A CASE STUDY OF HIGHLY EFFECTIVE COLLABORATIVE TEAMS

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The Degree

Doctor of Education in Leadership Studies

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A Dissertation

titled

A Case Study of Highly Effective Collaborative Teams

by

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Doctor of Education in Leadership Studies

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The purpose of this qualitative case study was to provide an understanding of how collaborative teacher teams become successful and to discover the nuances that contribute both negatively and positively to their work. Evidence was collected from individual and focus group interviews of teachers and administrators from a large suburban high school in Ohio. Additional data sources included student demographic data, grant reports, and a collective efficacy survey completed by the school’s teachers. Themes from interviews showed several keys to implementing teacher collaborative teams: (a) teachers’ trust in the process, in the school administration, and in colleagues; (b) professional development; (c) time to meet face-to-face and build relationships among team members; (d) buy-in to the process, including open-mindedness and willingness to analyze and act on student performance data, and belief that the work will produce results; (e) teacher empowerment and teacher leadership; and (f) administrative support via long-term planning and research, consistency, and a clearly articulated vision. The results of the survey showed that the teachers in this school had a high level of collective efficacy. The stories of the teachers and administrators contained numerous examples of mastery experience, vicarious experience, and social persuasion, as described in the collective efficacy and professional learning community literature.
Dedication

This work is dedicated to my family: my husband, Tim, and my daughters, Melissa and Meredith, for the love, support, and patience they have provided me throughout the process; and to my parents, Les and Zana, for expecting me to be an independent, hardworking woman, especially my mother, who forged a path for me and other women in educational leadership while demonstrating a true example of grace, toughness, perseverance, and love of the profession.
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CHAPTER I

INTRODUCTION

Background of the Study

The impact of teacher instruction on student achievement has been of great concern to education leaders, researchers, opponents, and proponents of public education for a long time. With the passage of the No Child Left Behind (NCLB) Act of 2001 and the increased requirements of accountability it mandated, schools and districts intensified their focus and efforts to provide high quality instruction and improve student achievement. Although funding these efforts continues to be inadequate, grants are available to assist in meeting the mandates and, in theory, improve student achievement.

One such grant, a Smaller Learning Communities Grant, was awarded by the federal government to a large suburban high school in Ohio. The school hosted a significantly changing population of 2200 students from grades nine through twelve. Student demographic records and grant-reported data revealed an increase of nearly 50 percent in the population of English Language Learners over a five year span, in addition to a 42 percent increase in the socio-economically disadvantaged and transient student population during the same time period. The school employed approximately 150 staff members, and was the oldest of three high schools in a district responsible for the education of over 15,000 students.

Grant funding was provided to meet the needs of a growing diverse and socio-economically changing population. Its overarching theme was to “Redefine school to empower students, staff, and families to be connected to their learning by choosing authentic and meaningful work that promotes ownership, achievement, and citizenship”
(SLC Grant Annual Progress Report, 2007, p. 1). Several areas of concentration were presented within the goals of the proposal to guide the work of the grant recipients:

- The Student and Family Services Center
- The Freshmen Transition and Mentorship Program
- Academic Teaming
- A Professional Learning Community
- Data Analysis Tools, Training, and Use
- Intervention Programming
- Career Education and Assistance
- The Intramural Program

The compilation of all the initiatives was proposed to improve student achievement, meeting both the directives of NCLB, Elementary and Secondary Education Act (ESEA), and the expectations of societal stakeholders.

Each initiative was implemented over the course of a five year span. Two more years of funding were extended to the school following an extensive report and study of the data which supported the school improvement efforts. From preliminary surveys, interviews, and observations, along with demographic and achievement records, data were collected to examine the effectiveness and impact of the implementation of initiatives. A theme surrounding the positive impact of collaborative teacher teams emerged. Through observation, dialogue, and analysis of student achievement and demographic data at this school, it became clear teachers were working more cohesively toward a common vision and were, through their definition, collaboratively, productively and successfully working to increase student achievement. Given the significant number
of initiatives intertwined within the data, I found it important to separate and more closely investigate the work and functioning of collaborative teacher teams.

**Purpose of the Study**

With the large number of initiatives simultaneously implemented at this school and throughout the life of the Smaller Learning Communities federal grant, it was difficult to isolate the most effective program impacting student achievement within the high school. The positive results supported by the data were encouraging; however, in order to maintain the progress experienced thus far, it was essential to continue to support and examine current successful practices. Of great concern in sustaining these efforts was the eventual loss of funding. Examining the most effective and efficient practices which positively and most significantly impacted the long terms needs for improved students achievement was necessary.

Multiple schools have reported the student success achieved through the implementation of professional learning communities. Within these communities a high level of teacher collaboration, improving instruction and student learning, has been emphasized (DuFour & Eaker, 1998). Of interest to me is a deeper understanding of why these teams are so successful, and what covert nuances contribute both negatively and positively to the endeavors on which they embark. It is the purpose of this study to provide such insight.

**Research Question**

The primary research question of this study was:

How do collaborative teacher teams learn to work productively together?

Through investigation, secondary questions arose:
How do these teams define productive or effective?

What do team members perceive as important factors to the development of productive teams?

How do collaborative teaching team members perceive their level of collective efficacy as measured by the Collective Efficacy Scale – Short Form, (Goddard & Hoy, 2003)?

**Significance of the Study**

Professionals in areas other than education, (Citibank, IBM, Kaiser Permanente, NASA, to name a few) work collaboratively and provide results that support an increase in innovation, creativity, and productivity from their collective efforts (Adler, Heckscher, & Prusak, 2011). Members of collaborative communities are encouraged to employ their unique and individual talents motivated by the collective mission (Adler, et al., 2011). They work together to problem-solve and improve their craft. Schmoker (2005) submitted:

In science, industry, medicine, and technology, professional effort and advancement are continuously nourished and accelerated by learning from and working with one’s colleagues; collective work and effort are the engine for improvement and a vital source of professional and psychological satisfaction. (p. 140)

In the education profession, teaching has evolved into an individual endeavor where until recently, teachers were able to spend years working in isolation. The classroom teacher cannot shoulder the entire blame for this phenomenon; the design of the system has failed teachers as well. The framework of this system has resulted in a
decrease of professionalism and teacher efficacy where through this organizational design, teachers are unable to reap the benefits of their collective intellect and effort (Schmoker, 2005). The good news, however, is efforts to reform the system, improve instruction, and increase student achievement through the creation and implementation of a system of collaboration has been more readily accepted and implemented throughout the profession.

Other studies have offered evidence of the positive effects of teacher collaboration, and presented critical elements and conditions needed to increase teams’ probability of success. This study adds to the present body of research by examining more deeply the transition of a group of teachers to an effective and productive collaborative teacher team through reflection of the team members themselves. Stated another way, this study was designed to examine how team members of collaborative teacher teams of a self-prescribed professional learning community (PLC) perceive their transition to increased productivity. Interviews allowed both teachers and leaders to reflect upon their journey.

In addition, although numerous studies have supported the link between teacher and collective efficacy beliefs on student achievement, this study offers a view into how teams view their collaborative efforts as both a source of improvement in student academic outcomes as well as the manner in which student achievement fuels their collective efforts. Descriptions and reflections of the journey toward effectiveness and productivity of the collaborative teacher teams came directly from the teachers who worked in these teams and from leaders who worked to create the infrastructure and provide resources to support them. Presented more succinctly, this study offers the
opportunity to learn about teaming from experiences and insights from practicing teachers.

**Conceptual Framework**

The school personnel interviewed in this study, as well as the guidelines and submitted evaluations of the Smaller Learning Grant, identified student achievement as a metric in the determination of teacher, collaborative team, and school success. Multiple studies have provided evidence of the positive impact of strong efficacy beliefs on student achievement; stronger yet than environmental factors such as socioeconomic status (Bandura, 1993; Goddard, 2001; Goddard, Hoy, & Woolfolk Hoy, 2000; Goddard, LoGerfo, & Hoy, 2004; Ross, Hogaboam-Gray, & Gray, 2004). Collective efficacy theory in practice would suggest high performing collaborative teacher teams would produce positive individual teacher beliefs of the conjoint capabilities of the members of the teams (Bandura, 1997).

With this in mind, I thought it was important to better understand these three theories of efficacy (self, teacher, and collective) to assist in the design of interview questions, in categorizing data from teacher and focus group interviews, and possibly to observe a link to the level of collective efficacy beliefs held by collaborative teacher teams and their level of productivity and effectiveness.

Through the review of the literature, I found the Collective Efficacy Scale – Short Form, developed by Goddard (2002). The scale, shown to be valid and reliable, was completed by approximately 55 percent of the high school faculty and was used to provide another source of evidence of the success of collaborative teacher teaming proclaimed by teachers and leaders in this school. A more detailed description of the
scale and the manner in which it was used and scored is reported in Chapter II (the review of the literature) and in Chapter III (the methodology).

The leaders and faculty of this large suburban high school reported to the federal government in their grant progress reports and to me during interviews that they collectively defined themselves as a professional learning community. The professional learning community was comprised of 42 collaborative teacher teams and followed the PLC model shared by DuFour, Eaker, and DuFour (2005). As such they enacted team norms; defined essential outcomes; collectively established SMART goals; created, utilized, and studied results of formative and summative common assessments; and designed and implemented intervention practices to address the needs of students who were not performing. Teachers were assigned to groups to complete these arduous tasks using an initially unfamiliar process and in most cases transformed their groups into committed productive collaborative teams. For this reason, I reviewed the literature surrounding professional learning communities, teamwork, and some factors that affect the teaming process.

Through this investigation I studied the manner in which teacher collaboration affects the behaviors of teachers when they feel supported by, appreciated by, encouraged by, and learn from their peers, and how these results influence student achievement. In addition to these theories, as a past participant within the organization, my presuppositions comprised of my experiences and beliefs were also noted and considered.

Finally, I approached this study through the lens of a postpositivist researcher. According to Creswell (2007), “postpositivist researchers will likely view inquiry as a series of logically related steps, believe in multiple perspectives from participants rather
than a single reality, and espouse rigorous methods of qualitative data collection and analysis” (p. 20). In order to glean a complete representation of how collaborative teacher teams become productive, I used multiple data sources and triangulated the data to support definitions and findings. This triangulation of data was also used to reduce any presuppositions I may have had due to the participatory and immersive nature of my previous position as an administrator in this high school.

Limitations of the Study

Although this research was conducted following my advancement to a different position in another school, I was previously an administrator of the high school in this study, however not a member of any of the collaborative teacher teams. Student demographic data, discipline, achievement, and attendance data were easily attainable. The concern, however, was my ability to evaluate and decipher true evidence obtained through observation and interview, not tainted by the teachers’ and administrators’ eagerness to please, or teachers’ covert feelings toward administration when conducting research in a school where I previously held an administrative role. Further mitigation to the study was the effect other grant initiatives had on student achievement: freshmen transition programming, intervention programming, and the student/family service center. It was difficult to disentangle the effects of these initiatives from those of collaborative teaching teams, and I considered this difficulty as I approached the study.

The site where the research was conducted, as well as the additional government grant funding may pose skepticism of research results as well. The overall demographic make-up of this high school including the average socio-economic level of the population often tends to support a higher level of student achievement. The study, as mandated
through the use of grant funds, focused on the achievement of AYP subgroups defined by state and federal guidelines. This should assist in decreasing the impact and subsequent perspectives attributable to the suburban setting of the school in the study.

**Definition of Terms**

To proceed clearly, it was important to define terms widely used in this study and accepted throughout the education community.

*Annual Yearly Progress (AYP) subgroups.* The No Child Left Behind Act defines subgroups of the overall student populations within public schools by those populations comprised of 30 or more students from the following categories: white, African-American, Native-American, Hispanic, Asian, Pacific-Islander, socio-economically disadvantaged, limited English proficient, and students with disabilities.

*Collective Efficacy.* According to Bandura (1997), collective efficacy is defined as, “a group’s shared belief in their conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments” (p. 476).

*Collaborative teaching teams.* Teams of educators, usually three to eight teachers, are assigned by a course (e.g., Algebra I or Geometry) or course content areas (e.g., German 1 and German 2) to create essential course outcomes with common formative and summative assessments to discuss educational philosophies and content-specific pedagogy, and to analyze multiple forms of assessment data in order to inform instruction and improve student learning.

*EMIS.* Described by the Ohio Department of Education Office of Data Quality and Governance, “Education Management Information System (EMIS) provides the architecture and standards for reporting data to the Ohio Department of Education

*Integrated teaching teams.* Teams of educators comprised of three to five members from three to five subject areas who (at this school) work as a smaller educational unit where students are shared among these teachers, integrated units are utilized, and where students receive consistent and collaboratively designed norms and expectations.

*Professional Learning Community.* Although he was not the first to define a professional learning community, DuFour’s name has become synonymous with this idea. He asserts that a professional learning community within a school focuses on three big ideas: ensure students learn, sustain a culture of collaboration, and focus on results (DuFour & Eaker, 2005). In the context of this research study, a professional learning community was comprised of the 42 collaborative teaching teams assigned throughout the building as well as the integrated teacher teams at the ninth and tenth grade levels.

*Self Efficacy.* Multiple studies define self efficacy as the individual’s perceived capabilities of achievement (Bandura, 1993; Bandura, 1997; Goddard, Hoy, & Woolfolk Hoy, 2004; Ross, Hogaboam-Gray, & Gray, 2004). These beliefs influence the motivation, manner, and effort given to an endeavor.

*Smaller Learning Communities Grant.* The United States Department of Education Office of Elementary and Secondary Education describes the purpose of these federal grants is:

> to support the implementation of SLCs and activities to improve student academic achievement in large public high schools with enrollments of 1,000 or more
students. SLCs include structures such as freshman academies, multi-grade academies organized around career interests or other themes, “houses” in which small groups of students remain together throughout high school, and autonomous schools-within-a-school, as well as personalization strategies, such as student advisories, family advocate systems, and mentoring programs. (United States Department of Education Smaller Learning Communities Program, 2009)

*Student achievement.* Generally student achievement is defined as minimally satisfactory progress toward graduation. Specifically, student grades, attendance rates, discipline incidents, Ohio Graduation Passing Rates, ACT and SAT scores, program retention rates, and graduation rates are compiled to offer an overall picture of student achievement.

*Teacher Efficacy.* Researchers of the construct of teacher efficacy define teacher efficacy as the positive beliefs of teachers in their own individual capabilities to foster motivation and provide quality learning experiences for children resulting in an improvement in student achievement in even the most difficult and unmotivated students (Ross & Gray, 2006; Tschannen-Moran & Barr, 2004).
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The purpose of this case study was to delve more deeply into factors that impact the manner in which members of successful collaborative teaching teams learn to work together. As social organizations, schools’ greatest assets are the teachers whom they employ. The teachers subsequently hold as their greatest responsibility the education of the children for whom they are responsible. Teams of teachers who enjoy higher levels of collective efficacy have been identified as a stronger predictor of student achievement than the socioeconomic status of the students (Bandura, 1993; Goddard, 2001; Goddard, Hoy, & Woolfolk Hoy, 2000; Goddard, LoGerfo, & Hoy, 2004; Ross, Hogaboam-Gray, & Gray, 2004). Due to the use of student achievement as a measure of team success, it is important to better understand factors that influence efficacy. I reviewed literature regarding mediating factors affecting self efficacy, teacher efficacy, and collective efficacy and their relationship to teacher and group performance.

The school in which this study was situated is a professed professional learning community. As such, the teachers are divided into collaborative teaching teams where they follow a somewhat prescribed set of tasks and behaviors. To glean information regarding the teaming process studied, it was also important to review literature with respect to professional learning communities, teaming, and the issues that impact the work and success of teams.
Self Efficacy

The perceptions individuals hold of their ability to complete a task significantly influence their motivation, determination, and effort to complete the task. Bandura (1997) offers the definition of self-efficacy as, “beliefs in one’s capacity to organize and execute the courses of action required to produce given attainments” (p. 3). In other words, self-efficacy is one’s belief in his or her ability to plan, persevere, and carry out actions needed to complete a task at a preconceived level of acceptable performance.

The construct of self-efficacy, rooted in Bandura’s social cognitive theory, reveals that people who feel confident in their ability to perform a task are more likely to attempt that task than those who doubt their ability to complete the task successfully (Ashton & Webb, 1986; Bandura, 1993; Brownell & Pajares, 1996). Efficacy beliefs assist or impede achievement of goals, the manner in which one problem-solves, the extent of persistence one exerts when faced with obstacles, and the level or quality of the result ultimately produced (Bandura 1990; Multon, Brown & Lent, 1991; Pajares, 1996). It is logical, therefore, that student achievement would be linked to self-efficacy; how the student perceives his or her ability to successfully complete school requirements has an effect on its completion. Self-efficacy is not limited to effecting students’ perceptions regarding the outcomes of their efforts. Self-efficacy also has a profound influence on adult behavior and attitudes as well.

Considerable emphasis is placed on goal setting in all realms of the human experience, especially in education. Individuals possessing a higher sense of self-efficacy have been found to set more challenging goals and persevere through obstacles and disappointments. Goal setting is a way in which one focuses his or her mind on
completion of future tasks. Although research exists which considers the effects of the types of goals (intrinsic versus extrinsic) set and attained, goal setting and achievement continue to impact an individual’s perception of self. Intertwined with self-efficacy are the outcomes of effort. Bandura (1993) asserts, “Personal goal setting is influenced by self-appraisal of capabilities. The stronger the perceived self-efficacy, the higher the goal challenges people set for themselves and the firmer is their commitment to them” (p. 118). On the contrary, those with a lower sense of self-efficacy find it difficult to envision themselves as able to conquer certain demanding tasks and proceed to avoid them. A connection between ability and efficacy beliefs is shared with respect to goal attainment. The attainment of goals can influence efficacy beliefs in a positive manner, while lower efficacy beliefs contribute to lower goal attainment and vice versa (Ross & Gray, 2006). Furthermore, those who possess weak feelings of self-efficacy tend to recover from setbacks more slowly and lose confidence more quickly as well (Multon, Brown, & Lent, 1991; Schunk, 1987).

Consider the assertion Bandura (1997) offers: “people’s level of motivation, affective states, and actions are based more on what they believe than on what is objectively true” (p. 2). In other words, the self-efficacy belief held by an individual may significantly influence behavior far and above his or her actual capabilities. This contention provides an explanation into the inconsistency of behaviors and performance of people who possess similar levels of skill and knowledge (Pajares, 2002). With this in mind, understanding the sources of self-efficacy and the way in which they can be influenced is essential.
Recognizing the sources of self-efficacy is important to understanding, encouraging, and supporting greater levels of self-efficacy in students and in teachers who work to improve instruction and increase student achievement. Four major sources of self-efficacy have been revealed by Bandura (1982, 1997): mastery experiences, social modeling, social persuasion, and psychological response. Although researchers have identified influential sources of efficacy, they do not provide a discrete list of instructions imparting a menu for successful acquisition from each of them. Instead the process is a complicated and cognitive one by which an individual evaluates, combines, and coordinates his or her own experiences ultimately constructing self-efficacy (Bandura, 1997).

