development and sustainability of a Professional Learning Community.

Mitchell and Sackney (2000) & Toole and Louis (2002) observed educators sharing critical examinations of their practices, reflections, collaborations, and inclusive learning oriented growth opportunities as common trends throughout Professional Learning Communities. Louis, Kruse & Associates (1995) and Bolam, McMahon, Stoll, Thomas, Wallace, Greenwood, Hawkey, Ingram, Atkinson, and Smith (2005) concur that effective PLCs have the capacity to stimulate and sustain professional learning within schools with the united objective to enhance student learning.

Talbert and McLaughlin (1994) suggest each word in the phrase Professional Learning Community denotes particular significance. They believe the term professional is indicative of specialization, technique, ethics and collegial control over practice and standards. However, Day (1999) suggests some teachers have had the ability to demonstrate partial control over curriculum yet, few have little, if any, influence over professional standards. Learning emerged as an appendage to professional communities in the 90s. The inclusion of learning in the phrase is indicative of the change that has resulted since learning and improvement have become the focus in schools.

Stoll & Seashore- Louis (Eds.), (2007) posit the term Professional Learning Community, implies significantly more than teachers’ individual learning does. Conversely, it denotes professional learning, within the context of a cohesive group, which focuses on collective knowledge and occurs within ethical parameters that promote interpersonal caring and permeation of the lives of the entire
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school community (Hargreaves & Giles, 2003; Louis, Kruse & Bryk, 1995b). David Bohm (1980; 1985), a theoretical physicist who explored Newtonian physics, believed that parts, which emerge from a unified sum, continue to unite and integrate, even as they move further from the focus. Stoll & Seashore- Louis (Eds.), (2007) have applied Bohm's global perspective, to their understanding of Professional Learning Communities. They posit that a PLC is a "place of and for connections, relationships, reciprocity and mutuality" (Stoll & Seashore Louis (Eds.), 2007. p.31). Starratt (2003) explains PLCs in human terms in these sentiments: human thoughts, actions, drives, desires, action, purpose, growth and learning hone perspectives when we engage and collaborate. Consequently, it can be inferred that PLCs exclusively pertain to people, their lives and experiences (Stoll & Seashore- Louis (Eds.), 2007). The creation of a successful, sustainable Professional Learning Community is primarily dependent upon the capacity of educators to learn, develop and change in a stimulating and nurturing environment. A Professional Learning Community that is led by thoughtful, reflective educators and administrators will accentuate the belief that learning is the basis of individual and organizational development (Argyris, 1977; Argyris & Schon, 1974; Senge, 1990; Starkey, 1996; Wheatley, 1992).

Reflective Practice

Reflection, as a practice in education, is experiencing a renaissance. Although the educational community is not privy to a universal definition of reflective practice (York- Barr, Sommers, Ghere, & Montie, 2006), multiple perspectives have been offered, and contribute to an operational understanding. For generations, educators, administrators and members of the global education community have recognized John Dewey as the foremost authority on reflection in the educational setting (Fendler, 2003; Rodgers, 2002; Sparks- Langer& Colton, 1991; Zeichner & Liston, 1996). Dewey (1933) was influenced by early Eastern and Western philosophers, Buddha, Plato & Lao-Tzu and aptly applied the scientific method to understand how individuals thought and learned.
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(Del-Carlo, Hinkhouse, & Isbell, 2009). In doing so, he determined that the processes of teaching and learning are embedded in the fundamentals of observation and quantification, enabling learners to analyze what is known and done (Del-Carlo et al., 2009). From Dewey's insights, Cochran-Smith & Lytle (Eds.), (1993) deduced that learning to teach and learning to inquire becomes inextricably linked, eventually revealing the "teacher as researcher" (Del-Carlo et al., 2009, p.60).

Donald Schon (1983), one of the most cited experts on the subject of reflective practice, introduced the theory as a significant process in refining one's skills in a desired discipline. His beliefs compliment the premise of Fullan's change theory because thoughtfulness, reflection and the evolution of personal beliefs are cultivated throughout the process of collective learning.

Learning is at the core of the improvement process and it requires reflection (York-Barr et al., 2006) and, reflection in learning is a complex endeavor (Johns & Henwood, 2009). According to York-Barr and associates (2006), "reflection that considers social, moral, and ethical perspectives has the potential to affect community values and action" (p.4). It is anticipated that collaborative and reflective practitioners will emerge from this research project, consequently changing the organization and the stakeholders it serves. Bolton (2010) identifies reflective practice as being mindful of practical values and theories that influence daily actions through reflection and reflexivity, while Kagan (1969) contends reflection reduces errors. Dempsey, Halton, and Murphy (2001) emphasize self-reflection for each member of the learning community as being a critical component of improvement in one's discipline. Bolton (2010) reminds reflective practitioners to learn from experiences garnered in their work, allowing them to influence new opportunities. Bright (1996) believes individuals, who regularly partake in reflective practices, often execute their daily duties with an increased capacity for professional competence. Ur (1996) contends reflection is the primary basis for professional progress and it has been reported that educators, who habitually utilize
Reflective practice, at the organizational level, is a formidable model, which is necessary for the continuous improvement of teaching and learning practices, as well as the advancement of student achievement (DuFour & Eaker, 1998a; Garet, Porter, Desimone, Birman, & Yoon, 2001; Hawley & Valli, 2000; Ingvarson, Meiers, & Beavis, 2005; Kruse, Louis, & Bryk, 1995; Osterman & Kottkamp, 2004; Senge, 2000). York-Barr et al., (2006) designed a theory of action for reflective practice, which delineates the connections between thinking, action, and student learning (p.9). Emphasized within this theory of action for reflective practice is obligation to pause and create an opportunity for openness to emerge (York-Barr et al., 2006). Eraut (1985) suggests that educators should develop behaviors and practices that enable them to develop self-awareness and opportunities to think about the work they are doing. Moon (2009) suggests this process may enable individuals to "be reflective" and yield unanticipated outcomes (p.82). With the establishment of PLCs as a model of professional development, it is anticipated that staff will become increasingly reflective; consequently altering the teaching and learning environment.

Verdonschot (2006) identified the following five aspects of reflection that are essential for professional learning: reflection pertaining to routine events, emotional experiences, acknowledgement of successes and failures, interpersonal interaction and teamwork, historical perspective and the ability to assess the current situation and formulate predictions for the future. Each of these will guide the participant interview process and are anticipated to emerge in themes.

With the increasing popularity and prevalence of reflective practice in education today, some practitioners have employed creative strategies to demonstrate its relevance and efficacy because scant empirical research data exist to document how these skills develop over time (Wyatt, 2010).
Narrative writing, or narrative analysis, has emerged as a beneficial strategy for reflection (Attard & Armour, 2005). Narrative analysis has been described as the investigation of experiences, thoughts and emotions, which are depicted and expressed through written chronicles (Polkinghorne, 1995). According to Merilainen and Syrjala (2001), introspective narratives are interconnected with reflective practice and self-study. The narrative analysis process will be used by research participants to document changes in the teaching and learning environment throughout the study. Attard (2008), a reflective practitioner, attests to the increased ability to construct new meanings, interpretations, knowledge and comprehension while utilizing narrative writing experiences. Noddings (1994) believes memorializing the evolution of a reflective practitioner, via narrative writings, is an "enriching and enlightening" experience (p. 358). Reflective practitioners commonly consider the notion of internal dialogue in their narratives (Attard, 2008; Charmaz, 2000; Ellis & Bochner, 2000; Ghaye & Ghaye, 1998; Glaze, 2002; Pollard, 2002; Schon, 1983). Internal dialogue affords to practitioners the opportunity to assume the dual role of researcher and subject because they are actively engaged in studying their practices (Conle, 2000).

As is anticipated with reflective practice, consistent analysis is a fundamental part of this research process (Pollard, 2002). Consequently, within these narrative writings, researchers not only provide evidence of consistent observations, but also, critical analysis of the research process. This non-linear, perpetual data collection and analysis process enables practitioners to learn as they are engaged, while enhancing professional practices in their environment (Yin, 2003a). An analysis of narrative chronicles enables researchers with opportunities to generate "cognitive networks of concepts", which help them identify common themes throughout their reflections (Polkinghorne, 1995, p. 10-11). Through "the interpretive lens of the researcher" (Harry, Sturges, & Klinger, 2005, p.5) commonalities emerge and enable the reflective practitioner to consider significant implications.
Since reflective practice is a dynamic activity, it can be considered pertinent for the comprehension of ongoing action (Bright, 1996). Reflective practice is a complex process that provides a basis for continuous learning and relevant action. Additionally, it requires concentrated thought and commitment to transform practices based on fresh, introspective knowledge (York-Barr et al., 2006) which is necessary for the implementation of PLCs.

**Cultural Transformation**

Change has emerged as the decisive catalyst for contemporary professional development models in the educational sector. Recently, national and international experts have recognized school culture as an historically over-looked obstacle to improving schools and the capacity to educate students adequately (Wagner, 2006; Wager & Hall O'Phalen, 1998; Levine & LeZotte, 1995; Sizer, 1998; Phillips, 1996; Peterson & Deal, 1998; Frieberg, 1998). Fullan (1993, 1999, 2007) contends restructuring is a practice that consistently occurs in schools, however, reculturing, or the practice of teachers changing their beliefs and habits, is truly needed for schools to be successful.

Peterson (2002) identifies school culture as "the set of norms, values and beliefs, rituals and ceremonies, symbols and stories that constitute the 'persona' of the school" (p.10). Additionally, he suggests establishing a healthy school culture to combat culture's underestimated influence. A healthy school culture is identified by common values, deliberately planned collaboration, and learning that is continuously nurtured. DuFour, DuFour & Eaker (2006) believe PLCs require cultural shifts in the following: fundamental purpose, use of assessments, the response when students do not learn, the work of the teachers, focus, and professional development (pp.6-7). Numerous researchers (Crow et al., 2002; DuFour & Eaker, 1998b; DuFour, Eaker & DuFour, 2005; Hord, 1997a, 2004b; Toole & Louis, 2002) believe nurturing a school culture, which supports staff as it transitions into a professional learning community, offers the most encouraging opportunity for
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considerable and sustained school improvement. DuFour, Eaker and DuFour (2005) claim schools can only exist as PLCs when educators transform not only their practices, but also themselves.

Despite the numerous benefits for collaboration and increased collegiality in this model, Roberts and Pruitt (2009) cite obstacles associated with transitioning schools from traditional models to those that reflect a PLC. They suggest cultural transformation be established as the primary goal.

According to Phillips (1996), school culture is the beliefs, attitudes and behaviors, which are observable throughout a school community. Wagner (2006) suggests common goals, staff stability, and shared curriculum threads, when paired with honest communication, help to create a healthy organization and positive school culture. Peterson (2002) suggests culture is enduring; consequently, it influences how people think, feel and act. Wagner (2006) cautions school culture, pertains not only to that which occurs within the confines of the building, but also to occurrences in the community, family and teams, which exist beyond those parameters. Stoll & Seashore–Louis (Eds.), (2007) caution that the purpose of PLCs is not to enhance the morale or procedural skills of the educational staff rather, it is designed to transform the learning experiences of students. Others propose PLCs provide the opportunity to embed caring as a critical component of school culture (Noddings 1992; Beck 1994; Sergiovanni 1994; Hargreaves with Giles 2003). Stoll and Seashore-Louis (Eds.), (2007) suggest learning moments occur when a transformation in understanding, a shift in awareness and a movement in the soul transpires. They believe a shift in at least one of these realms must occur in order for learning to have transpired.

Collaboration

The development of a learning organization is a complex process; therefore, it requires members to have access to resources such as time for collaboration, consistent support from leaders, information and colleague availability (Senge, 1994). Lujan and Day (2010) contend teaching
initiatives in the 21st century emphasize the creation of collaborative professional cultures. Commonly, PLCs are discerned by their emphasis on the collective learning process (Stoll et al., 2006b). Richardson (2003) explains that short-term transmission in-service models continue to dominate schools and must be eliminated, and replaced by models that support collaboration and collegiality. Renowned authors and practitioners DuFour, Eaker and DuFour (2005) articulate the following sentiments pertaining to this assertion “…students would be better served if educators embraced learning rather than teaching as the mission of the school, if they worked collaboratively to help all students learn, and if they used formative assessments and a focus on results to guide their practice and foster continuous improvement” (p.5).

Vescio, Ross and Adams (2006) studied the change process, as it occurs when learning community characteristics work in conjunction with one another. Results obtained from their study revealed, "culture is improved because the learning communities increase collaboration, a focus on student learning, teacher authority or empowerment, and continuous learning" (Vescio et al., pp. 17-18). A leader’s capacity to create a shared vision and support his/her teacher's collaborative efforts significantly contributes to the advancement of a successful culture (Marzano et al., 2005. p.48). In the absence of meaningful, engaging opportunities, the capacity of schools to transform into learning organizations becomes limited (Ingram, Louis & Schroeder, 2004; Lashway, 1997).

In order for schools to transform their existing practices by making teaching organizations learning organizations, Hord & Sommers (2008) remind leaders that “learning begins with educators” (p.17). Elmore (2004) believes school improvement involves increasing the knowledge, practice and skills of teachers. He adds improvement occurs when teachers are informed by assessments because they help them understand how their students perform academically (p.207).
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Kruse, Louis, and Bryk (1995) suggest that the establishment of shared values and norms, which are critical in a PLC, provide the foundation on which the community rests and from there, the other elements will radiate. Lave and Wenger (1991) and Wenger (1998) posit learning in communities of practice encourages participants to gradually absorb and be absorbed in the culture. This deliberate process provides participants with exemplars, which typically promote shared meaning, a sense of belonging and enhanced comprehension (Stoll et al., 2006a). Kleine-Kracht (1993) aptly summarized the PLC environment in this way “… in a PLC no longer do teachers teach, students learn and administrators manage…there is need for everyone to contribute” (Hord and Sommers, 2008, p. 11). DuFour, DuFour and Eaker (2008) recommend to educators that they develop a profound, common understanding of learning community concepts and practices, which can be demonstrated in their own schools as a catalyst for transformation. Stoll & Seashore-Louis (Eds.), (2007) add that teachers are critical learners in professional communities because they are influenced and energized by each other, students, families and the expansive community.

Rosenholtz (1989) identified 'learning enriched' and 'learning impoverished' schools as those, which were focused upon learning, and those that were not. Stoll and Seashore-Louis (Eds.) (2007) and colleagues examined the impact of teachers attempting to preserve the status quo throughout the change process (Stoll et al., 2006a. pp.223 & 229). Little (2001) examined schools that were identified as having solid traditional teacher communities (e.g., those where work is designed to bolster tradition) or others, which were identified as teacher learning communities (where teachers collaborate to rejuvenate practice and share stories of professional growth).

Learning in the context of PLCs, pertains to people collaborating for a shared understanding and practices (Bryk, Camburn, & Louis, 1999; Marks, Louis & Printy, 2002; Stoll et al., 2006c). Fullan and Hargreaves (1992) have studied the value of collaboration and its debilitating effects on isolation
in the educational community for decades, but recently, collaboration has been the focus of widespread research in many disciplines, including learning communities (Wegner, 1998). Hord’s (2007) review of contemporary research studies, pertaining to staff outcomes, reveal that participants report diminished feelings of isolation and increased inclination toward collegiality and collaboration, after participating in a PLC model. King and Newmann (2001) emphasize the importance of PLC members uniting to learn as a collective group rather than as individual learners in the following sentiments:

To be sure, high quality instruction depends upon the competence and attitudes of each individual teacher. But in addition, teachers' individual knowledge, skills and dispositions must be put to use in an organized, collective enterprise. That is, social resources must be cultivated, and the desired vision for social resources within a school can be summarized as professional community (p. 89).

John-Steiner (2000) contends collaboration is particularly complex because it blends relationships, common purpose and conflicting emotions. Fullan (2001a) believes one of the most critical components for a successful change is the creation of improved relationships, specifically those that are focused upon group development. Oakes, Quartz, Ryan, and Lipton (1999) believe moral commitment is a necessary component for strengthening teacher exchanges. Oakes and associates add, staff that is connected by moral commitment, empathy and shared responsibility, are inclined to grow and effectively replicate positive school culture. Nonka and Takeuchi (1995) share the views of Oakes and associates and add the processes of acquiring knowledge and knowledge creation must be honed, continuously, in prosperous organizations. Through this refining process, Nonka and Takeuchi (1995) found collaborative cultures are able to adapt unspoken knowledge into that which is shared among colleagues.
Collaborative learning, which is fundamental for communities of practice, involves the shared development of meaning and mutual relationships through common initiatives (John-Steiner, 2000; Wegner, 1998). Consequently, collaborative practices are critical for successful professional development because they serve as a catalyst for teachers to establish networks of relationships, which enable them to reflect, share practices, revisit their teaching and learning philosophies and build knowledge (Achinstein, 2002; Chan & Pang, 2006; Clement & Vandenberghe, 2000; Hargreaves & Dawe, 1990; Little, 1987). The new, professional relationships that emerge from PLCs are critical for school improvement efforts, and help to shape the capacity for greater program coherence and improved student outcomes (Fullan, 2001b; Knapp, 2003). The capacity to foster knowledge emanates from social interactions, which are indicative of PLC culture (Britzman, 1991; John-Steiner, 2000; Wegner, 1998). The increased knowledge, which is acquired because of increased peer interactions, enables staff to become less dependent and interdependent upon relationships, resulting in greater autonomy and independence as new knowledge is internalized (John-Steiner & Mahn, 1996). According to Mitchell and Sackney (2000), the learning that is experienced in PLCs requires obliteration of existing knowledge through a reflective analysis process. Once this has occurred, reconstruction of knowledge begins through a collaborative and collegial learning process.

The notion of teacher knowledge of self has recently been the focus of widespread research throughout the field (Musanti & Pence, 2010). Lytle and Cochran-Smith (1994) believe metacognition may be critical for the identification of consummate teaching professionals. They add teaching proficiency is not exclusively identified as mastery of knowledge, but also how staff relate to knowledge, students and familiarity with the field (Lytle et al., 1994).
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According to author Wagner (2006), “…we don’t yet have an education system that can produce dependably proficient teaching in every classroom in every school, day in and day out” (p.27). Elmore (2004) explains, “…school personnel must share a coherent, explicit set of norms and expectations about what a good school looks like before they can use signals from the outside to improve student learning” (p.206). Fullan (2006) argues that in order to change systems, purposeful interaction between and among individuals needs to increase. According to Shulman and Shulman (2004), teacher development, which occurs within the context of learning communities, enables teachers to become learners and encourages them to create a new environment that cultivates a common vision and the capacity to be reflective about learning processes and practices.

Roberts and Pruitt (2009) believe professional development that occurs within the natural setting provides to educators an opportunity that encourages them to visit one another’s classrooms, meet frequently, discuss issues, and share information and insights pertaining to students. Barth et al., (2005) contend schools can only transform into professional communities when the educators working within them are required to change many things, including themselves (p.26).

Despite this emphasis, educational literature posits leaders are often confronted by numerous barriers, which delay the creation of a collaborative culture. Similar to their qualitative research colleagues, Musanti and Pence (2010) who studied teacher resistance to the collaborative camaraderie that emerges from PLC development, Lujan and Day (2010) examined the “roadblocks” that deter collaboration. These researchers were guided by the following research questions: What was the effect of the implementation of Professional Learning Communities on roadblocks to collaboration among teachers?; If roadblocks were addressed, did the collaborative culture change? (Lujan and Day, 2010, p. 11). In their analysis of the quantitative data collected from the High Five Regional Partnership for High School Excellence, barriers to implementation were often be
attributed to inconsistent meetings, superficial discussions and inadequate completion of PLC assignments. In addition, their data revealed time, isolation, divergent views, collaboration and culture as obstacles. Using unidentified quantitative methods and the theoretical framework of DuFour and DuFour to document transformation throughout the study, Lujan and Day (2010) determined PLCs have a positive impact on schools. Additionally, the authors cited “shared mission, vision and goals” as essential components for ameliorating the barriers to collaboration (p.11). Their results, obtained from data collected from the 36 research participants, also indicated positive cultural transformation and favorable prognosticators for future PLC sustainability.

Analysis of the aforementioned Armour-Thomas (2008) quantitative study indicated successful outcomes can be anticipated when educators are provided with opportunities for professional development that have a distinct focus on content and promote collaboration and collegiality among staff. Additionally, successful partnerships are further cultivated when school communities share a vision, mission and high expectations. Westheimer (1999) recognized five common components that have emerged as contemporary theorists have examined school community. These trends are shared beliefs and understandings, interaction and participation, interdependence, concern for individual and minority views, and meaningful relationships (p.75).

Successful learning communities focus upon establishing mutually supportive relationships with common norms and values; conversely, in those communities where professionals and professionalism is directed exclusively toward the acquisition and development of knowledge and skills, autonomy often prevails (Stoll et al., 2006b). Tensions can arise as a direct result of this autonomy (Louis et al., 1995a; McMahon, 2001) and often necessitate leader intervention and divergence from the focus. Since it is accepted, globally, that teacher growth does not occur in isolation, contemporary professional development seeks to construct PLCs in which participants
engage in thoughtful activities by collaborating with peers to construct knowledge that pertains to
teaching and learning (Darling-Hammond & Bransford, 2005; Shulman & Shulman, 2004).

Stoll and Seashore – Louis (Eds.), (2007) suggest participant engagement has a significant impact
on the development and sustainability of a PLC. They have identified the following five
foundational principles for PLCs: deep respect, collective responsibility, appreciation of diversity,
problem solving orientation and positive role modeling (pp. 32-34). Each of these principles, when
practiced by PLC members, help align actions and maintain the purpose of the focus in a secure
environment. Cordingley, Bell, Rundell and Evans (2003) study revealed collaborative, continuing
professional development (CPD) has a positive influence on teachers and students because teachers
reported behavioral modifications in the following realms: confidence, empowered capacity relative
to student outcomes, enthusiasm for collaboration, diminished anxiety about observations, and a
greater commitment to transform practice by being open to try new approaches. Louis et al.,
(1995b) discovered a genuine sense of community in schools positively affects work efficacy,
motivation, satisfaction and the collective responsibility for student outcomes.

**Efficacy**

Since PLCs are considered more fluid than fixed (Stoll et al., 2006) and constantly developing in
conjunction with experiences (Bolam et al., 2005), determining efficacy at individual organizations
is a complex process. Mulford (2004) believes the capacity of an organization to morph into a PLC
is dependent upon its stage of development. Mulford explains PLCs can exist along a developmental
continuum, which includes the early starter phase, developer phase and the mature phase. PLCs can
demonstrate varying levels of success throughout each of these phases.

Preliminary research results, pertaining to the efficacy of PLCs are beginning to emerge, which
is creating a resurgence of optimism about the future of learning in schools (Stoll & Seashore- Louis,
According to Fullan (2001b), school districts throughout the nation have reported profound systemic changes emerging from transformations in professional development practices. DuFour (2004b) posits this success is contingent upon the presence of a school-wide capacity to focus on learning rather than teaching. According to Bolam et al., (2005) an effective PLC has the ability to "promote and sustain the learning of all professionals in the school community with the collective purpose of enhancing pupil learning" (p.145). Little (2001) reports professional learning communities are deemed an important contributor in the domains of school reform and instructional improvement, throughout contemporary literature. Australian teachers, who developed a PLC, discovered that PLCs not only enhance their knowledge, but also significantly impact student performance in the classroom (Andrews & Lewis, 2007). Rosenholtz (1989) and Louis & Marks (1998) discovered indications of a link between PLCs and improved student outcomes. They discovered that environments with learning enriched teachers have students with better academic achievement. Additionally, Louis and Marks (1998) discovered that students who are educated within positive professional communities achieve at enhanced levels. This phenomena was attributed to authentic pedagogy, which Stoll et al., (2006) identify as enhanced levels of thinking, substantive conversations, profound knowledge and global connections (p.230).

**Summary of Literature Review**

Recently, the educational community has become inundated with literature pertaining to best practices in professional development. The majority of this literature, which is fortified by principles of the National Staff Development Council standards (2001; 2005), advocates for the creation of Professional Learning Communities. A conglomeration of professional development experts believes PLC structure facilitates increased reflection, collaboration and collegiality, which are deemed necessary to meet the diverse and complex needs of 21st century learners.
Conclusions of Literature Review

The preceding review of the literature and research revealed successful efforts to improve the teaching and learning environment. Experts in the field of staff development have recommended a job-embedded, data-driven, collaboratively and collegially supported model for 21st century schools, which they have identified as Professional Learning Communities. Throughout the subsequent portions of this doctoral thesis report, the research design, an historical perspective, pertaining to the development of a professional learning community in a special education organization emerges. The program, which was the focus of this study, reflects the essential characteristics of a Professional Learning Community. Links between staff development, collaboration, collegiality and increased outcomes in a specialized learning organization are emphasized.
Chapter Three: Research Design

This is a qualitative single case study, designed to understand how changes made to an existing professional development model increased reflection, collaboration, and collegiality in a special education setting.

Yin (2009) has identified five components, which are critical for a successful design: the study question(s); its propositions (if any); its unit(s) of analysis; the logic that links the data to the propositions; and the criteria for interpreting the findings (p.27). Yin suggests the primary purpose of the design is to help the researcher avoid a situation in which the data and conclusions lack sufficient support for the initial research questions.

Research Questions

The identified problem of practice in this study was the observed discrepancy between teaching practices and the increasing complexity of student needs. In order to address this problem, the study investigated how educational organizations can change their existing professional development practices to reflect a collaborative, learner-centered approach within a small research site. The primary research question that guided this study was: 1) How can organizations change their professional development practices to become more learner-centered? A secondary question to support this was: 2) How can changes made to existing professional development practices enhance outcomes?

The research garnered from this study documents how one educational organization changed its professional development practices to reflect a collaborative, collegial, learner-centered, outcomes-based environment. The characteristics of PLC design and the objective of increased collaborative and collegial practices throughout the program are reflected in this study and fortify the mission, vision and professional development plan of the organization.
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Methodology

Approach

This doctoral thesis was designed as a qualitative single-case design study (Yin, 2003a). The intent of this study was to document the experiences of a particular group of educators (K-5 special education teachers) exploring the educational problems associated with collaboration, collegiality, and reflection, specifically as they pertain to the evolving complexity and diversity of student needs (Creswell, 2009). The application of case study methodology, supported by participant interviews, and reflective memos, which were accumulated throughout the 2010-2011 school year and collected by the organization, aligned with the research questions and the continuous improvement model (Zmuda, Kuklis & Kline, 2004) established by the organization. The sum of this data clarifies the evolution of a PLC from the unique perspective of the participants.

Creswell (2009) identified nine characteristics of qualitative research, which align with and are reflected throughout this thesis. Throughout this study, the most prevalent of these features is the "holistic account" (p.176). Using the holistic account, Creswell claims, enables the researcher with an opportunity to create a multifaceted representation of the circumstances being studied. The aforementioned research questions necessitate an holistic approach and analysis for the complex issues that link professional development with increased collaboration and collegiality. The design, implementation and assessment of PLCs is a complex process, which requires a multidimensional approach. The following investigation of qualitative and case study methodologies were used as justification for this doctoral thesis.

Case Study

Case study methodology was selected for this thesis because it is reflective of the following three tenets of the qualitative method: describing, understanding, and explaining (Tellis, 1997) and
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because it is used to examine a particular phenomenon or an entity (Stake, 2006), which is intrinsically bound by time, event and/or place (Merriam 1998). In order to fortify the mission, vision and professional development plan, administrators adopted a continuous improvement model, which was used to examine various facets of the organization. Professional development emerged as an area of concern throughout the annual staff questionnaire. Consequently, the organization initiated changes to their existing model in the 2010-2011 school year. These changes, which were part of an ongoing program throughout the organization, were documented by ten elementary educators and will be revealed throughout subsequent portions of this thesis.

Traditionally, case studies are used in many fields, including education, to enhance the knowledge of groups and individuals pertaining to social, political and organizational phenomena (Yin, 2009). Researchers, who utilize a case study approach, generally seek to maintain the integrity of real-life events, such as small group behavior, organizational processes, and school performance in their work (Yin, 2009), each of which are characteristic of this thesis. Zonabend (1992) contends that an expertly designed case study integrates the perspective of the "actors" in the research and must reflect completeness in observation, reconstruction, and analysis. In this study, research participants provided their unique perspectives through reflective memos and interviews.

While Alvarez, Binkley, Bivens, Highers, Poole, and Walker (1990) contend the primary purpose of case studies is to develop critical thinking skills, Feagin, Orum, and Sjoberg (1990) believe the quintessential purpose of case studies is to preserve a holistic understanding of cultural systems of action. Generally, in case study models, the researcher is often the primary investigator; consequently, Stake (1995) cautions researchers to establish appropriate boundaries throughout the project. Since participants were responsible for completing their individual reflective memos, prior
to participating in collegial discourse with the researcher, appropriate boundaries were easily established and maintained throughout the study.

According to Tellis (1997), case studies, which provide multi-perspective analyses, tend to be selective because they generally present primary and secondary goals pertaining to a fundamental purpose. Although this case study was focused upon increasing collaboration and collegiality in order to meet the needs of diverse and complex learners, participants had an opportunity to share their individual impressions of collaboration, collegiality, and reflection during their interview. Tellis believes interviews are one of the most important sources of case study information; therefore, open-ended surveys were selected as the primary interview source for this case study, in order to guarantee participant impressions were sufficiently documented. Although a case study examination necessitates a report that is primarily descriptive in nature (Yin, 2009), readers should not anticipate an artless enumeration of facts, rather the report provides “thick” description (Geertz, 1973) of the contextual experience of the educators as they sought to change their problem of practice.

According to Snow and Anderson (cited in Feagin, Orum, & Sjoberg, 1991), the case study model is referred to as a triangulated research strategy. They further explain that triangulation can occur with data, investigators, theories, and even methodologies. Stake (1995) explained protocols are commonly used as an effective triangulation tool because they help to ensure accuracy and alternative explanations. Yin (1984) suggests triangulation meets the ethical obligation to confirm the validity of the research processes. In this study, triangulation was used as a validation tool to compare data obtained from the participants' reflective memos and interviews. The participants' interviews were used as the primary data set for this investigation, while their reflective memos were used as the secondary set and the researcher's reflective memos were the tertiary set.
Keen and Packwood (1995) explain that researchers who choose to conduct case study research generally do so because it allows them to concentrate on complex situations, while being mindful of the contextual impact. Yin (2009) explains that a case study approach is appropriate when a ‘how’ or ‘why’ question, pertaining to contemporary events over which the investigator has little or no control, is posed. Stake (1995) and Yin (1984) have identified the following data sources for case study researchers to collect throughout their investigation: documents, archival records, interviews, direct observation, participant-observation and physical artifacts. Documents, records, interviews, and physical participant artifacts, such as reflective memos were used as data for this case study.

In order to illustrate the diversity of contemporary professional development practices as well as their common trends, an explanation, demonstrating the complexity of PLC development emerged, as the accounts of the changes were documented and subsequently analyzed. By design, (Light, Singer, & Willett, 1990) this study afforded the researcher opportunities to accentuate individual educator diversity as the professional learning environment changed. In addition, the practical and intellectual goals of this thesis were supported through the establishment of a Professional Learning Community model that can be replicated within the organization and throughout other diverse educational environments.

**Site and Participants**

This study was conducted at a Special Education collaborative in southeastern New England. The participants were ten licensed Special Education elementary educators. This was a purposeful sample. Staff was chosen to participate in this research study because all are “involved, committed and valued”, which Wheelan (2005) insists are critical team dynamics for those who are motivated to embark upon a transformation. Each of the teachers has been employed by the organization for a minimum of three years. The professionally licensed Special Education administrator at the research
Glesne and Peshkin (1992) caution researchers who share a connection with study participants within a familiar organization because they may be inclined to conduct "Backyard" research. This type of research may lead to compromises in the reporter's ability to disclose accurate information and could pose authority issues. Although the researcher/administrator is cognizant of this predisposition, the relationship with the site and its participants did not have any impact upon the accuracy of data collection, nor analysis because safeguards to ensure accuracy were established throughout the validity portion of this project. Although the researcher/administrator is responsible for conducting evaluations, these are based upon observations of instructional staff, and therefore, the elementary PLC pilot did not influence the outcome of any staff evaluations during the 2010-2011 school year. The participants were voluntary. At any point in the study, each participant was aware that s/he could leave the study.

Data Collection

According to Yin (2009), evidence to support case study research emerges from many sources and, is often more complex than data collection processes for other research methods. Yin (2009) identifies the following six sources of complementary evidence that can be used to collect data in case study research: documentation, archival records, interviews, direct observation, participant-observation and artifacts (p.99). Creswell (2009) explains that qualitative research data is collected in a natural setting, where the identified problem of practice is observable and the researcher is considered a critical instrument in the data collection process.

As is recommended by Yin and Creswell, this research study was designed to utilize multiple sources of data to ensure a comprehensive investigation and research validity. Following each
professional development activity in the 2010-2011 school year (September, November, January, March), the special education collaborative solicited reflections from each of its ten elementary teachers. In these reflective memos, teachers were asked to reflect upon their experiences, following the professional development activity. In June, the elementary teachers provided their final reflections, pertaining to the PLC model. The data, which was gathered by the organization throughout the year, was subsequently obtained and carefully examined by the researcher as historical data. After the final reflective memos (June) were collected and examined, the researcher conducted individual interviews with each of the ten elementary special educators during the final two weeks of June. The accumulated responses, which were contained within the reflective memos, were used as the secondary data set for this investigation. The interview questions were crafted to reflect the NSDC’s 2005 standards and the principles of PLCs. Interviews and participant artifacts (e.g. reflective memos), collected by the researcher, from the collaborative, were used as primary sources of data for this project because they are inextricably linked to the research questions. According to Maxwell (2005), it is important to use multiple data sources to increase the dependability of the study. In addition, multiple data sources promote a comprehensive analysis that involves systematic decoding where themes and categories emerge.
Throughout the 2010-2011 academic year, the elementary teachers were asked to implement strategies, in their classrooms, which were learned throughout the organization's four professional days. After the initial three professional days, staff completed reflective memos, which were used as participant artifacts in this project, to document the impact of these changes on their practices. Historically, staff was required to complete pre/post tests during professional development days; however, the memos that were distributed throughout the 2010-2011 year were crafted to solicit reflective responses. On the final professional day, the elementary staff presented demonstrations during an interactive Learning Expo. Their presentations emphasized how their practices changed because of the newly implemented PLC model. Additionally, the
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Learning Expo structure enabled staff throughout the organization to view the impact of the PLC model in the elementary programs, while engaging in collegial dialogue. Participants' impressions of this new model were reflected in memos, which were collected by the organization. The aforementioned memo, which was distributed in June, was a new tool that was instituted by the organization to facilitate its continuous improvement model (Zmuda et al., 2004).

Figure 4  Data Collection Procedures

Creswell (2009) and Yin (2009) suggest interviewing can be used for organizational purposes, as well as a valuable source for gathering information. Merriam (2009) believes, "...interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the world around them; it is also necessary to interview when we are interested in past events that are impossible to replicate" (p. 88). According to Rubin and Rubin (1995), case study interviews are designed,
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generally, to be flexible rather than rigid. In depth interviews, which solicit participant input pertaining to facts and opinions relative to particular events, were used as the primary technique for gaining the participants’ perspective relative to professional development, collaboration, collegiality and reflection (Yin, 2009); Merton, Fiske & Kendall (1990). Individual, in depth interviews, which captured the participants' impressions of the 2010-2011 PD events, were conducted in June. The researcher developed interview questions, which reflected the tenets of the organization's mission, NSDC standards and critical PLC components. Results obtained from these interviews were shared with the organization's administrators for further analysis.

Kvale (2007) cautions qualitative researchers about interviewing when he suggests interviews can be perceived as a moral inquiry and, as such, interviewers are required to consider how their questions can improve individual and scientific knowledge and impact. In an effort to maintain the integrity and accuracy in this research project, the researcher considered Creswell's (2009) advice to qualitative researchers by utilizing an interview protocol. A semi-structured interview protocol, based upon the research questions and relevant literature reflecting Creswell's data collection procedures was implemented throughout this study (Appendix B) because some intimate revelations emerged throughout the data interview process (Creswell, 2009).

Initially, participants answered open-ended questions, which were subsequently followed by probe questions. This style of questions was utilized to guide the researcher and focus the participants. In addition, it enabled the researcher to focus on the participants who described their perceptions and impressions, relative to the problem of practice being studied (Merriam, 2009). Probe questions were used to encourage participants to share detailed information about their experiences, ultimately making them less inclined to share opinions or ideas that they believe the researcher was anticipating (Merriam, 2009). According to Seidman (2006), the optimal interview
duration is ninety minutes because it enables participants the opportunity to reconstruct their experiences, provide situational context and reflect. As recommended, the duration of the interview did not exceed ninety minutes.

Merriam (2009) suggests documents can serve as an additional source of data collection in qualitative research (p. 162). The researcher reviewed numerous documents, including participant artifacts, such as reflective memos, that related to the special educators' perceptions about changes in professional development, collaboration, collegiality and reflective practices. These documents were distributed, collected, maintained and stored by the organization throughout the 2010-2011 school year. These documents included, but were not limited to the organization's professional development surveys and participants' reflective memos. Yin (2009), cautions researchers about using documents because he claims they should not be accepted as literal recording of actual events. Although inferences can be made from the aforementioned documents, the researcher also submitted them as evidence for consideration; using them as probes for further investigation, rather than definitive findings because they could be negated. Documentation of these has been recorded on the Document Analysis Protocol (Appendix C).

Bogdan and Biklen (1992) believe reflective notes should be used to record the researcher's personal thoughts, ideas, impressions and biases; consequently, the researcher maintained reflective notes to document impressions garnered throughout the interview, data collection and analysis processes. These notes are stored in a journal that was saved electronically. The journal documented the chronology of activities occurring for the duration of the project and tracked pertinent research details including daily/weekly activities, weekly correspondence, participant and researcher questions/concerns, completed components, and a timeline of required tasks. Additionally, the journal contained reflective and highly descriptive field notes (Merriam, 2009), compiled following
each interview (Creswell, 2009; Merriam, 2009). The preliminary analysis of themes, critical
events, processes, strategies, strengths and challenges were recorded, following each interview
(Maxwell, 2005). The researcher was cognizant of data gaps and interview trends, which are critical
in the document review process (Creswell, 2009; Merriam, 2009). The researcher’s journal was
divided into the following sections: interviews, participant artifacts and researcher reflections.
Creswell (2009) advises researchers to devise columns, separating descriptive and reflective notes.
He explains that the descriptive notes should include a detailed account of participant dialogue,
quotes, a depiction of the physical setting, and specific accounts of pertinent events or activities
(Creswell, 2009). Reflective notes, documenting the researcher’s reflections, assumptions,
impressions, questions, problems and intuitions (Creswell, 2009) are included in the journal.
Creswell (2009) believes organization and structure provide to the researcher opportunities to
participate in the ongoing process of reflection. According to Creswell (2009), reflecting about data,
questions and journaling throughout the study, helps to prepare researchers for the final report.

In addition to the field notes and the research journal, analytical memos containing initial
analyses and interpretations of data were maintained (Creswell, 2009; Merriam, 2009; Maxwell,
2005). Throughout the data collection process, the researcher used memos to consistently and
systematically document impressions about the research data. Maxwell (2005) believes this
methodical documentation strategy encourages researchers to maintain files of these writings.
Maxwell (2005) contends, “Memos are an extremely versatile tool that can be used for many
different purposes; this term refers to any writing that a researcher does in relationship to the
research other than actual field notes, transcription, or coding” (p. 12). The complexity and details
provided within memos are completely dependent upon the researcher’s requirements. Generally,
they may present as brief, trivial comments/prompts or an intricate idea, presented in an analytical
Memos provide to researchers a beneficial tool that facilitates reflection and analytical insights throughout the entire data collection process. Maxwell (2005) believes maintaining memos is a critical strategy for researchers to employ because they help increase clarity and understanding about the identified topic, research site and participants (p.12). The utilization of these systematic, continuous data collection systems facilitated straightforward analysis throughout this project.

**Data Analysis**

Yin (2009) contends the analysis of case study results is generally the most complicated component of the process for neophyte researchers. Boyatzsis (1998) posits interpretations of data can only be as valid as they are reliable and validity is assured, only when multiple sources are utilized (Yin, 1984). Creswell (2009) advises researchers that they should provide an accurate account of information and data interpretation that is easily verifiable among participants and multiple data sources. He also suggests a well-organized design promotes accurate analysis because it enables the researcher to remain focused upon learning about the participants and their problems.

In order to diminish analytical complications, Yin (2009) suggests four general strategies for researchers to consider as they approach the data analysis phase of their project. These strategies include, relying on theoretical propositions, developing a case description, using qualitative and quantitative data, and examining rival explanations (pp. 130-134). Additionally, he suggests five analytic techniques to fortify the general research strategies. These techniques include: pattern matching, to fortify the internal validity; explanation building, to provide clarification for the case; time-series analysis, to reflect time as it pertains to research and experiments; logic models, to provide chronology of events over a specific time, and cross-case synthesis, to employ when research is compared and contrasted in multiple case studies (pp.136-156). With the implementation of these techniques, Yin (2009) believes a superior quality research model has been designed.
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A program-level logic model, aligning contemporary events with those that were predicted (Yin, 2009) was used in this project. Application of this model allowed the researcher to demonstrate the sequence of events, as they evolved throughout the project, while encouraging necessary modifications. This model, adapted from Yin (2009) demonstrates the inter-related cause and effect sequence of events. The data obtained from the researcher's reflective memos, participants' reflective memos and interviews, revealed whether teachers' perceptions of professional development, collaboration, collegiality, and reflection evolved throughout the PLC project.

Figure 5 Phases of Change

The logic model of explanation building was used to analyze the case study data and to clarify the phenomena. Although explanation building is generally represented in narrative form, it is typically the result of a series of iterations (Yin, 2009), which are represented in Figure 5. This figure is used to demonstrate the fluidity of the process (ongoing professional development), how it is linked with immediate outcomes (greater staff control over their learning destiny), intermediate outcomes (increased staff empowerment because of enhanced student information) and ultimate outcomes (increased collaboration, collegiality and reflection with a focus).
Sufficient evidence was collected from a variety of data sources (e.g., interviews, participants' reflective memos and the researcher's reflective memos) throughout the 2010-2011 academic year to document successful changes in staff practices.

Figure 6 Explanation Building Logic Model

This logic model was adapted from Yin, 2009. p.152

Figure 6 is used to illustrate the continuous improvement process that emerged when logic models were utilized for problem analysis. Once the logic model was employed to analyze the case study data, codes emerged and were used to label and retrieve information efficiently (Miles & Huberman, 1994). Characteristic of logic models is their capacity to illustrate the cause-and-effect relationship between the linked components (Yin, 2009). This logic model illustrates the cause-and-effect relationship between federal proficiency mandates, diverse and complex student needs, and how they are linked with job-embedded professional development that occurs within classrooms.
Data, accumulated from staff throughout the 2010-2011 school year, were used to inform, continuously, the logic model because it tracked all of the pertinent change features (Yin, 2009).

Figure 7 Sequence of Data Analysis Phases

The iterative process of data analysis, described by Miles and Huberman (1994) guided this research process. A combination of descriptive, interpretive, and pattern coding (Miles & Huberman, 1994) were used to analyze the data. Initially, descriptive coding was used to "chunk" the primary iteration of specific information (e.g., interview, reflective memos, & artifact data). The reflective memos, completed by participants from September 2010- June 2011, were collected by the collaborative, as part of ongoing professional development and were obtained and analyzed, by the researcher, as historical data. Next, interpretive coding techniques were used to analyze staff interviews and artifacts for more complex themes (e.g., pertaining to the impressions of PLC practices). Finally, data were subjected to the process of pattern coding, which was used to make inferences and formulate explanations. An example of this coding process is found in Appendix ff. Participants' reflective memos, the researcher's reflective memos, and open-ended interviews were coded to reveal emergent themes. Given the use of the
open-ended interview questions, themes pertaining to reflection, collaboration, collegiality, communication and resources emerged.

**Figure 8  Data Collection and Analysis**

This study generated a significant amount of data in multiple forms (e.g., participants' reflective memos, interviews and the researcher's reflective logs); therefore, the researcher performed continuous, systematic and immediate analysis of the data that were collected. Prior to the participant interviews, data obtained from the participants' reflective memos were analyzed.
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to reveal emergent themes. Emergent themes included, but were not limited to the following: collaboration, learning communities, resources, design, quality, shared vision, focus and efficacy. These themes were common among participants and throughout the three data sets.

Interviews, which were digitally recorded, were transcribed and analyzed in a judicious manner (Maxwell, 2005; Merriam, 2009; Yin 2009) because Maxwell (2005) claims that qualitative researchers should resist the temptation of allowing unanalyzed field notes and transcriptions to accumulate because it complicates the final data analysis process. Once this process was completed, qualitative data analysis software, NViVo 9 (2010) was used to manage and analyze the data. NViVo provided analysis of complex, multi-faceted data patterns, which emerged in this case study (NViVo 9, 2010). Additionally, NViVo analyzed individual segments of data, which were coded for multiple themes, enabling relevant data to be accessed and utilized, while concentrating on multiple research questions and emergent themes (NViVo 9).

Throughout this study, it was imperative to consider how the research questions and theoretical framework were consistently informed and linked with the data collection and analysis processes. Since the primary theoretical lens for this study was educational change theory, reflective memos and open-ended interview questions were designed to mirror the tenets of change. In particular, interview questions and memos were designed to demonstrate how staff assimilated shared meaning, altered their use of new materials and approaches, and revised pedagogical practices. The design of these open-ended questions elicited common themes such as impressions pertaining to embedded professional development, frequency and quality of staff reflection, collaboration and collegiality. In addition, the data reflected how staff had altered the context, process and content of their learning environment, because of the changes made to their professional development model.
Study Limitations

Although the study was designed prudently, it should be acknowledged that there were several limitations. The data obtained from the study were collected from ten special educators, who may share common training, but each has garnered unique impressions and perspectives from this experience. Although the study's scope may seem limited, the researcher believes that it is applicable in other settings. Additionally, it should be considered that the experiences and impressions garnered from the research participants might not necessarily be reflective of special education colleagues working in alternative environments. Therefore, in order to determine the nature, influence and transferability of this study, the researcher clarified, methodically, the document contents, as well as the context of the study throughout later portions of this report.

This study was designed to accommodate constraints in resources (e.g., financial and time); consequently, it was conducted, exclusively, by one researcher who was responsible for the entirety of the components (e.g., data collection, analysis, and interpretation). Had the availability of financial resources not been a mitigating factor, an additional researcher could have shared the responsibility of the research study and created an additional degree of validity and reliability through diligent verification. Additional limitations that emerged as the study was conducted are documented in subsequent portions of this thesis.

Cognizant of the tendency for researcher biases to emerge, documentation of the research study was maintained, meticulously, in a journal, which was stored electronically, to ensure perceptions and impressions were restricted throughout the data collection and analysis phases of the project. Additionally, it is necessary to disclose that the researcher maintained the role of Elementary Program Administrator for the special education teacher participants and was appointed, recently, to the organization's professional development committee. As a member of
that committee and study researcher, it is critical to note that significant time and resources were
dedicated toward the review of literature pertaining to best practices in professional development
and professional learning communities. As a result, protections against the researcher's biases
were embedded throughout each phase of the study process and are documented in the
researcher's journal to guarantee perceptions are neither distorted, nor reflected in the results.

Validity and Credibility

Lincoln and Guba (1985) suggest testing for trustworthiness, using conventional criteria of
internal and external validity, reliability, and objectivity generally begins at the onset of the
research study and remains a critical component for the duration (p.189). To guarantee
trustworthiness, Lincoln and Guba (1985) suggest researchers embed these four criteria: truth-
value, applicability, consistency and neutrality (p.290). Applicability testing for these criteria
was conducted, consistently, throughout the interview, survey, data collection and analysis
processes' of this study. Periodically, the researcher reflected upon Lincoln and Guba's eight
validity threats (p.291), to ensure they were minimized. Study participants were asked to partake
in "member checking", which Lincoln and Guba (1985) suggest is "the most critical technique
for establishing credibility" (p.314). Member checking enabled the participants to clarify their
views, as they pertained to the researcher's impressions, interpretations and conclusions. The
researcher provided to participants, a preliminary draft and data summary, which they reviewed
for accuracy. Study participants were encouraged to advise the researcher of any revisions that
were necessary within a one-week period, so those could be reflected in this final report. In
addition to member checking, colleagues with similar research interests also subjected the study
to peer review, which helped to maintain credibility.

Validity, according to Maxwell (2005) is the quintessential component in research
design. In order for a qualitative study to be considered valid, the merit of the data must be
trustworthy and the information credible (Yin, 2009). These conditions are possible when various research strategies, designed to enhance the credibility and dependability of the data are utilized. According to Przeworski and Salomon (1988), researchers should be prepared to defend the validity of their conclusions, particularly in studies that involve a single researcher (Bosk, 1979). Maxwell (2005) contends "validity is a goal rather than a product; it is never something that can be proven or taken for granted" (p. 105). He also believes that validity is relative and, as such, it can only be assessed with relation to the outcomes and context of the research.

According to Yin (2009), reliability is defined as the degree to which another researcher would reach the same conclusions by examining the same set of data and case. Creswell (2009) posits the meaning of qualitative validity pertains to the researcher determining the level of accuracy as it relates to specific procedures. Gibbs (2007) suggests that qualitative reliability is the researcher's approach to ensuring consistency among researchers and projects. Patton (2002) advises researchers to engage participants throughout the research and data collection process as a means to guarantee validity and appropriate dissemination. The researcher engaged study participants throughout the data collection and analysis process, in order to guarantee validity and credibility (Neuman, 2000). In addition, the research participants were used to corroborate data that were reported in this case study, not only as a professional courtesy, but also as a means to ensure validity (Schatzman & Strauss, 1973; Yin, 2009).

**Protection of Human Subjects**

Since this case study involved human activities, the researcher was obligated to ensure specific ethical practices were adhered to throughout the project (Yin, 2009). Researchers should be protective of and eager to develop trust with participants (Isreal & Hay, 2006), while promoting the integrity of the research. Shielding the site and its participants from impropriety
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and misconduct is crucial for researchers, as is the competence to contend with novel, contemporary problems (Israel & Hay, 2006). Ethical issues, as they pertain to qualitative research, are emerging as a critical component in the design process (Christians, 2000; Denzin & Lincoln, 2008; Fine, Weis, Weisen & Wong, 2000). Hesse-Bieber and Leavey (2006) urge researchers and writers to anticipate any ethical dilemmas that may develop throughout the study. Since this project involved collecting data from people, about people (Punch, 2005), it was essential to consider possible threats to the research participants. All study members, who were assigned pseudonyms for the duration of the study, were considered adults and full-time employees of the organization. Study contributors included the Special Education Administrator for the elementary programs, as well as ten licensed special educators. Digitally recorded material, which was obtained from participants throughout the study, was stored, securely, throughout the data analysis process. In seven years, in accordance with research guidelines, the data will be destroyed. Data are maintained for reference or to verify accuracy, tone and implications that were communicated throughout interviews (Seidman, 2006).

The human rights of all subject participants, who were voluntary participants, were guaranteed with the utilization of an informed consent document (Appendix A). Elements of the informed consent document contained the following information, which was adapted from Sarantakos (2005): identification of the researcher and cooperating institution, participant selection procedures, research purpose, benefits of research participation, frequency and duration of participation, participant risks, confidentiality guidelines, participant withdrawal procedures and contact information.

This project documented the evolution of a Professional Learning Community as perceived by ten elementary teachers. The participants were not exposed to any treatment that
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could result in adverse consequences, nor was their welfare or rights in peril. Conversely, it is believed that the participants benefitted from partaking in this project. The changes in professional development practices, which emerged from this study, have been enhanced by the additional insights gained throughout this experience. Participants experienced empowerment because of their participation in this study. They have used reflection as a strategy to hone their skills. Opportunities for validation and embedded recognition emerged, as the participants were encouraged to share their insights, knowledge and experiences that were garnered throughout the project.

Although the data collected throughout this study was not used for evaluative purposes, it should be noted that potential risks do exist. Throughout portions of this project, the researcher documented strategies, which were designed to minimize these possible risks. The organization's Executive Director has forged an agreement with the researcher, indicating any data collected throughout the research project will not be influential during staff evaluations, or impact employment status. During the informed consent process, study participants were informed of this mutual agreement. Although the results of the research study were reported without revealing participants' identity, because pseudonyms were used, the organization, although relatively small, is influential in surrounding communities. Although the anonymity of the organization could not be completely assured, its identity has been protected with the utmost discretion. Although these risks seemed unlikely, safeguards to protect individual participants and the organization were embedded within validation techniques.

Conclusion
The precipitous, co-existing circumstances of federal mandates and the diverse and complex needs of 21st century learners have prompted members of the educational community to investigate all facets of education, including the professional development practices of teachers. The preceding literature review revealed a demonstrable gap between the learning practices of educators, the National Staff Development Council Standards (2001; 2005) and the outcomes of students, particularly those within special education environments. The aforementioned components of this thesis emphasized the need for research, which will facilitate an enhanced understanding of the impact that increased collaboration and collegiality have in a specialized school environment. The current research, pertaining to PLC efficacy and the adoption of the NSDC’s standards, which promote ongoing, job-embedded, results-driven professional development that facilitate changes in the process, context and content of teaching and learning practices in a special education environment is scant; therefore, the results of this study will provide a greater depth to the education community. Educational change theory is the theoretical framework that guided this study. It was structured to supply the basis for a case study that contributes to the existing research, which concerns professional development models and how the collaboration and collegiality that is facilitated within them influences the outcomes of a specialized population. Subsequent portions of this thesis will reveal the process that led to the development of a professional learning community within a special education collaborative in Southeastern, MA.

**Chapter 4: Report of Research Findings**
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The purpose of this qualitative case study was to determine the extent to which changes in professional development influenced collaboration and collegiality within a special education environment. In a quest to support the organization’s continuous improvement model, this study documented the perceptions of ten elementary educators as a Professional Learning Community (PLC) model was implemented. The research questions examined how educators’ practices, behaviors and relationships changed because of the organization's commitment to facilitating the continuous improvement process through PLCs.

Data Collection

The data collection, as it pertained to the PLC pilot project, commenced in September 2010, when the organization revealed that it would be initiating a new approach to providing professional development to staff throughout the upcoming year. In September, during the first professional day, the organization's Executive Director shared that he, and other members of the leadership team and professional development committee, had reviewed annual staff memos (distributed June 2010) pertaining to the professional development practices of the organization. It was decided, based on staff’s responses and recent professional development committee members' focus on best practices in professional development, that the organization, although staunchly dedicated to continuous learning, was not meeting the needs of complex and diverse 21st century students within the special education environment. Consequently, the organization's administrators deemed change within the professional development model was necessary and subsequently launched a Professional Learning Community initiative, which was designed to empower staff through increased collaboration, collegiality and reflection. Throughout this initiative, comprehensive data was collected from the participants, by the organization, and obtained as historical data, by the researcher.
Since the organization strives to promote its continuous improvement model (Zmuda et al., 2004), it is recognized that data obtained from PLC participants was critical, as the change process evolved. According to Zmuda et al. (2004), collecting accurate, detailed data to identify the organization's current status helps to identify the gaps between current reality and the shared vision for the future (p.18). This data collection process reflects the third step in Zmuda, Kuklis and Kline's Six Steps of Continuous Improvement process (pp. 18-19).