Mastery experiences, personal attainment, or enactive attainments as Bandura (1982) asserted tend to be “the most influential source of efficacy information” (p. 126). Authentic mastery experiences provide profound sources on which efficacy beliefs are based. Frequently experiencing mastery or successful performance increase self-efficacy beliefs. However, repeated failure in performance will decrease the level of self-efficacy.

Witnessing others of similar skill successfully perform allows individuals to receive positive experiences vicariously. Not only do vicarious experiences or social modeling impact self-efficacy, “the nature and predictability of environmental events” are revealed to individuals as well (Bandura, 1982, p. 127). Similar to the impact of enactive experiences, observing repeated success on tasks by individuals with comparable skill will generate beliefs of higher self-efficacy, while repeated failures will cause a diminished level of self-efficacy.
Social persuasion, if used within realistic bounds, can also be a successful source of self-efficacy. For example, if an admired and trusted teacher encourages and offers valid reasons for successful goal attainment or performance to a student, it is possible the teacher’s persuasive dialogue will have an impact on the student’s performance through an increase in his or her self-efficacy, increasing effort, persistence, and/or resilience. It is additionally probable that in this type of situation, persuasion would result in an increase in effort and an increase in achievement. Social persuasion’s effect does not necessarily sustain higher levels of self-efficacy. However, mastery experiences occur when coupled with positive outcomes from increased effort and achievement (Bandura, 1982, 1997). In turn those types of experiences will more intensely affect a higher sense of efficacy.

Finally, people judge their capabilities through information supplied from their psychological state or psychological arousal. Instinctively, situations causing high stress lead many individuals to feel unequipped or unprepared to successfully manage a situation. Internal signals of angst play heavily on the psyche, rendering feelings of doubt and inadequacy. In a similar fashion, Bandura (1999) asserted, “People construct anticipatory cognitive scenarios and visualized futures and use them to guide their actions” (p. 29). Individuals enjoying high self-efficacy are more capable of approaching difficult tasks more calmly than individuals with low levels of self-efficacy. Conversely, individuals with low self-efficacy approach complex tasks with greater anxiety and trepidation than individuals with high self-efficacy, which interferes with the level in which tasks are ultimately accomplished (Pajares, 2002).

Teachers with higher levels of self-efficacy set more challenging goals, persist against obstacles, employ stronger problem-solving strategies, and experience greater
skill growth compared with teachers of lower levels of self-efficacy (Bandura, 1997). Self-efficacy beliefs influence personal choice, effort, persistence, resiliency, and stress. This is significant with regard to the manner in which teachers, and consequently schools, plan and implement strategies to educate children. Of further consideration is the manner in which organizational strategies are employed to support high levels of efficacy among teachers. “As defined in social cognitive theory, all efficacy belief constructs—student, teacher, and collective—are future-oriented judgments about capabilities to organize and execute the courses of action required to produce given attainments in specific situations or contexts” (Bandura, 1997, p. 3). Self-efficacy, as outlined here, is an important ingredient to student, teacher, and subsequently organizational success.

**Teacher Efficacy**

Improving the self-efficacy of students is not an isolated ambition taken on by educators in their endeavors to improve instruction and increase student achievement. The perceptions teachers have of their ability to educate students is also a strong indicant of student success and is therefore an enormously important component. According to Ross and Gray (2006), “Teacher efficacy is a set of personal efficacy beliefs that refer to the specific domain of the teacher’s professional behavior. . . a teacher’s expectation that he or she will be able to bring about student learning” (p. 182). Positive beliefs of teachers in their own individual capabilities has been found to foster substantial motivation in providing quality learning experiences for children, thus improving student achievement. Tschannen-Moran and Barr (2004) added, “Teachers sense of efficacy, . . . teachers’ belief or conviction that they influence how well students learn, even those who may be difficult or unmotivated, has been linked to productive teacher behaviors and
positive student outcomes” (p. 189). Furthermore, the goals teachers set, their persistence in overcoming obstacles, and the effort expended in the work of teaching is related to teachers’ self-efficacy beliefs (Tschannen-Moran, Woolfolk Hoy, & Hoy 1998).

Viewing teacher efficacy through Bandura’s framework for self-efficacy, two classes of expectations emerge: outcome expectation and efficacy expectation (Bandura, 1977). An example of a teacher’s outcome expectation would be the belief or expectation that teacher inputs overcome environmental factors that may obstruct a student’s ability to achieve. An efficacy expectation of a teacher would be the belief or confidence a teacher holds in her own teaching capabilities; how well she knows and is able to implement teaching pedagogy. Researchers of teacher efficacy have modified these labels to “teaching efficacy” and “personal teaching efficacy” (Ashton & Webb, 1986; Gibson & Dembo, 1984) and subsequently “general teaching efficacy” and “personal teaching efficacy” (Hoy & Woolfolk, 1990). Nevertheless, both are important to the outcomes of performance. For if one believes generally that teachers possess the power to affect student achievement, but lacks the confidence in one’s own ability to perform, the overall influence on student achievement cannot be realized (Coladarci, 1992).

Considerably important teacher behaviors are linked to the sense of efficacy they hold (Jerald, 2007). Congruent with resulting actions of people with high levels of self-efficacy; teachers who enjoy high levels of teacher efficacy tend to be more organized and create better lesson plans, are more persistent and resilient, are more willing to employ new strategies, offer more encouragement and feedback to students, and are less likely to refer struggling or difficult students to special education (Ashton & Webb, 1986; Gibson & Dembo, 1984; Guskey, 1988; Meijer & Foster, 1988, Tschannen-Moran &
Barr, 2004; Tschan nen-Moran & Woolfolk Hoy, 2001). As an important element of student achievement, teacher-efficacy must not be ignored, quite the contrary.

Measuring the level of teachers’ efficacy has evolved over time. Researchers have used a variety of formats to capture the complicated construct. In 1976 Rand Corporation researchers in their study of teacher characteristics and student learning with regard to reading instruction found two items of their large comprehensive questionnaire offered powerful insights into the importance of teachers’ perceptions of their own capabilities (Armor, Conry-Osequera, Cox, King, McDonnell, Pascal, Pauly, & Zellman, 1976; Dibapile, 2011; Tschan nen-Moran & Woolfolk Hoy 2001;). Rooted in the theory of locus of control proposed by Rotter (1966) and Bandura (1977), the two items from the questionnaire suggested “the extent to which teachers believed they could control the reinforcement of their actions” as a measure of teacher efficacy (Goddard, Hoy, & Woolfolk Hoy, 2000, p. 481). Teachers completing the two five-choice Likert scale items from the Rand study were asked to rate:

1. When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment.

2. If I really try hard, I can get through to even the most difficult or unmotivated students. (Tschan nen-Moran & Woolfolk Hoy, 2001 p. 784.)

The sum of the two items evaluated the level of teacher efficacy (TE). Notice teachers concurring with the first statement believe the external environment has a greater influence than they on student learning (external control). However, teachers who concur with statement number two believe their effort and capabilities will overpower
environmental factors and their influence will foster higher levels of student learning (internal control). Ashton (1984) shared a review of a subsequent Rand study where they noted teacher efficacy also had an effect on the sustainment of implemented initiatives after federal funding had ended. Both studies “reported a significant relationship between teacher efficacy and student achievement” (Ashton, 1984, p. 28).

Following the Rand studies, a 30-item instrument measuring teacher efficacy was developed by Guskey (1981). The questionnaire, the Responsibility for Student Achievement (RSA) scale, was designed to measure the beliefs teachers had in their ability to control factors that influence the success or failure of their students (Guskey, 1988). The scale also included the two items from the Rand Corporation’s Change Agent Study presented previously. When Guskey compared scores from the RSA and from the Rand study, he found “significant correlations between teacher efficacy and responsibility for both student success … and student failure…” (Tsannen-Moran & Woolfolk Hoy, 2001, p. 785). In his 1988 study Guskey found “fairly strong and statistically significant perceptions of teachers that are generally associated with instructional effectiveness and attitudes toward the implementation of instructional innovation” (Guskey, p. 11). Generally teachers believed they had greater capability to affect positive outcomes than prevent negative ones.

In 1984 Gibson and Dembo developed a 30- item scale measuring teacher efficacy (TES), utilizing both the Rand studies and Bandura’s two-factor theoretical model of self-efficacy and used it in a three-part study of teacher efficacy. Included in their study was the use of a multitrait-multimethod analysis and classroom observation data related to whole versus small group instruction, feedback, persistence and academic
focus. The factor analysis portion of the study supported Bandura’s self-efficacy two-factor model:

…Factor 1 reflects the teachers’ sense of personal responsibility in student learning and/or behavior … Factor 2 represents a teacher’s sense of teaching efficacy, or belief that any teacher’s ability to bring about change is significantly limited by factors external to the teacher… (Gibson & Dembo, 1984, p. 573)

In other words they found Bandura’s conceptualization of self-efficacy to be applicable to the measurement of teacher efficacy.

The classroom observation portion of the study proved to be quite interesting. Here observers gathered data to determine if “high- and low-efficacy teachers exhibit differential patterns of teacher behaviors in the classroom related to academic focus, feedback and persistence in failure situations” (p. 576). Although a small sample size of eight teachers was observed, conservative findings showed teachers with high efficacy achieved more on-task behaviors from students and better student engagement. They were able to communicate higher expectations and exhibit persistent student questioning strategies with struggling students.

To measure teacher efficacy in a more context specific manner, Ashton, Buhr, and Crocker (1984) created vignettes describing various situations in which teachers may be involved, asking them to evaluate what their level of success might be in that particular situation. The measure tested teacher views from two frames of reference: self-referenced and norm-referenced (Tschannen-Moran & Hoy 2001). First teachers were asked to judge their probable performance level described in the vignette experience based on a scale ranging from “extremely ineffective” to “extremely effective.” In the second frame
teachers were asked to compare their level of effectiveness to that of other teachers. The second frame (norm-referenced vignettes) was found to be more significantly correlated to the Rand items.

Tschannen-Moran and Woolfolk Hoy (2001) published a review of the transformation of the measurement of teacher efficacy, the implications of the various scales, and the introduction of a highly tested scale which integrated portions of several of the previously studied and utilized teacher efficacy scales. After significant exploration utilizing the work of two researchers and eight graduate students, the Ohio State teacher efficacy scale (OSTES) was ready for testing. Three different studies were performed on the instrument. After each study the scale was slightly modified. A significant number of participants was noted in each study (224, 217, 410) before the final scale was adopted. In the end both a long (24-item) and a short (12-item) scale were developed. The OSTES includes items which measure a wider variety of teaching tasks, student engagement, instructional strategy use, and classroom management, which “represent the richness of teachers’ work lives and the requirement of good teaching” (p. 801). Factor analyses provided evidence that this scale was reasonably valid and reliable.

An interesting study by Coladarci (1992) asked 170 practicing teachers, “Suppose you had to do it all over again: In view of our present knowledge, would you become a teacher” (p. 323). The study was designed to measure teacher commitment and in doing so offered support to teacher efficacy research. Of these 170 teachers from Maine, 65 percent indicated they would or probably would choose teaching again as their profession; twice as large as the percentage obtained from teachers nationally (Coladarci, 1992). Two of the three highest correlating independent variables were personal and
general efficacy. These are noteworthy in that they are identified as “the strongest predictors of commitment to teaching” (p. 334) fortifying the importance of creating conditions where strong teacher efficacy beliefs may be cultivated.

The level of a teacher’s efficacy beliefs has a significant impact on his or her motivation and effectiveness in the classroom (Guskey & Passaro, 1994; Ross, 1998). Research supports the assertion that teacher decisions regarding classroom practices are influenced directly by teacher efficacy (Goddard, Hoy, & Woolfolk Hoy, 2004). In addition to expectations of success or failure, greater teacher efficacy among staff has been found as a consistent predictor of teachers’ willingness to experiment with new teaching ideas (Ross, Hogaboam-Gray, & Gray, 2004). Ashton (1984) added:

> Current conditions in the schools – the isolation, the difficulty in assessing one’s effectiveness as a teacher, the lack of collegial and administrative support, and the sense of powerlessness that comes from limited collegial decision-making – make it difficult for teachers to maintain a strong sense of efficacy. (p. 28)

Therefore the sources of teacher efficacy and the environments in which it might be fostered are important to acknowledge, create, and sustain. School leaders would be negligent by disregarding this powerful cognitive construct when working with their faculties to attain the positive outcomes and behaviors teachers’ sense of efficacy influence in schools’ constant journey to increase student achievement. Collective settings where vicarious experiences and social persuasion encourage colleagues and offer feedback may be one avenue toward providing positive mastery experiences for teachers, thus promoting greater teacher efficacy among faculty members of a school.
Collective Efficacy

Aligned with self- and teacher-efficacy is the construct of collective efficacy. Both teacher and collective efficacy share the same theoretical underpinnings of social cognitive theory. Within social cognitive theory, Bandura (1997) described a fundamental assumption of human agency. Individuals have the ability to make choices and making those choices is an example of agency. Not only do individuals make choices or intentionally pursue a course of action, but these purposeful actions may also be made by a collective group, described as organizational agency (Goddard et al., 2000). Both individuals and groups “exercise some level of control over their futures” (Goddard & Skrla, 2006, p. 218). The decisions, or exercises of agency, are strongly affected by perceived levels of efficacy. Goddard and Goddard (2001) explained, “According to social cognitive theory, efficacy is key to the operation of agency because individuals and collectives are more likely to pursue activities for which they believe they have the capability to succeed” (p. 809). Conversely, those who hold a lower sense of efficacy are less likely to persist in the face of obstacles (Bandura, 2000; Britner & Pajares, 2006; Goddard & Skrla, 2006; Ware & Kitsantas, 2007).

Of major importance in this study is the idea of collective efficacy. According to Ross et al., (2004); “Collective teacher efficacy refers to teacher perceptions that they constitute an effective instructional team, capable of bringing about learning in students” (p. 163). As a specific belief in collective capacity, collective teacher efficacy is defined by Goddard et al., (2000) as, “the perceptions of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students” (p. 480). Adding to the definition of collective efficacy, Tschannen-Moran and Barr (2004) shared; “(CTE) refers
to the collective perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities” (p. 189). High levels of collective efficacy have been found to impact teacher perceptions of empowerment or collective agency (Drury, Cocking, Beale, Hanson, & Rapley, 2005). This is a powerful concept in the investigation of collaborative teaming. Of concern in all schools where collaborative teacher teams are at work, is the task of moving the teachers from a group of individual teachers working together to a cohesively working team, supporting one another, learning from one another, striving as a unit to improve student learning.

Collective teacher efficacy is deemed to be a stronger predictor of student academic performance than socio-economic status (Bandura, 1993; Goddard, 2001; Goddard et al., 2000; Goddard, LoGergo, & Hoy, 2004; Ross et al., 2004). The norms and sanctions of a collaborative culture, influenced by the efficacy beliefs of the collective, impact student achievement (Ross et al, 2004). Goddard et al. (2000) demonstrated through their multilevel analysis that a one unit increase in collective efficacy was related to over 40% of a standard deviation increase in student achievement. Of significant concern, therefore, is the fostering of collective teacher efficacy, given the substantial impact it has been shown to have on student achievement.

In order to enhance and improve the collective efficacy of a school, consideration to the sources of collective efficacy is necessary. Although self-efficacy and collective efficacy are distinct, researchers have suggested the same four sources of information previously outlined in self-efficacy influence collective efficacy: mastery experiences, vicarious experiences, social persuasion, and affective states (Goddard et al., 2004; Ross
et al., 2004; Tschannen-Moran & Barr, 2004). Differing mainly in the unit of agency, these sources affect the perceived performance capabilities of the school as a whole (Bandura 1997).

Goddard (2001) completed a study designed to determine the extent to which prior mastery experiences with respect to student achievement would affect the level of collective efficacy of a school. Survey data were collected from 438 teachers in 47 schools in a large urban district. The results of this study show that prior student achievement (specifically school reading achievement) is not only a predictor of the differences in collective efficacy among schools, it is a stronger predictor of collective efficacy than the socioeconomic status of the students within the school. This study supports the assumption that the perceptions of collective efficacy are heavily influenced by mastery experiences (Goddard et al., 2004).

At nearly the same time, Watson, Chemers, and Preiser (2001) conducted a study “to analyze the antecedents and consequences of collective efficacy in college basketball teams” (p. 1057). Questionnaires were sent to 30 NCAA Division III basketball teams at the beginning and nearing the end of a season. Ultimately 26 teams, 275 players, participated in the study where seven hypotheses were posed and tested. One relating specifically to mastery experiences and their effect, “Hypothesis 3: Perceptions of recent team performance are positively related to individual perceptions of collective efficacy” (p. 1059) was proposed and supported. The researchers report, “Players who remembered recent team successes judged the team as more efficacious” (p. 1062). Notably, this study also supports the assumption presented by Bandura (1997) where past success or mastery experience is related to levels of collective efficacy.
Although deemed the most powerful source of information in the development of collective efficacy, direct experiences are not the only source on which efficacy beliefs may be built. Vicarious experiences are quite powerful as well, and occur in a variety of ways. Observing similar schools obtaining high levels of academic achievement, reading or hearing stories of other schools with similar characteristics and goals finding success, attending a conference or professional development opportunity where successful programming is shared and subsequently replicated are examples of sources of vicarious experience. These experiences offer the opportunity for members of a school community to believe similar results are possible and may influence the level of collective efficacy in the organization (Goddard et al., 2000; Goddard et al., 2004; Goddard, LoGerfo, & Hoy 2004; Goddard & Skrla, 2006).

Another factor shaping collective efficacy is social persuasion. Feedback, encouragement, or even criticisms from the principal or other colleagues are examples of this source of influence. Other examples proving to inspire action can come from community discussion or the media. Often illustrated in sports contexts, social persuasion in these instances consists of comments and encouragement from influential coaches or athletes inspiring teams to believe in themselves and the power of teamwork to overcome what may seem to be insurmountable odds (Goddard & Skrla, 2006). Teachers, in a similar vein, evaluate the trustworthiness and credibility of the source of influence as well as prior vicarious and mastery experiences in determining their level of capability to execute action. Social persuasion as a primary source of collective efficacy beliefs is uncommon, yet serves to inform norms and expectations, sanctions and rewards to its members (Goddard et al., 2004).
Goddard et al. (2004) proposed that organizations just as individuals are aroused through anxiety, stress, or excitement, and in turn their perceptions of efficacy are influenced in a positive or negative manner. For instance, efficacious schools tend to view standardized testing as “just part of the job” and are relatively unaffected by the disruption to the school schedule or pending results that follow. However, schools holding weak collective efficacy beliefs approach testing schedule changes and the anticipation of the subsequent results in a more dysfunctional and debilitating manner. Resulting behavior in this case often increases the probability of failure.

The previously described informative sources alone do not influence collective efficacy of teams of teachers or schools as a whole. Instead, shared Goddard and Goddard (2001), the collective efficacy beliefs of teams “… arise from cognitive and metacognitive processing of relevant information” (p. 809). Collecting from all sources of influence and using the information in order to make judgments regarding group capability results in collective beliefs of efficacy of the team of teachers or educational organization. These perceptions, “… serve to influence the behavior of individuals and the normative environment of collectives by providing expectations about the likelihood of success for various pursuits” (p. 809).