During the initial professional day, members of the professional development committee distributed to the elementary teachers, reflections. Staff members completed the reflections within a two-week period, following the professional day, and returned them to members of the professional development committee. These staff reflections pertained to their existing knowledge and perception of Professional Learning Communities.
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Participant Profiles

At the onset of the academic 2010-2011 year, PLC members, employed as special educators within a Southeastern, MA collaborative, were asked to provide some profile information to the organization. This information, which was protected using pseudonyms, synthesizes their experience, current assignment and DESE licensure, and is provided in Table 1.

Table 1 Elementary Teachers' Profile Information

<table>
<thead>
<tr>
<th>Teacher (Pseudonym)</th>
<th>Experience</th>
<th>Current Assignment</th>
<th>Licensure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ami</td>
<td>15 years</td>
<td>Gr. 3-4, public day program for students with social, emotional and behavioral disorders</td>
<td>Professional, Moderate Disabilities PK-8</td>
</tr>
<tr>
<td>April</td>
<td>3 years</td>
<td>K-2, substantially separate classroom for students with ASD and cognitive delays</td>
<td>Initial, Elementary 1-6 Initial Moderate PK-8</td>
</tr>
<tr>
<td>Desiree</td>
<td>5 years</td>
<td>Gr. 3-5, public day program for students with ASD and cognitive delays</td>
<td>Initial, Moderate Disabilities K-8</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>4 years</td>
<td>Gr.3-5, substantially separate classroom for students with multiple disabilities</td>
<td>Initial, Elementary K-8; Initial Moderate Disabilities K-8</td>
</tr>
<tr>
<td>George</td>
<td>17 years</td>
<td>Gr. 5, public day program for students with social, emotional and behavioral disorders</td>
<td>Professional Elem. K-8; Waiver Severe Disabilities</td>
</tr>
<tr>
<td>Marilyn</td>
<td>7 years</td>
<td>Gr. 4-5, public day program for students with social, emotional and behavioral disorders</td>
<td>Professional, Moderate Disabilities, PK-8</td>
</tr>
<tr>
<td>Mark</td>
<td>12 years</td>
<td>Gr.3-5, substantially separate classroom for students with ASD and cognitive delays</td>
<td>Professional, Special Needs PK-9</td>
</tr>
<tr>
<td>Patricia</td>
<td>30 years</td>
<td>Gr.3-5, substantially separate classroom for students with ASD and cognitive delays</td>
<td>Professional Special Needs K-8</td>
</tr>
<tr>
<td>Samantha</td>
<td>3 years</td>
<td>K-2, public day program for students with social, emotional and behavioral disorders</td>
<td>Initial Early Childhood w/without Disabilities Initial Moderate PK-8</td>
</tr>
<tr>
<td>Shanene</td>
<td>6 years</td>
<td>K-2, substantially separate classroom for students with ASD and cognitive delays</td>
<td>Initial Moderate Disabilities PK-8</td>
</tr>
</tbody>
</table>

The data, which is provided in Table 1, above, depicts the participants’ profile information. Each of the participants' information has been protected with pseudonyms. The ten PLC participants’
experience ranged from three to thirty years, with an average of ten years of experience among them. Nine of the participants possessed initial or professional licensure as special educators, and one participant was licensed, professionally, in elementary education, with a waiver in special education.

Figure 10 Professional Learning Communities Activities

Figure 10 identifies the three Professional Learning Communities that were established at the research site during the 2010-2011 academic year. Each of the ten elementary teachers participated, actively, in one of these PLCs, while the program administrator/researcher participated in all three. These topics, which were selected by the PLC participants and their administrator, emerged from the June 2010 memos and were chosen based on the teachers' capacity to identify their students' needs. The student requirements, which emerged from these assessments, along with the participants' desire to become more collaborative, collegial and reflective, enabled the participants to adapt the learning environment and adopt new teaching
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practices, which ultimately increased student outcomes. Following, is an explanation of each PLC.

Explanation of Professional Learning Communities

In September 2010, two special education elementary teachers established a PLC, which was dedicated to exploring educational applications of assistive technology, within their specialized learning environment.

April and Mark, the teacher participants who selected technology as their identified topic, did so because their students' individual therapeutic programs required intense visual supports to ensure successful outcomes. In an effort to gain additional knowledge pertaining to contemporary technology, they solicited support and resources from the organization's assistive technology team. This team offered to them, contemporary assistive technology tools, which could improve their students' language processing skills, active engagement and independence. Since April and Mark shared students for core subjects, they believed the use of common technology would facilitate increased collaboration and collegiality among classrooms.

In September 2010, Samantha, Ami, Marilyn and George established the Reactive Attachment Disorder (RAD) PLC. These elementary special education teachers provided a therapeutic learning environment to students with social, emotional and behavioral disorders. According to the American Psychological Association, the authors of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), 2000 & DSM-V (anticipated publication May 2013), Reactive Attachment Disorder (RAD) occurs during infancy and early childhood as a result of severe parental neglect, abuse or serious mistreatment. Students diagnosed with RAD often experience intrusive thoughts and emotions, which frequently and adversely affect their capacity to learn within all educational environments.
Each of these participants, Samantha, Ami, Marilyn and George, provided academic and therapeutic programming to students, daily, who were diagnosed with Reactive Attachment Disorder. For the RAD PLC members, gaining additional insights relative to this prevalent student population was a priority. Since these students' intrusive thoughts and emotions commonly affect the educational environment, the teachers established RAD as their learning priority. These teachers, who partner with emotional and behavioral disorders (EDBD) students and their families, recognized the need to increase their collaboration and reflective practices in order to provide the intense therapeutic programming that RAD students require. This team, supported by the expertise of clinical psychologist, Dr. Kevin Plummer, helped to develop new therapeutic strategies for students who were coping with the symptoms of RAD, within their learning environment. Autobiographical episodic vignettes/video slideshows and a recognition program emerged as therapeutic strategies for students whose teachers participated in the PLC.

In September 2010, Desiree, Elizabeth, Patricia and Shanene, who educated students with multiple physical and cognitive impairments, united to form the Vision PLC. This PLC was committed to exploring the educational implications for students with reduced vision, which these teachers identified as an increasing need in the organization. With the complex and evolving educational environment, these teachers explored the visual conditions that influence learning and child development, particularly in the specialized setting that was used for this study. Throughout their meetings, this PLC explored a variety of simulation activities that enabled them to gain a better understanding of vision loss and its impact on learning. Since the brain receives 75% of its information visually, while motivating and guiding interactions, it is significant in the developmental process and was a critical exploration topic for the Vision PLC.
Below, Figure 11 illustrates the three PLCs and their primary members. Additional staff members, including paraprofessionals, therapists and clinicians, were also active PLC participants; however, since this study was conducted to assess how teachers' perceptions of collaboration, collegiality, and reflective practices changed because of this new model, they are not reflected in the figure.

Figure 11 Elementary Professional Learning Communities
Throughout the 2010-2011 school year, the ten PLC pilot members participated, consistently, in meeting to discuss the characteristics of PLCs and NSDC standards. Initially, it was critical for the participants to have a comprehensive understanding of these characteristics and standards so they could establish goals and objectives, which would unite them as professionals, and compel instruction, assessment and, ultimately, student learning. Meeting schedules and a review of the PLC's meeting topics are provided in Appendices G, H and I.

**Summative Data for Three Professional Learning Communities**

Table 2 Comparison of three Professional Learning Communities

<table>
<thead>
<tr>
<th>PLC</th>
<th>Expo Prep</th>
<th>Workshops</th>
<th>Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD PLC</td>
<td>20</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td>Vision PLC</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Tech PLC</td>
<td>7</td>
<td>8</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 2 depicts the total number of hours that the PLC team members dedicated toward cultivating their PLCs throughout the 2010-2011 school year. The PLC events, which are depicted in this table, include meetings, workshops and the Learning Expo.
Analysis of the preceding table revealed the RAD PLC participants devoted 60 hours toward their PLC work. In contrast, the Technology PLC devoted 49 hours toward their PLC work, while the Vision PLC devoted 40 hours toward their PLC work. Contained within the subsequent portions of this thesis are the researcher's analysis of participant perceptions of professional learning communities, as revealed in their reflective memos and interviews.

Reflective Memos

September Reflections

During the first professional day, in September 2010, the organization's Executive Director and members of the professional development committee introduced, to staff, the notion of Professional Learning Communities. Elementary special educators, who participated in the PLC pilot program at a collaborative in Southeastern, MA, completed reflective memos, after they reviewed a PowerPoint presentation, which explained the concept of PLCs. Since PLCs were a new concept for the organization, and a pivotal component of the organization's continuous improvement model, administrators within the organization determined that it would be important to assess staff's knowledge of PLCs, as the initiative commenced. Consequently, members of the leadership team and professional development committee requested that the ten teachers, who were participating in the pilot program, provide their written responses to the following prompts: Please share at least two ideas that you’ve learned or accomplished as a result of your participation in this workshop/activity and please share at least two examples of how the information you have gained will be embedded within daily classroom practices. The teachers were provided with additional space for sharing other relevant comments, as well. As the researcher reviewed the memos, references to the following seven characteristics of PLCs were sought: relationships, reciprocity, collaboration, assessments, student focus, reflection and
an examination of practices (Barth, 2006; DuFour, DuFour & Eaker, 1998, 2006, 2008; Hord & Sommers, 2008; Kruse, Louis & Bryk, 1995; Stoll & Seashore-Louis, 2008; Roberts & Pruitt, 2009; York-Barr, Sommers, Ghere, & Montie, 2006). These characteristics were used as indicators to assess how the PLC participants' perceptions and practices evolved, throughout the 2010-2011 school year.

The researcher assessed the presence of emergent and habitual reflection, in the participants' memos, using York-Barr, Sommers, Ghere and Montie (2006) Topics to Promote Meaningful Reflection (p.57). The aforementioned authors suggest that reflection pertaining to the following topics occurs: focus on students, focus on self, focus on staff, focus on school, and focus on community. The researcher conducted a thorough review of the participants' responses and their synopses' follow, as delineated by their designated professional learning community.

**Reactive Attachment Disorder PLC Participants' September Reflections**

**Ami**

A thorough review of Ami's September reflective memo revealed references to her practice being focused upon students. In addition, she revealed that she reflected and examined her practices, regularly. In her initial reflection, Amy revealed that she was "looking forward to a new professional development model" that would "focus on results" and "facilitate better collaboration". Analysis of Ami's September memo suggested that she was focused upon students and cultivating collaborative relationships with her colleagues. The acknowledgement of these characteristics, prior to her participation in the PLC, suggested that she was committed to becoming more learner-centered and focused on enhancing outcomes.

**George**

A thorough review of George's September reflective memo revealed that his practices were punctuated by forging meaningful relationships with his students, who were his primary
focus, and his colleagues. In addition, George reported that he examined, critically, his daily practices, in order to make program modifications for his students. In George's reflective memo, he articulated the following sentiments, "The professional learning community model is focused upon results and I am excited about that because I think we can all become complacent".

Analysis of George's memo indicated that he understood the significance of cultivating relationships, in order to enhance student learning, prior to his participation in the RAD PLC. The acknowledgement of these characteristics, prior to his participation in the PLC, suggested that he was interested in becoming more learner-centered and focused on enhancing outcomes.

**Marilyn**

A thorough review of Marilyn's September reflective memo revealed that her practice was student-centered, and that focus was possible because she was a reflective practitioner who examined, regularly, her practices. As a reflective practitioner, Marilyn provided evidence in her memo, which revealed that she assesses, critically, her effectiveness of instructional delivery. In her September reflective memo, Marilyn said, "I am very excited about the new professional development model because I think it will help us understand individual students even better".

Analysis of these and other sentiments contained within the memo suggested that Marilyn's practices, prior to her participation in the RAD PLC, embodied some critical PLC characteristics. The acknowledgement of these characteristics, prior to her participation in the PLC, suggested that she was interested in becoming more learner-centered and focused on enhancing outcomes.

**Samantha**

A thorough review of Samantha's September reflective memo revealed that her practices were student-focused and based on assessments. In addition, Samantha revealed that relationships and collaboration were important to her practice and critical examination and reflection were significant factors in her daily routine. In her memo, Samantha articulated the
following sentiments, "my staff and I will have numerous opportunities to embed the new information we are learning on RAD into our daily work. Students with RAD have a huge impact on the way that my classroom functions every day, so the more information the better."

Analysis of Samantha's initial reflective memo provided evidence, which supported the existence of a majority of PLC principles, prior to her participation in the new model. The acknowledgement of these characteristics, prior to her participation in the PLC, suggested that she was interested in becoming more learner-centered and focused on enhancing outcomes.

**Reactive Attachment Disorder (RAD) Professional Learning Community Data Analysis September Reflective Memo**

Four special educators, Ami, George, Marilyn and Samantha, participated in the RAD PLC throughout the 2010-2011 school year. Each of these participants submitted reflective memos, in September, following the initial professional day and prior to their participation in any PLC activities. The results from their initial reflective memos in September revealed that each of them focused on students, prior to their participation in the PLC. In addition, analysis of the memos revealed that they have examined their practices, regularly. None of the RAD PLC members revealed that they had engaged in reciprocal activities as part of their daily practice; however, Ami, Marilyn and Samantha reported that they were reflective. Neither Ami, nor Marilyn, nor George reported that they had used assessments to inform the instruction of students; however, Samantha reported, in her September memo, that she had used assessments and data to inform instruction. Samantha and George reported that cultivating collegial and student-based relationships were a critical component of their practice; however, neither Ami nor Marilyn revealed this presence of relationships in their September reflective memos.
Technology PLC Participants' September Reflections

April

A thorough review of April's September reflective memo revealed references to her practices being focused upon students. Similar to her colleague, Ami, April revealed that she reflected and examined her practices, daily. Her initial reflection revealed that she was eager to "make changes to programming when students aren't learning". In addition, she believed that the PLC model would "help teachers better meet their students’ needs". Analysis of these and other sentiments contained within her September memo suggested that she was committed to learning more about PLCs and how they can affect the learning environment for all students. The acknowledgement of these characteristics, prior to her participation in the PLC, suggested that she was interested in becoming more learner-centered and focused on enhancing outcomes.

Mark

A thorough review of Mark's September reflective memo revealed that he was a reflective practitioner who was focused upon students and building relationships with his colleagues. As a reflective practitioner, Mark revealed that he analyzes, habitually, with regard to his students' capacities to socialize, because the majority of his students have been diagnosed with Autism. He was also an effective collaborator who examined, routinely and critically, his practices. Mark reported that he appreciated that the PLC model was results-driven because "sometimes it is difficult to see results in our students because their progress can be slow". He added, "If we are better focused, I think we will be able to monitor their progress/ regressions better and we can make changes faster". Analysis of these sentiments suggested that Mark's practices, prior to his participation in the PLC model, embodied some critical PLC characteristics. The acknowledgement of these characteristics, prior to his participation in the
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Plc, suggested that he was interested in becoming more learner-centered and focused on enhancing outcomes.

**Technology Professional Learning Community Data Analysis**

**September Reflective Memo**

Two special educators, April and Mark, participated in the technology PLC throughout the 2010-2011 school year. Both of these special educators submitted reflective memos, following the initial professional day in September, prior to their participation in any PLC activities. The reflective memos submitted by April and Mark in September indicated that they were both focused upon students, prior to their participation in the PLC. In addition, reflective memos from April and Mark reveal that they had been reflective practitioners who consistently examined their practices. Analysis of April and Mark's September reflective memos also revealed the absence of relationships, collaboration, reciprocity and assessments, prior to their participation in the PLC.

**Vision PLC Participants' September Reflections**

**Desiree**

A thorough review of Desiree’s September reflective memo revealed that she was a reflective practitioner, who was focused upon enhanced student outcomes. She demonstrated her capacity to be a reflective practitioner by assessing curricular materials to determine how students could effectively access them with modifications, and subsequently assessed their level of performance and participation. Additionally, she indicated that she used assessment data to inform her practices, which she examined often. In her September reflection, Desiree revealed that she was eager to use a "job-embedded" model for professional development because she served such "challenging students". In addition, she "love(d) the idea of learning in (the) programs" because she could apply the information immediately after it was discussed. Analysis
of these, and other sentiments contained within her September memo, suggested that Desiree was committed to learning, with her colleagues, in her classroom environment, in order to serve her students, effectively. The acknowledgement of these characteristics, prior to her participation in the PLC, suggested that she was interested in becoming more learner-centered and focused on enhancing outcomes.

Elizabeth

A thorough review of Elizabeth's September reflective memo revealed that she was a reflective practitioner who was focused upon students and building relationships. She facilitated these processes by understanding her students’ learning styles, strengths and interests. She was also an effective collaborator who critically examined her practices. Elizabeth reported that she was "very excited about being a member of the vision PLC" and hoped that the "PLC format (could) help her redesign (her) classroom environment". Analysis of these and other sentiments contained within her reflective memo suggested that Elizabeth had previously engaged in collaborative practices to enhance learning experiences for all of her students. The acknowledgement of these characteristics, prior to her participation in the PLC, suggested that she was interested in becoming more learner-centered and focused on enhancing outcomes.

Patricia

A thorough review of Patricia's September reflective memo revealed that her practices were student-focused. In Patricia's September reflective memo, she shared the following, "Using professional learning communities as a model for professional development is better than our old approach because we can focus on individual student and program needs". She continued by adding," I think the PLC format will help me improve me ability to collaborate with other team members". Analysis of Patricia's September reflective memo suggested that her current practices were reflective of one critical PLC component prior to her participation in the
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PLC. The acknowledgement of this characteristic, prior to her participation in the PLC, suggested that she might be interested in becoming more learner-centered and focused on enhancing outcomes.

**Shanene**

A thorough review of Shanene's September reflective memo revealed that her practices were student-focused and influenced by assessments. In addition, Shanene revealed that collaboration and relationships were integral components of her daily practice. She was influenced, equally, by frequent critical examinations of her practices and reflection. Shanene's memo revealed, that she was "very excited about the PLC model" and was "starting to generate (a) list of questions about how the learning environment can be modified for (her) students". Analysis of Shanene's September reflective memo suggested that her eagerness to embed PLC characteristics in her daily practices had the capacity to improve the learning environment, exponentially, for her students. The acknowledgement of these characteristics, prior to her participation in the PLC, suggested that she was interested in becoming more learner-centered and focused on enhancing outcomes.

**Vision Professional Learning Community Data Analysis**

**September Reflective Memo**

Four special educators, Desiree, Elizabeth, Patricia and Shanene participated in the Vision PLC throughout the 2010-2011 school year. The four special educators submitted reflective memos, following the initial September professional day, prior to participating in any PLC activities. The reflective memos submitted by Desiree, Elizabeth, Patricia and Shanene in September indicated that they were all focused upon students, prior to their participation in the PLC. Desiree, Elizabeth and Shanene reported that they had regularly examined their practices and were reflective; however, Patricia did not report the presence of reflection or practice examination in her September reflective memo. Desiree and Shanene reported the use of
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assessments in their daily instruction, while Elizabeth and Patricia did not report the use of assessments, prior to their participation in the PLC. In addition, Shanene and Elizabeth cited the importance of collegial and student-based relationships as being critical practice components; however, none of the Vision PLC participants revealed that reciprocity in their practices.

Table 3 A comparison of synthesized Professional Learning Community data

<table>
<thead>
<tr>
<th>September Reflections by PLCs</th>
<th>Relationships</th>
<th>Reciprocity</th>
<th>Collaboration</th>
<th>Assessment</th>
<th>Student Focus</th>
<th>Reflection</th>
<th>Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Technology</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Vision</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3 depicts the presence of the seven critical PLC characteristics, as individual Special educator participants, in their September Reflective Memos, reported them.

This graphic compares the presence of those characteristics by PLC groups. The RAD PLC had four Special educator participants, each of which reported the presence of student focus, as well as their examination of practices. Three RAD PLC participants reported that they engaged reflective practices, while two reported the presence of relationships in their September memos. Only one participant reported the presence of collaboration and the use of assessments. In the September memos, none of the RAD participants perceived the presence of reciprocity in their practices. In comparison, the Tech PLC was comprised of two participants, each of whom reported the presence of student focus, examination of practices and reflection in their daily work, prior to participating in the initiative, in their September reflective memos. Additionally, one participant reported the presence of collaboration in their reflective memo, but neither participant reported the use of relationships, reciprocity or assessments. In comparison, four
members of the Vision PLC reported that students were their primary focus and that they had regularly examined their practices. Three of the vision participants reported that they had regularly engaged in reflective practices, while two participants reported that relationships, collaboration and assessment were embedded within their daily practices. Similar to their RAD and Technology PLC peers, none of the Vision PLC participants indicated the presence of reciprocity in their September memos.

Comparison analysis of the three PLCs indicated that all ten PLC members have identified students as their primary focus and that they had consistently examined their practices. In addition, all ten members expressed their enthusiasm for the PLC model. According to their September reflective memos, they all felt that their students would benefit from the unified approach that emerges when the special educators learn collaboratively. Eight participants, from the three PLCs, reported that they had regularly engaged in reflective practices, while six cited that they had found relationships were critical in their daily work. Four participants, representing each PLC, referenced collaboration as being an effective strategy in their daily work, while three cited the use of assessments, in their September memos. Appendix J depicts the participants' individual September reflective memos, which portray the participants' familiarity with the PLC characteristics and the NSDC standards, at the onset of the initiative.

In addition to aligning with the seven critical characteristics of PLCs, the purpose of the PLC initiative was also to increase alignment with the National Staff Development Council's (NSDC) standards (2001; 2005). These standards compel educational communities to develop professional development models, which are ongoing, job-embedded and results-driven. Evidence of these three standards was provided throughout the PLC participants' September reflective memo. Additionally, the NSDC's 2005 standards required changes in teaching and
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learning practices in the following three domains: process, context and content. Within each of these three domains are twelve specific indicators, which the NSDC recommended to assess changes. According to the NSDC, the following three are the indicators of content changes: a learning community is established, leadership is present and participatory and resources are available. The NSDC identified the following six indicators in the process domain: design, learning, evaluation, collaboration, research design and data. In the final domain, context, the NSDC identified the following three indicators: quality, equity and family involvement.

In the September reflective memos, the following changes were noted in process: design, learning, evaluation & collaboration; in context: learning communities, leadership and resources; in content: quality.

Reflective Memos

November Reflections

During the organization's second professional day, in November 2010, the ten members of the RAD, Technology and Vision Professional Learning Communities (PLCs) and their staff, participated in the growth and learning opportunities, which were designed to enhance their knowledge and skills in the aforementioned topics. Following their participation in these activities, the elementary Special educators, who participated in the PLC pilot program, completed reflective memos, which memorialized their experiences. The participants forged PLCs, since they completed their September reflections, therefore their data has been compiled to reflect the perceptions and sentiments of the members, rather than individuals. Individual participant data, obtained from the November reflective memos, are found in Appendix K.

Since the members of the leadership team and professional development committee sought comparison data pertaining to the work of the PLCs, as a component of their continuous
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improvement model, the special educators were posed the following prompts: Please share at least two ideas that you’ve learned or accomplished as a result of your participation in this workshop/activity and Please share at least two examples of how the information you have gained will be embedded within daily classroom practices. The teachers were provided with additional space for sharing other relevant comments, as well. As the researcher reviewed the memos, references to the following seven characteristics of professional learning communities were sought: relationships, reciprocity, collaboration, assessments, student focus, reflection and an examination of practices. The researcher conducted a thorough review of the participants' responses and their synopses' follow.

Reactive Attachment Disorder (RAD) Professional Learning Community Data Analysis

Four special educators, Ami, George, Marilyn and Samantha, participated in the RAD PLC throughout the 2010-2011 school year. Each of these participants submitted reflective memos, in November, following the organization's second professional day and their two-month participation in the RAD PLC. The results from their November reflections revealed that each of them were focused upon students, which was consistent with their September reflection and they all reported evidence, which suggested their habitual examination of practices, as well as their capacity to engage in reflective practices, each of which represented a change, since their September reflections were submitted. In her November memo, Ami articulated the following, "In reading our students' files, I always knew that they had been through so much in their young lives. Being a participant in this workshop and our PLC has helped me realize that the trauma is always present with them, even when they are at school, and not being reminded of their previous traumatic experiences." Ami’s colleague, George, shared the following, "I am looking forward to discussing individual student treatment plans when the RAD PLC meets again because I have additional contributions to share, now that I have acquired new information". He
also expressed the following, "The individualized programming that we do with the RAD students will definitely change- we will be talking about specific student recommendations during our next PLC meeting". In her November reflection, Marilyn offered the following, "Through my participation in this workshop and the subsequent embedded trainings, I've learned that RAD is a very complex disorder that requires intense, therapeutic intervention." She also expressed the following, "Through my participation in this workshop and the subsequent embedded trainings, I've increased my knowledge about identity shaping narratives". Samantha, the final member of the RAD PLC offered the following about recent growth and learning opportunities in her November reflection, "I had never heard of mirror neurons before participating in this workshop, but the concept makes sense to me. During our next PLC meeting, I want to explore this concept further, so we can determine how to limit the impact of our negative mirror neurons on our students".

In November, Ami, George, Marilyn and Samantha reported that relationships were embedded as a component of their daily practices, for Ami and Marilyn, the inclusion of relationships being reported as part of their daily practices was a change. Ami, reported evidence, in November, that suggested reciprocity had become embedded within her daily practices, however, none of her other RAD PLC colleagues reported the same presence in their daily work. Ami, George and Samantha reported they had become more collaborative in their work, since they joined the RAD PLC in September, however, Marilyn did not provide any evidence to suggest that her practices had become more collaborative; however, the researcher's reflective log and RAD PLC meeting agenda notes suggest the presence of reflection in PLC during this period. A thorough analysis of Ami, George, Marilyn and Samantha's reflective memo revealed that none of them reported the use of assessments in their November reflective
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memos. This evidence suggested a slight difference, since Samantha submitted her September memo, because at that time she referenced her use of assessments to guide student instruction. Since they submitted their initial reflections in September, members of the RAD PLC demonstrated an increased capacity to embed essential PLC features within their daily work. With the acknowledgement of these critical features, the practices of the RAD PLC became more learner-centered and focused on enhanced student outcomes.

**Technology Professional Learning Community Data Analysis**

Two special educators, April and Mark, participated in the technology PLC throughout the 2010-2011 school year. Both of these special educators submitted reflective memos, following their participation in the organization's second professional day and, after their two-month participation in the Technology PLC. The reflective memos submitted by April and Mark in November indicated that they were both focused upon students, collaboration, reflection and an examination of their practices. They also indicated that they had been focused upon forging new relationships with colleagues. This additional focus on relationships represented an adjustment to their practices, since they submitted their September reflections. In her November memo, following a technology training, April shared the following sentiments, "I am excited about using new software. We will be talking about how to integrate this new technology into our classes during the next PLC meeting". She also added, "I am excited about the technology because I think some of the students will be able to write sentences and stories with greater independence and I will be using this new software to collect data for the MCAS portfolios". April's colleague, Mark expressed the following, "Throughout this upcoming term, I am going to use this new technology to have the students communicate more with their families". He also added, "I am anxious to share the work products that the students produce with their families".
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Mark provided evidence, which suggested his use of reciprocal practices in his November reflection; however, neither April nor Mark referenced the use of assessments in their reflections. Since they submitted their initial reflections in September, members of the Technology PLC demonstrated an increased capacity to embed essential PLC features within their daily work. With the acknowledgement of these critical features, the practices of the Technology PLC became more learner-centered and focused on enhanced student outcomes.