In the process of analysis and interpretation of these major influences, education organizations concentrate their attention on two related teaching domains: teaching task and teaching competence (Goddard et al., 2000; McCoach & Colbert, 2010). Analysis of the teaching task includes the assessment of the existing components necessary to successfully perform: instructional materials and resources, school facilities, community resources, ability, and motivational levels of the students. McCoach and Colbert (2010),
summarized, “… analysis of task deals with external resources and barriers that influence teachers’ perceptions of their abilities to educate students” (p. 32). Teaching competence refers to the perceptions teachers hold of their colleagues’ ability to successfully bring about high levels of student achievement within their school (Goddard et al. 2000; McCoach & Colbert, 2010). Both domains are analyzed and evaluated by teams in the formation of collective efficacy beliefs.

**Measuring Collective Efficacy**

Comparable to the measure of self and teacher efficacy, collective efficacy measurement has been investigated, and subsequently measurement tools have been developed. Various approaches to the measurement of collective efficacy have been suggested. Bandura (2000) offered two: evaluate the level of individual teacher efficacy and aggregate the score, or aggregate the beliefs teachers hold of their school’s capability to influence learning as a whole. Adding to Bandura’s proposed approaches, Goddard et al. (2004) asserted collective efficacy can be measured in four different ways: aggregate the measures of self-efficacy of the teaching staff, aggregate the measure of individual perceptions of the capability of the staff as a whole, determine consensus of levels of collective efficacy through discussion among staff, and determine the extent to which group members agree across their personal perceptions.

Researchers of collective efficacy support Bandura’s (1997) observation that “perceived collective efficacy is an emergent group-level attribute rather than simply the sum of members’ perceived personal efficacies” (p. 478). Goddard et al. (2004) agreed in that submitting questions of individual group members’ perceptions of group capabilities, rather than aggregating individual’s self efficacy beliefs, will more likely
glean valuable information regarding the obstacles, limitations, and opportunities of a given social system such as a school. Therefore, they asserted, measurement of the collective efficacy of schools is more appropriately measured, “as the aggregate of individual perceptions of group capability” (Goddard et al., 2004, p. 7).

In order to measure the level of collective efficacy held by a school, measurement instruments have been researched, created, and tested. Goddard et al. (2000) developed an operational measure of collective teacher efficacy. Tested and found to have “strong reliability and reasonable validity,” this instrument was utilized to measure the relationship between student achievement in reading and mathematics and the collective efficacy beliefs held by urban elementary school teachers. The study found a school’s collective teacher efficacy was positively associated with a school’s average student achievement level (p. 479).

The Collective Teacher Efficacy Scale (CTES) was created by Goddard et al. (2000) using Gibson and Dembo’s (1984) Teacher Efficacy Scale as a model. In their instrument, Goddard et al., stressed the need to measure a school’s collective capabilities rather than the capabilities of individual teachers. Sixteen of the original Gibson and Dembo Teacher Efficacy Scale items were used, however, the “I” statements were changed to “We” statements. For example, “I am able to get through to the most difficult students” was changed to “Teachers in this school can get through to the most difficult students” (p. 487). Additional items were included in order to better balance the Collective Teacher Efficacy Scale.

Four types of items were included in the scale, both positive and negative in nature, acknowledging previous research suggesting efficacy beliefs may be expressed
differently depending on the presentation of outcomes as positive or negative (Goddard et al. 2000; Guskey, 1982). Additionally items were worded in such a way as to ensure consideration be given to both group competence and task analysis. With all this in mind, the following four item types were presented on the (CTES): “group competence/positive (GC+), group competence/negative (GC-), task analysis/positive (TA+), and task analysis/negative (TA-)” (p. 487). Sample items appearing on this scale indicating the four different types of items are as follows:

If a child doesn’t learn something the first time teachers will try another way. (GC+)

If a child doesn’t want to learn teachers here give up. (GC-)

These students come to school ready to learn. (TA+)

Students here just aren’t motivated to learn. (TA-) (p. 492)

Teachers were asked to respond to the statements using a six-point Likert scale ranging from “strongly disagree” to “strongly agree” similar to the Teacher Efficacy Scale presented by Gibson and Dembo (1984).

The CTES questions were field tested and two pilot studies were conducted to provide evidence that scale is both reliable and valid in measuring collective efficacy. In the end a 21-item collective teacher efficacy scale was developed and ultimately used to test the hypothesis, “collective teacher efficacy is positively associated with differences between schools in student-level achievement” (Goddard et al., 2000, p. 498). As shared earlier in this chapter, this study and multiple others have shown collective teacher efficacy to be a powerful predictor of the differences in student achievement among schools. Goddard et al. (2000) used this scale to provide evidence in support of the
extension of the theoretical conceptualization of teacher efficacy to explain collective teacher efficacy at the organizational level.

**Goddard’s 12-Item Scale**

In 2002, Goddard presented a study reporting “on the development of a 12-item Likert-type measure of collective efficacy in schools” (p. 97). He claimed the 12-item scale he developed was more conceptually pure than the 21-item scale to which it is compared. He asserted the 12-item scale to be a more parsimonious version as well. Additionally, he shared, “All items included in the Collective Efficacy Scale are directed at the group, not the individual level” (p. 99). In other words, the scale developed by Goddard (2002) was meant to measure judgments and perceptions teachers have of the school faculty as a whole rather than the aggregate of individual efficacy perceptions, therefore attending to the effects of group membership. The Collective Efficacy Scale – Short Form (Goddard, 2002; Goddard & Hoy, 2003) was used to measure the level of collective efficacy of the high school in the present study (see Appendix A).

The model presented by Goddard (2002) used Tschannen-Moran, et al.’s (1998) teacher efficacy scale as a foundational source. In doing so, he acknowledged collective efficacy perceptions are dependent upon the level of group teaching competence to perform a task and the circumstance in which the task takes place (Goddard 2002). Group teaching competence or judgments include faculty teaching methods, skills, training, and expertise, and task analysis examines the constraints and opportunities inherent in the task, as well as the level of support received from students’ families and the community.
In his review of the Collective Teacher Efficacy Scale, Goddard (2002) identified two areas in which he believed the scale needed attention: to correct the unequal weight of group competence and task analysis elements, and to attend to the considerable length of the 21-item scale. Stated in an alternative way, his new scale was designed to be more balanced and parsimonious. Through his research, Goddard developed a 12-item balanced scale with three items from each of the four categories established from the previous 21-item scale (GC+, GC-, TA+, TA-).

In order to create the 12-item scale, 452 teachers in 47 different elementary schools of an urban Midwestern school district completed the 21-item survey. Both student achievement and demographic data were acquired from the district office to be used to test predictive validity of the scores received from the Collective Efficacy Scale (CES). The teacher responses received after completing the 21-item (CES) were aggregated to the school level then subjected to a principal axis factor analysis. Using those data, decisions were made to determine which items from the 21-item scale would be used in the 12-item scale with the resulting scale being both shorter (43 percent shorter) and more balanced (three items were related to each of the four categories listed previously). The twelve items chosen were subjected to a second principal factor analysis. Results from the testing showed the 12-item and 21-item scales to be highly correlated, and the between-school difference in students’ standardized mathematics achievement could be highly predicted from the use of the 12-item scale.
The Collective Teacher Efficacy Belief Scale

Noting the importance and reciprocal nature of collective teacher efficacy and student achievement, Tschannen-Moran and Barr (2004) created and tested a similar collective efficacy scale, The Collective Teacher Efficacy Belief Scale. Their study sought to explore the existence of a relationship between the collective efficacy beliefs of teachers and student achievement. An additional purpose of their study was to examine the impact of collective efficacy beliefs independent from students’ socio-economic status. Data were collected utilizing the Standards of Learning Tests results of 66 middle schools from the Common Wealth of Virginia as the measure of student achievement, and teachers from these schools were asked to complete the newly created collective efficacy scale.

The scale, designed to measure the faculty’s collective belief to effect student achievement, contains twelve items and is divided into two subscales. These subscales differ from Goddard (2002) in that they are related to instructional strategies and student discipline, not analysis of task difficulty and perceptions of faculty competence. Additionally, The Collective Teacher Efficacy Belief Scale, includes a nine-point Likert scale which asks teachers to rate the presented statements from “nothing” to a “great deal.”

The results from this study showed a significant positive relationship between collective teacher efficacy and student achievement. According to the researchers, socioeconomic status as expected played a role “in explaining student achievement in the schools in this study” (Goddard, 2002, p. 202). However, “collective teacher efficacy was uncorrelated to the socioeconomic status of the school” (p. 204). As cited in multiple
studies, the socioeconomic status of a school’s population does not necessarily determine or predict the collective efficacy perception level of a school organization (Bandura, 1993; Goddard, 2001; Goddard et al., 2000; Goddard, LoGerfo, & Hoy, 2004; Ross et al., 2004; Tschannen-Moran & Barr 2004). Thus, other factors are contributors and must be fostered in order to facilitate high levels of this powerful construct. A possible area holding a high probability of influence is the development of productive and effective teacher teams who are part of the greater learning organization or part of the professional learning community.

**Professional Learning Communities**

Professional Learning Communities (PLC) may be a means to providing the framework necessary for building stronger collective teacher efficacy. As Graham (2007) suggested, “PLC teams were able to develop a level of team community that determined improvements in knowledge, skills, and teaching practices” (p. 9). Teachers as a team contribute significantly to collective teacher efficacy, school culture, and student achievement as does the leadership which transforms it (Ross & Gray, 2006). Previously within this review, literature was presented citing the impact of mastery and vicarious experiences, as well as social persuasion and psychological states, on levels of perceived efficacy. Professional learning community teams provide a venue for increasing teacher effectiveness, both individually and as a collective, by providing examples of mastery and vicarious experiences, support, and feedback from which teacher teams may build their efficacy beliefs.

In addition to this assertion, McLaughlin and Talbert (1993) shared “teachers’ responses to today’s students and notions of good teaching practices are heavily mediated
by the character of the professional communities in which they work” (p. 8). Imperative to group efficacy is the manner in which group members work together. As advised by Alavi and McCormick (2008), “Groups composed of self-efficacious members may not necessarily develop high collective efficacy if there is unsatisfactory interaction and coordination” (p. 376). It is, therefore, not sufficient for individual group members to possess high levels of self-efficacy beliefs, but also important to effectively facilitate and foster positive, productive, and collaborative teams.

The concept of learning organizations or learning communities is not a new idea or organizational practice (Fullan, 1993; Senge, 1990; Servage, 2009). It has, however, become a dominant instrument utilized to improve schools in the omnipresent educational reform movement. Included in a study by Visscher and Witziers (2003), is a definition of professional learning communities as being “. . . characterized by practices such as reflective dialogue, classroom observation, providing feedback on each other’s work, preparing lessons together, etc.” (p. 796). Common content area teams are formed to develop teachers, improve teaching practices, and to support efforts which increase student achievement. Optimal functioning teacher teams not only set goals which are designed to improve teaching practices, but foster and encourage intellectual growth (Hindin, Morocco, Mott, & Aguilar, 2007; Wineburg & Woolworth 2001).

Teacher networks and collegial relationships, as well as support of ongoing learning for teachers, are factors found to influence teacher satisfaction in the workplace, impact efficacy beliefs, and provide a great deal of shared wisdom with regard to the craft of teaching (Fullan, 1991; Hord, 1997; McLaughlin & Talbert, 1993; Rosenholtz, 1989). They are also considered byproducts of healthy collaborative teacher teams and
professional learning communities. Implementing and utilizing a professional learning community requires a change in infrastructure to support collective school goals “where the professionals come together to learn for improvement within a community setting” (Morrissey, 2000, p. 31) with the purpose of improving student learning (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Morrissey (2000) emphasized that the ultimate goal is not to “be a professional learning community” (p. 31), but to inspire continuous professional learning and maximize student achievement. DuFour and Eaker (1998); key practitioners, teachers, and researchers of this organizational model profess while working within a professional learning community “Educators create an environment that fosters mutual cooperation, emotional support and personal growth as they work together to achieve what they cannot accomplish alone” (p. xii).

In order for professional learning communities to function effectively, they must possess five essential characteristics or critical elements: reflective dialogue, de-privatization of practice, collective focus on student learning, collaboration, and shared norms and values (Kruse, Louis, & Bryk, 1994, p. 4). Additional supportive conditions falling into two categories, structural and human resource, are necessary for the development and growth of a school’s professional learning community (Hord, 1997, Kruse et al., 1994). Examples of structural conditions include time, physical structures, teacher empowerment and communication structures. Human resource condition examples to be considered are risk-free environments where teachers feel free and are open to try new things; high levels of trust, respect, and loyalty among team members; and a supportive leadership who maintain and promote the school’s collective vision. Comparable to this list of five characteristic was one offered by Stoll et al. (2006) which
identified shared values and vision, collective responsibility, reflective professional
inquiry, collaboration, and both group and individual learning (p. 227) as essential
characteristics. Along the same line as the supportive conditions above, Stoll et al. (2006)
added mutual trust, respect, and support among staff members as essential to building an
effective professional learning community.

A number of authors have recommended strategies designed to transform groups
of teachers in schools into professional learning communities. Further, descriptions of
suitable environments and essential teacher and leader behaviors likely to cultivate the
PLC construct abound (DuFour & Eaker, 1998; DuFour, Eaker, & DuFour, 2005;
Graham, 2007; Hord, 1997; Kruse, Louis, & Bryk, 1994; McLaughlin & Talbert, 1993;
McLaughlin & Talbert, 2007; Morrissey, 2000; Vescio, Ross, & Adams, 2008). The
school in which this case study is situated chose to use DuFour et al. (2005) as its
foundational source for implementation of the professional learning community model.

Three big ideas or core principles guide the efforts of professional learning
communities: ensuring that students learn, a culture of collaboration, and a focus on
results (DuFour, 2004; DuFour et al., 2005; Eaker, DuFour, & DuFour, 2002). The shift
from traditional school thinking to that of a school as a PLC is from a primary focus on
teaching to a primary focus on learning. Teachers fully engaged in professional learning
communities explore the following three crucial questions:

What do we want each student to learn?

How will we know when each student has learned it?

How will we respond when a student experiences difficulty in learning (DuFour,
2004, p. 8)?
Additionally, teachers shift from independent determination of what to teach to a collaborative approach of an agreed upon curriculum focus, collaboratively built and presented assessments, and a mutually planned response to intervention. Finally, an anticipated shift from traditional school practices to that of a professional learning community will change teachers’ focus on a preferred approach of instruction to a focus on results and what approach will support the highest levels of learning for students. Teachers will evaluate overall student progress based on collaboratively created goals. SMART goals are strategic and specific, measureable, attainable, results-oriented, and time-bound, (O’Neill & Conzemius, 2006). They are clearly written to measure student growth and “team” achievement rather than mere validation based on outside sources.

In view of this change in behavior, (moving teachers from isolation to collaboration), an investigation of organizational learning, collaboration, and effective teaming is prudent. Senge (1990) proposed the means for destroying the idea of the world as existing and working from fragmented, disconnected and unrelated areas of influence. He wrote:

When we give up this illusion – we can build “learning organizations,” organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together. (p. 3)

The premise, definition, characteristics, and goals of professional learning communities align with Senge’s description of a learning organization.
Within a learning organization and a professional learning community are groups of individuals who come together or are assigned collectively to perform designated tasks. Research exits to suggest that these groups will not become consistently successful until they become a team (Gratton & Erickson, 2007; Katzenbach & Smith, 1993; Senge, 1990). In order to better understand this important transformation Katzenbach and Smith (1993) presented their definition of team as, “… a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable” (p. 45). Senge (1990) submitted that great teams trust one another, compliment the strengths and compensate for the limits of one another, and share common goals, not simply individual goals, but those of the collective. Further, he added, “The team that became great didn’t start off great – it learned how to produce extraordinary results” (p. 4). In a similar fashion, McCabe (2006) described groups who are lead into teams as, “…able to blend their complementary skills and talents and support one another to achieve far more than they could ever aspire to individually” (p. 116). Numerous researchers of teams and their dynamics agree that not only do high-performing teams have the capability to meet performance goals, but they are a valuable asset in managing the effects of the rapidly-changing landscape of our global economy (Katzenbach & Smith, 1993).

Nearly 50 years ago Tuckman (1965) submitted a four-stage model for team development: forming, storming, norming and performing. An additional stage, adjourning, was subsequently added following research in this area by Tuckman and Jensen (1977). As a general sequence in the evolution of a team, these stages have merit; however, the model does not take into consideration the complexities of the teaming
process (Rickards & Moger, 2000). Nevertheless, an investigation of this model is prudent.

During the forming stage of team development members become more familiar, develop team protocols, and formulate common goals. It is during the next stage that team members’ ideas, frames of reference and individual perspectives compete with other members’, and consequently conflicts tend to arise. Known as storming, this stage is critical to team development. It is during this stage that some teams are able to move through quickly and where others become bogged down, sometimes never reaching the next level.

Norming is the third stage of team development presented by Tuckman (1965). At this time teams develop a collective mission, define and build consensus, and become collectively accountable for reaching team goals. Once teams have moved through the storm phase and into the norm phase where the norms or behavior have been established, the team focuses their efforts on tasks (Rickard & Moger, 2000). The performing stage is ultimately the level high-performing teams want to achieve. Teams who reach this stage are motivated, knowledgeable, and accept appropriate conflict as part of team functioning.

Group members and/or leaders change and can challenge the team cohesiveness or dynamic, causing it to revert it back to a previous stages such as storming. It is part of the team’s evolutionary process. In contrast, adjourning, the final stage described by Tuckman and Jensen (1977), involves the dissolving of the team itself. It can be brought on suddenly or following task completion. Rickards and Moger (2000) share that the foundation of this model:
… is the implication that teams pass through several developmental stages prior to effective performance. The assumption is that intra-personal and interpersonal needs have to be addressed before behaviour norms are established. Only then can task effectiveness be achieved. (p. 277)

In a review of characteristics of effective teamwork, Mickan and Rodger (2000) provide three levels of analysis by which effective teamwork is examined: organizational structure, individual contribution, and team processes. Generally, each category aligns with the characteristics of a team’s essential discipline outlined by Katzenbach and Smith (1993): meaningful common purpose, specific performance goals, mix of complementary skills, strong commitment to how work is accomplished, and mutual accountability. Real teams, as opposed to working groups, are committed to one another, “their purpose, goals, and approach” say Katzenbach and Smith. “…the wisdom of teams comes with a focus on collective work-products, personal growth, and performance results” (p. 9).

LaFasto and Larson (2001) surveyed over 6000 leaders and teams to determine what is needed for teams to work effectively. They asserted an effectiveness model denoted as the “Five Dynamics of Team Work and Collaboration” which focuses on team members, team relationships, team problem-solving, team leadership, and the organizational environment. Their work emphasizes the importance of collective thinking, collaboration and the capacity to work together.

Adding to the research on effective teams is Hackman (2002). He described five essential conditions that most effectively encourage the success of teams: a stable intact team, a clear and engaging direction, an enabling team structure that promotes teamwork, an organizational structure designed to support teaming, and the availability of competent
coaching offering feedback and direction when necessary. Interestingly, Hackman also shared the importance the inclusion of a deviant member on each team and the imperative that he be protected by the leader. His reasoning behind this assertion is to avoid complacency, promote creative discussion, and to ensure someone asks the difficult questions. He remarked, “People generally think that teams that work together harmoniously are better and more productive than teams that don’t” (Hackman, 2009, p. 25).

A similar line of thinking is presented by Lencioni (2003) in his submission of *The Five Dysfunctions of a Team*. According to Lencioni, “The fact remains that teams, because they are made up of imperfect human beings, are inherently dysfunctional” (p. vii). He continued by suggesting that strong teams can be established, quite simply he added, yet not without a great deal of work. Lencioni’s model of team dysfunctions include: absence of trust, fear of conflict, lack of commitment, avoidance of accountability and inattention to results. He acknowledged the simplicity of his model, but cautioned, “In practice, however, it is extremely difficult because it requires levels of discipline and persistence that few teams can muster” (p. 190).

Worthy of note are the commonalities found in these models for team effectiveness. All promote themes of common purpose and team goals, the imperative of trust among team members, acceptance of and skill in working through conflict, strong leadership, and a supportive organizational structure. Characteristics presented by these authors are comparable to the previously reported essential characteristics and supportive conditions that sustain an effective professional learning community: reflective dialogue, de-privatization of practice, collective focus on student learning, collaboration, and
shared norms and values; as well as time, physical and communication structure, high levels of trust and respect among members, individual and group learning.

Team Learning is one of Senge’s (1990) five disciplines of a learning organization. Within this described discipline are important factors which influence the work of teams. According to Senge, “The fundamental characteristic of the relatively unaligned team is wasted energy” (p. 217). When teams agree on a collective direction and the energy of team members is synchronized, a shared vision is forged, member strengths align and complement one another, and the team works efficiently and collectively toward the common goal.

How do teams find this collective direction and individuals harmonize energies? How does team learning overcome obstacles that interfere with productivity? Senge advised that it “involves mastering the practices of dialogue and discussion” (p. 220). Dialogue and discussion are forms of communication in which collaborative teams must engage in order to forward their mission. Dialogue involves exploring different points of view from multiple perspectives. Senge (1990) explained that individual team members must “suspend their assumptions” during dialogue to truly listen and learn beyond their own individual experiences and frames of reference.

Differences of opinion, open dialogue, as well as discussion frequently erupt into conflict. Often members of teams speak of conflict in a negative vein. Conflict is, however, prevalent among teams who are successful (Senge, 1990; Katzenbach & Smith, 1993; Lencioni, 2002). “Teams that engage in productive conflict know that the only purpose is to produce the best possible solution in the shortest period of time,” (Lencioni, 2002, p. 203). The difference between great teams and mediocre teams are those who
engage in conflict constructively versus those who simply endure it (Katzenbach & Smith, 1993).

One undeniable and important reason teams falter and fail is the lack of trust among team members in the leadership, and in the process of teaming itself. At the core of a high-functioning team is trust; without it teamwork is essentially impossible (Lencioni, 2002). Tschannen-Moran (2004) shared “Trust has, paradoxically, been likened to both a glue and a lubricant. As a ‘glue,’ trust binds leaders to followers and organizational participants to one another … As a ‘lubricant,’ trust greases the machinery of an organization” (p. 18).

Summary

As Hord (1997) in her review of PLC literature revealed, “Professional learning communities can increase staff capacity to serve students, but success depends on what the staff do in their collective efforts” (p. 59). The infrastructure necessary and the multifaceted human behaviors with which individuals approach the team concept make the creation and maintenance of a high functioning professional learning community challenging and complex. Hargreaves and Fullan (2012) wrote, “When the pressure and support is embodied in one’s peers, it is an irresistible force for most people” (p. 58). As the research presented in this chapter suggests, high levels of student achievement and perceived efficacy are the outcomes received from this effort.
CHAPTER III

METHODS

The Research Question

For decades prolific efforts to reform the system of education have relentlessly continued. The use of professional learning communities has been touted as one way in which improved instruction and increased student achievement can be fostered. Professional learning communities are the compilation of many components, none more important, however, than the collaborative teaching teams that function within them. The school in which this study was conducted is a self-professed professional learning community. Within this school community were 42 collaborative teaching teams who with varying levels of success were working to improve instruction and increase student achievement. The purpose of this study was to investigate how collaborative teaching teams learn to work productively together. The primary research question was: How do collaborative teaching teams learn to work productively together?

In the process of this investigation, I discovered three secondary questions were needed to better inform the study: How do these teams define productive or effective? What do team members perceive are important factors to the development of productive teams? How do collaborative teaching team members perceive their level of collective efficacy as measured by the Collective Efficacy Scale – Short Form, (Goddard & Hoy, 2003)?

Methodological Approach

The study was in the form of case study research designed to understand the processes collaborative teacher teams use to guide their work, create their culture, and
influence the learning of students. This study was housed within a large suburban high school, where the professional learning community concept had been promoted for eight years. Prior to the initiation of this study, I was a four-year member of the learning community and an administrator of the school, but was not a member of any of the collaborative teaching teams of the school learning community.

I chose case study as an approach to exploring the process by which teachers learn to work productively in teams. Noted by Baxter and Jack (2008), “Qualitative case study methodology provides tools for researchers to study complex phenomena within their contexts” (p. 544). Yin (2009) added, “As a research method, the case study is used in many situations, to contribute to our knowledge of individual, group, organizational, social, political, and related phenomena (p. 4). In greater detail and more specifically, he offered:

1. A case study is an empirical inquiry that
   - investigates a contemporary phenomenon in depth and within its real-life context, especially
   - when the boundaries between phenomenon and context are not clearly evident.

2. The case study inquiry
   - copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
   - relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis (p. 18).

Prior studies of the teaming process have been observed in laboratory situations, analyzed from surveys by team members, and observed in industry. In this particular school multiple initiatives were at work to improve school climate and increase student achievement through the implementation of initiatives defined in their SLC Grant. In order to delve more deeply into the teaming process and separate the multiple variables at play, case study as defined by Yin (2009) was most appropriate.

In order to effectively inform this study, I utilized interviews, focus groups, survey, and student demographic data, as well as the longitudinal data of student achievement throughout the evolutionary process of the collaborative teaching teams within the professional learning community of this high school. Additionally, I analyzed multiple sources of data to define the characteristics of high functioning teams who foster greater student achievement in order to discover antecedents which can positively influence the effectiveness of collaborative teams, and subsequently, most importantly positively student achievement. I triangulated the varying sources of data to glean a more informed representation of the process teams experience as they move from working groups to productive collaborative teaching teams.

The choice of this approach is influenced by Creswell (2007), who described case study research as, “. . . a qualitative approach in which the investigator explores a bounded system . . . or multiple bounded systems . . . over time, through detailed, in-depth data collection involving multiple sources of information. . .” (p.73) The analysis of higher functioning collaborative teams, the data connected with student achievement,
as well as perceived levels of self and collective efficacy, assisted in yielding a story that, if duplicated, may have a great impact on the positive future of team functioning and the hypothesized connection to student achievement.

**Methodological Rationale**

When considering a qualitative research approach capable of providing the most useful data to scrutinize, study, and inform, I chose a case study research model. Due to the level of rapport and experience I already held in this school community, and the existence of a great deal of both academic and demographic data, as well as multiple years of internal and external evaluation submissions regarding a Smaller Learning Community Grant to the federal government, I deemed this method the most appropriate. This type of data collection allowed for the review of multiple collaborative teams through interview, observation, survey, and the use of data which surround student achievement; attendance rates, discipline records, and grades. These data were analyzed, triangulated, and compared to provide a transparent view of high functioning teams and the academic achievement levels of the students they serve.

Initially, an ethnographic research approach was considered due to the immersive capabilities my position provided. Considering the words of Creswell (2007), the researcher involved with this type of qualitative design “describes and interprets the shared and learned patterns of behaviors, beliefs, and language of a culture-sharing group” (p. 68). The behaviors of the collaborative teaching teams that lead to student success and the camaraderie developed through these shared experiences may lead to a change in culture. Culture change, however, was not the pure focus of this study. It was not merely the intent to report the behaviors, beliefs and language of collaborative teacher
teams, but to discover how the teams move from historically independent, non-collaborative professional work groups to fully effective and collaborative teaching teams within a professional learning community which positively affects student outcomes. Varied and vast amounts of data from the initial grant application through the eight year life span of its use were available for utilization in this study. Combined with in-depth interviews, survey data, and observation, this information assisted me in providing a more holistic description of the process.

**Methodological Presuppositions**

In choosing a qualitative research study, one must be cognizant of the worldviews or paradigms from which their choice of methodology is imbedded. These worldviews or paradigms are defined as a fundamental collection of principles or convictions that influence behavior (Creswell, 2007). Not only are these beliefs important to intrinsically identify as the researcher, they are important to share overtly as the research unfolds.

My methodological choice was based on a comfort level specific research activities provide. This comfort level was influenced by the paradigms which I hold; a worldview which tends toward a postpositivist belief system. Creswell (2007) suggested researchers who hold this worldview tend toward more traditional or quantitative forms of research. My prior education (degrees in business administration and education administration) and career experience (secondary mathematics and business education) foster this view and encourage research activities which utilize a more scientific approach. Although case study may seemingly conflict with my worldview, the question I intended to answer required a case study approach. Therefore, I included more rigorous
levels of data analysis as well as logically structured inquiry of multiple perspectives (Creswell, 2007) into my study.

Also important to communicate is my prior experience as one of four assistant principals within this studied school learning community (not a member of any of the collaborative teacher teams). The four-year immersion into this community as a working member allowed me to convey more detailed and informed research. It was important to acknowledge this position as I worked to present non-biased conclusions. I held great respect and admiration for this group of professionals and worked diligently to present an accurate case study that celebrates their good work, yet assists them and others as we strive to improve the education profession.

**Research Sample**

As previously discussed, the case study is bounded within a 1786 to 2200 student population, 111 teachers, six counselors, and six administrators, of a suburban high school in Ohio. Student data were analyzed from all grade levels (9-12) within this high school and disaggregated by federally defined AYP subgroups.

The collaborative teacher teams whose transition and experiences were studied were comprised of various teachers assigned to 42 separate teams. These teams were defined by subject area and course. Each team was overseen by an administrator and led by a department member who was not a department chairperson.

From these teams, I interviewed 11 individuals (three science teachers, three English teachers, one performing arts teacher, one business education teacher, two math teachers, and one administrator). I interviewed four focus groups which were comprised of two to five members including two social studies teachers, one art teacher, two English
teachers, two foreign language teachers, two science teachers, two math teachers and two administrators. The two administrators were interviewed as a single focus group and not included with the teacher groups. Although length of participation on collaborative teams was a question asked in the interview process, teaching experience was not used to determine interview participation. It was important from my view that we include teachers from various subject areas and those, from my previous interaction, who had varying opinions of the collaborative teaming process. I specifically invited teachers who had been outspoken and opposed to collaborative teaching teams as well. A total of 25 teachers and administrators were included in the interview and focus group portion of the study.

Administrators in this high school were assigned approximately eight teams to observe, approve agendas, and read minutes of the collaborative team meetings. Infrequently, these administrators were asked to intervene or contribute to team planning, decisions, or dissention. In addition to the teacher team members, three of the five building administrators who oversaw and planned the collaborative teaming process also participated in the study through interview focus group, and/or survey.

I used the collective efficacy survey developed by Goddard (2002) in this study in conjunction with other data sources to determine the high school professional learning community’s level of collective efficacy. The overall outcome calculated by this survey was also used to define and describe the level of collective and collaborative work experiences of the teams. All teachers, counselors, and building administrators in the building were asked to complete the survey, and approximately 51 percent were completed.
Sources of Data, Triangulation, Data Analysis

Four sources of data were included in the research process: individual and focus group interviews, Smaller Learning Community Grant Annual Performance Reports submitted to the United States Department of Education, Education Management Information System (EMIS) data submitted to the State of Ohio Department of Education, and results from a collective efficacy survey completed by the school administrators and teachers. The data were reviewed and triangulated to determine any overlapping themes, support or refute conclusions, determine follow-up questions, and provide an overall picture of the collaborative teaching team process at this large suburban high school.

The collaborative teacher teams whose personnel had remained predominantly unchanged were reviewed with greater intensity by comparing interview answers with those of the same team as well as to those from other teams whose personnel had remained relatively intact. This allowed for a better view of the transformation process of the team toward an increase in team effectiveness and productivity. Collective teacher team behavior and efficacy beliefs were also a focus of this study. Teachers were sent an invitation outlining the process of my research. Teachers who were available during certain periods on scheduled days came to a small conference room during their conference period. Interviews were held in the fall of 2012 and the spring 2013. The interviews were recorded and took approximately 40 minutes. The teachers were asked 15 pre-planned questions, previously approved by the Ashland University Human Subjects Review Board (see Appendix B). The questions varied in depth from the length of time served on collaborative teams to obstacles to success, (see Appendix C).
Focus group interviews were held on one day during exam week 2013. Teachers not proctoring exams during that day and time were invited to participate. After reviewing the teacher and exam schedules, I sent email invitations to teachers who appeared to be available during the times of my visit. The principal’s secretary sent a follow-up reminder through email. Four different groups ranging in size from two to five participants were interviewed in various conference areas of the high school building for approximately 60 minutes each. A variety of content area teachers were in each group. During these interviews, I used HSRB previously approved general topic areas and asked for some clarification of common terms discovered during the individual interviews. Figure 3.1 includes the general topics discussed during each focus group session.

Following the first day of interviews, I listened to the recordings and made notes, searching for relevant pieces and common themes. When returning to the school for the second session of individual interviews, I asked the same questions but was better able to delve more deeply and focus more intently into areas where I had previously discovered common themes or relevant subject matter.

Following the completion of all individual interviews, I transcribed the recordings, reread the transcripts and coded common themes. The information gleaned from the individual interviews allowed me to listen more closely for information during the focus group interview process. For example, it was during these interviews where I was able to ask for the teachers’ definition of “buy-in” and “trust,” commonly used by all interview participants.
Figure 3.1. Focus Group Topics

- Communication
  - Internal
  - External
- Research
- Timelines
- Self-reflection
- Targets/goals
- Monitoring growth and change
- Professional Development
  - Self-initiated
  - District
  - School
- Results
  - Teacher
  - Student
  - Building
- Celebrations
- Environment
- Sustainability

In addition to interviews of individuals from collaborative teacher teams, administration, and focus groups interviews, outside evaluator reports of the Smaller Learning Communities Grant were reviewed. These evaluations were submitted to the United States Department of Education. Compilation and review of all these sources were used to gain a better understanding of how collaborative teacher teams move from a group of teachers to an effective and productive collaborative team of teachers.

Five years of quantitative data were available to explore the longitudinal changes which I presumed were affected by collaborative teacher teams: GPA, subject area retention rates, Ohio Graduation Test scores, Advanced Placement test scores, ACT and SAT scores, discipline incidents, attendance rate, and graduation rate. Demographic changes were also studied as they too have impact on student achievement (e.g.,
transiency can be found to affect student achievement). Also noteworthy is the requirement of these data by the U.S. Department of Education in the required SLC Annual Performance Report. Student achievement data, attendance, graduation rates, and demographic data were utilized and analyzed by both the school and the department of education to determine effectiveness.

In my review of the literature, I found a great deal of individual and team success can be attributed to feelings of self and collective efficacy. With that in mind, I chose to include as a form of triangulation of data, the Collective Efficacy Scale-Short created by Goddard (2002). Both a longer 21-item scale version (Goddard et al., 2000) and a short 12-item version (Goddard 2002; Goddard & Hoy, 2003) exist. In order to motivate more teachers to complete the survey (scale), and I chose to use the shorter 12-item version. I chose the CES – Short Form (Goddard, 2002) over the 12-item Collective Teacher Efficacy Belief Scale (Tschannen-Moran & Barr, 2004) due to the focus of the questions posed. The CES – Short Form is related to teacher analysis of task difficulty and perceptions of faculty competence, while the CTEBS subscales focus on instructional strategies and student discipline.

**Collective Efficacy Scale – Short Form**

The Collective Efficacy Scale (CE-SCALE) was developed over time and began in its initial phases by adapting a teacher efficacy scale similar to Gibson and Dembo’s 1984 Likert-scale instrument. Goddard et al. (2000) made changes such as “I can” statements to “Teachers in this school can” statements. The instrument was reviewed, revised, and piloted using a sample of 70 teachers, each from 70 different schools in five different states. Following this initial pilot, revisions were completed and a subsequent
pilot was performed. The second pilot utilized a population of 47 randomly selected elementary schools and 99% of 452 teachers from those schools “within one large urban Midwestern school district” (Goddard et al., 2000, p. 18). This population was chosen in order to alleviate possible differences brought about by a difference in urban and non-urban schools, organizational structure of different levels of schools, or any difference reflected between different school districts.

Multiple tests of validity and reliability were performed by the researchers. These tests included, but were not limited to, a principal axis factor analysis, criterion related validity tests on variables such as personal teaching efficacy and faculty trust in colleagues, and hierarchical linear modeling as a test of predictive validity. According to Hoy, “Taken together, these results provide content, criterion-related, and predictive validity evidence for scores on the collective efficacy scale as well as strong reliability evidence” (2005, p. 2).

Building on the work of Goddard et al. (2000), Goddard (2002) developed and tested the Collective Efficacy Scale – Short Form. Added Hoy (2005), “the validity and reliability of the short form are strong” (p. 3). Goddard wrote of the short form, “Although the short form is substantially shortened compared to the original, the correlation between the scales (r = .983) suggested the 12-item scale is quite strongly related to the original scale (Goddard, 2002, p. 108).

Completing this version, teachers in my study rated 12 statements by filling (bubbling) in answers from six choices: one through six; strongly disagree, disagree, somewhat disagree, somewhat agree, agree, or strongly agree (see Appendix A). The statements presented for rating range in focus and examples from the scale are:
Teachers in the school are able to get through to the most difficult students.
Teachers in this school believe that every child can learn.
Students here just aren’t motivated to learn.
Drug and alcohol abuse in the community make learning difficult for students here. (Goddard, 2002, p. 107)

I presented the CE-SCALE Short Form to the building principal who included it in a short faculty meeting preceding collaborative team time. Approximately half (50.8 %) of the teachers returned the scale. I followed the directions for scoring provided by Goddard and Hoy (2003) and scored the responses.

In addition to surveys and interviews from the teacher teams and their leaders, the administrative team participated by completing surveys and interviews as well. This allowed for another view of the performance and evolutionary levels of the teams. The compilation of qualitative data was coded, triangulated, and compared with the quantitative data attached to the students who have been under the guise of these teams in an effort to provide an informed description of activities and attitudes that contribute positively or negatively to student achievement.

**Research Timeline**

The high school participating in this study was awarded a Smaller Learning Communities Grant from the United States Department of Education in 2003. The beginning of the implementation of collaborative teaching teams as part of a professional learning community began the following summer with the reading of the book *On Common Ground*. The timeline for the full launch of the collaborative teaching team process began the next school year, 2005-2006.
I joined the administrative team as an assistant principal the summer prior to the 2006-2007 school year. After completing four years working in this capacity, I moved to a new high school in a different district. This study began one year after my move to a new school following approval from the Ashland University HSRB and from my dissertation committee. Interviews were conducted during three different sessions over the course of the school year two years after I had left the position of assistant principal. The collective efficacy – short form was completed by school staff during the fall of 2012, the year when interviews were conducted. The school made their last report submission to the United States Department of Education during the 2010-2011 school year.