Vision Professional Learning Community Data Analysis

Four special educators, Desiree, Elizabeth, Patricia and Shanene, participated in the Vision PLC throughout the 2010-2011 school year. Each of these special educators submitted reflective memos, following their participation in the organization's second professional day and after their two-month participation in the Vision PLC. The reflective memos submitted by Desiree, Elizabeth, Patricia and Shanene in September indicated that they were all focused upon students and examined their practices, critically. In her November memo, Desiree shared the following, "Before participating in this workshop and PLC, I never knew how many adaptations I could make to help my students be more successful in their learning environment". She also added, "I will be making adjustments to my educational environment during the spring and summer to prepare for the students who will be coming to my class in the fall. This includes minimize visual and environmental clutter, getting adaptive shades and raised paper". Desiree's colleague, Elizabeth, reported the following in her November reflection, "Since participating in the vision PLC and subsequent training workshops, I have a better understanding of the importance of talking to students with visual impairments through transitions". Patricia shared the following sentiments in her reflective memo, "I am going to be using slant boards in my class because it is easier for students with visual impairments to see text/photos when they aren't presented on a flat surface". She added, "The vision PLC is doing great work and our TVI is
fantastic!". In her reflective memo, Shanene expressed the following, "I am so happy to be participating in this workshop and the vision PLC because I feel like I haven't been doing all that I can for my students. I am so excited about learning new techniques for working with them". She added, "My staff and I will be changing the way that we present materials to one of our students who has a visual impairment. For one year we have been presenting materials, horizontally, on a flat plain, now I will be using vertical presentation on a slant board".

Elizabeth, Patricia and Shanene reported, in their November reflections, that they exhibited more collaboration and improved relationships in their daily practices; however, Desiree did not provide any evidence, which supported her integration of either, within her daily practices. Elizabeth, Desiree and Shanene reported their increased capacity to engage in reflective practices; however, Patricia did not provide evidence, which suggested that she engages in reflective practices. None of the vision PLC participants provided evidence, in their November memos, which suggested they had increased their capacity to be reciprocal or use assessments, effectively, to guide instruction. Since they submitted their initial reflections in September, members of the Vision PLC demonstrated an increased capacity to embed essential PLC features within their daily work. With the acknowledgement of these critical features, the practices of the Vision PLC became more learner-centered and focused on enhanced student outcomes.

Table 4 A comparison of synthesized PLC data
Comparative Analysis of the November Reflections by PLC

Table 4 depicts the presence of the seven critical PLC characteristics, as individual Special educator participants, in their November reflective memos, reported them. This graphic compares the presence of those characteristics by PLC groups. The RAD PLC had four Special educator participants, each of which reported the presence of student focus, an examination of practices, relationships and reflection. Three RAD PLC participants reported that they engaged in collaborative practices, while one reported the presence of reciprocity in their November reflections. None of the RAD participants reported the use of assessments in their practices, in their November reflections. In comparison, the Tech PLC was comprised of two participants, each of whom reported the presence of student focus, examination of practices, reflection, relationships and collaboration in their daily work, after two-months. Additionally, one participant reported the presence of reciprocity in his/her November reflection, but neither PLC member reported the use of assessments to guide their practices. In comparison, four members of the Vision PLC reported that students were their primary focus and that they had regularly examined their practices and collaborated, effectively. Three of the vision participants reported that they had regularly engaged in reflective practices and increased their capacity to cultivate relationships, while none of the participants reported that reciprocity or assessments influenced their daily practices.

Comparison analysis of the three PLCs indicated that all ten PLC members have identified students as their primary focus and that they had consistently examined their practices. Nine participants, from the three PLCs, reported that they had regularly engaged in reflective practices and felt that collaboration and relationships were critical for the development of PLCs. Two participants cited their use of reciprocity, while none of the PLC members referenced assessments in their November reflections.
Since their previous report in September, prior to any structured PLC work, the participants demonstrated an increased capacity to align with the National Staff Development Council's (NSDC) standards (2001; 2005). Those standards compel educational communities to develop professional development models, which are ongoing, job-embedded and results-driven. Evidence of those three standards was provided throughout the PLC participants' November reflective memos. Additionally, the NSDC's 2005 standards also required changes in teaching and learning practices in the following three domains: process, context and content. In the November reflective memos, the following changes were noted in process: data, design, learning, evaluation and collaboration; in context: learning communities, leadership and resources; in content: quality, family involvement and equity.

Reflective Memos

January Reflection

During the organization's third professional day, in January 2011, nine members (the 10th member was excused) of the RAD, Technology and Vision Professional Learning Communities (PLCs) and their staff, participated in the growth and learning opportunities that were designed to enhance their knowledge and skills in the aforementioned topics. Following their participation in these activities, the elementary special educators, who participated in the organization's PLC pilot program, were again, asked to complete reflective memos, which memorialized their experiences.

Since the members of the leadership team and professional development committee had previously collected participant comparison data from September and November, as a component of their continuous improvement model, they requested that the participants share their sentiments regarding the following prompts: Please share at least two ideas that you’ve
learned or accomplished as a result of your participation in this workshop/activity and Please share at least two examples of how the information you have gained will be embedded within daily classroom practices. Again, the teachers were provided with additional space for sharing other relevant comments. As the researcher reviewed the memos, which were provided by the organization, references to the following seven characteristics of professional learning communities were sought: relationships, reciprocity, collaboration, assessments, student focus, reflection and an examination of practices. The researcher conducted a thorough review of the participants' responses and their synopses' follow, as delineated by their PLCs.

**Reactive Attachment Disorder (RAD) Professional Learning Community Data Analysis**

Four special educators, Ami, George, Marilyn and Samantha, participated in the RAD PLC throughout the 2010-2011 school year. Three of the special educators, Ami, George and Marilyn, submitted reflective memos, following the January professional day and their four-month participation in the RAD PLC. The fourth Special educator, Samantha, was excused from the January Professional Day, and therefore did not complete the reflective memo, but it should be acknowledged that Samantha participated, actively, in all PLC activities throughout this period.

The reflective memos submitted by Ami, George and Marilyn indicated the presence of relationships, reciprocity, collaboration, student focus, reflection and an examination of practices in their daily routines. In her January memo, Ami articulated the following, relative to her participation in the January professional day and her PLC work, "During this workshop we explored how the traumatized brain functions in school". She also added, "We engaged in collegial dialogue, which was possible because of our PLC work, to develop strategies that could be implemented within our classroom settings." George shared, "Since our last professional day, we have been working to integrate memory interventions into our daily programming."
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When we are able to use these, we are improving students' opportunities to have less intrusive thoughts/actions". Contained within Marilyn's reflection were the following sentiments, "I can really appreciate the information that was shared today as it pertains to Reactive Attachment Disorder and memory. Sometimes I think my students are "in the present", when they actually aren't and are reacting to something that is stored in their traumatized brain".

In her January reflective memo, Marilyn provided evidence, which suggested the presence of her use of assessments to inform and guide student programs; however, neither Ami nor George indicated the same usage, in their memos. Since they submitted their initial reflections in September, and their second reflections, in November, members of the RAD PLC demonstrated an increased capacity to embed essential PLC features within their daily routines. With the acknowledgement of these critical features, the practices of the RAD PLC became more learner-centered and focused on enhanced student outcomes.

**Technology Professional Learning Community Data Analysis**

Two special educators, April and Mark, participated in the technology PLC throughout the 2010-2011 school year. Each of these special educators submitted reflective memos following the January professional day and their four-month participation in the Technology PLC. Their November reflective memos provided sufficient evidence, which suggested the presence of all seven critical PLC characteristics, within their daily routines. Their ability to embed the seven essential PLC characteristics within their daily practices represents a significant change, since they submitted their November reflections. In their November reflections, Mark reported the presence of six features in his daily practices and April reported the presence of five in hers. The most significant reported addition to their January reflection is the presence of assessments, which guide individual student programs. In her January memo, April shared the following sentiments relative to her PLC work, "Through my participation in the technology
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I learned how we can use lists/visuals to help students understand spoken language better. I've also used the technology enhanced curriculum to track individual student progress and make programming modifications". Mark expressed the following, "I am so happy with the progress the students are making. They have been able to show progress in the ELA skills since the beginning of the year, thanks to the advances in technology".

Since they submitted their initial reflections in September, and their second reflections, in November, members of the Technology PLC demonstrated an increased capacity to embed essential PLC features within their daily routines. With the acknowledgement of these critical features, the practices of the Technology PLC became more learner-centered and focused on enhanced student outcomes.

Vision Professional Learning Community Data Analysis

Four special educators, Desiree, Elizabeth, Patricia and Shanene participated in the Vision PLC throughout the 2010-2011 school year. The four special educators submitted reflective memos, following the January professional day and their four-month participation in the Vision PLC. The reflective memos submitted by Desiree, Elizabeth, Patricia and Shanene indicated the presence of relationships, student focus, reflection and an examination of practices.

In her January reflection, Desiree articulated the following, "Because of my participation in the vision PLC and this workshop, I feel like I am better equipped to help my students. I had never received any training for students with visual impairments before, and I have to say that I feel badly because I wasn't doing all that could be done for them". In her January memo, Elizabeth shared the following sentiments," Through my participation in this workshop, I have learned how important it is to collaborate with all professionals to achieve students' educational objectives. In the future, I will ensure that we collaborate more effectively and frequently, particularly during our PLC meetings". Patricia expressed the following in her January memo,
"Since participating in this workshop and the vision PLC, I have learned how students' vision can impact their access to the general curriculum. I never understood how visual processing impacts student performance. I was familiar with auditory processing and its impact, but not visual processing". Their colleague, Shanene, articulated the following, "This workshop and subsequent PLC meetings taught me about how visual impairment affect learning. I found the information that was shared during this workshop to be very informative and helped me organize my environment better". Shanene also added, "I found the presentation of classroom materials to be very helpful. Since this workshop and PLC meetings, I have learned how to adapt classroom materials in order to better meet the needs of my students".

Three PLC members, Elizabeth, Patricia and Shanene reported the integration of reciprocity and collaboration in their January memos; however, Desiree did provide evidence, which supported her integration of either reciprocity or collaboration. Desiree reported the use of assessments in her daily practices, but Elizabeth, Patricia and Shanene did not. Since they submitted their initial reflections in September, and their second reflections, in November, members of the Vision PLC demonstrated an increased capacity to embed essential PLC features within their daily routines. With the acknowledgement of these critical features, the practices of the Vision PLC became more learner-centered and focused on enhanced student outcomes.

**Table 5 Synthesized Professional Learning Community Data**

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<th>January Reflections</th>
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<td>RAD</td>
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<td>Technology</td>
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<td>Vision</td>
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**Figure 5:**

The figure shows a bar chart titled "January Reflections" with categories for RAD, Technology, and Vision. The chart uses different colors to represent Relationships, Reciprocity, Collaboration, Assessment, Student Focus, Reflection, and Examination.
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Comparative Analysis of the January Reflections by PLC

Table 5 depicts the presence of the seven critical PLC characteristics, as individual Special educator participants, in their January reflective memos, reported them. This graphic compares the presence of those characteristics by PLC groups. The nine Special educator participants, who submitted reflective memos in January, reported improved peer and student relationships. In addition, they reported their increased focus on students and that they have been more reflective while examining their practices. Eight of the special educators who submitted their reflective report, indicated an increase in reciprocity and collaboration, since the PLC model began in September, while seven teachers indicated that assessments or data collection systems have changed since they joined the PLC model. Analysis of the January reflective memos suggested the most significant growth was in the use of assessments and reciprocity.

Since their previous reports in September and November, the participants continued to demonstrate an increased capacity to align with the National Staff Development Council’s (NSDC) standards (2001; 2005). Those standards necessitate that educational communities develop professional development models, which are ongoing, job-embedded and results-driven. Evidence of those three standards was provided throughout the PLC participants' January reflective memos, which is analogous to the evidence provided in September and November. Additionally, the NSDC’s 2005 standards also required changes in teaching and learning practices in the following three domains: process, context, and content. In the January reflective memos, the following changes were noted in process: data, design, learning, research-based, evaluation and collaboration; in context: learning communities, leadership and resources; in content: quality, family involvement and equity. Since the PLC model was initiated, this data reflected the inclusion of all the twelve characteristics, which are delineated in the three domains.
Reflective Memo

March Reflections

During the organization's fourth and final professional day, in March 2011, ten members of the RAD, Technology and Vision Professional Learning Communities (PLCs) and their staff, participated in the growth and learning opportunities, which were structured in a Learning Expo model. The Learning Expo was a unique experience for PLC members, as well as the other members of the organization. Since this was the preliminary unveiling of this model for the organization, members of the leadership team and professional development committee wished to memorialize, sufficiently, the sentiments and perceptions of the PLC pilot participants. In addition, the leadership team and members of the professional development committee had previously collected participant comparison data from September, November and January, as a component of their continuous improvement model; therefore, they desired valuable data from the Learning Expo participants, for comparison. In order to acquire the participants' constructive insights and valued perceptions, it was requested that the participants share their sentiments regarding the following questions/prompts: Please explain how the professional development practices of this year led you and your team to present on the identified topic., Please share at least two ideas that you’ve learned or accomplished as a result of your participation in this Learning Expo., Do feel the learning expo was a beneficial forum to present your work?, Please discuss some collegial discussions that occurred during the learning expo, with other members of the organization., What was the impact of these collegial discussions on your current and future practices?, Please share at least two examples of how the information you have gained throughout this year will be embedded within daily classroom practices throughout the upcoming year.
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As the researcher reviewed the ten reflective memos, which were provided by the organization, references to the following seven characteristics of professional learning communities were sought: relationships, reciprocity, collaboration, assessments, student focus, reflection and an examination of practices. The researcher conducted a thorough review of the participants' responses and their synopses' follow.

**Reactive Attachment Disorder (RAD) Professional Learning Community Data Analysis**

Ami, George, Marilyn and Samantha, elementary special educators who participated in the RAD PLC throughout the 2010-2011 school year, submitted reflective memos, following the March professional day and their six-month participation in the RAD PLC. In March, the four RAD PLC participants reported the presence of relationships, reciprocity, collaboration, student focus, reflection and an examination of practices, within their daily routine. In her March reflective memo, Ami articulated the following, "I thoroughly enjoyed preparing for this Learning Expo. My colleagues and I worked collaboratively, to prepare our RAD presentation for other members of the community". She also added, "Throughout the year, we worked, diligently, to improve therapeutic programming for our students. We used visual imagery/slide shows as a prevention technique with our students and we were excited to share it with the rest (of the organization)". With specific references to PLC impacting her classroom, she said, "Throughout this year, my team and I have started using slideshows as a therapeutic intervention for students with RAD and I have improved how I collect data because of my PLC work".

In his March reflection, George shared the following, "During this Learning Expo we were able to share with our colleagues all that we had learned this year in the RAD PLC. The PLC model was extremely beneficial for the teachers for the students with RAD because we were able to use a case study format, which is what we presented during the Learning Expo". He also expressed the following, "We are very pleased with our students' response to the visual
imagery/slideshows that we've been using this year and would like to share them, in greater depth, with the middle school teachers”.

During her March reflective memo, Marilyn shared the following about the Learning Expo, "In the RAD PLC we were able to take a subject that we had learned a lot about throughout the year and were able to share it with colleagues throughout the organization. People were very receptive to the information that we had to share and thought the students had done a wonderful job”. She added, "The RAD PLC members were very eager to share their experiences with members of the community. We were so happy to see so many interested people because students with RAD are very complex and need as many therapeutic interventions as possible to help make them be successful in the educational setting”.

Samantha reported the following, in her March reflection, "I think the Learning Expo was very beneficial because everyone was interested in what everyone else has been doing all year. Since our students are so complex, it is difficult to get out to other programs, so this was a great way to learn about each other and hopefully apply some of the strategies that others are using within our rooms". Samantha also shared the following, "I am currently using slideshows to improve the mood and tolerance of the students who are diagnosed with RAD in my class. I’ve started collecting data on how their mood is affected by viewing the videos and I think this is an important therapeutic tool for us to use in the future”.

Ami and Samantha reported the consistent use of assessments to guide student instruction; however, neither George, nor Marilyn, referenced the use of assessments, in their March reflections. The capacity of the four PLC members to embed, consistently, six of the essential PLC characteristics within their daily practices represents a significant change, since they submitted their January reflections. With the acknowledgement of these critical features,
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the practices of the RAD PLC became more learner-centered and focused on enhanced student outcomes.

Technology Professional Learning Community Data Analysis

April and Mark, the two special educators who participated in the technology PLC throughout the 2010-2011 school year, submitted reflective memos following the March professional day, following their six-month participation in the Technology PLC. In her March reflective memo, April revealed the following, "Learning in the PLC model this year has been fun for all members of the team. We always enjoy the professional development days, but this year, it was great to be learning in our classroom environment. We could immediately apply the strategies that we were learning during our PLC meetings and workshops into the classroom setting. The kids loved having access to new technology and we loved how much independence they had using it". April continued by adding the following, with regard to collaboration and reciprocity with colleagues, "It's been great to have therapists and paraprofessionals as contributing members in our technology PLC because students can use these tools in a variety of settings. Their response in the classroom with me, is different than their response with the therapists, so it is great that we are all meeting together so we can share that information". In his reflective memo, Mark said, "The learning expo was a great idea for us to showcase the projects that the students had been working on throughout the year. Being part of the PLC helped us focus more on student needs, which meant we could improve their results". He added the following, "I am so proud of the work that we did as a technology PLC this year. Our collaborations led to better student programs and ultimately, increased outcomes for our students. It was a great use of our time and resources. I hope we can continue with this format because I learned how important data could be. We have always used it, but this year we used it more effectively to make changes in individual student programs".
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In their reflections, both April and Mark provided sufficient evidence, which suggested the presence of all seven critical PLC characteristics within their daily routines. The presence of those seven characteristics, demonstrated consistent growth in the Technology PLC's ability to function, effectively. With the acknowledgement of these critical features, the practices of the Technology PLC became more learner-centered and focused on enhanced student outcomes.

Vision Professional Learning Community Data Analysis

Desiree, Elizabeth, Patricia and Shanene, the special educators who participated in the Vision PLC throughout the 2010-2011 school year, submitted reflective memos, following the March professional day and their six-month participation in the vision PLC. In Desiree's March reflective memo, she shared the following, "During this workshop, members of the vision plc shared their techniques and strategies for helping students with visual impairments. One of the strategies we shared was how to use guided reach and hand-under-hand assistance to help the students become more independent". She continued by adding the following sentiments, "From talking with colleagues who also have students with visual impairments, I learned that they are struggling with ideas and techniques to help their students learn. I shared many of the ideas that we generated during our plc meetings with them and have invited them to view my class". In her March reflection, Elizabeth shared the following sentiments, as they pertain to the learning expo, "I am so happy that we were able to share the work that we have done with our students throughout the year at the learning expo. The PLC is very proud of the progress that our students have made because we collaborated so effectively and focused on results". Patricia shared the following sentiments in her March reflective memo, "Through my PLC work I've learned that working collaboratively helps students attain better outcomes faster and in more settings". Patricia also added, I have really enjoyed working with the vision PLC this year and enjoyed
sharing our knowledge with the rest of the community". In her March reflection, Shanene articulated the following, "Participating in the vision PLC has been an amazing experience for me! I can’t imagine that I would have been able to learn as much as I have this year if we had used the traditional professional development model. Being able to try strategies out and talk about them during PLC meetings has been wonderful". She enthusiastically added, "The vision PLC has changed my life and more importantly the lives of my students. My data collection strategies have changed significantly since joining this group".

The reflective memos, submitted by the Vision PLC members, indicated the presence of relationships, reciprocity, student focus, collaboration, reflection and an examination of practices. In addition, Shanene, reported the use of assessments to guide her daily instruction; however, the other three PLC members, Desiree, Elizabeth, and Patricia did not report the use of assessments. Since the PLC pilot participants submitted their initial September reflections, members of the Vision PLC demonstrated an increased capacity to embed essential PLC features within their daily routines. With the acknowledgement of these critical features, the practices of the Vision PLC became more learner-centered and focused on enhanced student outcomes.

**Table 6 A comparison of synthesized Professional Learning Community data**

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<th>March Reflections</th>
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<th>Vision</th>
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<tr>
<td>Examination</td>
<td>2.5</td>
<td>3.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Comparative Analysis of the March Reflections by PLC

Table 6 depicts the presence of the seven critical PLC characteristics, as individual Special educator participants, in their March Reflective Memos, reported them. This graphic compares the presence of those characteristics by PLC groups. The ten Special educator participants, who submitted reflective memos in March, reported improved peer and student relationships, increased focus on students, increased reflective practices, an increased examination of their practices, increased reciprocity, and improved collaboration. Five of the special educators who submitted their reflective memo, indicated an increase in the use of assessments, since the PLC model began in September 2010. The March reflective memos indicated a significant increase in the presence of the following PLC characteristics relationships, reciprocity, collaboration, student focus, reflection, and the examination of practices; however, a decrease in the reference to assessments was noted, since the special educators' previous report, in January.

Since their previous reports in September, November and January, the participants continued to demonstrate their capacity to align with the National Staff Development Council's (NSDC) standards (2001; 2005). Those standards necessitate that educational communities develop professional development models, which are ongoing, job-embedded and results-driven. Evidence of those three standards was provided throughout the PLC participants' March reflective memos, which is analogous to the evidence provided in September, November and January. Additionally, the NSDC's 2005 standards also required changes in teaching and learning practices in the following three domains: process, context and content. In the March reflective memos, the following changes were noted in process: data, design, learning, research-based, evaluation and collaboration; in context: learning communities, leadership and resources;
in content: quality, family involvement and equity. March and January data are comparable because they reflected the inclusion of all the twelve characteristics, which are delineated in the three domains.

Reflective Memo

June Reflection

In June, PLC pilot participants were asked to complete a final reflective memo, which helped them summarize the sentiments and insights that they gained throughout their participation in the PLC initiative. The wisdom they shared, relative to their experiences, was used to help guide the organization's future professional development model. In order to acquire the participants' constructive insights and valued perceptions, the organization asked them to share their sentiments regarding the following questions/prompts: Do you feel that your participation in these opportunities was valuable?, Please identify new practices you have integrated into your classroom since the January professional day., What changes have you noticed in your students since implementing these activities?, What changes have you noticed in yourself other staff since implementing these activities?, Have there been any barriers to implementing these new practices in your classroom?, Do you plan to continue using these skills in the future?, Will you require any supports in the future to implement these new skills?, Did you prepare a presentation for the Learning Expo that was held in March?, Please identify three ideas or strategies that you obtained from engaging in collegial dialogue during the Learning Expo., The Learning Expo was designed to promote collaboration and collegiality among staff. Do you feel this goal was achieved?, Do you feel the professional development model that was implemented throughout this year has encouraged collaboration among staff, and since the organization implemented the PLC model, do you feel you have become more reflective?
As the researcher reviewed the ten reflective memos, which were provided by the organization, references to the following seven characteristics of professional learning communities were sought: relationships, reciprocity, collaboration, assessments, student focus, reflection and an examination of practices. The researcher conducted a thorough review of the participants' responses and their synopses' follow.

**Reactive Attachment Disorder (RAD) Professional Learning Community Data Analysis**

Ami, George, Marilyn and Samantha, elementary special educators who participated in the RAD PLC throughout the 2010-2011 school year, submitted their final reflective memos, in June, following their nine-month participation in the RAD PLC. In March, the four RAD PLC participants reported the presence of relationships, reciprocity, collaboration, student focus, reflection and an examination of practices, within their daily routine. This data remained consistent throughout their June reflections, as well.

In their June reflections, George and Samantha reported the consistent use of assessments to guide student instruction; however, neither Ami, nor Marilyn, referenced the use of assessments, in their June reflections. The aforementioned data, was consistent for Samantha, because she reported the use of assessments in her March reflection; however, George did not reference the use of assessments in his March reflection. In March, Ami had referenced the use of assessments to guide her instruction; however, in June she no longer did. The capacity of the four PLC members to embed, consistently, six of the essential PLC characteristics within their daily practices represented a significant change, since they submitted their initial reflections, in September.

In June, Ami shared the following sentiments, "I think we have been more collaborative and collegial this year. We've always been a very strong team, but now we have better focus and we are learning more about each other's students. This is important because we all have
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interactions with each other's students all day. So, being able to hear about their individual programs during our PLC meetings has been very helpful”. She also added, "I've always been fairly reflective about my practice, but the PLC model this year encouraged deeper reflection. In the past, I haven't really shared my reflections about my students beyond the confines of my classroom staff, but this year we were encouraged to do so during our PLC meetings and it was almost therapeutic for me. It was nice to hear that my colleagues share my struggles and that they were willing to talk with me, openly, during our PLC meetings”. In his June reflective memo, George expressed the following, "I think I grew both personally and professionally from my experience in the RAD PLC. My students also grew from my participation in this group. I learned to collaborate more effectively with my colleagues and learned to contribute to the conversations more effectively because my ability to collect pertinent data happened as a result of this PLC”. George also shared the following, "I am much more focused on prevention because that has been the objective of the PLC. We always need to prevent students from escalating to the point of a breakdown- being more focused on their triggers and knowing more about brain functioning has allowed me to do that”.

In June, Marilyn shared the following sentiments regarding her participation in the PLC, "I think my participation in the RAD PLC and the Learning Expo was extremely valuable because I learned so much throughout the year. I am a better contributor during meetings and I have improved my ability to observe students and listen to my colleagues”. In June, Samantha shared the following, with regard to her participation in the Learning Expo, "I think the Expo was fabulous and gave staff a great opportunity to learn about the projects in other programs. It gave me and my staff and opportunity to share the great work we've been doing with the kids all year. Other staff members were able to ask questions that prompted us to reflect on this year and
make programming revisions for the upcoming year". With the acknowledgement of these critical features, the practices of the RAD PLC became more learner-centered and focused on enhanced student outcomes.

**Technology Professional Learning Community Data Analysis**

April and Mark, the two special educators who participated in the technology PLC throughout the 2010-2011 school year, submitted their final reflective memos, in June, following their nine-month participation in the Technology PLC. In their reflections, both April and Mark provided sufficient evidence, which suggested the presence of all seven critical PLC characteristics within their daily routines. The presence of those seven characteristics was consistent with their previous reflections, in March. In June, April reported the following, "My students are becoming more independent and are staying engaged for longer periods of time. When they had worksheets to complete in the past (i.e. for MCAS Alt), they became more easily frustrated, now they seem to enjoy the activities, although some are similar in nature, the students are responding more favorably and the data I've collected thus far indicates better performance". In addition, she added, "I have become more reflective and focused about student outcomes. I've always wanted to see our students succeed, but I have a better path to track it now and more people are committed to the same goal".

In his June reflection, Mark shared the following, with regard to his experiences, "I like how we were focused on one topic for the year. When students had issues, we were able to look at how technology helped improve the quality of their programming. Using the PLC model was a great way to facilitate enhanced collaboration among the team. Mark also added the following sentiments, with regard to his future teaching practices, "I will definitely use these technology tools in the future because my students really like them and the data shows they are responding
favorably to the tools. Parents have had a great response as well because they are pleased by the technology enhanced work samples”.

Both Technology PLC members demonstrated consistent growth in their ability to function, effectively. With the acknowledgement of these critical features, the practices of the Technology PLC became more learner-centered and focused on enhanced student outcomes.

**Vision Professional Learning Community Data Analysis**

Desiree, Elizabeth, Patricia and Shanene, the special educators who participated in the Vision PLC throughout the 2010-2011 school year, submitted their final reflective memos, in June, following their nine-month participation in the Vision PLC. The reflective memos, submitted by the Vision PLC members, indicated the presence of relationships, reciprocity, student focus, collaboration, reflection and an examination of practices, which demonstrated consistency, since their previous submission, in March. In addition, Shanene, reported the use of assessments to guide her daily instruction; however, the other three PLC members, Desiree, Elizabeth, and Patricia did not report the use of assessments. This assessment data is also consistent with that which was reported by the PLC members, in March. Since the PLC pilot participants submitted their initial September reflections, members of the Vision PLC demonstrated an increased capacity to embed essential PLC features within their daily routines.

In her June memo, Desiree offered the following, "I think we were much more collaborative because of this model- we stayed focused on the work that we had to do". Desiree also added, "I am always reflective about my students. The PLC model has encouraged me to be reflective about the team process as well. It has been a wonderful process!"

In her final reflective memo, Elizabeth reflected on the changes that she had noticed in her classroom and shared the following thoughts, "My staff and I are more aware of the students'
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vision. We watch their eyes when they are working so we can pick up their visual field when tasks are being presented. We are also more cognizant of the environment; we try to reduce clutter, enlarge their work, and provide the slant boards so that they can access the curriculum. Working in the PLC has helped us realize the impact low vision can have on a student and how it impacts their world. They do not access their environment the same way a person with typical vision does and it’s important to realize how to accommodate their environment so they can be successful”. She continued by sharing the following, with regard to the Learning Expo, "I think the Learning Expo was a motivating experience".

In June, Patricia shared the following, "I think the learning expo was great and that people collaborated before, during and after the Expo. Students are benefitting from the PLC model and the subsequent Learning Expo”. In June, Shanene shared the following, "Since participating in the PLC, we are so much more aware of the students' visual needs. We have always made accommodations for the students in the past, but never really knew if they were working, now that we have greater focus on results, we can make modifications very quickly. We are always need to adapt the environment to the students' needs as well, so we have reduced clutter and enlarged the font on their worksheets. We are planning more tactiley based activities to facilitate their learning as well”. She also shared the following, "Reflection has always been a huge part of my daily practice, but I now reflect differently and have a different purpose. I am not only reflecting about what happens in the classroom, but also about how it could impact my students in their therapies, etc. I am also reflecting differently about the data, which is collected, and whether it captures what I am truly trying to figure out. The PLC discussions help me work through this and prompt greater reflection". With the acknowledgement of these critical features,
the practices of the Vision PLC became more learner-centered and focused on enhanced student outcomes.

**Table 7 A comparison of synthesized Professional Learning Community Data**

![Graph showing comparative analysis of June reflections by PLC groups.]

**Comparative Analysis of the June Reflections by PLC**

Table 7 depicts the presence of the seven critical PLC characteristics, as individual Special educator participants, in their June reflective memos, reported them. This graphic compares the presence of those characteristics by PLC groups. The ten Special educator participants, who submitted reflective memos in June, reported improved peer and student relationships, increased focus on students, increased reflective practices, an increased examination of their practices, increased reciprocity, and improved collaboration. Five of the special educators who submitted their reflective memo, indicated an increase in the use of assessments, since the PLC model began in September 2010. The June reflective memos indicated consistencies in the presence of the following PLC characteristics: relationships, reciprocity, collaboration, student focus, reflection, and the examination of practices. In June,
the reference to assessments being used to guide students' programs, was included in five reflective reports. This data was consistent with the previously submitted March reflective memos.

Since their previous reports in September, November, January and March, the participants continued to demonstrate their capacity to align with the National Staff Development Council's (NSDC) standards (2001; 2005), throughout this period. The NSDC's standards necessitate that educational communities develop professional development models, which are ongoing, job-embedded and results-driven. Evidence of those three standards was provided throughout the PLC participants' June reflective memos, which is analogous to the evidence provided in September, November, January and March. Additionally, the NSDC's 2005 standards also required changes in teaching and learning practices in the following three domains: process, context and content. In the June reflective memos, the following changes were noted in process: data, design, learning, research-based, evaluation and collaboration; in context: learning communities, leadership and resources; in content: quality, family involvement and equity. June, March and January data are comparable because they reflected the inclusion of all the twelve characteristics, which are delineated in the three domains.

Interviews

Once the leadership team and members of the professional development committee reviewed the memos they had collected from the PLC pilot participants, and Northeastern University's Internal Review Board issued their approval for the study of human subjects (IRB# 11-05-23,6/2/11), the researcher obtained the data from the organization and began to conduct a thorough review of it. After the data analysis process was completed, the researcher conducted individual, in-depth, open-ended interviews with the ten special educators who had participated
in the PLC pilot program. The following ten interview questions/prompts were posed to the participants, in order to gain a better understanding of their perceptions of the PLC model that they participated in during the 2010-2011 school year: How have the professional development trainings this year helped improve your practice?, Has sufficient time been provided for you to collaborate with your colleagues concerning changes in practice, Have you had sufficient opportunities to reflect on past practice in order to improve teaching and learning?, To what extent does reflection influence your daily practice, How have you been empowered by the professional development model used this year?, How have your relationships with your colleagues changed throughout this year?, How has your ability to identify your own professional development altered your impressions of professional development?, Have you noticed any changes in your students since the PLC model was adopted?, How effective do you think the PLC model is?, How would you modify the professional development model in the future?

As the researcher reviewed the ten Special educator interviews, references to the following seven characteristics of professional learning communities were sought: relationships, reciprocity, collaboration, assessments, student focus, reflection and an examination of practices. In addition, references to the National Staff Development Council's standards (2001; 2005) were also sought. Participants reserved one-hour, individual interview periods, to answer their questions, which were posed by the researcher. Although all of the participants were provided with a minimum of sixty minutes to partake in their individual interview with the researcher, participants only required 45-60 minutes to answer, thoughtfully, questions.

During the interview, participants were encouraged to take as much time as they required responding, thoughtfully, to their questions. Data analysis of the interview transcripts revealed
that four PLC participants completed their interviews in forty-five minutes, while six participants participated in sixty-minute interviews. None of the interviewees was compelled to partake in a lengthier interview; however, they were all prompted to take as much time as they required. The researcher conducted a thorough review of the participants' responses and their synopses' follow.

**Reactive Attachment Disorder PLC participants' interview results**

Ami, George, Marilyn and Samantha, the four RAD PLC members, participated in 45-60 minute, individual interviews with the researcher, in a private setting. Participants were affable and eager to share his or her insights and perceptions of the new PLC model and the changes that evolved throughout the year. Interviewees were posed a series of ten questions, which each responded to thoughtfully and with confidence. Additional sentiments, provided by the RAD participants, are provided in Appendices P,T,U, and X.

Throughout their individual interviews, the four RAD participants cited favorable impressions of the piloted PLC model. Ami shared the following, "I've enjoyed the professional development model we used this year and feel that I was able to get a lot out of it. I think it has been particularly helpful when we've done the small groups". She also added, "I am constantly reflecting! I take the opportunity to talk things out and change practice the next day. I do reflect a lot and am always trying to read educational books on pedagogy. I am very interested in the link between how trauma impacts learning". Her colleague, George, expressed the following, "PLCs are an extremely effective method of professional development. I feel my ability to anticipate and alter behavior patterns is much greater now that I have received such specialized training". Marilyn, also a member of the RAD PLC, shared her sentiments, relative to how her students benefitted from the PLC pilot in the following sentiments, "This year, the PLC structure was more specific and tailored to my students. The information that we gathered and shared during our PLC meetings was very useful and it helped to inform my daily practice".
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Samantha, the final member of the RAD PLC noted overall programmatic changes when she expressed the following sentiments regarding her experiences, "I think our weekly professional development has helped greatly with program development. I think that this has been more productive and consistent than the large group model. The PLC model provides more opportunity for follow-through than the large group meetings. Having the opportunity to meet, weekly, as a small group, has enabled me to hone my practice considerably".

Reactive Attachment Disorder (RAD) Professional Learning Community Data Analysis

Ami, George, Marilyn and Samantha, elementary special educators who participated in the RAD PLC throughout the 2010-2011 school year, completed individual interviews, in June, following their nine-month participation in the RAD PLC. In March, the four RAD PLC participants reported the presence of relationships, reciprocity, collaboration, student focus, reflection and an examination of practices, within their daily routine. This data remained consistent throughout their June reflections and interviews, as well. In their June reflections, George, Marilyn and Samantha reported the consistent use of assessments to guide student instruction; however, Ami did not reference the use of assessments, in her interview. Ami’s omission of her reference to assessments is particularly surprising to the researcher, because Ami has specialized training in reading instruction and assessment. Since assessment is such a significant component of her daily practice, the researcher surmised that Ami did not perceive that her use of assessment had changed, significantly, since the adoption of the PLC model. The capacity of the four PLC members to embed, consistently, six of the essential PLC characteristics within their daily practices represented a significant change, since they submitted their initial reflections, in September. With the acknowledgement of these critical features, the practices of the RAD PLC became more learner-centered and focused upon enhanced student outcomes.
Technology PLC participants' interview results

April and Mark, the two technology PLC members, participated in 45 and 60 minute, individual interviews with the researcher, in a private setting. The technology PLC participants' demeanor was comparable to their RAD colleagues, as each were affable and eager to share his or her insights and perceptions of the new PLC model and the subsequent changes that evolved throughout the year. Interviewees were posed a series of ten questions, which each responded to thoughtfully and with confidence. Both technology PLC participants reported favorable outcomes from their participation in the pilot program. Additional sentiments, provided by the technology participants, are provided in Appendices Q and V.

During her interview, Ami noted that the new professional development model had facilitated changes in how the staff interact and work toward a common purpose. She articulated the following, "The professional development that was offered this year in a PLC model was an effective way to encourage a team approach. PLCs provide staff with a shared vision as to where we want to be, and they help to bring a team together; therefore, we are working together for the common goal of improving our practice". Reflections, obtained during Mark's interview revealed that he found collaboration to be a significant contributor to his altered perceptions of professional development. Mark shared the following, “This year, the professional development trainings that we've had in the PLC format have allowed me to observe and adopt different instructional techniques used by my colleagues. This year, due to changing student census, I've been sharing my students with another teacher, so it was a huge advantage for us to be having the same professional development and to have our staff hearing the same thing at the same time in our weekly PLC meetings". 
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Technology Professional Learning Community Data Analysis

April and Mark, the two special educators who participated in the technology PLC throughout the 2010-2011 school year, completed their individual interviews, in June, following their nine-month participation in the Technology PLC. In their interviews, both April and Mark provided sufficient evidence, which suggested the presence of all seven critical PLC characteristics within their daily routines. The presence of those seven characteristics was consistent with their previous reflections, in March and June. Both members demonstrated consistent growth in their ability to function, effectively as PLC members. With the acknowledgement of these critical features, the practices of the Technology PLC became more learner-centered and focused upon enhanced student outcomes. Both PLC participants reported their perceived success was a result of their intimate PLC group size. They believed that it was easier to facilitate collaboration and collegiality in their environment because their classrooms had close proximity. Due to the intimate nature of the PLC, there were less environmental distractions and tendencies to engage in off topic discussions. The researcher's impressions support the participants' perceptions.

Vision PLC participants' interview results

Desiree, Elizabeth, Patricia and Shanene, the four vision PLC members, participated in 45-60 minute, individual interviews with the researcher, in a private setting. The vision PLC participants' demeanor was comparable to their RAD and Technology colleagues, as all were affable and eager to share their insights and perceptions of the new PLC model and the subsequent changes that evolved throughout the year. Interviewees were posed a series of ten questions, which each responded to thoughtfully and with confidence. All vision PLC participants reported favorable outcomes from their participation in the pilot program.
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Additional sentiments, provided by the vision participants, are provided in Appendices R, S, W and Y.

During her interview, Desiree reported that the most significant changes in her practices occurred because the model encouraged enhanced collegial relationships. She shared the following, "Since we've adopted the PLC model, my relationships with my colleagues have grown stronger. I feel very comfortable in asking questions and sharing my successes and failures with them in this collegial format. We all have very good communication and we collaborate, effectively". Similar to Desiree, Elizabeth perceived that the PLC pilot had been successful because staff was focused upon specific student objectives. Elizabeth shared the following, "I think the PLC model is extremely effective because it is focused on student outcomes. Participating in weekly meetings where staff is focused on the same goals makes students achieve the goals faster and it helps them generalize into all settings".

During her interview, Patricia reported that she perceived changes in staff relationships because of the PLC pilot. Patricia shared the following, relative to staff relations, "I think we have become more respectful of each other. Our relationships have improved because our work is more focused upon the students. We have always worked well together, but this year we were focused upon particular topics that helped keep us on task. Having the focus on vision grounded our work and gave us a common language as we approached student programs." Shanene, the final member of the Vision PLC, perceived the most significant changes were in the enhanced levels of collaboration and collegiality. She said, "I think our PLC model has been great this year! It has gotten people out of their seats! People have become more passionate about their work! They've become more creative because they are collaborating with colleagues from other disciplines who present with varied strengths and resources".
Vision Professional Learning Community Data Analysis

Desiree, Elizabeth, Patricia and Shanene, the special educators who participated in the Vision PLC throughout the 2010-2011 school year, completed their interviews, in June, following their nine-month participation in the Vision PLC. Their interviews indicated the presence of relationships, reciprocity, student focus, collaboration, reflection and an examination of practices, which demonstrated consistency, since their previous submissions, in March and June. In addition, Elizabeth, Patricia and Shanene, reported the use of assessments to guide their daily instruction; however, Desiree, did not report the use of assessments, during her interview. Desiree's omitted reference to the use of assessments to guide instruction is not surprising to the researcher. Although Desiree was committed to the PLC model and perceived instructional and collegial changes because of the shift in professional development, her student population is extremely diverse and is difficult to assess because of their co-existing cognitive and social/emotional/behavioral diagnoses. Although Desiree's colleagues, Elizabeth, Patricia and Shanene report the use of assessment to guide their daily practices, it should be noted that their student populations lack the diversity and challenges that Desiree's students present. Students in Elizabeth's, Patricia's and Shanene's classes are able to complete, consistently, formal and informal assessments. Desiree's capacity to assess her students, successfully, is contingent upon their regulation, as well as their physical and emotional status, which fluctuates during the day.

Since the PLC pilot participants submitted their initial September reflections, members of the Vision PLC demonstrated an increased capacity to embed essential PLC features within their daily routines. With the acknowledgement of these critical features, the practices of the Vision PLC became more learner-centered and focused upon enhanced student outcomes.
Table 8 A comparison of synthesized Special educator Interviews by PLC

Table 8 depicts a comparison of the seven PLC characteristics that emerged during the interviews with the special educators. The comparison depicts how the responses from each PLC compare with each other at the conclusion of the 2010-2011 school year.

Comparative Analysis of the Interviews by PLC

Table 8 depicts the presence of the seven critical PLC characteristics, as individual Special educator participants, in their interviews, reported them. This graphic compares the presence of those characteristics by PLC groups. The ten special educator participants, who participated in individual interviews, in June, reported improved peer and student relationships, increased focus on students, increased reflective practices, an increased examination of their practices, increased reciprocity, and improved collaboration. Eight of the special educators who submitted their reflective memo, indicated an increase in the use of assessments, since the PLC model was initiated in September 2010. The most noteworthy changes, since the PLCs were initiated in September 2010, were in the categories of reciprocity and assessment. The other five categories: relationships, collaboration, student focus, reflection and an examination of practices, also demonstrated consistent evidence of implementation throughout the PLC pilot.
During their interviews, PLC participants noted how their practices had evolved to align with the National Staff Development Council's (NSDC) standards (2001; 2005). Although references to those standards were also revealed throughout their five reflective memos, having the participants engaged in thoughtful discussion, throughout the interview process, with respect to those standards, was insightful. Embedded throughout the interview questions, were references to 21st century professional development being ongoing, job-embedded and results driven. In addition, the NSDC's 2005 standards also required changes in teaching and learning practices in the following three domains: process, context and content. Throughout the interviews, it was apparent to the interviewer, based on anecdotes and evidence provided by the participants, that the following perceived changes occurred in process: data, design, learning, research-based, evaluation and collaboration; in context: learning communities, leadership and resources; in content: quality, family involvement and equity. References to these twelve characteristics, throughout the interviews are analogous to the data, which were revealed, previously, in ten participants', five reflective memos. Individual results are presented in Appendices' P-Z.

Table 9 A Synopsis of Professional Learning Community Data from Memos & Interviews

This table depicts the presence of PLC characteristics from Sept. 2010- June 2011 in the special educators' reflective memos and interviews.
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**Synopses' of PLC Characteristics**

In September 2010, a PLC model was introduced, as part of a continuous improvement process at a special education organization. The PLC model was introduced as a contemporary form of professional development because its existing model lacked the capacity to meet the complex needs of its diverse students. Administrators within the organization collected data, from the participants, throughout the year, to determine how the changes affected learners throughout the elementary classrooms. The data, which is depicted in Table 9, demonstrates when evidence of the seven PLC characteristics was reflected in the PLC members’ reflections.

**September**

In September, ten PLC pilot participants reported, in their reflective memos, prior to their participation in any PLC activities, that students were their primary focus. Nine participants reported that they habitually examined their practices. Eight participants revealed that they regularly engaged in reflective practices, while four reported relationships and collaboration were part of their daily routines. Three PLC participants reported their use of assessments to guide instruction, effectively; however, none of the Special educator participants reported reciprocity in their daily practices.

**November**

In November, ten PLC pilot participants reported the following results, following their two-month participation in PLCs. Data analysis of the ten reflective memos revealed that all of the special educators were focused upon students, which was consistent with previously reported data. In addition, the ten PLC members reported the critical examination of their practices, which represented a change since the reflections were submitted, in September. Nine PLC members reported the presence of relationships, collaboration, and reflection in their November memos. This presence of reflection in nine teachers’ memos represented a slight change, since
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the September memo; however, the teachers' capacity to effectively forge relationships and collaborate, represented a dramatic increase, since the September reflections were completed. Two participants reported the use of reciprocity, in their November reflections; however, none of the participants reported the use of assessments. In the previously submitted September memo, none of the participants reported the practice of reciprocity in their daily routines. November data reflects the teachers' diminished capacity for the use of assessments in their daily practices; however, other data sources (e.g. the researcher's reflective log and PLC agendas) indicated the use of assessments.

January

Analysis of January data revealed fluctuations, which may be attributed to the fact that data was collected from only nine participants, rather than the typical ten. In January, Samantha, a RAD PLC participant, did not submit a reflection because she did not participate in the professional day, due to an excused absence. In January, nine participants reported the presence of the following characteristics in their daily practices: relationships, student focus, reflection and an examination of practices. Eight PLC pilot participants reported evidence, which suggested their use of collaboration and reciprocity, in their daily practices. Four participants reported the use of assessments, in their daily routines. The data, which indicated the presence of assessment driven instruction, demonstrated a significant increase, since the previously submitted November reflections. In addition, the capacity of the eight special educators, who demonstrated reciprocity in their daily routines, indicated a significant change, since the November memos were collected.

March

Analysis of March data revealed the presence of relationships, reciprocity, collaboration, student focus, reflection and an examination of practices, in the ten reflections. This data
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revealed some changes in the following categories: collaboration, reciprocity, relationships, reflection and the examination of practices. A slight deviation was noted in the reporting of assessment usage. In January, four staff reported the presence of assessments in their daily practices; however, March data revealed the presence of assessments in five reflections.

June

Analysis of June data revealed the presence of relationships, reciprocity, collaboration, student focus, reflection and an examination of practices, in the ten reflections. The capacity of the ten special educators embedding these characteristics within their daily practices is consistent with the data that is contained within their March reflections. In June, five special educators reported the use of assessments to guide their daily practices. This data is consistent with the previously reported March data.

Interviews

Critical analysis of the ten participants' interviews revealed the presence of the following PLC characteristics, in June: relationships, reciprocity, collaboration, student focus, reflection and an examination of practices. This data is consistent with the data that was submitted by the ten participants in March and June. Eight interviewees reported the presence of assessments in their daily practices. This report indicated an impressive change, since the participants submitted their final reflections in June.

Final Analysis of Synopsis Data

A comprehensive analysis of the six data sources, which were completed by the ten Special Education elementary teacher participants from September 2010- June 2011, revealed that students were the consistent focus for all ten participants for the duration of the PLC pilot. The staff's capacity to be reflective and critically examine their practices, were also apparent throughout the six data sources, for the duration of the pilot. Collaboration and relationships,
demonstrated significant growth in the reflections, by November; however, reciprocity emerged as the most dramatically altered from September-March. The PLC characteristic that demonstrated the most fluctuation throughout the nine-month period was the use of assessments. This characteristic was the only one that was never embedded by all ten participants, throughout the PLC pilot project. By March, all ten participants had embedded all characteristics, with the exception of assessments.

Based on the previously identified, seven critical components of professional learning communities: relationships, reciprocity, collaboration, assessments, student focus, reflection and an examination of practices (Barth, 2006; DuFour, DuFour & Eaker, 1998, 2006, 2008; Hord & Sommers, 2008; Kruse, Louis & Bryk, 1995; Stoll & Seashore- Louis, 2008; Roberts & Pruitt, 2009; York-Barr, Sommers, Ghere, & Montie, 2006), which were evident throughout the PLC participants' five reflective memos and interviews, it is apparent that the participants' perceptions of their practices, throughout the 2010-2011 academic year, became more learner-centered and focused upon enhanced student outcomes, which were proposed as research questions, at the onset of this thesis.

**Professional Learning Community Agendas**

**Analysis of the Reactive Attachment Disorder (RAD) PLC Meeting Agenda Notes**

At the onset of the PLC pilot project, in September 2010, prior to any education on the topic of professional learning communities, the RAD PLC meeting agenda and notes did not reveal the presence of relationships, reciprocity, collaboration, assessments, reflection or an examination of practices; however, analysis of early September notes revealed the presence of student focus. By mid-late September (9/24/10), RAD PLC meeting agenda notes revealed the presence of the following six PLC characteristics, within them: relationships, reciprocity,
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collaboration, student focus, reflection, and the examination of practices. The 9/24/10 RAD PLC agenda notes did not reveal any references to assessments. Consistencies in the presence of the other six characteristics were maintained for the duration of the RAD PLC pilot. Assessments were mentioned, initially, during the RAD PLC meetings in mid-October (10/22/10), and discussed, subsequently, throughout the remainder of the RAD PLC pilot meetings. A graphic, depicting the presence of these characteristics is provided in Appendix aa.

Analysis of the Technology PLC Meeting Agenda Notes

At the onset of the PLC pilot project, in early September 2010, prior to any education on the topic of professional learning communities, the Technology PLC meeting agenda notes revealed the presence of relationships, student focus, and reflection. The meeting notes did not reveal the presence of reciprocity, collaboration, assessments or an examination of practices. By mid-late September, relationships, reciprocity, collaboration, student focus, reflection and the examination of practices were embedded within Technology PLC meeting notes, and were present, consistently, for the duration of the pilot program. In mid-October (10/18/10), assessments, the final PLC characteristic, became embedded in the PLC meeting agenda notes and remained as a critical component of the discussions for the remainder of the PLC pilot. A graphic, depicting the presence of these characteristics, is provided in Appendix aa.

Analysis of the Vision PLC Meeting Agenda Notes

At the onset of the PLC pilot project, in early September 2010, prior to any education on the topic of professional learning communities, the Vision PLC meeting agenda notes revealed the presence of relationships, reciprocity, collaboration, student focus, and the examination of practices. The meeting notes did not reveal the presence of assessments or reflection, in early September. By mid September (9/20/10) the final two characteristics, assessments and
reflection, were embedded within Vision PLC meeting notes, and were present, along with the other five characteristics, consistently, for the duration of the Vision PLC pilot program.

Contained within the three sets of PLC meeting agenda notes are references to the processes that the PLC participants used to align their practices with the National Staff Development Council's (NSDC) standards (2001; 2005). Embedded throughout the agendas and notes, were references to 21st century professional development being ongoing, job-embedded and results-driven, throughout the PLC pilot initiative. In addition, the NSDC's 2005 standards, which also required changes in teaching and learning practices in the following three domains: process, context and content, were evident throughout these documents. The researcher reported, in these documents, that the participants reported perceived changes during PLC meetings, starting in September. Perceived changes were documented in the following: process: data, design, learning, research-based, evaluation and collaboration; in context: learning communities, leadership and resources; in content: quality, family involvement and equity. References to these twelve characteristics, throughout the agenda and notes are analogous to the data, which were reported, previously, by the participants. A graphic, depicting these characteristics, is provided in Appendix bb.
Researcher's Reflective Memo

Reactive Attachment Disorder

Table 10 Researcher's Reflective Memo for RAD Synopsis

Table 10 depicts the presence of the seven PLC characteristics in the researcher's reflective memo for the RAD Professional Learning Community.

Analysis of Reactive Attachment Disorder (RAD) PLC Researcher's Log

In September 2010, when the PLC pilot model was introduced, the researcher/administrator determined that it would be critical for the facilitation of the organization's continuous improvement model that she be a participant in the weekly RAD PLC meetings and professional development trainings. As the researcher/administrator for the program, it was determined that it would be beneficial to maintain a reflective log, which was completed, following every RAD PLC event. Table 10 illustrates the references to the seven essential PLC features in the researcher's log. In September, relationships were noted in three of the Researcher's RAD PLC Log; however, reciprocity was noted in only one entry. Collaboration, staff reflection and an examination of practices were each referenced once in the researcher's
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reflective log. In comparison, student focus was mentioned in all three RAD PLC meetings, but assessments were not referenced in any of the September RAD PLC meetings. In October, relationships, reciprocity, collaboration, student focus and reflection were documented in each of the three RAD PLC meetings; however, assessments and the examination of practices were only mentioned in two of the researcher's reflective log entries. In November, after the participants had been members of the RAD PLC for two months, the researcher's reflective log indicated the presence of all seven critical PLC characteristics, during the five RAD PLC meetings that were conducted. This data represented an increased consistency throughout the researcher's log. In December, the researcher's reflective log continued to demonstrate the presence of all seven critical PLC characteristics. In January, after the participants had been members of the RAD PLC for four months, the researcher's reflective log indicated the presence of all seven critical PLC characteristics, during the three RAD PLC meetings that were conducted. This data represented consistency throughout the researcher's log, which is depicted in Appendix Z.

In February, the researcher's reflective log demonstrated some deviation from its historical references. The researcher's log revealed the presence of relationships and reciprocity during three entries; however, collaboration, student focus, examination of practices, reflection and assessments were only documented, twice. In March, after PLC members had been participants for six-months, the researcher's reflective log referenced reciprocity and relationships on four separate occasions; however, the remaining five PLC characteristics, assessments, collaboration, student focus, examination of practices and reflection, were only noted on three occasions. In April, all seven PLC characteristics were documented in the researcher's reflective log; however, in May, only six of the PLC characteristics were documented in four of the researcher's logs, but collaboration, was only noted in three entries.
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The researcher's reflective log for June indicated the presence of all seven PLC features during the three RAD PLC meetings that were conducted.

Technology

**Table 11 Researcher's Reflective Memo for Technology PLC Synopsis**

<table>
<thead>
<tr>
<th>Month</th>
<th>Relationships</th>
<th>Reciprocity</th>
<th>Collaboration</th>
<th>Assessments</th>
<th>Student Focus</th>
<th>Staff Reflection</th>
<th>Examination of Practices</th>
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</thead>
<tbody>
<tr>
<td>Sept.</td>
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<td>Nov</td>
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<td>April</td>
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<tr>
<td>June</td>
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</tr>
</tbody>
</table>

Table 11 depicts the presence of the seven PLC characteristics in the researcher's reflective memo for the RAD Professional Learning Community.