**Validity and Reliability**

In order to ensure a credible study, multiple data sources were utilized (structural corroboration). I used grant evaluation reports which included required external evaluator reports and internal executive narrative summaries to support the qualitative findings of individual and focus group interviews. In addition to the summaries from the grant reports, I studied the demographic data to support teacher, administrator, and grant definitions of initiative success (evidence of student growth in particular) It was also important to return to those interviewed and discuss my interpretations of the interviews in order to determine if what I understood was what was meant by those interviewed (member checking). This supported the requirement of multiple data sources and triangulation needs as well.

Another trustworthiness tool I utilized in this study was negative case analysis. To do so, I specifically invited teachers who had been less than enthusiastic about the
collaborative teacher teams initiative to participate in the interviews. I used the data gathered from these individuals to identify similarities and differences in themes indentified during the analysis process, specifically searching for contradictions to the themes found from those openly supportive of the effort from the beginning.

Following each set of individual interviews, I coded and returned to the school with follow-up and clarification questions. Additionally, my interpretations were shared in discussion with building administration following each set of interviews and with previously interviewed teachers during my subsequent visits in order to continue the member checking process. Additionally, an overall summary of the findings was shared with administrators and subsequently offered to participants for review. Confirmability and dependability are important aspects of the research process which triangulation, structural corroboration, and consensual validation promoted (Creswell, 2007).

Consideration was also given to the population being studied and the manner in which I was situated. It was important for me to be cognizant of possible tainted responses provided from those interviewed for fear of reprisal or a desire to please me as a former administrator by offering responses deemed favorable. Although my review of documents began shortly after my study’s approval, I did not return to interview teachers or administrators until two school years following my departure from my position as an administrator in the building. Further, I chose to hold the majority of my interviews away from the administrators’ offices, predominantly in teacher work spaces, in order to promote a more comfortable environment for the participants.
Ethical Considerations

My position as researcher and former administrator was an important consideration when interviewing, observing, and reviewing collected data. It was imperative that I not use the data in an evaluative manner and I was fortunate to have moved into another position outside the school and school district prior to conducting individual focus group interviews. With that said, I honored the anonymity and confidentiality of the participants to protect the students, teachers, school, and district from any findings which might cause harm.
CHAPTER IV

RESULTS

The primary intent of this study was to determine how collaborative teacher teams learn to work productively together. Individual and focus group interviews provided the major amount of information reviewed for this qualitative case study revealing the process of the manner in which these teams became effective; how the groups of teachers became collaborating, collegial, professional work teams. To better understand the teachers’ journey, experiences, and context from which they based their stories, answers, and views, I also thought it important to review progress and evaluation reports submitted to the United States Department of Education on the Smaller Learning Communities Grant the high school was awarded and was implementing. This review of report documents also supported teacher definitions of effective teams. Finally, while reviewing the literature, I discovered the importance feelings of collective efficacy play in the success of collaborative teams and sought to determine the level of collective efficacy among this community of educators. As such, the level of collective efficacy of this school was measured through the use of a collective efficacy scale – short form (Goddard, 2002; Goddard & Hoy, 2003), and the results of the completion of this scale are included in the chapter.

One of the most important questions answered and imperative to examine at the onset of this study was how the teachers and administrators defined an effective team. In all areas I reviewed, a major component used by effective productive teams as they evaluated themselves was student performance and growth. Not one teacher or focus group failed to offer student achievement and growth as one way in which effectiveness
was measured. The primary measure of student performance was state standardized test data and common summative assessments.

Further, student growth was professed to be a measure of success for the entire Smaller Learning Communities Grant initiative and was stated as such in the SLC APR executive summaries, outside evaluator reports, and the initial grant requirements. The collective efficacy scale, utilized in the triangulation of data sources, posed several statements regarding the teachers’ collective ability to influence student learning. For the purpose of this study, however, student learning was immensely important, but not the single component influencing the transformation to productive collaborative teacher teams. With this in mind, I looked deeper into the information collected through the interviews.

**Individual Interviews and Focus Group Interviews**

From the review of the eight individual interviews and four focus groups I was able to discover several common themes regarding the components by which this school’s teams learned to be productive: (a) administration, (b) buy-in, (c) communication, (d) data, (e) professional development, (f) teacher leadership, (g) time, and (h) trust. These themes were consistently shared in all interviews, even from those who I predicted would have differing opinions, yet varied in degree of importance and type of influence.

**Administration**

The original framework of the collaborative teams was created and implemented by the administrative team. In order to guide and provide a foundation for the transition from the longtime engrained culture of individualism and isolation, the administration
provided a copy of DuFour et al.’s (2005) book, *On Common Ground*, to all staff members. Using this book in a book study format, the administration offered a less imposed change in working conditions by allowing teachers time to discuss the advantages of collaborative work and to brainstorm ways in which this type of professional work could be accomplished at this high school. After the inaugural year, teacher representatives worked with administrators strategically to plan both long and short-term tasks aligned with the goals of the Smaller Learning Community Grant with which they were involved as well as the building and district improvement plan. At the initial fall teacher meeting of each year, the teachers received a schedule of meetings and a thorough description of tasks teams should include in their work. Over time these tasks became guidelines and teachers had more autonomy in the work they did on a meeting to meeting basis. Most teachers spoke of the importance of the structure established by the administration. A teacher present from the inception added, “Having the structure of the data team meetings in the beginning was huge.”

Initially the schedule, tasks, and suggested agenda items were provided to help teachers engage effectively in the work. Included in the tasks sheets was a small review of items from the book *On Common Ground* the staff read prior to the journey into the professional learning community building process in addition to excerpts from manuals received in professional development training, documents received from attendance at conferences, and additional applicable literature (e.g. articles from *Educational Leadership*).

Although this initial planning by administration was completed to allay fears and trepidation, the change in the “way things are done here” did not happen without
resistance. According to one teacher leader, “during the first year of PLCs here, it was like mayhem here. People thought they were going to die.” She continued by sharing how difficult it still was because as they continued to strive to work together and meet students’ needs, some had to give up some of their more favorite activities and units, those which did not “fit” into the new team plan. She added, however, “looking back and saying, ‘look what we did as a team for those kids’ has to be a good thing too.”

In the interviews an almost unanimous description of administration was that they were “hands off.” According to teachers and through my experience I can confirm, teachers were required to submit a meeting agenda to their assigned administrator prior to meetings and also submit meeting minutes following the meetings. This level of involvement received both positive and negative comments regarding administration and the way in which they were involved.

For example, one team member commented when discussing administrative oversight, “when we know someone is paying attention to what you are doing, if you know there is somebody else saying there is a purpose, you will dot your i’s and cross your t’s a little more.” He also shared that the administrator assigned to his team read and commented on all their agendas and minutes adding, “… that has made a difference.” Another teacher when asked specifically about the role of administration said, “They play a role, but they’re hands-off. They give guidelines and provide communication.” One interesting comment along these lines was, “Administration gives tasks, but collegial growth comes from our peers. We would not be a big strong group if the leader was our boss.” Adding to this topic, a teacher from one of the focus groups shared, “even though
we had a framework, we were permitted some give and take . . . a little variance from the agenda was ok.”

According to most teachers interviewed, teachers and administrators were now on the same page. In the beginning, administration strongly pushed common formative and summative assessments. The initial teams were called “PLCs” which changed to collaborative teams operating within the professional learning community and more recently had been renamed by central office administration “data teams.” From the initiation of the collaborative teaming process the focus remained the same; however, labeled as data teams, teacher teams gave a great deal of importance to reviewing and analyzing data to inform instruction and improve student achievement. The review of student data gave teachers the most significant evidence that their work was important and worthwhile.

It is important to disclose the acknowledgement that teachers granted regarding administration and time and commitment. Administration modeled the importance of the collaborative team process by dedicating time previously used for other work to teaming. They [building administrators] also made it clear there was no choice. During one of the focus group sessions a teacher commented, “They acknowledged ours and their fear of change, but we didn’t have a choice. Here we go. We’re going to learn together as a school. We started small.”

Administration also created a risk-free environment where teachers felt comfortable taking risks and trying new things. Proclaimed by one teacher of a focus group with others supporting his views, “There is almost no risk here. You will be supported by building administration and other teachers 99% of the time.” The majority
of teachers shared this view of a risk-free environment exhibited from the administration at this high school. Of importance to note though is that when asked “Who determines the success/effectiveness of the teams?” most answers included not only team members but administration. “They track our data.” A final comment of interest in this area was:

The biggest role administrators play in teaming is to create the schedule and align good team members together. In line with this, they have to run a lot of interference with our central office staff. Further, administrators have proven very helpful with professional development and in collecting a lot of the data we teachers do not have access to. Finally, they are your cheering section and are always there to support you when you are out on a limb with teaming.

In contrast to positive comments about the administrators’ role, however, central office administration did not receive the same admiration, nor did the building administration from every interviewed teacher. Although some negative aspects of the teaming process were shared in all interviews, the most negative views were shared regarding what was perceived as intrusion into the teams’ work by district administration and their agenda. Multiple teachers commented:

Teacher One: “Central office taking control of our time for their initiatives is a problem. They really get in the way. We have the work to do for our kids.”

Teacher Two: “Here’s the busy work we have to do for Central Office, then we can get to what we think is important.”

Teacher Three: “CO agendas used to be passed through staff meetings. Someone from CO would come down and talk to us. Now they put it into PLC groups, then the building administrators come through to make sure we’re doing it.”
Teacher Four: “CO is intimidating and offers no feedback and little communication.”

Teacher Five: “Doesn’t CO see this? We’re so productive in our teams when they give us the time to work.”

Teacher Six: “Teachers don’t feel that CO believes in what they’re doing because they’re piling more on.”

Some of the district initiatives about which the teachers talked included High Yield Instructional Strategies, (Marzano, Pickering, & Pollock, 2001), The Gradual Release of Responsibility Model (Fisher & Frey, 2008)), Response to Intervention (e.g., Murawski & Hughes, 2009), and a study of Visible Learning (Hattie, 2009). Arguments against these initiatives were based in their interference with the work data teams were designed to address. The number and continual introduction of initiatives by Central Office was also presented as concerning, “No more initiatives! Give us time to look at the kids’ scores and look at the kid as a learner and time to come up with instructional devices to let that child learn. It’s hard to put RTI into place when you don’t have time to talk about individual children.” A poignant summary of this issue was submitted:

Where we were to focus on instruction, collegiality, collaboration, and student work; we have moved to someone else’s agenda [during data team time]. Maybe these things are about instruction and are coming from good intentions, but they are biting into time when we used to talk about kids, their work and instruction.
Buy-in

A quite consistent theme echoed throughout the interview process was the importance of buy-in from team members. “I have a theory about buy-in” proclaimed one teacher:

it is a voluntary process where a teacher opens their mind to an idea . . . The frustration comes, seems to me, when a professional at anything would not be open minded and give things a try.

When specifically asked to define buy-in, one teacher shared, “I think buy-in comes when you personally agree to do it – there is some benefit that kicks back to you.” Another teacher in this focus group described buy-in as, “voluntary, which makes it subjective, makes it fluid, undependable. That’s frustrating,” he added. The group of teachers and administrators interviewed from this high school shared that buy-in is a necessary ingredient to the productivity and effectiveness of teams, and is both given and earned.

At the onset of the collaborative teaming initiative, many “bought-in” out of duty and professionalism, some due to their loyalty to the long-time principal. At this point buying-in meant cooperating, being open-minded to the process, reading the book, and completing the tasks established by the school administrative team. “There was resistance at first,” said one teacher “some just thought it was something that would cycle through. But once we got into it, as products came out and we saw the benefit, there was a transition where there was less resistance.” Explained by another teacher, “I think you have to have an ok attitude with it and not be closed minded.” True buy-in is aided by
open-mindedness and time. Positive results supported by reliable data are essential to such a transition.

As discussed previously, administration had a great deal to do with the framework, initial ground rules and requirements of each team. One area they pushed incessantly was the use and analysis of both common summative and formative assessments. Through common assessment, teacher teams were able to collect and review data. Teachers “will not buy in if they think data is bunk,” declared a teacher. Analysis of the data, whether group or individual, once discussed with the team, provided evidence of student growth; the ultimate purpose of the collaborative teacher teams. These discussions and analyses contributed to sustained and greater performance by teachers and students. Subsequently, the result was greater buy-in of the collaborative teacher team initiative.

Several of the teachers spoke of the understanding of and believing in the purpose of collaborative teacher teams. They shared that in order to encourage buy-in, goals needed to be placed at the forefront; “those goals were focused on the kids.” Further discussion with one of the focus groups elicited this pronouncement, “It has to do with, does everyone on the team see the purpose of what’s being done. Do they buy-in to the goals set? The team is more productive when we all can see the goal and buy-in.” One of the administrators in an earlier interview explained, “Buy-in is trusting one another, trusting the results, and trusting the work is worth it.”

**Communication**

One of the initial items discussed during each interview was the definition of an effective team. In every session teachers and administrators spoke of the importance of
communication: communication from administration, to administration, and within the teams and departments. An effective team “communicates well and often. Each member is willing to compromise for the greater good,” shared one teacher. Yet another added, “People need to meet face to face, to value people for who they are and respect what their unique qualities have to offer.”

Several teachers spoke about the transformation of the groups to teams in that their communication style is like that of a family. “Families can work through and resolve differences,” said one woman, “be respectful of opinions.” From a different interview an interesting comment was shared, “It’s a journey. We know where we’re trying to go and we’re going together. The question is can we be open to advice and giving like a family instead of judging?” Family conversations can be lively yet intimate. In the end for most families, it is the ultimate level of care that is taken into consideration. One team leader pointed out, “you try to make it so it is never a personal attack, and somehow you are showing empathy and at the same time you are offering assistance.”

Important to the journey was the creation of tasks and agendas by administration at the onset of the process. Many spoke of agendas helping to guide conversations, “Having the structure of the data team meetings in the beginning was huge. Communication was supported by offering time and providing requirements of data and following the agendas.” In other words, administration guided the discussions and provided data to study and avenues of communication which facilitated the growth of these teams. One teacher interjected, “my department collaborates constantly. We’ve been trained this way to think.” Through the process the teachers have become less
proprietary and according to one, “we want to share.” Another focus group member added, “The communication is enriching, productive, and focused. We collaborate!”

Although the overall conversations with the teachers and administrators were positive, just about everyone interviewed had suggestions or negative views on communication with respect to collaborative teacher teams. In some cases it seemed members were unhappy with teachers who were unwilling to cooperate; bring real data, share, follow the norms. “It’s hard to talk to people who don’t see how you see,” said one focus group member. “It creates arguments,” interjected another. “You’ve got to have give and take. You really must be open,” added a third. In the most dysfunctional teams, shared one more, “They just agree to disagree and then do their own thing.”

In other cases teachers were unhappy with administration and the amount of feedback received. “It’s ironic that there is such a big push for feedback, and when we don’t get it it’s frustrating,” said one teacher during a focus group interview. Later nearly an identical comment came from another focus group member, “It’s frustrating. We don’t get any real feedback. We give feedback to students. We crave that too.”

One the other hand, some teachers interviewed remarked about the positive impact their administrator had had on their team. The administrator made sure to comment on the agendas and minutes each time they were submitted. “Wow, someone is actually paying attention to this” stated one teacher. Teachers also agreed this oversight supports the leader and other team members by acknowledging the receipt of information and having the knowledge of what is supposed to be transpiring during these meetings as well as in the classrooms. Again here was another example of an effective cycle of
communication which, according to those interviewed, is essential to the success and productivity of the collaborative teams.

Other conversations yielded additional aspects of collaborative teaming that increase the ability to communicate. A more intimate group could result from dividing into smaller groups, which allowed for more productive communication. A collaborative team member and department facilitator added, teaming “. . . gives you a small enough group, three or four teachers, is less intimidating than eight or twelve . . . adds to the level of comfort.” This level of comfort according to teachers interviewed allows members to take a risk and share. As the previous contributor said, “Can we have a real conversation about what works and doesn’t work without being territorial? We can do that.”

Collaborative teacher teams are designed to do just that; provide an arena or forum for good quality communication among teachers. A teacher newer to the teaming process added, “Why is it not a good idea for us to bounce ideas and have conversation?”

Data

In order to be successful, collaborative teacher teams work to improve instruction and increase student achievement. To do so, a study of student data is essential. The study of student data, combined with high yield teaching strategies and committed education professionals, allows collaborative teams to add a great deal of impact to student learning. Knowing this, teachers and administrators discussed retrieving, understanding, and using data in their collaborative teacher team work and throughout the interview process.

Common data used were grade point averages, discipline referrals, failure rates, attendance rates, Ohio Graduation Test results, Advanced Placement enrollment,
common formative and summative assessment results, SAT and ACT scores, as well as other demographic information. These data sources were used to inform everyday practice and to make adjustments to instruction as student performance dictated. Stated succinctly by an interviewed teacher, “Ultimately data are used to continuously improve.” From a review of the data, teachers returned to their teams to collaborate about content students were unable to master and strategically, methodically planned to help students grow and succeed. Data were not only used to inform, but were used to sustain, motivate, and celebrate teachers’ dedicated and difficult work.

One teacher remarked, “Data are used in collaboration, to review common assessments. We look to see if kids are getting those enduring understandings, showing a level of competence on those common assessments and the OGT.” Still another teacher in the same department, yet not on the same team added, “We use data to evaluate our product. Are we on track to meeting our goals?”

Again in the collaborative teacher team process, administration played an important role. In order to build a productive team, said one teacher, “... it takes time and trust and administration on our backs about common assessment, but not on our backs about what data look like.” In the beginning at this high school, teachers needed to learn to review data effectively and do so without fear of reprisal. According to most teachers, this administration had done an excellent job of creating a risk-free environment for teachers to openly discuss their data. At first, commented a teacher, “We had to be honest with ourselves. We had been teaching so long, but we didn’t even have good data or know how to get it. You have to have data for individual reflection and together reflection. Not until PLCs were we offered this
opportunity. You have to have a willingness to reflect in front of people. One reason I seek help now is because I don’t want my data to come back bad.”

In the initial stages of the collaborative teaming process, it was important for administration to provide teachers with an adequate explanation of the process and purpose of data collection. Teams were required to use common assessments, use diagnostic pretesting and compare data to determine progress and inform intervention strategies regularly. In addition, teachers also were expected to post analysis notes in their collaborative teacher team minutes. Not only was there discomfort in sharing data with peers, a level of skepticism was evident among teachers surrounding the inevitable use of data in the future. “The purpose of the administrators providing you data in this building has been to help you do better and for the kids. So you can see what that fear would be if someone else got a hold of it,” commented one teacher. “That fear,” she continued “restricts some from getting down and dirty with the data.” Another teacher shared, “They have all this physical data they can pull to try to justify your existence of your pay and obviously that is scary.”