**Analysis of Technology PLC Researcher's Log**

In September 2010, when the PLC pilot model was introduced, the researcher/administrator determined that it would be critical for the facilitation of the organization's continuous improvement model that she be a participant in the weekly Technology PLC meetings and professional development trainings. As the researcher/administrator for the program, she determined that it would be beneficial to maintain a reflective log, which was completed, following every Technology PLC event. In September, the researcher's reflective log revealed the presence of relationships and student focus in three entries. Reciprocity, collaboration, staff reflection and an examination of practices were each noted, once, in the researcher's reflective log. In September, assessments were not referenced in the researcher's
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log. In October, relationships, reciprocity, collaboration, student focus and staff reflection were documented on three occasions, in the researcher's log. In comparison, assessments and the examination of practices were only documented on two occasions, in the researcher's log. In November, all seven PLC characteristics were noted in the researcher's reflective log for the Technology PLC. In December and January, the seven PLC characteristics were consistently present in all three of the researcher's log entries; however, in February, only relationships and reciprocity were noted three times in the researcher's reflective log, while the remaining five characteristics were referenced twice.

In March, when the PLC members had participated in the pilot for six months, relationships and reciprocity emerged with the greatest prevalence in the researcher's log (e.g. four entries), but collaboration, student focus, assessments, reflection and an examination of practices was only revealed on three entries. In April, the researcher's log revealed the presence of all seven characteristics on the three monthly entries however; in May, some data differences emerged. Four of the researcher's reflective log entries revealed the presence of the following six characteristics: reflection, reciprocity, student focus, assessments, examination of practices and relationships; however, collaboration was only referred to on three occasions. In June, consistency in the presence of all seven PLC characteristics returned to the researcher's reflective log, where it was documented that they had been referenced throughout the three Technology PLC meetings. A table, depicting the presence of these characteristics is provided in Appendix aa.
Vision

Table 12 Researcher's Reflective Memo for Vision PLC Synopsis

Table 12 depicts the presence of the seven PLC characteristics in the researcher's reflective memo for the Vision Professional Learning Community.

Analysis of Vision PLC Researcher's Log

In September 2010, when the PLC pilot model was introduced, the researcher/administrator determined that it would be important for the facilitation of the organization's continuous improvement model that she be a participant in the weekly Vision PLC meetings and professional development trainings. Additionally, as the researcher/administrator for the program, she determined that it would be beneficial to maintain a reflective log, which was completed, following every Vision PLC event. Critical analysis of the researcher's logs from September 2010-June 2011 revealed the presence of all seven essential PLC characteristics during the bi-monthly meetings for the duration of the Vision PLC pilot.
Contained within the three sets of the PLC researcher's reflective memos are references to the processes that the PLC participants used to align their practices with the National Staff Development Council's (NSDC) standards (2001; 2005). Embedded throughout the researcher's reflective memos, were references to 21st century professional development being ongoing, job-embedded and results-driven, throughout the PLC pilot initiative. Additionally, the NSDC's 2005 standards, which also required changes in teaching and learning practices in the following three domains: process, context and content, were evident throughout the researcher's reflections. The researcher reported, in these memos, that the participants reported perceived changes during PLC meetings, starting in September and continuing throughout the remainder of the pilot. In the reflective memos, the researcher documented the participants' perceived changes in the following: process: data, design, learning, research-based, evaluation and collaboration; in context: learning communities, leadership and resources; in content: quality, family involvement & equity. References to these twelve characteristics, throughout the researcher's reflective memos are analogous to the data, which were reported, previously, by the participants in their memos, as well as throughout the meeting agendas and notes is depicted in Appendix bb.

**NVIVO9 Synopsis Data**

For this doctoral thesis, sixty-three documents were coded using NVIVO9 Data Analysis Software. The sixty-three documents included reflective memos from ten special educator PLC participants from September 2010- June 2011, as well as the researcher's reflective memos from each of the three PLCs. Each of the ten PLC participants submitted five reflective memos (September, November, January, March, June) and participated in individual interviews with the researcher. Each of these documents, in addition to the researcher's reflective memos for the RAD, Technology and Vision PLCs were entered into NVIVO9 and ultimately coded for the following twelve categories: change, collaboration, collegiality, empowerment, focus,
implementing, Learning Expo, PLC, professional development, reflection, relationships and success. A sampling of the iterative coding process is found below in table 13.

Table 13 The Coding Reduction Process

<table>
<thead>
<tr>
<th>Interview Excerpt</th>
<th>NVIVO Codes (Descriptive)</th>
<th>Initial Reduction (Interpretive)</th>
<th>Final Reduction (Pattern)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;The PLC model is quite effective because it brings staff together in different ways. I've observed new collaborations, and as a result better professional development has emerged because people are coming together to get and share critical student information&quot;. (Shanene)</td>
<td>PLC</td>
<td>NVIVO was used for the initial coding reduction process of participant interviews. This process revealed that PLCs, collaboration, professional development and students were the most common descriptive codes that emerged.</td>
<td>NVIVO was used for the final pattern coding process. The codes, which were obtained from participants' interviews remained consistent with the researcher's expectations.</td>
</tr>
<tr>
<td></td>
<td>Togethers</td>
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<tr>
<td></td>
<td>Staff</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Collaboration</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional development</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective Memo Excerpt</td>
<td>Collaborative</td>
<td>NVIVO was used for the initial coding reduction process of participant reflections. This process revealed that PLCs, collaboration, collegiality, teams, learning and students were the most common descriptive codes that emerged.</td>
<td>NVIVO was used for the final pattern coding process. The codes, which were obtained from participants' reflections remained consistent with the researcher's expectations.</td>
</tr>
<tr>
<td></td>
<td>Collegial</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I think we have been more collaborative and collegial this year. We've always been a very strong team, but now we have better focus and we are learning more about each other's students. (Ami)&quot;</td>
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</tbody>
</table>

Results obtained from NVIVO9 revealed one hundred fifty-six references to change throughout the sixty-three documents. It also revealed ninety-six references to collaboration and forty-nine references to collegiality throughout the sixty-three documents. There were twenty references to empowerment and an additional one hundred seven references to focus throughout
the sixty-three documents. Improvement was referenced in seventy-four instances, while the Learning Expo was referenced one hundred ten instances. PLCs were referenced on five hundred sixteen occasions, while professional development was referenced on three hundred forty-nine instances, throughout the sixty-three documents. Additionally, there were one hundred nineteen references to reflection, one hundred fifty-five references to relationships and one hundred sixteen references to success throughout the sixty-three documents. These high frequency, coded words, which are indicative of this project, are illustrated, below, in Table 14.

**Table 14 High Frequency References Coded**

<table>
<thead>
<tr>
<th>NVIVO9 Coding References</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>96</td>
</tr>
<tr>
<td>Relationships</td>
<td>155</td>
</tr>
<tr>
<td>Change/Change</td>
<td>156</td>
</tr>
<tr>
<td>Collegiality</td>
<td>49</td>
</tr>
<tr>
<td>Empowerment</td>
<td>37</td>
</tr>
<tr>
<td>Focus/Focused</td>
<td>107</td>
</tr>
<tr>
<td>Improvement</td>
<td>74</td>
</tr>
<tr>
<td>Learning Expo</td>
<td>110</td>
</tr>
<tr>
<td>PLC</td>
<td>516</td>
</tr>
<tr>
<td>Professional</td>
<td>349</td>
</tr>
<tr>
<td>Reflection</td>
<td>119</td>
</tr>
<tr>
<td>Success/Outcomes</td>
<td>116</td>
</tr>
</tbody>
</table>

**Analysis of coding references**

A comprehensive analysis of the NVIVO9 results indicated that PLCs were referenced, most frequently, throughout the sixty-three documents that were analyzed. The professional development/learning/learned category was referenced, most frequently, after PLCs. Change and relationships were also referenced, frequently, according to NVIVO9 software. Reflection, success/outcomes, focus, Learning Expo and collaboration received an admirable sum of
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references in the reflections, researcher's logs and interviews, as well. Improvement, empowerment and collegiality demonstrated the least number of references among those that were coded, according to NVIVO9 software. The high frequency words, which emerged during the coding process were consistent with the themes that the researcher had identified at the onset of this thesis. These themes were consistent with those that are characteristic of PLCs and the NSDC’s 2005 standards for professional development, which are revealed below, in Table 15.

Table 15 Professional Learning Community Characteristics Coded

<table>
<thead>
<tr>
<th>PLC Characteristics</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships</td>
<td>221</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>188</td>
</tr>
<tr>
<td>Collaboration</td>
<td>96</td>
</tr>
<tr>
<td>Assessments</td>
<td>83</td>
</tr>
<tr>
<td>Student Focus</td>
<td>119</td>
</tr>
<tr>
<td>Staff Reflection</td>
<td>152</td>
</tr>
<tr>
<td>Examination of Practices</td>
<td>1013</td>
</tr>
</tbody>
</table>

Analysis of the coded Professional Learning Community Characteristics

At the onset of this PLC pilot, the seven critical characteristics of PLCs were identified and participants were asked to assess their ability to embed these features within their daily practices at six critical periods throughout the academic year. The researcher sought evidence to support the presence of these characteristics within the participants’ reflections and interviews as well as in the researcher's reflective log. These sixty-three documents were coded for frequency,
using NVIVO9 software, and the astonishing results, which are supported by previously reviewed data, are provided in Table 15. Critical analysis of this table revealed 1,013 references to participants, who were focused upon students, from September 2010- June 2011. A thorough analysis of the data also revealed dominant references to relationships, reciprocity and the examination of practices. Also noteworthy, but with less frequent references, was the staff’s ability to collaborate and use assessments, effectively. Analysis of previously referenced data demonstrates consistency with assessment being used less frequently than the other six PLC characteristics. Assessment, was the only PLC characteristic that was not present in all ten participants’ reflections or interview by June 2011, therefore the NVIVO9 analysis is consistent with other data sources. Despite the rather diminutive references to assessments, in comparison to the other characteristics, the staff embedded assessments within their practices.

**Conclusion**

In September 2010, a Special Education organization determined, based on internal and external data sources, that their existing professional development model was inadequate for 21st century educators and students. In an effort to revitalize the organizations' continuous improvement model for the upcoming school year, it was determined that professional learning communities would be piloted in the elementary classrooms. Three professional learning communities were established, and efficacy of the change process was assessed by their participants’ perceptions of their abilities to embed the seven essential components of PLCs in their daily practices. The organization's data, which was obtained and analyzed, historically, by the researcher, revealed that each of the PLCs embedded all seven PLC characteristics and the NSDC’s standards (2001; 2005).

A comparison of the triangulated data (e.g. five reflections from each of the participants, one interview with each of the participants, the researcher’s reflective log from each of the PLC
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meetings and the PLC meeting agendas and notes), which was collected and analyzed by the researcher, and subjected to member checking and peer review, indicated that some individuals did not refer to their use of assessments, which was surprising to the researcher, considering the impact they had on daily practices. Despite the inconsistent reference to assessment usage throughout the reflections and Special educator interviews, the other six PLC characteristics were embedded, consistently, in their daily practices. It is also essential to note that although some individual PLC participants may not have adequately reflected the presence of all seven PLC characteristics in their reflections or interviews, evidence of their use of assessments was found in the researcher's reflective log and PLC meeting agenda notes.

Using Fullan's Educational change theory as a theoretical framework for this project, the researcher proposed the following questions: How can the organization change their professional development practices to become more learner centered? and How can changes made to existing professional development practices enhance outcomes? Preliminary data analysis, which was introduced throughout previous portions of this thesis, indicated that participants perceived their professional development practices became more learner-centered when staff functioned, collaboratively, on student centered goals that were informed by real-time, relevant assessments. The creation of three professional learning communities, whose focus was derivative of the diverse and complex needs of students, provided ample evidence to suggest that the staff’s perceptions of PLCs and NSDCs standards changed, sufficiently, to reflect a learner-centered model. These results were consistent with the impressions of the researcher, at the onset of this project.

Preliminary data analysis suggested that PLC participants perceived that changes made to the existing professional development practices enhanced students outcomes, when the staff
cultivated collaborative and collegial relationships, which were based on reciprocity, reflection, and their examination of practices. Perfunctory analysis of triangulated data did not reveal any anomalies or surprises to the researcher; however, analysis of the NVIVO9 data revealed that *empowerment*, which was one of the following twelve categories: collaboration, collegiality, relationships, change, empowerment, focus, improvement, learning expo, professional development, reflection and success), was referenced the least.

In the subsequent chapter of this thesis, impressions of the project are communicated and the implications for educational practice are discussed.
Chapter 5: Summary, Discussion and Implications

Discussion of Findings and Implications for Practice

The purpose of this qualitative single case study was to determine the extent to which changes in professional development influence collaboration, collegiality and reflection within a special education environment. This study documented the perceptions of ten elementary special educators as a Professional Learning Community (PLC) model was implemented to support the organization's continuous improvement model. The following research questions examined how educators' perceptions, practices, behaviors and relationships changed because of the organization's commitment to facilitating the continuous improvement process through PLCs:

1.) How can organizations change their professional development practices to become more learner-centered? 2.) How can changes in staff development promote a collaborative learning model? The questions were examined within the specific context of a small special education collaborative, with the outcomes presented as a case study. The case study model enabled the researcher the opportunity to disclose a vivid and holistic depiction of the participants' perceptions of their new professional development model.

This chapter focuses upon the implications of the findings for the PLC participants and the organization's quest to support its continuous improvement process through this model. In addition, this chapter links these discoveries to broader scholarly dialogue: theories of educational change and literature pertaining to the improvement of educational outcomes for all learners within a special education environment. A program-level logic model was used to chronicle the events, which occurred throughout the PLC development process (Yin, 2009, p. 150). In addition, the logic model was used to illustrate the relationships between the PLC activities and data, which revealed the teachers' evolving perceptions of their practices. This
chapter provides a comparison of theoretically predicted events with those that actually occurred throughout the study.

Analysis of the case study findings revealed that the majority of the special educator participants perceived that they had embedded, consistently, the seven critical features of Professional Learning Communities within their daily practices. The perceptions of the participants, with regard to the National Staff Development Council Standards for Professional Development (2001; 2005) also changed. Data, which was contained in the participants' reflective memos and interviews, as well as the researcher's reflective logs and meeting agendas, was collected throughout the nine-month pilot project, revealed the following findings.

1. The theoretical framework of educational change theory (Fullan, 2007) guided, successfully, the change process that occurred throughout the study.

2. The application of a case study model was apropos because it enabled the researcher with the opportunity to use data, which was descriptive in nature (Yin, 2009) and triangulated by multiple sources.

3. A program-level logic model, which aligned theoretically predicted events with those that actually occurred, was applied, successfully, to this research project.

4. The special educator PLC participants perceived that they were focused, consistently, upon students.

5. The special educator PLC participants perceived that they had embedded the seven characteristics of PLCs within their daily practices.

6. The special educator PLC participants perceived that they had increased their capacity to be collaborative, collegial and reciprocal.
7. The special educator PLC participants perceived that they had created a professional development model, which embodied the critical components of professional learning, as delineated by the National Staff Development Council Standards (2001; 2005).

Logic Model: Comparison to the Literature

Outcomes of the Professional Learning Communities

The literature review revealed that successful efforts to improve the teaching and learning environment occurred when professional development was ongoing, job-embedded, data-driven, and collaboratively and collegially supported. Professional Learning Community experts contend that staff development model for educators aligns with the National Staff Development Council's Professional Learning Standards (2001; 2005) and supports the learning of all members in the educational setting. Special educators value this ongoing, job-embedded, results-driven model because their students benefit from their collective use of assessments, data, and reflection.

Finding one, the theoretical framework of educational change theory (Fullan, 2007) was apropos for this research project. The study results validated Fullan's premise that change occurs in the three critical dimensions: teaching style, beliefs and understanding. PLC pilot participants reported their perceived transformation of established practices, core values and understanding (Fullan, 2007) throughout their reflective memos and interviews. Additionally, this finding supports Fullan's (2007) assertion, which was introduced in previous portions of this thesis that the ultimate ambition of change is for staff to envision themselves as shareholders consistently sharing meaning in an intact system. This finding is significant to the educational community and is transferrable throughout other levels of the organization, or in other educational
environments, particularly those with specialized student populations. It may also be transferrable to public schools, where there is greater diversity in the student population and significant need for educators to collaborate. In order to replicate this finding in other collaborative or public school settings, administrators must be visible and create a climate that is conducive to facilitating the change process. Participants must be amenable to the PLC process evolving and they must be committed to ensuring students are the focus of the change. Since institutionalization of change is a 2-4 year process, administrators and staff members should establish incremental goals to help maintain focus throughout the initiative.

Finding two, the application of a case study model was apropos for this research project because it enabled the researcher with the opportunity to use data, which was descriptive in nature (Yin, 2009) and triangulated by multiple sources. These results are significant throughout the educational community because they validated the application of a case study model, which enabled participants to describe, understand, and explain (Tellis, 1997) the evolution of PLCs from their individual perspectives. It also allowed the researcher the opportunity to examine a particular phenomenon (Stake, 2006), the evolution of PLCs in a special education collaborative, for a nine-month period. This finding is transferrable throughout other levels of the organization, or in other educational environments, particularly those with specialized student populations. It may also be transferrable to public schools, where there is greater diversity in the student population and significant need for educators to collaborate. In order to conduct similar research in a collaborative or public school setting, small learning communities could be established and data collection procedures should be emphasized. Resources, technology and common planning time, should be established as a priorities for the initiative. Staff should also be provided with relevant case study models.
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Finding three, a program-level logic model, which aligned theoretically predicted events with those that actually occurred, was applied, successfully, to this research project. The theoretically predicted outcomes aligned with the actual outcomes of the study, which is a significant study finding, for both the organization and the educational community. At the onset of this PLC initiative, Fullan's model of educational change (2007) was introduced to participants. Included in Fullan's model are the following three critical components of change: use of new materials, application of new approaches and the transformation of beliefs. All participants in the three PLCs, reported the perceived use of new materials and approaches, as well as a transformation of their beliefs. Evidence, in the form of participant artifacts, which supported these perceived changes, was provided to the researcher. During the learning expo, and throughout weekly PLC meetings, participants in the three PLCs displayed their use of new materials and evidence of revised instructional approaches. Additionally, evidence of their transformed beliefs was provided in their written reflections, as well as during their interviews. This finding is transferrable throughout other levels of the organization, or in other educational environments, particularly those with specialized student populations. It may also be transferrable to public schools, where there is greater diversity in the student population and significant need for educators to collaborate. In order to conduct similar research in another setting, it would be prudent to follow a program-level logic model, which is comparable to the one that was applied in this study. A logic model provides a methodical sequence for researchers, which enables them to make adjustments, if the theoretically predicted events do not align with those that are actually occurring.

Finding 4, the special educator PLC participants perceived that they were focused, consistently, upon students. Although this finding is significant for the organization, as well as
the educational community, it was anticipated by the researcher. The participants' reflective memos and interviews, as well as the researcher's reflective notes and PLC meeting agendas, revealed that the special educators perceived that they had embedded the seven critical features of PLCs and the NSDC standards within their daily practices and meetings. Data analysis revealed that PLC participants believed students were the primary focus of their daily activities.

A critical feature of PLCs is the capacity of the staff to be focused upon students. Data analysis revealed that the Special educator participants were focused upon students, throughout their participation in the PLC. Students were referenced on 1,013 occasions throughout the documents of the ten participants. This finding implies that participants possessed a genuine commitment to students, which was a sound basis for initiating the PLC model in the elementary programs. This finding is consistent with the researcher's impressions of the organization and is consistent with the mission, vision and strategic plan of the organization. This finding is transferrable throughout other levels of the organization, or in other educational environments, particularly those with specialized student populations. It may also be transferrable to public schools, where there is greater diversity in the student population and significant need for educators to collaborate. In order to conduct similar research in another setting, staff would require dedicated time to collaborate and reflect upon students. Administrators would need to establish common meeting time as a priority, in order for staff to assess their priorities and make student outcomes their primary objective.

In finding five, the special educator PLC participants perceived that they had embedded the seven characteristics of PLCs within their daily practices. Data analysis revealed that the ten special educators perceived the increased presence of relationships, reciprocity, collaboration, student focus, reflection and an examination of practices, in their daily routines. This finding is
significant for the organization, as well as the educational community. Eight of the ten special educator participants revealed their perceived perception of assessments in their June data as well. The two participants who did not report their perceived presence of assessments to guide their daily instruction participated in the RAD and Vision PLCs. Both of the participants are professionally licensed special educators, with an average of ten years of experience. This inconsistent perceived use of assessments was surprising to the researcher. This anomaly in the data implied that neither their experience, nor licensure appeared to influence their perceptions. However, it is the researcher's impression that the students' cognitive diversity, as well as fluctuations in the students' social/emotional functioning may have contributed, significantly, to the participants' inconsistent perceived use of assessments, in both the RAD and Vision PLCs. The student populations, which were represented by the PLC participants, are often difficult to assess because of their complex, co-existing diagnoses. The data also implied that perceptions regarding use of assessments in their daily practices did not influence the remaining PLC participants. In addition, the data did not indicate that the amount or duration of PLC meeting time/resources contributed to the participants' capacity to utilize assessments to guide instruction.

The aforementioned changes align with Fullan's Educational change theory (2007), which posits innovation, is a complex, multidimensional process.

Although their individual data does not reflect the use of assessments, it is critical to note that the researcher/administrator did note the perceived presence of assessments, from these participants, in other related documentation. This finding of inconsistencies in the perceived use of assessments by PLC participants is surprising to the researcher. However, Educational change theory (Fullan, 2007), which guided this study, suggests that phase 3, institutionalization,
commonly emerges after 2-4 years, therefore, although consistency is compulsory in order for change to occur, it is anticipated that it would not occur, completely, in a nine-month period.

This finding is transferrable throughout the organization, at other levels, or in other educational environments, particularly those with specialized student populations. Additionally, it should be noted that it is transferrable to the public school setting, where collaboration and collegiality are also necessary to meet the needs of the diverse student populations, who will be required to demonstrate proficiency by 2014. In order to replicate the results from this study in another setting, it is imperative that staff collaborate with school administrators to establish incremental goals that support the implementation of the critical PLC characteristics. It would also be important for administrators to conduct observations within the classroom setting, as well as during PLC meetings to ensure progress toward the benchmarks are made.

In finding six, the special educator PLC participants perceived that they had increased their capacity to be collaborative, collegial and reciprocal. A comprehensive review of the data revealed the perceived increase of collaboration and collegiality/reciprocity among participants, throughout the nine-month PLC pilot initiative. Their perceived capacity to be collaborative, collegial and reciprocal within their special education setting also enhanced the quality of their professional relationships because they were focused, primarily, upon their students. This finding is significant both, organizationally and to the educational community because it aligns with the NSDC standards for professional development, as well as with identified gaps in topical literature. Data analysis implies the increased perceived presence of these critical features in the teachers' daily practices facilitated the development of a collaborative learning model. This finding is fortified by the three critical components of Fullan's educational change theory (2007), which promote the use of new or revised materials, the use of new teaching approaches and the
transformation of beliefs (p.30). This finding is transferrable throughout the organization, at the middle and high school levels, or in other educational environments, particularly those with specialized student populations. Additionally, it should be noted that the findings are transferrable within the public school setting, where collaboration and collegiality are paramount because of imminent federal proficiency standards. Comparable results in other settings may be obtained if staff collaborates with school administrators to establish incremental goals that support the implementation of the critical PLC characteristics. It would also be important for administrators to conduct observations within the classroom setting, as well as during PLC meetings, to ensure progress toward the benchmarks is made.

**Outcomes of the National Staff Development Council Standards**

In finding seven, it was concluded that, the special educator PLC participants perceived that they had created a professional development model, which embodied the critical components of professional learning, as delineated by the National Staff Development Council Standards (2001; 2005). This finding is significant throughout the organization and educational community because the ten PLC participants perceived their professional development model had become ongoing, job-embedded and results-driven, since the PLC model was adopted in September 2010. Analysis also revealed that the PLC participants perceived changes in their teaching and learning practices in the following domains: content, process, context, which align with the NSDC's standard (2001; 2005), as well as their twelve indicators, in Table 16.

**Table 16 The National Staff Development Council Standards (2005)**
These results imply that the PLC model increased the participants’ capacity to become more learner-centered. This finding is fortified by the three critical components of Fullan's educational change theory (2007), which promote the use of new or revised materials, the use of new teaching approaches and the transformation of beliefs (p.30). This finding is transferrable throughout the organization, at the middle and high school levels, or in other educational environments, particularly those with specialized student populations. It is the impression of the researcher that the finding is transferrable within the public school setting, where collaboration and collegiality are paramount because of imminent federal proficiency standards.

Comparable results in other settings may be obtained if staff collaborates with school administrators to establish incremental goals that support the implementation of the critical PLC characteristics. It would also be important for administrators to conduct observations, within the classroom setting, as well as during PLC meetings to ensure progress is made.