Several teachers commented it took a great deal of time for teachers to learn to create valid common assessments, analyze the data they produce, and use them effectively to change teacher behavior and increase student achievement. Teachers also shared that data affected buy-in. If teachers believe data are not valid or useful, they view it as a game or obstacle to getting to the real work. For example, a comment made was, “We’re not math. They can make the numbers say whatever they want. Some just don’t see it as intrinsically valuable.” He further explained, however, “Those who have tried to use it, utilizing writing rubrics and tying them to standards, have found it to be fantastic.”
The use of data also allowed the strengthening of the teaming process, for it allayed the fear of creating robots by automating the teaching process or removing the autonomy enjoyed by teachers for ages. Utilizing common formative and summative assessment data provided evidence to support individualized teaching decisions and methodology by teachers’ teaching the same content in different ways, but enjoying similar student growth results. “As we’ve become more comfortable about teaming, we can agree to teach in different ways as long as we are giving the same assessment,” explained one veteran teacher. In contrast, however, teachers’ data also prompted in-depth dialogue surrounding teaching strategies where some teachers had greater growth results than others. By using common assessments, whether standardized or commonly created, teachers were provided common assessment points prior to and following instruction. One of the teacher leaders observed, “Data have been helpful because you can see the progress there.” Progress attached to teachers and their teaching strategies, affected change, confidence, and creativity in many. Most mentioned the importance of viewing data objectively, not making the review a personal attack or by offering too many accolades to those who exhibited greater growth.

**Professional Development**

Aided by the Smaller Learning Communities Grant sponsored by the United States Department of Education, the administration of this suburban high school was able to provide multiple and varied professional development experiences for the teaching staff. Shared earlier, the initiative began through the use of a book study to assist in providing a foundation for the implementation of collaborative teacher teams.
In the next phase of implementation, teachers and administrators visited Adlai Stevenson High School in Chicago, Illinois, to receive a more in-depth view and first-hand knowledge of what was described in the book they reviewed during the book study. Several trips were made and a large sample of staff members was provided the experience. Additionally, a consultant and former dean of students from Adlai Stevenson, Sam Richey, provided the initial professional development for the leaders of the newly formed teacher teams. He returned regularly to provide more assistance and calibration of the process. One of the teacher leaders who received professional development from Mr. Richey and whom I later interviewed shared, “Sam Richey was awesome. When he was explaining the lights kind of went on. I shared with some of my team members. They said, ‘let’s go for it!’ And we did.”

While ongoing professional development in the collaborative teaming process and trips to Adlai Stevenson continued, administrators scheduled regular meetings with team leaders to determine additional needs in this area. Summer stipends were available for more professional development in areas which supported teaming: Mastery Manager (data collection tool), creating common formative assessments, and Response to Intervention. According to a team member interviewed, “Regular and useful professional development needs to be in place for both teacher and student learning to be ongoing.”

When asked about additional professional development that may have been helpful to the teaming process, one teacher responded, “It may have been helpful to have some professional development to know what type of and how to collect data.” Further comments were added regarding the subject of data by another stating, “What would it [data] look like? What do we do with it?”
One negative noted by the teachers interviewed in this case study was the inadvertent isolation collaborative teacher teams produced. Once the collaborative teacher team initiative began most faculty and department meeting times were devoted to collaborative teacher team meetings. During the former meeting structure a social aspect to the school community was afforded, where larger groups of teachers were assembled. With the change in meeting structure implemented with the collaborative teacher team initiative, several teachers remarked of their desire to interact more regularly with the entire faculty. A teacher involved in this initiative from the beginning described his wish to know more about other school departments, “I know that the arts, athletics, and academics are top notch, but I really don’t know a lot about the people in those departments.” This aspiration surfaced during the professional development discussions. “Team building,” one teacher suggested, “not to fix a problem, but to pull staff together would be a great professional development opportunity.”

**Teacher Leadership**

One great advantage to collaborative teacher teams is the opportunity to utilize teacher strengths, experience, and knowledge in a collective manner in order to impact teaching and learning. Another positive attribute of these teams is the prospect of empowering teachers through teacher leadership, both as a team leader and as the team creates their own path for learning and achievement. Also advantageous is the buy-in gained through teacher leadership rather than administrative directive. According to administrators and teachers alike, the lack of true teacher leader commitment may result in a lack of impact on student achievement, an important result of productive and effective teams.
When asked about a high impact element on a team’s transformation, multiple teachers shared, “teacher leadership.” Many teachers spoke of the leader as willing to be the “go to” person. Specifically one shared the leader is “somebody who can; they are not really the boss, but they feel comfortable providing directions and they are comfortable assigning tasks to people.” In addition teachers shared an opinion about the need for organizational skills and a willingness to deal with the distracters. “You have distracters in every group. You have to be able to zone them back in to what you are trying to accomplish,” offered one team member.

A teacher from one interview shared their team’s rotating leader idea. Although they shared the duties and roles of the leader, she admitted, not all team members made great leaders. Again she shared the need for organization and was concerned about the organization of information and data collection. Although they were all happy to do the work, not everyone was as capable of organizing the work.

When it came to disgruntled members, strong leaders were able to help team members stay focused on team goals. According to a team member and department facilitator, “Unless you have someone in there that will lead and talk in the right coaching language, you’re not going to get there.” Added another, “A strong leader promotes a conversation with, ‘we’ll help you.’ He is proactive and uses a constructive approach.” One profoundly important opinion shared was, “the leader affects just how good a group can be.”

**Time**

One of the most consistent themes surrounding the success and impact of collaborative teacher teams was time. Teachers and administrators presented this from
two different perspectives: actual time devoted to team work and longitudinal time to allow for teams to evolve. Time was presented as an absolutely essential component to the success of teaming by nearly every interviewed participant.

Most public schools allow little time during the teaching day for teachers to work together. In many cases high school teachers receive a 30 minute lunch period and 50 minutes of conference time each day. In large overcrowded high schools with tight budgets, complicated schedules, and where other school initiatives compete for teachers’ time, teacher collaboration time is reduced to merely minutes of discussion as teachers pass through the hall. Some teachers enjoy collaborating and do so voluntarily before or after school. Without structure and common vision, however, this type of collaboration is not necessarily successful or sustainable. Without purposeful allotted time, very little remains for teachers to practice high quality collaboration.

In the high school studied, the previously described scenario was precisely the manner in which collaboration occurred prior to the highly researched and strategically planned implementation of teacher collaborative teams. As part of the Smaller Learning Communities Grant awarded to this school, administrators and teacher leaders devised the creation of their professional learning community. Shared by one administrator, “If you want it to mean something, you have to make it mean something and allow teachers to meet on your time. We made it a priority by giving of our time and time during the school day.” One of the teachers added, “Our principal gives us the time. If we did not have the time to do it, we would not get it done. We need time to collaborate and we need the time set aside to do so.”
With few exceptions, monthly staff and department meetings, contractually provided, were allocated for collaborative teaming. Teachers became accustomed to receiving building communication through email and through their collaborative team meetings via their team leader. Teachers also signed a memorandum of understanding between the teachers’ union and Board of Education to allow for a 19-minute longer day. Ninety percent of the teaching staff at this high school voted in agreement of this change in working condition.

The accumulation of time allowed for a one hour late start each month. These were utilized exclusively for collaborative teacher team work. In addition to these times, the school district provided approximately two hours quarterly through school late starts for professional development. By definition PLC teams work together to improve teaching and learning, therefore, the two hour late starts also were utilized for collaborative teacher team meetings.

When asked their thoughts on the transformation from group to team or the obstacles and barriers for successful transformation, several teachers said “time.” One teacher shared, “without time we would have never been able to do this.” “PLCs” added another, “offers time for both individual and team reflection.” A third teacher maintained, “The initial time helped open our eyes to what we could do and is valuable.” Time is needed for data collection, charting, analyzing and planning. One fairly new teacher to the profession and teaming added with conviction, “. . . without it, I would have drowned.”

What was strikingly apparent and consistent, was teachers’ reaction to changes imposed by the district administration recently. After a school tax referendum failure,
some changes in district office personnel, and movement toward new district initiatives, 
the high school lost their one hour late starts, and other allocated data team time was 
permeated with district professional development agenda items. “We’ve been moved to 
someone else’s agenda . . . it’s biting into time when we used to talk about kids, work, 
and instruction. We want our time back!” declared a focus group member. “CO takes late 
start dates with their stuff. We don’t really have enough time to do what we really need to 
do. More and more is being asked of people and less time is given,” remarked another. 
Yet another teacher pronounced, “CO taking our time is a problem!” Interestingly one 
more teacher commented, “. . . you get the feeling they think they’re giving us too much 
free time.”

On the other hand some teachers observed not all teachers appreciate the time 
provided for collaboration. “Some teachers are fundamentally opposed to the concept of 
teaming. They see it as an imposition into their time and classroom,” stated a leader. A 
focus group member shared “Some teams are using the time more for planning than data 
analysis due to time – not enough time to look at and plan the course.” One of the 
facilitators interviewed said, “The gaps in time from meeting to meeting are problematic 
in there is too much time gap from meeting to meeting.” With eyebrow raised one 
commented, “Some value it, some squander it. There is never enough time.”

The other type of time dominating the conversations regarding the components 
needed for creating a productive team was referring to the span of time teams worked 
together. Transforming a group to a team, according to teachers and administrators 
interviewed, did not occur instantaneously. According to one teacher who had been on 
her team since the inception, “. . . it takes time and trust. You don’t know enough in the
first three or four years to come up with a good agenda. You don’t know what you don’t know.” A member of a different collaborative team revealed, “It took three years to get on the same page!” A majority of those interviewed referred to learning personalities, strengths, weaknesses, and communication styles of team members. Knowing about each of these characteristics of their team members and the impact they had on team productivity took time.

Trust

It is logical that trust would play a large part in the transformation of collaborative teacher work groups to collaborative teacher teams. Quite a few teachers interviewed listed trust as a component of such a transformation, or that possessing trust was a characteristic of a productive team. One could question, however, is trust a byproduct once a team is productive or is it necessary for a team to be productive? Both examples were provided by teachers during the individual and focus group interview process.

For instance, the question was posed, “How would you define an effective collaborative team?” All individual interviewees included trust in one way or another, “. . . able to voice feelings, willing to compromise, trying to be on board, open conversations, respectful of opinions, understand and trust one another, trust team members.” Even the examples of buy-in imply teachers trust someone or something, the process or the people involved.

Yet others described their teams as families and friends. A team member interviewed shared, “We are respectful of opinions. We care about each other. We’re friends.” An awareness of this level of trust was suggested, “I’ve seen people really flourish, because if they don’t know an answer it’s ok to ask. People are willing to say, ‘I
don’t know how this works. Will you help me?” One notable insight was, “It’s still personalities and trust. It comes down to the respect amongst them [team members] and some way to be able to communicate that.” Yet another teacher maintained that trust is of utmost importance, “The teams that click right away versus the teams that don’t are that they have trust for each other.”

Team leaders’ and members’ approach to uncooperative team members had an effect on the creation of trust as well. A leader described as successful by his peers suggested empathy and being proactive helped with members who he labeled as “distracters.” He shared, “It’s like a struggling learner. You’re saying hey ‘I know you are struggling with this and we can help you.’” In time and through finding success, the “distracter” trusts the process and the team members.

From the inception of the collaborative teaming process, teachers had a level of trust for the administration. Most teachers voiced high levels of trust in the use of data by the building administration as well as support for trying innovative and creative lessons even if they were not fully successful. Stated one teacher, “We trust administration is interested in what we’re doing, but not judging what we’re doing. That’s a key piece.” Also addressing trust and administration, “I’ve never felt afraid to try anything new in this building,” said one focus group member of administration. “They’ve always been supportive.”

When looking at trust in totality, it appears trust is necessary throughout the process: at the outset of the initiative, trusting in the process; during the initiative, trusting data and team members; acquired from the initiative, experiencing success from the work. Proudly explained by a veteran teacher, “Productive teams are on the same page,
understand and trust each other. We take a little of our best and put it together to make ‘The Best.’”

**Review of Smaller Learning Communities Grant Reports**

The initial Smaller Learning Communities Grant was awarded to this suburban high school in 2003. During the fall of 2006, an additional three years of funding was awarded to continue initiatives proposed and implemented with the original grant, extending the life of the grant from five to eight years. Regular reporting on spending and progress were required twice a year through 2011, the year following the end of grant funding. Submitted and accepted reports included: a mid-year summary, which was less extensive, and a year-end summary, which included an executive summary, outside evaluator report, an extensive budget summary, longitudinal planning, demographic and achievement data.

The initial Smaller Learning Communities for Bigger Achievement (SLC) grant abstract proposed was “a school-wide reform initiative created to better meet the educational, social, and developmental needs of the students …” It included five major components: (a) Academy teams, (b) Freshman mentorship/High School survey class, (c) Career Learning Paths, (d) On-line coursework, and (e) Intramural activities.

The subsequent renewal of the SLCBA grant in 2006 added the implementation of a collaborative teaching team initiative. From the 2006 U.S. Department of Education Annual Performance Report, I obtained the revised goals of this suburban high school’s SLCBA grant initiative:

1. Further implement “smaller learning communities” through expansion of the Academy to include all students.
2. Design and implement a Student and Family Services Center to better meet the need of the school’s growing ELL, Transient, and Economically Disadvantaged population.

3. Further develop and expand the Freshman Focus transition program to include additional topics, lessons, and activities.

4. Expand the school’s Intramural Program to create additional opportunities for students to feel “connected.”

5. Create a comprehensive intervention program to provide classroom academic assistance, remediation for students entering high school significantly below grade level, and Ohio Graduation Test tutoring for students who still need to pass.

6. Create “collaborative teaching teams” for teachers to work together in developing strategies and techniques to increase student achievement.

7. Expand the staff professional development program to implement and sustain SLC initiatives.

8. Expand the school’s “Learning Path” program to better encourage Advanced Placement course registration, career exploration, and post-secondary planning. (U.S. Department of Education Annual Performance Report for 2006-2007, p. 4)

Goal number six differed from the original grant and was the area in which I focused a great deal of my review of both the executive summaries and outside evaluators’ reports. Also found in the reports with regard to goal number six were four
objectives used to guide the implementation of the collaborative teaching team goal.

These objectives included:

1. Place all teachers on collaborative teaching teams with other teachers instructing the same or similar course.

2. Require teachers instructing the same class to create and implement common assessments.

3. Use assessment software to study data and make sound instructional decisions.

4. Require teachers instructing the same course to develop and distribute essential outcomes that all students should be able to accomplish. (p. 10).

The executive summaries and outside evaluator reports referred to each of the eight goals of the SLC grant in their submissions. Also found in the annual performance report was a timeline or implementation plan of the manner in which the goals would be achieved. This also was used in both the school SLC committee’s reflection and the evaluation conducted by the educational consultants who performed the outside evaluation.

To complete the executive summaries and outside evaluator reports, data were collected not only for reporting purposes but also to be utilized by school personnel in order to make adjustments and judge progress. The external evaluators also used data to assess progress and provided them in their report. Finally, the U.S. Department of Education required the submission of similar data with respect to the SLC goals which included more disaggregated data by subgroup.
Executive Summaries

The executive summaries were written by the administrative staff following mid-year and end of year conferencing held with the school SLC grant advisory committee. Members of this committee oversaw and collected a combination of data, both anecdotal and quantitative, which were shared for assessment and reflective purposes. Following the compilation of data, the executive summary was written. All executive summaries described the collaborative teacher teams as professional learning community teams who continued to be successful in meeting the objectives of the grant and informed, enhanced, and improved instructional practices.

Although I reviewed the executive summaries in their entirety, the core investigation for this study was of the portions specifically related to collaborative teaching teams. Beginning with the 2005-2006 report, the executive summary reflected implementation of these teams. During the school year referenced in this report, a staff-wide book discussion transpired for the purpose of building the framework for collaborative teacher teams and a small number of instructional staff piloted the project.

Building on the success of those initiatives, all teachers were placed on collaborative teaching teams during the 2006-2007 school year. During the summer prior to this endeavor, team leaders were offered a stipend to attend summer professional development in the teaming process. The executive summary expressed that common vocabulary and defining meaningful data were important for all aspects of the initiative.

According to the next three years of executive summaries, teams expanded from pilot teams in the core content areas initially to 42 collaborative teaching teams who meet on a regular basis. Expressed in the 2007-2008 executive summary, “Collaborative teams
meet regularly to define essential course outcomes, inform teaching, and improve student learning” (p. 2) These teams had progressed to a place where five common assessments, two of which were formative, had been created and were used by all teams to assess, inform instruction, and improve student achievement (2009-2010 SLC APR). Teams were also required to “turn in PLC agendas and minutes from each meeting to a designated building administrator” (p. 4).

As appeared in the grant timeline, during the 2007-2008 school year data analysis software was purchased. In the following years and as conveyed in the 2009-2010 executive summary, professional development in the use of this data analysis program had been provided and all teams were required to utilize the program. The executive summary shared, “Focus data illustrates that staff members believe this is a useful and positive software tool. Team leaders reported that mastery manager has the potential to save teachers a lot of time …” (p. 4).

Professional development played an integral role in the on-going growth of the collaborative teaching team initiative. Referenced in all executive summaries, professional development was provided for each addition, change, or requirement of the initiative: to assist in the development of common formative assessment; to implement reading, writing, and literacy strategies throughout the curriculum; to plan and implement differentiation, tiered reading, and effective grading practices; and in the general implementation of the data team process. Evidence of all professional development was found in both the executive summaries and in the Smaller Learning Communities Budget also provided to the U.S. Department of Education.
Outside Evaluator Reports

Based on the information provided by the, Characteristics of a Useful Evaluation Report, (United States Department of Education, 2006), “Grantees should hire and work collaboratively with a third-party evaluator to assess their progress in achieving the grant’s goals and objectives and use information gleaned from the evaluation process …” (p. 2). Expectations of collaboration and “open sharing” between the external evaluators, project director (the principal), and advisory committee were articulated in this document and followed by all parties. Additionally, evaluators were directed to provide a variety of data: “quantitative data on academic achievement and student behaviors …; perceptual data from interviews, surveys or focus groups …; trend data …” (p. 3).

The external evaluator reports were divided into three sections: a short executive summary, longitudinal data, and focused progress summaries on each of the eight goals. Goal number six in all reviewed summaries was, “Create ‘collaborative teaching teams’ for teachers to work together in developing strategies and techniques to increase student achievement” (2010 SLC APR, Evaluator Review, p. 12). In order to glean more independent analysis of the work of the collaborative teaching teams at this high school, I studied the required outside evaluator executive summaries.

Evaluator Executive Summary.

The external evaluators’ summary discussed the overall purpose of the SLC grant awarded in 2003, progression of the grant goals, and the changes in student population throughout the life of the grant. All reviewed reports stated, “The focus of the work has been to create a school learning community that empowers students, staff and families to be connected to their learning” (2009-2010 SLC APR Evaluator Review, p. 1).
Additionally, all reports declare positive growth in achievement of the goals presented in the original grant application and of those subsequently added in 2006.

According to the reports, the initial five goals were centered on “… Academies, Freshman Focus, Intramurals, Learning Paths and Professional Development” (2006-2007 SLC APR Evaluator Review, p. 1). The additional goals concentrated areas were: the creation of a student welcome center, a more elaborate intervention system, and the creation of a Professional Learning Community through the initiation of collaborative teaching teams. Each of the reports reviewed included an evaluation of the progress toward achieving goal number six; establishing “collaborative teaching team” (p. 8).

The evaluators also provided a short synopsis of the longitudinal data presented in the report. Worthy of note was the change in student population over the years of grant implementation and review:

The initial grant year supported a relatively stable school community, with a low family mobility rate as compared to many other central Ohio schools. With an influx of new homes and an increasingly economically and culturally diverse population … grew to over 2000 students by the 2006 – 2007 school year, receiving all district overflow and new students at the high school level. With the opening of a third district high school in 2009 – 2010 the student number … returned to approximately 1,800 students, reducing some of the overcrowding previously experienced while still challenging building capacity. (2009 – 2010 SLC APR Evaluator Review, p. 1)

Even with these changes, data supported either positive or sustained growth in goal areas. Evaluators further stated, “The results can be attributed to a caring well trained and
collaborative staff, and administration that is attentive to staff and student needs …”

**Longitudinal Data.**

The following table is a compilation of data retrieved from the 2006 through 2010 Smaller Learning Communities Annual Progress Reports, specifically retrieved from the Evaluator Reviews. The expectation from the U.S. Department of Education with regard to this report was to review multiple data sources to evaluate progress, celebrate growth, and uncover areas where improvement, refinement, or recalibration may have been needed. The external evaluators used district data sources and results from Ohio Graduation Tests to prepare a quantitative view of what they surmised from interviews and focus groups they had conducted regarding the implementation of the initiatives of the SLC grant. In combination the data were able to present a more accurate and holistic view of goal achievement.

One way in which teachers and administrators described the results of collaborative teaching teams was through the success of the students. In order to gain a more accurate view, I reviewed the same data used in the external evaluators’ reports. For example, Table 4.1 offers a longitudinal view of the enrollment changes in the high school’s student population. Student overcrowding affects class size, limits the numbers of classrooms available, lunchroom space, as well as time and actual physical space when students move from classroom to classroom. Also important to note was the increase in enrollment as the collaborative teaching team initiative became operational, 2006-2007.
### Table 4.1

*Compilation of High School Evaluator Report Data*

<table>
<thead>
<tr>
<th>School Year</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically Disadvantaged</td>
<td>128</td>
<td>204</td>
<td>265</td>
<td>330</td>
<td>330</td>
<td>279</td>
<td></td>
</tr>
<tr>
<td>ELL</td>
<td>66</td>
<td>68</td>
<td>111</td>
<td>130</td>
<td>121</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>All Students</td>
<td>1853</td>
<td>1983</td>
<td>2093</td>
<td>2113</td>
<td>2094</td>
<td>1816</td>
<td></td>
</tr>
<tr>
<td>Average Daily Attendance Rates</td>
<td>94.0%</td>
<td>93.9%</td>
<td>93.5%</td>
<td>94.9%</td>
<td>95.1%</td>
<td>94.8%</td>
<td></td>
</tr>
<tr>
<td>Discipline Infractions Resulting in Suspension or Expulsion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Violence</td>
<td>72</td>
<td>55</td>
<td>95</td>
<td>93</td>
<td>37</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Drugs or Alcohol Use</td>
<td>20</td>
<td>19</td>
<td>40</td>
<td>70</td>
<td>19</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>74</td>
<td>135</td>
<td>163</td>
<td>56</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>10th Grade Ohio Graduation Test Passage Rates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>94.0%</td>
<td>96.1%</td>
<td>94%</td>
<td>92.1%</td>
<td>94.2%</td>
<td>90.9%</td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>88.0%</td>
<td>95.1%</td>
<td>93.2%</td>
<td>88.6%</td>
<td>93.6%</td>
<td>92.7%</td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>90.0%</td>
<td>94%</td>
<td>95%</td>
<td>91.7%</td>
<td>94.8%</td>
<td>88.8%</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>86.1%</td>
<td>88.7%</td>
<td>86.4%</td>
<td>87%</td>
<td>92.2%</td>
<td>87.9%</td>
<td></td>
</tr>
<tr>
<td>Social Studies</td>
<td>89.7%</td>
<td>93.2%</td>
<td>90.1%</td>
<td>90.7%</td>
<td>91.6%</td>
<td>92%</td>
<td></td>
</tr>
<tr>
<td>Graduation Rates</td>
<td>96%</td>
<td>97.5%</td>
<td>95%</td>
<td>96.5%</td>
<td>95.9%</td>
<td>94.4%</td>
<td></td>
</tr>
</tbody>
</table>

The data included in Table 4.1 also revealed a steady yet slight increase in attendance rates even as student enrollment and the number of socio-economically disadvantaged and English Language Learners increased. Student attendance has been shown to have an effect on student achievement. A review of average daily attendance rates at this high school showed a relatively stable and elevated rate. Another area of worth noting was the change in the number of economically disadvantaged students. Socio-Economic Status (SES) has also been said to have an impact on student
achievement. The data presented by the external evaluators, and found in Table 2 demonstrated a more than 100 percent increase in the number of economically disadvantaged students in the high school from 2004 to 2009.

Evaluators reviewed data extracted from Education Management Information System (EMIS) reports provided to the State of Ohio by the school district. Using this information they supplied data regarding the number of serious discipline infractions resulting in suspension and/or expulsion in their reports. This type of information was useful in assessing school climate, which has been shown to affect teacher beliefs of efficacy. Note in Table 4.1 the increase in occurrences of serious code of conduct offenses in the 2006 through 2008 school years and the considerable decline found in 2009-2010.

Final attention should be paid to the Ohio Graduation Test Results for tenth grade students and graduation rates for this school. Again noteworthy was the consistently high rates of performance and graduation while a noticeable change in demographics was apparent.

**Goal Six: Collaborative Teaching Teams.**

The Smaller Learning Communities Grant, sponsored by the U.S. Department of Education, permitted and inspired this high school to initiate the implementation of a professional learning community supported by the creation of collaborative teaching teams. According to the SLC Annual Progress Reports, Goal Six specifically addressed this initiative, “Create ‘collaborative teaching teams’ for teachers to work together in developing strategies and techniques to increase student achievement” (2009-2010 SLC
From the 2006 through 2010 Evaluator Reviews, a description of the manner in which this initiative was established was provided:

Professional Learning Teams (PLC’s) have been created to promote collaboration among teachers instructing the same or similar courses. Training in the DuFour model has provided the foundation for organizing teams and structuring the work. Vertical articulation and mapping have been part of the collaborative conversations. (p. 12)

In school year 2006-2007, 42 teams were established with each teacher assigned to at least one team. Gathered from the evaluator review of the school’s first year of full implementation; 61 teachers were on one team, 76 on two, and two teachers were on three or more. Teams were initially expected to create SMART goals and develop two common assessments. By year four of the collaborative teaching team evolution, 42 teams were working collaboratively; creating course pacing guides and greater than four common assessments, using a data analysis software package to study student and curricular progress, and implementing a building-wide writing rubric. Based on the evaluator review, the collaborative teaching teams were using assessment results, “to alter instruction in targeted areas in order to improve student achievement” (2009-2010 SLC APR Evaluator Review, p. 12).

An examination of the evolution of these teams through the commentary of the external evaluators demonstrated a preponderance of evidence of ongoing professional development in this area. According to the evaluator review documents: the building completed a book study; three administrators and 15 teachers traveled to Adlai Stevenson High School to receive a first-hand account of a successfully functioning PLC;
administrators attended a Solutions Tree Conference on Collaborative Teams; and two administrators and four teachers attended a Solutions Tree Assessment Conference. Professional education consultants consistently worked with teams in order to acquire teaming skills as well.

The Smaller Learning Communities Annual Reports also included a timeline where the progression of the initiative was disclosed. There I was able to review the plan for a data analysis software package to be purchased and implemented. True to their word, the school purchased a data analysis software package. Teachers were trained and teams piloted the program. Subsequently teams were required to use the program. Confirmed by the evaluator reviews, the data analysis software package had continued to be used.

Administrators continued to create a framework for collaborative teaching team work. Team norms, creation and sharing of essential outcomes, data collection and analysis, and scheduled mandatory team meetings were outlined and required by administration for all teams. Administration began to regularly join the PLC collaborative teams. However, based on the external review, their participation was more of an observational role in order to continue assessment of progress and needs of teams and the work; yet it allowed team planning, reflection, and decision making to remain autonomous in nature.

**Collective Efficacy Scale – Short Form**

During the time period in which individual interviews and focus group interviews were completed, I also asked the teaching staff at this high school to complete the Collective Efficacy Scale (CE-Scale) Short Form (Goddard & Hoy, 2003). A Collective
Efficacy Scale – Long version was also available and contained 21 items to scale. I chose, however, the CE – Scale Short Form anticipating more teachers would complete the shorter version.

According to Goddard et al. (2000), “Collective efficacy is the shared perceptions of teachers in a school that the efforts of the faculty as a whole will have positive effects on students” (p. 2). The authors further describe collective teacher efficacy as an, “emergent group-level attribute – the product of the interactive dynamics of the group members” (p. 5). In an effort to better understand how collaborative teacher teams become productive, I thought it was important to determine through additional means if teachers in this school believed they were or could have a positive effect on students. Re-examining the statement from above, “emergent group-level attribute – the product of interactive dynamics of the group members,” assisted in the description or definition of a productive team. In other words, I hypothesized: if the school as a whole believes they can positively affect students, and this is a group-level attribute, productive teams would have a higher level of collective efficacy beliefs.

**The Process.**

I presented 120 copies of the CE Scale – Short Form to the principal of the high school on half sheets of paper, (See Appendix A). At a short staff meeting, he asked teachers to complete the scales and return them to a folder in the teacher mailroom. Sixty-one scales or approximately 55% were completed and returned. Using the scoring key presented by Hoy (2005), I completed the scoring by:

1. Reversing scores on items 3, 4, 8, 9, 11, 12
2. Computing the average items score for each of the 12 items
3. Summing the average items scores for all 12 items and dividing by 12 (p. 3).

The resulting CE score for this school was 4.78.

In order to convert the score to a standard score (SdS), the following procedures were followed:

1. Subtract 4.1201 from the CE score above.
2. Multiply the difference by 100.
3. Divide the previous answer by the standard deviation of the normative sample (.6392)
4. Add 500.

The Result.

The resulting standard score was 605.59. This score is standardized against normative data from a representative Ohio sample. According to Hoy, “If the score is higher than 600, it is higher than 84% of the schools in the sample.” In other words this high school has a collective efficacy scale standard score that placed them at least one standard deviation above the schools in the sample or it had a “stronger collective efficacy than” 84 percent of the schools in the sample, (p. 3).

Summary

This chapter has explained the results in this qualitative case study of how collaborative teacher teams represented became productive teams. The greatest amount of data was found through the individual and focus group process. Eight general themes were found during this process: (a) administration, (b) buy-in, (c) communication, (d) data, (e) professional development, (f) teacher leadership, (g) time, and (h) trust.
Two other data sources were utilized in order to support information gleaned through the interview process. A review of data provided to the United States Department of Education with regard to the school’s Smaller Learning Communities grant was studied with a focus on two major areas of the report: the executive summary, a narrative provided by the principal, and the evaluator review, provided by external evaluators of the grant initiative. Within the evaluator review, data collected by the school and school district as well as those reported to the State of Ohio were presented and subsequently reviewed. In both narrative form and through examination of data, reporters maintained progress and positive results from both the collaborative teacher teams and in student achievement.

Finally, the standardized score for the collective efficacy of the high schools was calculated following the completion of a 12-item CE Scale – Short Form by 61 of the 111 teachers. The results of this exercise illustrated a stronger collective efficacy than 84 percent of the schools in a representative Ohio sample. The next chapter will summarize and discuss the results of all data sources.
CHAPTER V
DISCUSSION

This chapter will provide a review of the research question and secondary research questions of the study. It will also review the methodology used to glean answers to the questions posed. Next an analysis of the results found from the individual and focus groups interviews, the Smaller Learning Community Grant reports, and the completed Collective Efficacy Scale – Short Form (CE Scale – Short Form) will be presented. Finally, the chapter will conclude with a discussion regarding implications and recommendations for future research.

The Research Question

Current reform trends in education and efforts to improve instruction and ultimately increase student achievement have involved the creation and implementation of professional learning communities. This organizational structure requires bringing teachers out of their familiar, somewhat isolated environments into a new formation of collaborative teaching teams. The literature is replete with rules, procedures and protocols professed to create productive teams, as well as characteristics and conditions designed to define them. The issue is teams are comprised of human beings who join these groups of individuals with prior experiences and presuppositions that frame their world of existence. Their individual epistemologies often collide and prospective team members are left wondering how to make these groups of individuals productive together. It is simplistic to believe following a list of instructions will develop groups of teachers into high-performing collaborative teaching teams. The dynamic of teaming is complex and multi-faceted, requiring a number of essential conditions to be met in order
to evolve into effectiveness and productivity. My investigation was designed to answer the question: How do collaborative teaching teams learn to work productively together? To support this central question, three other secondary questions helped to guide the research: How do these teams define productive or effective? What do team members perceive are important factors to the development of productive teams? How do collaborative teaching team members perceive their level of collective efficacy as measured by the Collective Efficacy Scale – Short Form, (Goddard & Hoy, 2003)?

**The Methodology**

This study was designed as a qualitative case study. According to Yin (2009), “the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events” (p. 4). It was designed to develop a comprehensive description and analysis of the manner in which groups of teachers become productive collaborative teams. In order to inform the study, I conducted eight individual interviews and four focus group interviews in three separate sessions over the course of one year at a large suburban high school in Ohio. I included both core and non-core academic area teachers in the research. All faculty members available during my visits were invited to participate. In all 22 teachers and three administrators participated in the interview process. Interviews were audio-taped, transcribed and coded. Eight common themes emerged from the review of interviews: administration, buy-in, communication, data, professional development, teacher leadership, time, and trust.

A second source of data was progress reports submitted to the United States Department of Education as an ongoing assessment and evaluation of the school’s Smaller Learning Communities Grant. School demographic data and achievement data
reported to the Ohio Department of Education through the Education Management Information System (EMIS) were submitted in the reports and were additional data sources considered when assessing student achievement and the success of the collaborative teaching teams. Teachers and school leaders used student achievement as a means for determining the success of their teams and the PLC as whole.

The final source used to help inform this study was Goddard’s (2002) Collective Efficacy Scale – Short Form. Collective efficacy has been said to be an emergent attribute produced through the interaction of group members (Goddard et al., 2000). Of further significance is that collective efficacy has been shown to impact student achievement (Goddard, 2000; Ross et al., 2004). Teachers received the scale during a faculty meeting and were asked to complete it during the collaborative team time. Fifty-five percent of the high school’s teachers completed and returned the scale.

In order to acquire a more complete and accurate assessment, I triangulated the data from the interviews, collective efficacy scale results, and information retrieved from the SLC Grant progress reports. In the literature reviewed in Chapter II, research showed teachers’ perceived levels of collective efficacy to be related to student achievement. The high school EMIS data submitted in the SLC Grant progress reports outlined high levels of student achievement. The collaborative teaching teams and the high school administrators defined successful teams as those supporting high levels of student growth and achievement. I speculated that the data retrieved through these sources should support each other. Stated more definitively, I expected to find an above average collective efficacy score, consistent and higher levels of student achievement, and teachers and leaders reflecting experiences of overcoming obstacles and subsequently
describing experiences of productive team behaviors while working on collaborative teaching teams. The compilation of these data sources helped to answer the research questions posed.

**Analysis of the Results**

**Student Achievement**

The results of this study showed student achievement to be one of the most important factors teachers used to define productive and effective collaborative teacher teams. In fact, all teachers and administrators interviewed stated student achievement data were studied and used to guide discussion, dialogue, and teaching strategies chosen with the purpose of increasing student growth. Viewing student achievement as the product of the work, students of teachers who worked on productive and effective collaborative teaching teams exhibited high levels of academic achievement. The SLC Grant also used student achievement as evidence of progress toward goals outlined in the grant proposal and subsequent progress reports. Although intermingled among the other goals, the work of collaborative teacher teams specifically focused their dialogue and analysis on student achievement, intervention, and a change in teacher behavior in order to meet school and grant goals. The longitudinal data presented in Chapter Four, shows changes in demographic data (e.g. increases in overall population, ESL populations, and socio-economically disadvantaged populations). Other schools experiencing population increases similar to this have been shown to struggle with student achievement. The data reported showed that although the numbers of students in AYP subgroup categories and overall population increased, the levels of achievement among all 10th grade students remained relatively high, numbers of significant disciplinary infractions decreased, and
attendance rates remained relatively stable throughout the length of the study. Although important, analysis and study of student achievement data were not the only factors to effect the transformation of the collaborative teacher teams.

**Individual and Focus Group Interviews**

Team members and administrators shared that one of the most essential attributes of collaborative teaching teams was trust. Trust, submitted team members, was important in various ways: trust in the administration, trust in the process, and trust in colleagues. Multiple teachers provided examples of teachers trusting in the building administration to welcome their input through the teaming process, to provide support, and to sustain a risk-free environment where their professional growth was fostered.

Through professional development, facilitated by the trust in administration, and encouraged through vicarious experiences and social persuasion, teachers followed the outlined procedures. Shared previously teachers participated in a book study prior to implementation of the teaming process. Additionally, teams of teachers visited Adlai Stevenson High School, where an established and successful professional learning community was functioning. Professional development was also provided by a former dean of students from that high school providing not only education and an outlining of the process, but stories of success in similar circumstances, constructive feedback and encouragement to approach the initiative with an open mind and to maintain high levels of optimism in the probable outcomes teaming could provide.

During the building and functioning of teams, teachers must have trust in their colleagues in order to share, question, and build strong collegial relationships. Staff members cited trust as one of the most frequently mentioned elements to building
effective teams, especially when discussing the interaction of team members. For without possessing a high level of trust, discourse led frequently to conflict or passive resistance. Although conflict in and of itself is a function of teaming (Katzenbach & Smith, 1993, 2002), lack of trust causes major obstacles, some of which completely immobilize the team retarding or halting progress all together.

Complementary to trust is buy-in. Many teachers shared the importance of buy-in as a mind-set possessed by the members of the collaborative teaching teams. Initially buy-in with respect to the process and the possible outcomes of teaming can create the momentum needed to encourage the transformation from a group of teachers to a team of teachers. An example of the level of buy-in from this school was the 90 percent affirmation of the memorandum of understanding lengthening the daily school schedule to allow school to begin one hour late each month for the purpose of working in collaborative teaching teams. Once individual buy-in to the process is accomplished, then the collective vision, norms, and goals of the team are accepted and enacted. Buy-in, according to teachers interviewed, means members trust each other, trust the results received through their collective and individual efforts, and trust that the work is worth the effort.

DuFour (2004) wrote, “The powerful collaboration that characterizes professional learning communities is a systematic process in which teachers work together to analyze and improve their classroom practice” (p. 9). Teachers at this school consistently described the importance of the collection and analysis of real data. They commented on the use and power of the data in individual and group reflection. The staff utilized a data analysis system that scored and provided data reports for teams to study and analyze for
the purpose of planning, improving assessment instruments and most importantly classroom instruction. Teachers supported the use of data and commented about its positive impact on buy-in. Once more, they included the importance of trust, describing their fear to share in front of their peers and of reprisal from administration if their results were less than expected. However, over time, after observing positive student outcomes, and through effective communication, groups of teachers became more collegial, productive, and successful.