Table 17 Logic Model: Intended and Actual Outcomes of the PLC Pilot

<table>
<thead>
<tr>
<th>PLC Characteristics</th>
<th>Intended Outcome for PLC participants</th>
<th>Actual Outcome (As perceived by the participants)</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships</td>
<td>Participants improve the quality of their relationships, which enables them to be student centered</td>
<td>Participants perceived that adult and student relationships improved</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Participants improve their capacity to share data and resources to improve the teaching and learning environment</td>
<td>Participants reported the perceived presence of reciprocity in their daily practices</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
</tbody>
</table>
### Collaboration

<table>
<thead>
<tr>
<th>Participants</th>
<th>Participants perceived</th>
<th>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</th>
</tr>
</thead>
<tbody>
<tr>
<td>collaborate, effectively, to enhance the students' teaching and learning experiences</td>
<td>they collaborated, more effectively and frequently during the pilot</td>
<td>memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
</tbody>
</table>

### Assessments

| Participants will use assessment to effectively guide instruction and individualized programs | Participants perceived that they used assessments to make individual and programmatic changes | Participants' reflective memos, interviews, researcher's reflective log and meeting agendas |

### Student Focus

| Participants' discussions and actions will be student focused | Participants perceived that they were student focused; lessons were designed to meet their needs, effectively | Participants' reflective memos, interviews, researcher's reflective log and meeting agendas |

### Reflection

| Participates will become more reflective about their practices and document their reflections | Participants perceived that their practice of habitual reflection improved their teaching and learning | Participants' reflective memos, interviews, researcher's reflective log and meeting agendas |

### Examination of practices

| Participants will examine their practices more critically | Participants perceived that they made changes to their practices because of critical examinations | Participants' reflective memos, interviews, researcher's reflective log and meeting agendas |

### NSDC Standards

<table>
<thead>
<tr>
<th>Learning Community (Content)</th>
<th>Intended Outcome (For PLC participants)</th>
<th>Actual Outcome (As perceived by participants)</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A community of learners, dedicated to the education of special education students, will form to</td>
<td>Participants perceive an increased sense of community, which is focused upon improving educational</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
<td></td>
</tr>
<tr>
<td>Leadership (Content)</td>
<td>Participants will be empowered to plan and change their PD model. They will be led by each other and leaders will provide resources which enable them to respond to students' needs</td>
<td>Participants felt supported, which enabled them to act, independently. They believed that the support they received from their leader empowered them to make better decisions for their students</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Resources (Content)</td>
<td>Participants will share information and resources between and among PLCs</td>
<td>Participants perceive that their increased sharing of resources improved the quality of their lessons. They shared new materials and techniques</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Design (Process)</td>
<td>Participants will share evidence to support how curriculum and instruction are designed to meet student needs</td>
<td>Due to the new access to resources and information, participants perceive that they made improvements to their environmental design</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Learning (Process)</td>
<td>Participants will increase their commitment to their own learning, as well as to that of their students</td>
<td>Participants perceive that they learned through the PLC process. They learned about their practices as well as the learning styles of their students</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Evaluation (Process)</td>
<td>Participants will perform self-evaluations, regarding</td>
<td>Participants perceive that they had become more critical of their</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Collaboration (Process)</td>
<td>Participants will collaborate, effectively, to improve student instruction</td>
<td>Participants perceive that they collaborate, effectively, for the benefit of their students</td>
<td>Participants’ reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Research Design (Process)</td>
<td>Participants will use research in best practices to guide their instruction</td>
<td>Participants perceive that they use best practices to guide their daily instruction</td>
<td>Participants’ reflective memos, interviews, researcher's reflective log/meeting agendas</td>
</tr>
<tr>
<td>Data (Process)</td>
<td>Participants will use data, consistently, to inform and guide daily practices</td>
<td>Participants perceive that their use of data has increased, exponentially. They report that data guides instruction in new ways, since the pilot was initiated</td>
<td>Participants’ reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Quality (Context)</td>
<td>Participants will assess the quality of the professional development and the programs they provide by using contemporary best practices and state and federal standards</td>
<td>Participants perceive that program quality was assured by embedding federal and local standards within daily instruction</td>
<td>Participants’ reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Equity (Context)</td>
<td>Participants will ensure that equity is established throughout the pilot sites</td>
<td>Participants perceive that equity was established b/c all students were discussed and programs were modified</td>
<td>Participants' reflective memos, interviews, researcher's reflective log and meeting agendas</td>
</tr>
<tr>
<td>Family Involvement</td>
<td>Participants will communicate,</td>
<td>Participants perceive that they have</td>
<td>Participants’ reflective memos, interviews,</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>(Context)</th>
<th>effectively, with families to report changes in programs</th>
<th>increased the quality and consistency of student programs</th>
<th>researcher's reflective log and meeting agendas</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSDC Standards</td>
<td>Intended outcomes</td>
<td>Actual Outcomes</td>
<td>Data</td>
</tr>
</tbody>
</table>

Significance of Findings in Relation to the Posed Research Questions: Educational Practice

Implications for Practitioners

In September 2010, ten, elementary special educators were asked to participate in a PLC model, which was a new initiative within the organization. The educators were separated into three teams, which would be cultivated into Professional Learning Communities. These three PLCs were dedicated to acquiring additional knowledge and skills in the following topics: Reactive Attachment Disorder, Educational implications of technology-enhanced instruction for students with language processing disorders and Educational implications for students with reduced vision. The following findings were revealed: The theoretical framework of educational change theory (Fullan, 2007) guided, successfully, the change process that occurred throughout the study; The application of a case study model was apropos because it enabled the researcher the opportunity to use data, which was descriptive in nature (Yin, 2009) and triangulated by multiple sources; A program-level logic model, which aligned theoretically predicted events with those that actually occurred, was applied, successfully, to this research project; The special educator PLC participants perceived that they were consistently focused upon students; The special educator PLC participants perceived that they had embedded the seven characteristics of PLCs within their daily practices; The special educator PLC participants perceived that they had increased their capacity to be collaborative, collegial and reciprocal; The special educator PLC participants perceived that they had created a professional development model, which embodied the critical components of professional learning, as delineated by the National Staff
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Development Council Standards (2001; 2005). The educators' perceptions of their ability to embed the seven critical PLC characteristics and the NSDCs standards (2001, 2005) within their practices were captured in reflective memos, which were distributed by the organization during five critical periods between September 2010- June 2011 and throughout individual participant interviews.

Impressions of Participant Reflective Memos and Interviews

Reactive Attachment Disorder PLC

In September 2010, four elementary educators, employed by a special education collaborative, volunteered to participate in a new professional development initiative that was designed to increase collaboration, collegiality and relationships within their specialized environment. Based on their previously shared insights, which they had provided to the organization in June 2010, via questionnaires, they identified Reactive Attachment Disorder as a topic for increased examination. The organization's administrators and the professional development committee believed, because of the increasing prevalence of this multifaceted disorder in their current student population, it was important to validate the staff’s request for additional opportunities for growth and learning on this theme. Using the National Staff Development Council's standards (2001; 2005), and seven critical characteristics of PLCs as measures to assess how educators' perceptions, practices and behaviors changed throughout the academic year, it was revealed that the RAD PLC demonstrated significant changes in their capacity to embed all seven PLC characteristics. While embedding the seven PLC characteristics (relationships, reciprocity, collaboration, assessments, student focus, reflection, and an examination of practices) into their daily routines, they also altered the content, process and context (NSDC standards, 2001; 2005) of their practices. The researcher estimates that their collective reports of altered perceptions and changed practices should be attributed to the intensive
and consistent resources that were devoted toward meeting as a PLC, as well as the intense administrative support that was devoted toward this initiative.

Impressions of Participant Reflective Memos and Interviews

Technology PLC

In September 2010, two elementary educators, employed by a special education collaborative, volunteered to participate in a new professional development initiative that was designed to increase collaboration, collegiality and relationships within their specialized environment. Based on their previously shared insights, which they had provided to the organization in June 2010, via memos, they identified technology-enhanced instruction as a topic for increased examination. The organization's administrators and the professional development committee decided, because of the increasing prevalence of students with language and auditory processing disorders in their current student population, to validate the staff's request for additional opportunities for growth and learning on this subject. Using the National Staff Development Council's standards (2001; 2005), and seven critical characteristics of PLCs as measures to assess how educators' perceptions, behaviors and practices changed throughout the academic year, it was revealed that the Technology PLC demonstrated significant changes in their capacity to embed all seven PLC characteristics. While embedding the seven PLC characteristics (relationships, reciprocity, collaboration, assessments, student focus, reflection, and an examination of practices) into their daily routines, they also altered the content, process and context (NSDC standards, 2001; 2005) of their practices. The researcher estimates that their collective reports of altered perceptions and changed practices should be attributed to the intensity and consistency of resources, which were devoted toward meeting as a PLC, as well as the intense administrative support that was devoted toward this initiative.
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Impressions of Participant Reflective Memos and Interviews

Vision PLC

In September 2010, four elementary educators, employed by a special education collaborative, volunteered to participate in a new professional development initiative that was designed to increase collaboration, collegiality and relationships within their specialized environment. Based on their previously shared insights, which they had provided to the organization in June 2010, via memos, they identified the educational implications of reduced vision as a topic for increased examination. The organization's administrators and the professional development committee believed, because of the increasing prevalence of visual disorders in their current student population, that it was important to validate staff’s request for additional opportunities for growth and learning in this discipline.

Using the National Staff Development Council's standards (2001; 2005), and seven critical characteristics of PLCs as measures to assess how educators' perceptions, behaviors and practices changed throughout the academic year, it was revealed that the Vision PLC demonstrated significant changes in their capacity to embed all seven PLC characteristics. While embedding the seven PLC characteristics (relationships, reciprocity, collaboration, assessments, student focus, reflection, and an examination of practices) into their daily routines, they also altered the content, process and context (NSDC standards, 2001; 2005) of their practices.

The researcher estimates that their collective reports of altered perceptions and changed practices should be attributed to the intensity and consistency of resources, which were devoted towards meeting as a PLC, as well as the intense administrative support that was devoted toward this initiative.
Implications for Educational Environments

The following findings were revealed: The theoretical framework of educational change theory (Fullan, 2007) guided, successfully, the change process that occurred throughout the study; The application of a case study model was apropos because it enabled the researcher the opportunity to use data, which was descriptive in nature (Yin, 2009) and triangulated by multiple sources; A program-level logic model, which aligned theoretically predicted events with those that actually occurred, was applied, successfully, to this research project; The special educator PLC participants perceived that they were consistently focused upon students; The special educator PLC participants perceived that they had embedded the seven characteristics of PLCs within their daily practices; The special educator PLC participants perceived that they had increased their capacity to be collaborative, collegial and reciprocal; The special educator PLC participants perceived that they had created a professional development model, which embodied the critical components of professional learning, as delineated by the National Staff Development Council Standards (2001; 2005). Although this study was contained to the elementary level of a special education collaborative, it is important to note that the implications within the environment have been significant. The Special educator participants are using the resources contained within their environment more effectively than they had previously accessed them. The PLC participants perceive this increased use of resources may be attributed to the increased focus upon students, which has been driven by assessments and new data collection strategies.

PLC participants reported that the educational environment had become more collegial, collaborative and conducive to learning. With a student focus, which was prompted by the PLC characteristics and NSDC’s standards, the staff has reported perceived changes in how the students respond to the climate and culture of the classrooms, as well as the physical design of the learning
environment. Although the physical arrangement of the environment was never considered, previously, a contributing factor in the learning process, the PLC participants now believe it has a significant impact on teaching and learning. This was a surprising outcome for the researcher and PLC participants.

**Implications for Research**

This research project revealed the following: The theoretical framework of educational change theory (Fullan, 2007) guided, successfully, the change process that occurred throughout the study; The application of a case study model was apropos because it enabled the researcher the opportunity to use data, which was descriptive in nature (Yin, 2009) and triangulated by multiple sources; A program-level logic model, which aligned theoretically predicted events with those that actually occurred, was applied, successfully, to this research project; The special educator PLC participants perceived that they were consistently focused upon students; The special educator PLC participants perceived that they had embedded the seven characteristics of PLCs within their daily practices; The special educator PLC participants perceived that they had increased their capacity to be collaborative, collegial and reciprocal; The special educator PLC participants perceived that they had created a professional development model, which embodied the critical components of professional learning, as delineated by the National Staff Development Council Standards (2001; 2005). Although this study was not designed to document the use and impressions of support staff, which were intimately acquainted with this elementary PLC pilot program, in the future it may be prudent to examine the PLC process through the lens of paraprofessionals and related service providers. According to Huffman (2001), established PLCs involve all stakeholders while they are developing their vision. Additionally, existing literature considers, predominately, that only teachers are members of the professional learning communities; however, in many settings, particularly those
with special education students, the contributions of additional staff input can be considered significant (Louis & Gordon, 2006).

As designed, this study documented the perceptions of the PLC participants as the model evolved during a nine-month period. In the future, observations of educators, who have reported embedding the critical PLC characteristics and National Professional Learning Standards (Learning Forward, 2011) may be valuable research for the educational community to pursue.

Conclusion

As the federal proficiency mandates encroach, and the complexity and diversity of students' needs continue to escalate, school administrators recognize the need to provide superior quality, research-based, ongoing, job-embedded, results-driven professional development for contemporary educators. The purpose of this study was to document the experiences of ten elementary special educators as Professional Learning Communities were implemented within their organization. Their individual and collective experiences are thoroughly documented in this doctoral thesis. The research garnered from this study documented how one educational organization changed their professional development practices, perceptions and behaviors to reflect a collaborative, collegial, learner-centered, outcomes-based environment. The findings of this study are significant, not only for the organization where the study was conducted, but also for the educational community. Research, such as this, illustrates the impact that collaboration and collegiality have on the learning environment. It should be used as a catalyst for other studies that focus on the student outcomes. The researcher also contends that this study could be used as a catalyst to assess the fidelity of the PLC implementation in future academic years.

The results from this study suggest that once professional learning communities are established as a model for staff growth, data emanating from the PLCs can be used as a catalyst
for transformation in all educational environments. The aforementioned findings provide evidence, which supports this conclusion. When a PLC is established and sustained, countless educators, and students, can benefit from the model that was framed in this study. It is both the aspiration and expectation of the researcher that this study will contribute to the existing body of literature and provide an efficacious model of professional learning that can be replicated throughout contemporary schools, in order to improve the educational environment for all learners.
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The Massachusetts Department of Elementary and Secondary Education.

https://www.doe.mass.edu.


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Implementing a Professional Learning Community: A Case Study


http://www.wcer.wisc.edu/nise/Publications/Briefs/NISE_Brief_Vol_1_No_1.pdf.
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Implementing a Professional Learning Community: A Case Study


IMPLEMENTING A PROFESSIONAL LEARNING COMMUNITY: A CASE STUDY


Signed Informed Consent Document

Northeastern University: College of Professional Studies, Department of Education  
Investigator Name: Stacey Kaminski, Doctoral Candidate & Principal Researcher  
Dr. Margaret Dougherty, Principal Investigator  
Title of Project: Implementing a Professional Learning Community: A Case Study

Request for Consent to Participate in a Research Study

June 1, 2011

Dear Prospective Participants,

As the final phase of my doctorate program approaches, it is necessary for me to complete a research project. Among the most effective forms of research, are those that can be conducted in the setting where change is occurring. Therefore, as a change agent in the organization, I am inviting you to participate in this study.

The primary goal of this case study is to create an ongoing, job-embedded, learner centered, results-driven, professional development model that fosters collaboration and collegiality among staff in the special education setting. In addition, the supporting goals of this project are to identify: (a) the current professional development practices of ten elementary special educators, (b) the similarities and differences that exist between current professional development practices and those that the National Staff Development Council (NSDC) has deemed pertinent, (c) the pertinent changes that are necessary in existing professional development practices to ensure alignment with the NSDC's 2001 & 2005 standards, (d) the impact that collaboration and collegiality have on the learning environment.

The analysis of the findings from this project will be used to guide the professional development practices of the Collaborative and ameliorate the identified gaps between the current practices and the needs of 21st century learners. Additionally, once the conclusions are reached, this project will contribute to the existing body of research that informs 21st century global professional development practices.

As the primary researcher in this study, I am inviting you to participate in this study and requesting your consent to conduct an interview. The interview will consist of ten questions, which pertain to your professional development practices throughout the 2010-2011 school year.

As part of the informed consent process, it is important for the following to be clarified:

- Your participation in this study is voluntary and may be discontinued at any time. Although interview questions are not designed to be invasive, you may refuse to answer any of them throughout the process. Your decision to participate in this study will not have any affect on your position within the organization.
- Participants will not be offered compensation for their participation in this project.
It is anticipated that participants may benefit from involvement in this study because they will be provided the opportunity to share their experiences and impressions of the organization's professional development model. Sharing these insights may result in additional professional development opportunities or demonstrate growth relative to your practices.

Although your anonymity cannot be assured throughout this process, participants will be assigned pseudonyms, which will help to maintain confidentiality throughout the organization and educational community. Study participants will not be identified by name in any of the projects' publications.

Evaluation is not the intent of this research project, therefore the impressions or insights shared throughout this project will not affect annual reviews or employment status. Staff evaluation procedures are delineated in the Union contract and will be adhered to throughout this project. The sole purpose of the project is to gather insights from special educators, pertaining to impressions of existing and future professional development models within the organization.

A transcript of your interview will be provided to you for your review. After reviewing the transcript, it will be your right to withhold any information from the study and subsequent analysis. Additionally, you will have the opportunity to provide feedback about your contributions.

It is my intent to protect your wellbeing by ensuring that any challenges or obstacles that are discussed during the interviews are not regarded as individual weaknesses, rather they are opportunities for organizational change.

As a participant in this study, you will be asked to participate in Member Checking. This is a validation strategy, which is commonly used by researchers, to solicit your impressions of the research findings and interpretations. In order to participate in member checking, you will be provided with a preliminary draft of the research data and case study summary, to review judiciously. The comments, which you provide during this process, will be documented and reflected throughout the study results that are published in the final Doctoral Thesis (DT).

Digital recordings, which are used to document interviews, will be deleted and destroyed following transcription and analysis.

As the study is currently designed, I do not anticipate that your participation in this project poses any immediate risk or harm to you.

As a study participant, I am seeking your consent for the following:

**Interview:** It is required that all participants partake in one semi-structured interview throughout this study. As the interview protocol and questions are designed, it is anticipated that interviews will not last longer than 90 minutes. Interviews will be conducted, privately, within the teachers' classrooms between the hours of 3:00 p.m. and 5:00 p.m., or, at another time that is more convenient for the study participants. To ensure accuracy, interviews will be digitally recorded and transcribed. The researcher's goal for the interview is to determine the how collaboration and collegiality have changed professional development practices in the organization throughout the 2010-2011 academic year. It is anticipated that these individual interviews will occur during the spring of 2011.
Member Checking: Validation is a critical component of this research study. Therefore, as a research participant, you will be asked to review my analysis and interpretations for accuracy. Your thoughtful and judicious review of my findings and subsequent conclusions are invaluable, and will serve as verification for this investigation. As the principal researcher for this investigation, I vow to limit the time you are required to allocate for the review of my findings. It is anticipated that you will be asked to partake in member checking throughout the spring/summer of 2011.

Should you have any questions or concerns about participation in this research, please do not hesitate to contact me at kaminski.sta@huskey.neu.edu or 508-838-0939 or Dr. Margaret Dougherty, Principal Investigator, at m.dougherty@neu.edu.

Should you have any questions, pertaining to your rights throughout this research project, please contact Nan C. Regina, Director, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA 02115. She may also be contacted at n.regina@neu.edu or 617-373-4588. It should be noted that your inquiry will remain anonymous.

By providing your signature below, you are indicating your consent to participate in an interview and, agree to participate in Member Checking as a validation strategy:

_____________________________________    _________________
Participant Signature                                      Date

_____________________________________    _________________
Participant's Printed Name

_____________________________________    _________________
Principal Researcher's Signature                                                      Date

Stacey A. Kaminski
Researcher's Printed Name
## Special educator Interview Protocol

Date:________________________

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Stacey Kaminski</th>
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<tbody>
<tr>
<td>Location: Elementary School #1</td>
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<tr>
<td>Elementary School #2</td>
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<tr>
<td>Elementary School #3</td>
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Time of interview:________________________ Duration of interview:________________________

1. How have the professional development trainings this year helped improve your practice?
2. Has sufficient time been provided for you to collaborate with your colleagues concerning changes in practice?
3. Have you had sufficient opportunities to reflect on past practice in order to improve teaching and learning?
4. To what extent does reflection influence your daily practice?
5. How have you been empowered by the professional development model used this year?
6. How have your relationships with your colleagues changed throughout this year?
7. How has your ability to identify your own professional development altered your impressions of professional development?
8. Have you noticed any changes in your students since the PLC model was adopted?
9. How effective do you think the PLC model is?
10. How would you modify the professional development model in the future?
Appendix C

Document Analysis Protocol

Document/Artifact Source:________________________________________________________
Date of Document/Artifact Source:______________________________________________
Data Analyzer: Stacey Kaminski, Principal Researcher & Program Administrator
Date of Document Analysis:____________________________________________________

<table>
<thead>
<tr>
<th>Evidence of relationships:</th>
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<th>Evidence of reciprocity:</th>
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<th>Evidence of collaboration:</th>
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<th>Evidence of use of assessments:</th>
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<th>Evidence of student focus:</th>
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<th>Evidence of staff reflection:</th>
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<th>Evidence of examination of practices:</th>
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<tr>
<th>Additional Comments:</th>
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</table>
Reflective Memo

As the 2010-2011 academic year concludes, we feel it is important to obtain your input regarding the embedded professional development model that was implemented this year. Your valuable input will help to guide our future practices as we prepare for the 2011-2012 year. Please return this reflection to your administrator by June 15, 2011.

Name:_____________________________   Role:___________________________

Please identify the workshop/activity you participated in during the January professional day.
__________________________________________________________________________

Please identify the activity you participated in during the March professional day.
__________________________________________________________________________

Do you feel that your participation in these opportunities was valuable? Please explain.
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Please identify new practices you have integrated into your classroom since the January professional day.
1.____________________________________________________________________________

2.____________________________________________________________________________

3.____________________________________________________________________________

What changes have you noticed in your students since implementing these activities?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
What changes have you noticed in yourself/ other staff since implementing these activities?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Have there been any barriers to implementing these new practices in your classroom? If so, please identify them.
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Do you plan to continue these using these skills in the future? Why or why not?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Will you require any supports in the future to implement these new skills?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Did you prepare a presentation for the Learning Expo that was held in March? If so, please explain the basic premise of your presentation.
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
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______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
IMPLEMENTING A PROFESSIONAL LEARNING COMMUNITY: A CASE STUDY

Please identify three ideas or strategies that you obtained from engaging in collegial dialogue during the Learning Expo.

1._______________________________________________________________________

2.________________________________________________________________________

3.________________________________________________________________________

The Learning Expo was designed to promote collaboration and collegiality among staff. Do you feel this goal was achieved? If so, how? If not, what do you feel was lacking?________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Do you feel the professional development model that was implemented throughout this year has encouraged collaboration among staff? If so, how? If not, why do you feel it has not?________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Since the organization implemented the PLC model, do you feel you have become more reflective about your practices? Please explain.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
The Collaborative is an organization, which is committed to serving a specialized population of students throughout South Eastern Massachusetts and Rhode Island. The Collaborative's staff is committed to ensuring that the Care, Welfare, Safety, and SecuritySM of each student is preserved throughout their day by employing prevention strategies and de-escalation techniques. However, in the event that a student becomes a danger to themselves or others, CPI's Nonviolent Crisis Intervention® program is utilized. Each member of the Collaborative staff participates in an annual Nonviolent Crisis Intervention® program training, which is provided by its own Nationally Certified Instructor.

**CPI — Educating, Empowering, and Enriching**

CPI is an international training organization committed to best practices and safe behavior management methods that focus on prevention. Through a variety of specialized offerings and innovative resources, CPI educates and empowers professionals to create safe and respectful work environments. By doing so, they enrich not only their own lives but also the lives of the individuals they serve.

The cornerstone of CPI is the Nonviolent Crisis Intervention® program, which is considered the worldwide standard for crisis prevention and intervention training. With a core philosophy of providing for the Care, Welfare, Safety, and SecuritySM of everyone involved in a crisis, the program’s proven strategies give human service providers and educators the skills to safely and effectively respond to anxious, hostile, or violent behavior while balancing the responsibilities of care.

In response to business demands for adaptable solutions to manage potentially disruptive or even dangerous situations, CPI developed the Prepare Training® program. The strategies taught in this program have been effective in reducing the frequency and severity of these situations, increasing employee confidence and morale, and fostering a culture of Respect, Service, and Safety at Work®.

The preceding information was obtained, verbatim from the CPI Training Manual (2011) and, may be retrieved from the CPI website at http://www.crisisprevention.com/home.aspx.
The Collaborative is an organization, which is committed to serving a specialized population of students throughout South Eastern Massachusetts and Rhode Island. The Collaborative's staff is committed to ensuring that the students it serves have the optimal potential to thrive academically and behaviorally. The Collaborative promotes a Positive Behavioral Intervention Support (PBIS) philosophy, which is embedded throughout its Mission, Vision, Core Values and Professional Development Plan. Evidence of the PBIS decision-making framework is observable throughout all programs.

The Office of Special Education Programs Center on Positive Behavioral Intervention and Supports has published the following information pertaining to the PBIS decision-making framework.

- **PBIS** is used to improve students' academic and behavioral outcomes. It guarantees student access to the most effective and accurately implemented instructional and behavioral practices and interventions possible, while providing an operational framework for achieving these outcomes. **PBIS** is not a curriculum, intervention, or practice; however, it is a decision-making framework that guides selection, integration, and implementation of the best evidence-based academic and behavioral practices for improving important academic and behavior outcomes for all students.

The four integrated elements of PBIS are implemented in conjunction with the following to obtain optimal outcomes:

- Supports for social & academic competence
- Supporting staff behavior
- Supporting Decision Making

The information provided on this page has been partially provided on this page has been partially

*The OSEP Center website at [www.pbis.org](http://www.pbis.org).*
### Reactive Attachment Disorder (RAD) Professional Learning Community Events

<table>
<thead>
<tr>
<th>Participants</th>
<th>Activities</th>
<th>Frequency</th>
<th>Duration</th>
</tr>
</thead>
</table>
| Ami, Marilyn, Samantha & George | - 9/2010 Staff was introduced to RAD as a PLC topic  
- 9/2010 The RAD PLC participants conducted student chart reviews to determine which students had been diagnosed with RAD or demonstrated symptoms of RAD  
- 9/2010 The RAD PLC participants assembled preliminary student data and provided it to the consulting Clinical Psychologist for review and subsequent program planning  
- 10/2010 The RAD PLC participants, program administrator/researcher met with the clinical consultant to discuss programming for the 2010-2011 year. Student and program priorities were established. Staff discuss the characteristics of RAD and the educational impact | Introduction/Initial Training  
Daily throughout September  
Initially this process began in Sept., however due to the transient nature of the student population, this process is ongoing as students are admitted to the program  
Weekly, on Fridays during PLC meetings; some structured with the entire group of teachers; others with individual teachers to discuss specific students | 4 hours  
20 hours  
15 hours; including 3 PLC meetings (1 hour each) and individual consultation  
12 hours (month) |
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/2010</td>
<td>The RAD PLC participants, program administrator/researcher and clinical consultant met to review program plans and individual student profiles.</td>
<td>9 hours (month)</td>
</tr>
<tr>
<td>11/2010</td>
<td>The RAD PLC met with clinical consultant to explore brain anatomy, characteristics of RAD, emotional attunement, mirror neurons, memory and their impact on the educational environment.</td>
<td>4 hours</td>
</tr>
<tr>
<td>12/2010</td>
<td>The RAD PLC participants, program administrator/researcher and clinical consultant met to review program plans and individual student profiles as they pertain to the information that was communicated during the 11/2010 prof day.</td>
<td>9 hours (monthly)</td>
</tr>
<tr>
<td>1/2011</td>
<td>The RAD PLC participants, program administrator/researcher and clinical consultant met to review program protocols and student profiles of new students. PLC participants completed a survey which helped to assess therapeutic levels within individual classrooms.</td>
<td>12 hours (monthly)</td>
</tr>
<tr>
<td></td>
<td>Weekly, on Fridays during RAD PLC meetings; some structured with the entire group of teachers; others with individual teachers to discuss specific students.</td>
<td>9 hours</td>
</tr>
</tbody>
</table>
1/2011 The RAD PLC participants met with clinical consultant to continue the exploration of brain anatomy, characteristics of RAD, emotional attunement, memory, emotion, attachment, neurochemicals, therapeutic pharmaceuticals and their impact on the educational environment.

2/2011 The RAD PLC participants, program administrator/researcher and clinical consultant met to develop strategies to improve classroom culture/climate. Inconsistencies in practice and climate were revealed during survey, therefore program plans were designed to create a more therapeutic environment.

3/2011 The RAD PLC participants, program administrator/researcher and clinical consultant met to discuss implementation of strategies designed to improve classroom culture/climate.

3/2011 The RAD PLC participants assembled to a presentation, which highlighted the changes that had been made to the therapeutic environment because of their collaboration and collegiality. It emphasized programmatic changes as well as those experienced by individual students. The team shared its vision for future changes.

<table>
<thead>
<tr>
<th>3rd Professional Day</th>
<th>Weekly, on Fridays during RAD PLC meetings; new format adopted; all meetings are structured as case studies and presented by PLC participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Professional Day</td>
<td>Weekly, on Fridays during RAD PLC meetings; case study format of individual cases, which are presented by PLC participants</td>
</tr>
<tr>
<td>Learning Expo</td>
<td>4 hours</td>
</tr>
<tr>
<td>4 hours</td>
<td>12 hours (monthly)</td>
</tr>
<tr>
<td>9 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4/2011</td>
<td>The RAD PLC participants, program administrator/researcher and clinical consultant met to discuss implementation of individual therapeutic interventions including the use of autobiographical episodic vignettes (K. Plummer, 2011)/video slideshows and recognition programs, in those classrooms where a therapeutic environment was evident.</td>
</tr>
<tr>
<td>5/2011</td>
<td>The RAD PLC participants, program administrator/researcher and clinical consultant met to discuss the implementation of individual therapeutic interventions, including the use of retrospective autobiographical episodic vignettes (K. Plummer, 2011)/video slideshows &amp; recognition programs, in those classrooms where a therapeutic environment was evident.</td>
</tr>
<tr>
<td>6/2011</td>
<td>The RAD PLC participants, program administrator/researcher and clinical consultant met to discuss implementation and sustainability strategies. The purpose of the discussion was to ensure that a therapeutic environment is sustained throughout the summer programming. PLC members identified specific strategies that would be implemented and discussed how the therapeutic techniques could be used to improve academic &amp; behavioral outcomes for students.</td>
</tr>
</tbody>
</table>

Weekly, on Fridays during RAD PLC meetings; case study format of individual student interventions presented by PLC participants.

Weekly, on Fridays during RAD PLC meetings; case study format of individual student interventions presented by PLC participants.

Weekly, on Fridays during RAD PLC meetings; case study format of individual student interventions presented by PLC participants.

This table depicts the teacher participants in the Reactive Attachment Disorder (RAD) Professional Learning Community, as well as the frequency and duration of the trainings and meetings. The administrator/researcher was present during all trainings and meetings.
## Appendix H

### Technology Professional Learning Community Meeting Events

<table>
<thead>
<tr>
<th>Participants</th>
<th>Activities</th>
<th>Frequency</th>
<th>Duration</th>
</tr>
</thead>
</table>
| April & Mark | • Staff was introduced to new educational technology in 9/2010  
• 10/2010- The PLC participants discussed technology implementation with the students  
• 11/2010 Ancillary support staff, including 3 SLPS, provided a comprehensive training on technology to critical educational staff  
• 11/2010 The students were introduced to new technology®  
• 11/2010 PLC participants continued to develop and revise technology program and materials  
• 12/2010 The students continued using technology  
• 12/2010 The PLC participants continued to develop and revise technology program and materials for students  
• 1/2011 The SLPs return to conduct additional training  
• 1/2011 The students continued using technology | Initial Training/ 1\textsuperscript{st} Professional Day & weekly staff meetings  
2\textsuperscript{nd} Training/ 2\textsuperscript{nd} Professional Day  
3\textsuperscript{rd} Training / 3\textsuperscript{rd} Professional Day | 4 hours  
3 hours  
3 hours | 4 hours  
3 hours  
3 hours | 45-60 min sessions  
3 hours (1hr. weekly)  
3 hours (1hr. weekly)  
3 hours | 45-60 min sessions  
3 hours (1hr. weekly)  
3 hours | 45-60 min sessions  
3 hours |
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2011</td>
<td>The PLC participants continued to develop and revise technology programs for individual students</td>
<td>Weekly, during PLC meetings on Mon AM (1hr. weekly) 45-60 min sessions</td>
</tr>
<tr>
<td>2/2011</td>
<td>The students continued using technology</td>
<td>3 hours (1hr. weekly)</td>
</tr>
<tr>
<td>3/2011</td>
<td>The PLC participants continued to develop and revise programs for individual students</td>
<td>45-60 min sessions</td>
</tr>
<tr>
<td>3/2011</td>
<td>The students continued using technology &amp; began writing stories</td>
<td>4 hours (1 hr. weekly)</td>
</tr>
<tr>
<td>3/2011</td>
<td>The PLC participants continued to develop and revise technology programs for individual students; begin noting increased student independence; staff present their lessons and student work samples during learning expo</td>
<td>4 hours (learning expo)</td>
</tr>
<tr>
<td>4/2011</td>
<td>The students continued using technology &amp; continue writing stories</td>
<td>45-60 min sessions</td>
</tr>
<tr>
<td>4/2011</td>
<td>The PLC participants continued to develop and revise individual and group technology lessons; continued observation of student independence &amp;</td>
<td>2 hours (30 min weekly)</td>
</tr>
</tbody>
</table>
increased use for literature based activities

- 5/2011 The students continued using technology for a variety of literature based purposes

- 5/2011 The PLC participants continued to develop and revise individual and group technology lessons for literature and theme based activities

- 6/2011 The students continued using technology for a variety of purposes

- 6/2011 The PLC participants reflected upon technology implementation and its functionality as a future resource in the organization; conducted a SWOT analysis.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Activities</th>
<th>Frequency</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>April &amp; Mark</td>
<td></td>
<td>4x per week</td>
<td>2 hours</td>
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</tbody>
</table>

Weekly, during PLC meetings on Mon AM

45-60 min sessions

4x per week

Culminating technology PLC meeting

2 hours

45-60 min sessions

2 hours

This table depicts the teacher participants in the Technology PLC, as well as the frequency and duration of the necessary trainings and meetings. The program administrator/researcher was present during the trainings and weekly PLC meetings.
## Vision Professional Learning Community Events

<table>
<thead>
<tr>
<th>Participants</th>
<th>Activities</th>
<th>Frequency</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desiree, Patricia, Shanene &amp; Elizabeth</td>
<td>• 9/2010 Staff was introduced to the Educational Implications of reduced vision as a PLC topic</td>
<td>Initial Prof. Day</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>• 9/2010 The Vision PLC participants conducted student chart reviews to determine which students had been diagnosed with visual impairments or demonstrated symptoms of reduced visual functioning</td>
<td>Initially this process began in September, however due to the transient nature of the student population, this process is ongoing as students are admitted to the program</td>
<td>15 hours</td>
</tr>
<tr>
<td></td>
<td>• 9/2010 The Vision PLC participants assembled preliminary student data and provided it to the consulting Teacher of the Visually Impaired (TVI) for review and subsequent program planning</td>
<td>Bi-monthly, on Thursdays during PLC meetings; some structured with the entire group of teachers; others with individual teachers to discuss specific students</td>
<td>2 hours (monthly)</td>
</tr>
<tr>
<td></td>
<td>• 10/2010 The Vision PLC, program administrator/researcher met with the TVI to discuss programming for the 2010-2011 year. Student and program priorities were established. Staff discussed the characteristics of visual impairments and their impact on the environment</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students</td>
<td>2 hours (monthly)</td>
</tr>
<tr>
<td></td>
<td>• 11/2010 The Vision PLC participants, program administrator/researcher and TVI met to review program plans and individual student profiles</td>
<td>2nd Professional Day/Vision Training</td>
<td>4 hours</td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
<td>Time Commitment</td>
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<td></td>
</tr>
<tr>
<td>11/2010</td>
<td>The Vision PLC met with TVI to explore ocular anatomy, characteristics of Cortical Vision Impairment (CVI), legal blindness, blindness and their impact on the educational environment</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students 2 hours (monthly)</td>
<td></td>
</tr>
<tr>
<td>12/2010</td>
<td>The Vision PLC participants, program administrator/researcher and TVI met to review program plans and individual student profiles as they pertain to the information that was communicated during the 11/2010 prof day</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students 2 hours (monthly)</td>
<td></td>
</tr>
<tr>
<td>1/2011</td>
<td>The Vision PLC participants, program administrator/researcher and TVI met to review program protocols and new student profiles</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students 2 hours (monthly)</td>
<td></td>
</tr>
<tr>
<td>1/2011</td>
<td>The Vision PLC participants met with TVI to continue the exploration of ocular anatomy, characteristics of CVI and their impact on the environment, in order to make the necessary changes for optimal outcomes</td>
<td>3rd Professional Day/Training 4 hours</td>
<td></td>
</tr>
<tr>
<td>2/2011</td>
<td>The Vision PLC participants, program administrator/researcher and TVI met to develop strategies that could be integrated within the educational environment</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students 2 hours (monthly)</td>
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<tr>
<td>Date</td>
<td>Description</td>
<td>Duration</td>
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<td>--------</td>
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<td>----------------</td>
<td></td>
</tr>
<tr>
<td>3/2011</td>
<td>The Vision PLC participants, program administrator/researcher and TVI met to discuss implementation of strategies designed to improve the learning environment for students with visual impairments.</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students</td>
<td>2 hours (monthly)</td>
</tr>
<tr>
<td>3/2011</td>
<td>The Vision PLC participants assembled to a presentation, which highlighted the changes that had been made to the therapeutic environment because of their collaboration and increased collegiality. It emphasized programmatic changes as well as those experienced by individual students. The team also shared its vision for future programmatic revisions.</td>
<td>4 hours</td>
<td></td>
</tr>
<tr>
<td>4/2011</td>
<td>The Vision PLC participants, program administrator/researcher and clinical consultant met to discuss implementation of individual therapeutic interventions including the use of guided reach, modified paper, adapted utensils, scents &amp; textures.</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students</td>
<td>2 hours (monthly)</td>
</tr>
<tr>
<td>5/2011</td>
<td>The Vision PLC participants, program administrator/researcher and TVI met to discuss the implementation of individual therapeutic interventions and the students’ response to these interventions; modifications, based on</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students</td>
<td>2 hours (monthly)</td>
</tr>
</tbody>
</table>
data were made as a result of this collaboration

- 6/2011 The Vision PLC participants, program administrator/researcher and TVI met to discuss implementation and sustainability strategies for students who will be attending the program during the summer. The purpose of the discussion was to ensure that a therapeutic environment is sustained throughout the summer programming for students with visual impairments. PLC members identified specific strategies that would be implemented and discussed how they could continue to adapt the environment.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Activities</th>
<th>Frequency</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision PLC</td>
<td>Bi-monthly, on Thursdays during Vision PLC meetings; individual and groups to discuss specific students</td>
<td>2 hours (monthly)</td>
<td></td>
</tr>
</tbody>
</table>
**Synthesized September Reflections**

Document Analysis Protocol Results for the September Reflections

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Reciprocity</th>
<th>Collaboration</th>
<th>Assessments</th>
<th>Student Focus</th>
<th>Reflection Exam. of Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ami</td>
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This table depicts evidence of PLC characteristics that participants reported, prior to their participation in their identified PLC. Evidence from individual September reflections were illustrated in this table and were analyzed throughout this thesis.
### Synthesized November Reflections

Document Analysis Protocol Results for the November Reflections

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This table depicts evidence of PLC characteristics that were embedded within the special educators' practices since the PLC model was adopted in September 2010. Evidence from individual November reflections are illustrated in this table and analyzed throughout this thesis.
### Synthesized January Reflections

#### Document Analysis Protocol Results for January Reflections

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This table depicts evidence of PLC characteristics that were embedded within the special educators' practices since the PLC model was adopted in September 2010. Evidence from individual January reflections are illustrated in this table and, analyzed throughout the thesis.

*Samantha did not attend the January Professional Day, due to an excused absence.
## Synthesized March Reflections

Document Analysis Protocol Results for March Reflections

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This table depicts evidence of PLC characteristics that were embedded within the special educators’ practices since the PLC model was adopted in September 2010. Evidence from individual March reflections were illustrated in this table and analyzed in the thesis.
Appendix N

**Synthesized June Reflections**

Document Analysis Protocol Results

**June Final Reflective Memo**

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This table depicts evidence of PLC characteristics that were embedded within the special educators' practices since the PLC model was adopted in September 2010. Evidence from individual June reflections were illustrated in this table and analyzed in the thesis.
Appendix O

**Synthesized Special educator Interviews**

Document Analysis Protocol Results for the Special educator Interviews

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This table depicts evidence of PLC characteristics that were embedded within the special educators' practices since the PLC model was adopted in September 2010. Evidence from individual interviews were illustrated in this table and analyzed throughout the thesis.
A compilation of Ami's Reflections and Interview Data

In September 2010, when Ami became a member of the RAD PLC, she reported, in her reflective memo, the presence of student focus, reflection and an examination of practices in her daily routine. In November, when she completed her reflective memo, Ami provided evidence, which suggested the presence of the following three additional PLC characteristics, collaboration, reciprocity and relationships. The reflective memo, which Ami completed in January, was consistent with her previously submitted November memo. In March, Ami referenced the usage of assessments to guide her daily instruction; however, in neither June, nor during her interview, did she mention the use of assessments. During her interview, Ami shared the following sentiments, "She also shared the following with regard to changes in her practices, "We implemented additional morning meetings at the beginning of the year when we had a particularly difficult student and have continued meeting, even though the student is no longer in our program. This additional meeting time each week has given my classroom team and the social worker additional time to collaborate. I think the PLC model it is much more effective than the large group model. The PLC model reflects the fact that a one size fits all approach doesn't work". Although interview results suggested that Ami did not reference the use of assessments, ample evidence was supplied to suggest the presence of all other PLC characteristics. Analysis of this and other data suggested, sufficiently, that her practices had become more learner centered and enhanced student outcomes.

A thorough analysis of Ami's data suggested the consistent presence of six critical PLC characteristics within her daily practice. Data analysis also suggested that Ami demonstrated consistent growth in her practices, throughout this PLC pilot.
Synthesis of April's Data

In September 2010, when April became a member of the Technology PLC, she reported, in her reflective memo, the presence of student focus, reflection and an examination of practices in her daily routine. In November, April also reported the presence of collaboration and relationships as influential components in her daily routine. By January, when she completed her reflective memo, April reported that all seven PLC characteristics had been embedded within her daily practices. In March, following the Learning Expo, April no longer referenced her ability to examine, critically, her practices; however, her June reflection and interview transcript provided evidence, which suggested the consistent presence of the seven essential PLC characteristics.

With regard to the efficacy of the PLC model, April offered the following during her June interview, "PLC's are important. I think that the model brings a lot to the school community. It helps the administrators and the teachers learn together and to act on their learning. Everyone becomes responsible so that everyone is satisfied with the direction in which they are heading". Data analysis suggested that April demonstrated consistent growth in her practices, throughout this PLC pilot.
A compilation of Desiree's Reflections and Interview Data

Synthesis of Desiree's Data

In September 2010, when Desiree became a member of the Vision PLC, she reported, in her reflective memo, the presence of assessments, student focus, reflection and an examination of practices in her daily routine. In November, Desiree reported the following consistencies in her practice, student focus, reflection and an examination of practice; however, she also noted her increased capacity to collaborate, but she no longer referred to her use of assessments. In January, Desiree revealed her use of assessments and capacity to cultivate relationships, but her ability to collaborate did not emerge in her reflective memo. In March, Desiree revealed her increased capacity to forge relationships, be reciprocal, collaborate, maintain student focus, reflect and examine her practice. She did not reveal her ability to use assessments to guide instruction during March. In her June reflection, Desiree remained consistent in her ability to embed the aforementioned PLC characteristics. She remained consistent, as she discussed how she had embedded six PLC characteristics during her individual interview, as well. During her interview, she offered the following, "The professional development trainings this year have improved my practice by helping me continue my education on being able to become a more effective educator. There are always new ways and updates on software that having these trainings helps me as an educator stay up to date with current ways. Learning in a PLC model has really helped me because I've been more focused on how I can help my students". Data analysis suggested that Desiree demonstrated consistent growth in her practices, throughout this pilot.
IMPLEMENTING A PROFESSIONAL LEARNING COMMUNITY: A CASE STUDY

Appendix S

A compilation of Elizabeth's Reflections and Interview Data

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Synthesis of Elizabeth's Data

In September 2010, when Elizabeth became a member of the Vision PLC, she reported, in her reflective memo, the presence of relationships, collaboration, student focus, reflection and an examination of practices in her daily routine. In November, after she had participated in the PLC for several months, she reported consistency in the presence of those characteristics as well. In January, after participating in the Vision PLC for four months, she provided evidence, which suggested the presence of reciprocity in her daily practices. Her reflections from March, after she participated in the Learning Expo, was consistent with her January reflection and her June report indicated the same presence of six essential PLC characteristics. During her interview, Elizabeth shared the following, pertaining to her PLC experiences, "The professional development that we have experienced this year in the PLC format has been amazing! I have learned so much from my colleagues because we've used this model and I think our students have benefitted tremendously from it".

During her interview, Elizabeth provided evidence, which supported her capacity to embed seven PLC characteristics. Data analysis also suggested that Elizabeth demonstrated consistent growth in her practices, throughout this PLC pilot.
A compilation of George's Reflections and Interview Data

George's Data
September 2010- June 2011

Synthesis of George's Data

In September 2010, when George became a member of the RAD PLC, he reported, in his reflective memo, the presence of relationships, student focus, and an examination of practices in his daily routine. In November, after he had participated in the PLC for two months, George reported the additional presence of collaboration and reflection in his daily practice. By January, when he had participated in the PLC for 4 months, he noted the inclusion of reciprocity, in his daily routine. In March, following the Learning Expo, George reported consistencies in his practice, citing no changes in the presence of six critical PLC features. When George completed his final reflection, in June, he reported the presence of seven features, which indicated the addition of assessments, in his daily routine. During his interview, George shared the following, "Since RAD has been the focus of our PLC, I have noticed changes in our students, because we are working with them differently. The work in our PLCs has really encouraged us to collect data in new ways. We seem to be more sensitive to the time of day and frequency when students are displaying interfering behaviors. In the past, I don't think that I was aware of trends or patterns. I would just complete the paperwork and file it, never really taking the time to see if there were any consistencies. Now that we use the slideshows as a priming tool, and are taking different data on the students' incidents, I can see changes in our students. The PLC model encourages us to talk about these differences and make changes to individual student programs faster". George provided evidence, which suggested that he had integrated all seven critical PLC characteristics. Data analysis also suggested that George demonstrated consistent growth in his practices, throughout this pilot.
Appendix U

A compilation of Marilyn's Reflections and Interview Data

Marilyn's Data
September 2010- June 2011

Synthesis of Marilyn's Data

In September 2010, when Marilyn became a member of the RAD PLC, she reported, in her reflective memo, the presence of student focus, reflection, and an examination of practices in her daily routine. In November, after she had participated in the PLC for two months, Marilyn reported the additional presence of relationships in her daily practice. By January, when she had participated in the PLC for 4 months, she noted the inclusion of reciprocity, collaboration and assessments, in her daily routine; however, she did not provide evidence, which supported her ability to examine her practices. In March, following the Learning Expo, Marilyn reported the presence of the following six critical PLC features: relationships, reciprocity, collaboration, relationships and an examination of practices; however, she did not reveal her use of assessments. Marilyn's June reflection revealed consistencies with her March report, when she noted the presence of six critical features. During her interview, Marilyn shared, "I think the PLC model is extremely effective because we are able to get constant feedback and support. The PLC model allows us to provide our opinions in a non-threatening environment and it encourages us to test new techniques and learn from our colleagues".

During her interview, Marilyn provided evidence, which suggested that she had integrated all seven critical PLC characteristics in her daily routine. Data analysis also suggested that Marilyn demonstrated consistent growth in her practices, throughout this PLC pilot.
Synthesis of Mark's Data

In September 2010, when Mark became a member of the Technology PLC, he reported, in his reflective memo, the presence of collaboration, student focus, reflection and an examination of practices in his daily routine. In November, after he had participated in the PLC for two months, Mark reported the additional presence of relationships and reciprocity in his daily practice. By January, after he had participated in the PLC for 4 months, he noted the inclusion of assessments, in his daily routine. In March, following the Learning Expo, Mark reported consistencies in his practice, citing no changes in the presence of seven critical PLC features. When Mark completed his final reflection, in June, he reported the presence of seven features, which demonstrated consistencies in his practices, since he completed his March reflection. During his interview, Mark shared "Reflection plays a significant role in how I interact and present material to my students. It is also important that everyone have the same approach when interacting with students. The PLC model has helped me realize that we didn't have the same approaches in the past. Now we are using similar language & data to describe students and their academic and behavioral skills".

During his interview, Mark provided evidence, which suggested that he had integrated all seven critical PLC characteristics in his daily practices. Data analysis also suggested that Mark demonstrated consistent growth in his practices, throughout this PLC pilot.
A compilation of Patricia's Reflections and Interview Data

Synthesis of Patricia's Data

In September 2010, when Patricia became a member of the Vision PLC, she reported, in her reflective memo, the presence of student focus, in her daily routine. In November, after she had participated in the PLC for two months, Patricia reported the additional presence of relationships, collaboration, and an examination of practices, in her daily routine. By January, once she had participated in the PLC for 4 months, she noted the inclusion of reciprocity and reflection, in her daily routine. In March, following the Learning Expo, Patricia reported the presence of the following six critical PLC features: relationships, reciprocity, collaboration, student focus, reflection and an examination of practices; however, she did not reveal her use of assessments. The presence of those features, were consistent with her previous reflection, in January. Patricia's June reflection revealed consistencies with her March report, when she noted the presence of six critical features. During her interview, Patricia provided evidence, which suggested that she had integrated all seven critical PLC characteristics in her daily routine. She expressed the following, during her interview, "As the year progressed, we became more collegial with each other. The culminating event was when we prepared for the learning expo-when we prepared that project we really worked collaboratively to produce a high-quality exhibit for our colleagues to view and discuss. Preparing for the learning expo was a fun experience!"

Data analysis also suggested that Patricia demonstrated consistent growth in her practices, throughout this PLC pilot. Her data is indicative of the most significant change, since the pilot commenced.
Appendix X

A compilation of Samantha's Reflections and Interview Data

Samantha's Data
September 2010-June 2011

Synthesis of Samantha's Data

In September 2010, when Samantha became a member of the RAD PLC, she reported, in her reflective memo, the presence of relationships, collaboration, assessments, student focus, reflection and an examination of practices, in her daily routine. In November, after she had participated in the PLC for two months, Samantha reported the presence of the same critical features, with the exception of assessments, which were excluded from her reflection. Samantha did not participate in the January professional day; therefore, she did not complete a reflection. It is important to note, however, that she participated, actively, in the weekly PLC activities during that period. Data, which supports her attendance and active participation, is indicated in the researcher's reflective log and RAD PLC meeting agendas/notes. In March, following the Learning Expo, Samantha reported the presence of seven critical PLC features: relationships, reciprocity, collaboration, reflection, assessments, student focus and an examination of practices. Patricia's June reflection revealed consistencies with her March report, when she noted the presence of seven critical features. During her interview she offered, "Throughout this year, I have remarked to my directors that I think this model is more beneficial for staff and ultimately for students. It isn't that I think our previous model was poor, I just feel this one makes more sense for our current students. When I reflect upon the model that we used this year, I feel like the professional development topics and the capacity of staff to implement them, has significantly affected our students. I have tangible evidence/products/strategies that have evolved as result of this model. With our weekly meetings focused upon our PLC topic of Reactive Attachment Disorder (RAD), there was greater investment from all of the staff. The larger groups are impersonal and aren't geared toward the team. Large group trainings serve a purpose when massive amounts of information need to be communicated quickly, but in order to make changes for our students, trainings need to be tailored for individual teams, and those teams need to tailor the trainings for individual students. Since we started using this model this year, I've thought about professional development differently and it is easier to integrate strategies in my classroom because I think it about it more daily because it facilitated in a smaller group".

Samantha provided ample evidence, which suggested that she had integrated, consistently, all seven critical PLC characteristics in her daily routine. Data analysis also suggested that Samantha demonstrated consistent growth in her practices, throughout this PLC pilot.
Appendix Y

A compilation of Shanene's Reflections and Interview Data

Shanene's Data
September 2010- June 2011

Synthesis of Shanene's Data

In September 2010, when Shanene became a member of the Vision PLC, she reported, in her reflective memo, the presence of relationships, collaboration, assessments, student focus, reflection and an examination of practices, in her daily routine. In November, after she had participated in the PLC for two months, Shanene consisted in her inclusion of relationships, collaboration, student focus, reflection and an examination of practices in her daily routine; however, she no longer reported the presence of assessments in her daily practices. By January, once she had participated in the PLC for 4 months, she noted the inclusion of reciprocity in her daily routine. In March, following the Learning Expo, Shanene reported the presence of all seven PLC features: relationships, reciprocity, collaboration, student focus, reflection, assessments and an examination of practices, in her daily routine. Shanene's June reflection revealed consistencies with her March report, when she noted the presence of seven critical features. In her interview, Shanene shared the following, "During the learning expo, staff was invigorated! The integrated props, videos and data enabled me and my colleagues to see what everyone was doing, for the first time. It was a great time for collaboration and collegial dialogue. It was evident that people felt good about sharing and they took true ownership about what they did and were happy to share their passion". Shanene added, "My students have benefitted from the strategies that we have implemented in the classroom since we initiated the PLC model. The adoption of this model has significantly influenced my data collection procedures and consequently, student progress". In closing, she articulated the following," The PLC model is quite effective because it brings staff together in different ways. I've observed new collaborations, and as a result better professional development has emerged because people are coming together to get and share critical student information. Meeting as a PLC helps to assemble staff in an organized where and has become a critical part of our job. I believe that we can't serve kids well if we don't work together".

During her interview, Shanene continued to provide evidence, which suggested that she had integrated all seven critical PLC characteristics in her daily routine. Data analysis suggested that Shanene demonstrated consistent growth in her practices, throughout this PLC pilot.
### Reactive Attachment Disorder

**RAD Professional Learning Community Agenda Synopsis**

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**Appendix Z**
## Technology

### Technology Professional Learning Community Meeting Agenda Synopsis

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### Vision Professional Learning Community Agenda Synopsis

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Appendix cc

Presence of PLC characteristics throughout the Three PLCs, by data collection periods, as perceived by the participants

This table depicts the presence of the seven characteristics of PLCs, as they were embedded throughout the PLCs from September 2010- June 2011. Below, an in-depth description of the table is provided.

This table depicts the presence of seven critical PLC characteristics, as perceived by the participants, when they emerged throughout the PLCs, from September 2010- June 2011. Since there were four RAD PLC participants, there was an opportunity for the seven characteristics to be present a maximum of 28 opportunities. Additionally, the Vision PLC was also comprised of four Special educator participants; therefore, they had the opportunity to reference the PLC characteristics on 28 occasions as well. Since the Technology PLC was comprised of two participants, they only had the occasion to reference the seven characteristics on fourteen occasions. Critical analysis of the sixty RAD, Technology and Vision reflective memos and interviews revealed that the special educators, who represented each PLC, reported their perceived successes and changes in practices with increasing consistency, throughout the initiative. In September, 15/28 responses indicated the presence of the seven PLC characteristics, as reported by members of the RAD PLC. In comparison, 7/14 responses, provided by the Technology PLC, reported the presence of the seven PLC characteristics. In contrast, 17/28 Vision PLC participants reported the presence of seven PLC characteristics. By June, when the ten PLC participants completed their final reflective memos, their data indicated significant changes in their perceptions and practices. In June, 26/28 responses indicated the presence of the seven PLC characteristics, as reported by members of the RAD PLC. In comparison, 14/14 responses, provided by the Technology PLC, reported the presence of the seven PLC characteristics. In contrast, 25/28 Vision PLC participants reported the presence of seven PLC characteristics. Throughout their interviews, the following results were reported: 27/28 characteristics were embedded within daily practices, according to the RAD PLC. Technology PLC participants, reported 14/14 characteristics were embedded in their daily practices, during their interviews and the vision PLC participants reported 27/28 characteristics were embedded in their practices during their individual interviews. Critical comparison of the three PLCs indicated that all members of the PLCs were committed to changing their perceptions, behaviors and practices throughout the pilot year.
Special educator Interview Synopsis Data

Special Educator Interviews

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- Relationships
- Reciprocity
- Collaboration
- Assessment
- Student Focus
- Reflection
- Examination
Appendix ee

Presence of NSDC's standards (2005) throughout the three PLCs, by data collection periods, as perceived by the participants

This table depicts the presence of the twelve NSDC's standards, which exist in the aforementioned three domains (content, process & context). The graphic demonstrates the presence of four characteristics (design, learning, evaluation, collaboration) in the three PLCs, when the participants completed their initial memos in September 2010. In November, the following eight indicators were represented in reflections that captured the perceptions of the participants: design, learning, evaluation, collaboration, research-based, leadership, resources & quality. By January, when the participants completed their third reflective memos, the twelve NSDC's indicators (design, learning, evaluation, collaboration, research-based, data, learning community, leadership, resources, quality, equity and family involvement) were perceived, by the participants, to have been embedded throughout the three PLCs. The twelve NSDC's standards were consistently reported in the March and June reflections, as well as during the individual participant interviews, during June 2011.
IMPLEMENTING A PROFESSIONAL LEARNING COMMUNITY: A CASE STUDY