Teachers and administrators interviewed repeatedly included the importance of communication in their definition of productive teams. In a study researching the “It Factor” of teaming, Pentland (2012) found communication to be the key ingredient to high performing teams. Teams use various forms of communication, but the most valuable form of communication is face-to-face (Pentland, 2012). In agreement with the findings of Pentland, staff from this school often commented face-to-face meetings were necessary to foster the development of productive teams.

As well as a strong communication system, staff members commented about the creation of a family through the teaming process. They spoke of empathy, assistance, diversity, acceptance of differences, and respect of others’ opinions. Many noted these to be both byproducts and components of the journey or transformation of the original group of teachers to a collaborative team. Staff members also commented about the structure which aided the communication, development of the process, and oversight they received from administration to support it.

The teachers’ perceptions of the role of administration in the evolution of productive teams were most interesting. Teachers consistently shared their perceptions of
the hands off behavior of the building administration in the teaming process. Yet it was from long-term planning and research, consistency among the administrative team, a clearly articulated vision, activities implemented to foster buy-in and offer opportunities for teacher empowerment, and ongoing support that facilitated the transformation of these groups of teachers to collaborative and productive teaching teams. Overall, teachers valued feedback, the existing risk-free environment, the professional development opportunities available, and the structure organized by the administration. They noted their appreciation of the delivery of data inaccessible to them, and the empowerment received through the inclusion of their members in the decision-making process.

The administrators included in this study commented on the strategic and purposeful planning that went into the creation of a professional learning community. The executive summaries, goals, and outside evaluator reports included in the SLC Grant progress reports provided a generous amount of evidence of this work also. The building administrators’ commitment to the initiative was crucial to its success. Although the administrators were not part of individual collaborative teaching teams, their work in providing essential structural and supportive conditions encouraged the work of the teams. One important contribution to the teaming process offered by the administration in this school was time.

The literature on the subject of professional learning communities endorses the commitment of time dedicated for collaborative teaching team work during the teacher work day (Hord, 1997). Administration and teachers from this school commented on advantages provided by supporting this premise. In lieu of faculty meetings and department meetings, teachers were provided this time to meet with their teams.
Additional time was allotted by the district for professional development four times a year. The school administration gave that time to teams for work as well. Teachers interviewed were appreciative about the receipt of this time and commented they would not have had the ability to work productively without it.

Offering administration’s contractual time to team collaboration promoted teaming in many ways, two in particular. It sent a strong message of the endorsement of and commitment to the initiative by administration, and it demonstrated to teachers that their time was valued by the administrative team. According to teachers interviewed, the significance of the time offered to this initiative by administration was vital to the productivity of collaborative teaching teams.

Evidence of the value teachers held regarding time for teaming was frequently observed through the interview process. Teachers became quite demonstrative and direct when discussing the loss of time devoted to collaborative teaming, time taken for predominantly district initiatives. Their fervor revealed to me their buy-in and commitment to collaborative teaching teams and their belief in their value to the success of their students.

Intertwined throughout the transformation of these collaborative teaching teams at this high school was professional development. In the beginning teachers were introduced to the idea through a book study. At the end of that year teachers were divided into teams and professional development was provided to team leaders in the process on which they were about to embark. Groups of teachers visited the school on which their professional learning community was based a number of times and a representative from that school continued to work frequently with this high school for the next several years. Teachers
commented on the importance of this professional development in the overall
development and eventual productivity of the teams.

Worthy of note is the frequent mention of the importance of teacher leadership in
the literature, and from teachers and administrators in this study. Emphasis was shared
with regard to the significance of these teacher leaders, their ongoing professional
development, and the essential support provided to these brave and hard-working
teachers. Team members suggested not all team members were meant to be leaders.
Those best for that role were willing and able to maintain a group focus toward the
collective goals, facilitate conflicts within the team, and keep the team organized. They
were comfortable providing direction, assigning tasks, and working with administration.
Many used a coaching approach that was proactive, supportive, and constructive.

**Collective Efficacy Scale – Short Form**

The literature reviewed purports that the perceptions teachers as a faculty share
regarding their ability to positively affect student achievement is defined as their level of
collective efficacy (Goddard et al., 2000). The Collective Efficacy Scale – Short form
was used to survey the high school faculty and determine its level of collective efficacy.
Fifty-five percent of the faculty completed and returned the survey. Following the
directions provided by Hoy (2005, p. 3), the level of collective efficacy among this staff
was considered above average or 84 percent higher than the schools in a representative
Ohio sample. In other words this professional learning community, according to the
results of the scale, perceived their collective capacity to influence student achievement
of the students in this school to be above average. Note, collective efficacy has been
shown to influence student achievement greater than the influence of their homes and community (Tschannen-Moran & Barr, 2004).

Summary

School leaders, teachers, and the SLC Grant reports evaluated the success of school initiatives through the results of student achievement. Student achievement at this school remained high and consistent throughout the time of review for this study. Levels of collective efficacy were measured through survey. Results supported an above average level of collective efficacy among staff signifying teachers in this school perceived they as a professional learning community had the ability to impact the academic achievement of the students. Individual and focus group interviews provided further evidence of the perception of success of collaborative teaming through the productive nature of the teams in addition to the academic success of students.

After reviewing the literature, I found common conditions necessary for the productiveness of teams in general: common purpose and team goals, high levels of trust among team members, acceptance of conflict among team members as a component of the teaming process and the ability to work through it, strong leadership, and a supportive organizational structure which included ample work time. In review of literature relative to professional learning communities, common themes emerged here as well: a collective focus, shared norms, sharing of practice, reflective dialogue, trust, and an organizational structure that supports ongoing communication (in particular time), and individual and group learning.

The conditions experienced through the transformation of groups of teachers in this high school to collaborative, effective, and productive teacher teams aligned strongly
with the conditions suggested for effective and productive teams provided in teaming and professional learning community literature. When comparing the stories of the teachers and administrators to the conditions supporting an increase in collective efficacy, I found numerous occasions where mastery experience, vicarious experience, and social persuasion were present. For example, teachers reviewed data and collectively chose strategies to use in their classroom with a collective goal of improving student performance. When returning to the team with their results, the improvement in student performance found in the data, as well as stories shared of positive classroom environments experienced through the use of the chosen strategies, provided teachers mastery experiences on which their group dialogues, choice, and collective performance could be celebrated. Further, the book study and visits to Adlai Stevenson High School, where teachers were able to view success of the PLC initiative in a large suburban high school, provided teachers with vicarious experiences with which they shared with members of their collaborative teaching teams. Finally, the encouragement and feedback received from ongoing work with a consultant who was a former member of the Adlai Stevenson High School PLC, as well as those received from building administrators and team colleagues, persuaded collaborative teaching team members to push through the obstacles hindering performance such as fear, trust, and member conflict.

Multiple factors work together in the transformation of teacher work groups to collaborative teaching teams. The productive teams and the administration in this school collaboratively developed a shared vision to guide their work. They created team norms, essential course outcomes, pacing guides, and common assessments. The obstacles of buy-in and trust were overcome through courageous leadership provided by both
individual team leaders and the building administration. Buy-in was fostered from vicarious experiences and after experiencing successes connected to the performance of the team. Collective efficacy by definition began to grow. Team members believed their collective efforts were making a difference and the results of the administered survey supported their stories. Prolific dialogue grew through working through the tasks assigned by building administration, common work projects emerged, instruction improved, and students achieved at high levels.

Overall, the collaborative teaching teams represented in this study, using student achievement as the metric of success, were productive and effective. The implementation of the effort was strategically planned by the administrative team, fueled by large and ongoing doses of professional development throughout the process. The journey from group to team was wrought with obstacles and barriers to success, such as conflict, teacher pushback, and lack of trust. Through hard work, perseverance, commitment, and time these dedicated professionals were able to learn and work together to create highly effective and productive collaborative teaching teams.

Implications of the Study

This qualitative case study was designed to answer the question, “How do collaborative teaching teams learn to work productively together?” Individual and focus group interviews garnered a substantial amount of information supporting the conditions necessary for fostering productive teams as well as the characteristics of productive teams. Furthermore, the results of the Collective Efficacy Scale – Short survey supported above average sentiments held by the faculty that they as a group could affect student achievement in their school. Thus, as the research question posed, “How do collaborative
teaching teams learn to work productively together?‖ I submit five areas of focus that led the transformation:

1. Administration
2. Time
3. Trust
4. Conflict
5. Influence of factors affecting collective efficacy

**Building Administration**

One of the most unexpected findings of my investigation was the perceptions teachers held of the role of administration in the process and transformation of collaborative teaching teams. A majority of teachers described the approach taken by building administrators as a hands-off approach. Contrary to this description were numerous accounts by teachers of the work administrators performed covertly as well as that accomplished in full view.

For example, building administration designed and implemented a thorough and strategic plan complete with teacher empowerment, a defined communication structure, and ongoing professional development. In other words, from the beginning they provided a strong yet fluid infrastructure to support the various stages of team development and diverse needs of the 42 collaborative teaching teams of which their professional learning community was comprised. The plan was thoroughly researched and began with a book study where teachers were eased into the idea of collaboration, common units, and common assessment. Following this phase and with teacher input, both short-term and
long-term plans were designed. Each year more tasks were added and professional
development implemented to support the long-range goals.

One important aspect of collaborative teaching teams within a professional
learning community is communication. Building administration maintained continuous
and consistent communication and offered support throughout the process. Surprisingly,
teachers perceived a hands-off approach, even though the administrative team received
and provided consistent feedback as to the progress of team development, intervened
when needed, and allowed teachers an ample amount of autonomy.

In the well-designed and executed plan of this school’s administration,
communication was unending. Administrators met with teams, team leaders, and
individuals on a regular basis, formally and informally. Not only did they share
information, but they listened intently to allow continuous reflection and evaluation of
the teaming transformation. It was from this ongoing stream of giving and receiving
information that the administrators were able to support and encourage the teachers
leading the charge as well as those struggling with the process. They were better able to
design professional development in order to meet the needs of the teachers as they
entered new phases of the collaborative teaching team process.

Time

People in all professions cite time as the enemy of the success of an endeavor.
The necessity of time and teachers’ frequent declaration of its need was not unusual.
However, essential to the effort was the allotment of time; time for teams to work
together and time for teachers to build relationships and trust.
Again, the building administration modeled the importance of collaborative teacher team work by providing contractually allotted administrative meeting time to the effort. Additionally, teachers agreed to a modified schedule lengthening each day in order to allow for a one hour late start of school monthly, specifically created for collaborative teaching team work. This time was valuable to completing tasks together and working through the transformational process of group to team.

The transformation of the collaborative teaching teams I observed at this school and on which teachers remarked took an average of about three years to truly realize the positive outcomes of collaborative teaching teams. Some teams more easily began the process by way of the content they taught. For example, mathematics usually has a system where concepts build upon one another and basic skills are needed for success. Pacing guides and similar assessments were not initially difficult on which to agree. The true work of these teams, however, was much deeper and even they in time realized, pacing guides, common units, and assessments were merely the tip of the iceberg where true collaborative teacher teams is concerned. High levels of support, improved instruction, and ultimately increased student achievement were the result of time devoted to developing a common vision and goals, working through conflict, building trust among team members, and finally reflecting on the journey and celebrating their collaborative success.

**Trust**

Building trust among team members was at the essence of team productivity. In order for teachers to share data, reflect honestly, and build strong collegial relationships trust was imperative. Teams with strong leaders who led by example and were willing to
model trust among members encouraged the process, promoted buy-in, and enhanced positive relationships among team members.

The success of teams does not rest solely on the trust developed among the members of the individual collaborative teaching teams. Other areas of trust are also essential to the process: trust in administrators and the school’s vision, trust in the process and expected outcomes of teaming, and trust in the members of the learning community. Administration had a great deal to do with fostering these types of trust.

By inviting teachers into the process from the very beginning, offering contractual meeting time to the efforts, and spending coveted financial resources, administration was able to exhibit the importance of collaborative teaming and begin to build trust from the staff through modeling and through the teachers involved. Administration sent teachers to visit Adlai Stevenson High School to witness first hand successful collaborative teaching teams. They brought in professional development that offered real and relevant information the teachers needed and wanted. The administrators listened, shared frustrations, worked collaboratively with the teams to overcome obstacles, and were the cheerleaders of the teams. All these efforts fostered trust in them and the entire process. This is the area often overlooked and as imperative as the trust within the collaborative teams to the success of this endeavor.

**Conflict**

An unanticipated finding of this study was the varied perceptions teachers had regarding conflict among team members on the collaborative teaching teams. I found it interesting that many teachers spoke of conflict as a negative, while others spoke of the lack of conflict as a positive attribute of their team dynamic. Some described their teams
as a family with little conflict, while others described the resolution of conflict as difficult yet necessary.

Tuckman (1965) presented four stages of team development: forming, norming, storming, and performing. The storming phase is important to team development for it is where conflicts arise, are addressed and resolved. According to Tuckman the length of this phase varies and unfortunately some find it difficult to reach the next phase. Great teams, unlike good or just average teams, are those who accept conflict as part of the process and work through it productively (Senge, 1990; Katzenbach & Smith, 1993; Lencioni, 2002).

An enormous obstacle to building productive collaborative teaching teams was conflict. Trust was an important component to overcoming this barrier. It appeared to me that had teachers more clearly understood conflict as a natural part of the process and had they been provided resolution skills from the outset, conflict may still not have been comfortable, but possibly less intimidating. On the other hand, teams that accepted conflict as a part of the process and faced it courageously, empathetically, and constructively became productive more quickly than other teams.

**Influence of Factors Affecting Collective Efficacy**

Collective efficacy is defined as the perceptions teachers hold of their collective capacity to affect student achievement in a school. Factors influencing levels of collective efficacy are mastery experience, vicarious experience, social persuasion, and physiological states (Goddard et al., 2004). The collective efficacy scale – short form (Goddard, 2002; Goddard & Hoy, 2003) was completed by this school and provided evidence of an above average level of collective efficacy enjoyed by school.
Team members in this school shared a substantial number of mastery and vicarious experiences, as well as examples of social persuasion. According to evidence provided through interviews, teachers described these experiences which have been shown to influence collective efficacy as experiences which enriched and promoted team productivity. Noteworthy was the fact that sources that influence the level of collective efficacy of groups of teachers are equally important to the success of collaborative teaching teams.

Teachers received mastery experiences when they reviewed the results of their common assessments and standardized tests. According to teachers interviewed, this fueled the buy-in and supported ongoing work of the teams. Vicarious experiences came from teachers visiting a school finding success from teaming, and hearing other teachers’ stories of the barriers affecting collaborative teaming and how they can be successfully overcome. Social persuasion came in many forms; from administrators working together and individually with staff to teacher leaders encouraging team members to presenters of professional development inspiring teachers through learning experiences. All of these experiences supported and encouraged the transformation of these groups of teachers to effective and productive collaborative teaching teams.

**Summary**

The interconnectedness of these five levels of focus is extremely important in the analysis of the results of this study. For example, Time and mastery experiences led to the building of trust among team members. I was recently asked what I thought was the most important of these foci to the implementation of this process. I suggest none can exist without the other, but most are influenced initially and throughout the
transformation process by administration’s planning, implementation, reflection, evaluation, support, and ongoing involvement in the process.

This study adds to the research on teaming by substantiating previous accounts of both the characteristics of and conditions required for groups to become productive teams. It differs from others in that it is situated in one large high school and reviews not merely productivity as it relates to task completion, but ongoing collaborative work. Further, I saw the sources of collective efficacy beliefs, particularly mastery experiences, vicarious experiences, and social persuasion, used to support levels of collective efficacy as well as encourage the development of productive collaborative teaching teams.

**Recommendations for Future Research**

Although I interviewed 25 staff members, received a 55 percent return of completed collective efficacy surveys, and examined multiple years of Smaller Learning Community Grant Progress Reports, my study still provided only a small view into the teaming process. Furthermore, the majority of the teachers interviewed shared eventual positive outcomes of the collaborative teaching team process. Due to the voluntary nature of the interview process, it may be possible only those who enjoyed the teaming process participated. In order to glean an even greater amount of evidence in this area I make two recommendations for further study of the collaborative teaching team process:

1. A comparative case study reviewing at least two schools as they work through the implementation of collaborative teaching teams could provide the opportunity to compare and contrast experiences finding consistencies and differences in order to more accurately define the process.
2. An ethnographic study where day to day observation of the transformation of a team could be studied. By working in the setting and using both observation and interview, the researcher would have the ability to view the transformation from group to team rather than to just experience it through member accounts in the context of an interview, and may offer a more authentic view of the process or the inability to progress at all.

More research in this area is important to the education reform effort known as building a professional learning community. This organizational structure has the potential to provide ongoing learning to all professional members of the organization, build camaraderie and collegiality, improve instruction and increase student achievement. Receiving a list of conditions and characteristics of collaborative teaching teams assists in their development. Understanding the internal dynamics of the team transformation could enhance and possibly expedite the process. For this reason further study is warranted.
References


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APPENDIX A

CE-SCALE SHORT FORM
Dear Dr. Hoy,

I am a doctoral candidate at Ashland University in Ashland, Ohio and a high school principal in Grove City, Ohio. I am currently completing my dissertation. My study is a qualitative case study investigation into how collaborative teaching teams within a professional learning community learn to work productively together.

I have completed multiple individual teacher interviews and several focus group interviews. In addition, I have studied school demographic and EMIS data, as well as grant evaluation reports submitted to the US Department of Education assessing the school's implementation of a professional learning community initiative.

To triangulate my data, I would like to use the CE-Scale Short Form. My idea is to use the CE-Scale results to support the school's assessment that they are a successful professional learning community hosting a large number of highly productive collaborative teaching teams. It seems to me that an above average level of perceived collective efficacy would be one way to support their claim.

Also I would like to include a copy of the scale in one of my appendices with your permission.

Thank you for your consideration in this matter. I look forward to hearing from you soon.

Sincerely,

Jill Vincent Burke

On Mon, Apr 14, 2014 at 1:26 PM, Wayne Hoy <whoy@mac.com> wrote:

Hi Jill-

You have permission to use the CE-Scale in your research.

You can include the Scale in your dissertation, provided that you indicate that the scale is copyrighted by Goddard and Hoy, and you if you want to attach as an appendix, you also need to get Roger Goddard’s permission <dr.roger.goddard@gmail.com>.

Wayne

Wayne K. Hoy
Fawcett Professor Emeritus in
Education Administration
The Ohio State University
www.waynekhoy.com

7687 Pebble Creek circle, #102
Naples, FL 34108
Email: whoy@mac.com
Phone: 239 595 5732
Dear Dr. Goddard,

I am a doctoral candidate at Ashland University in Ashland, Ohio and a high school principal in Grove City, Ohio. I am currently completing my dissertation. My study is a qualitative case study investigation into how collaborative teaching teams within a professional learning community learn to work productively together.

I have completed multiple individual teacher interviews and several focus group interviews. In addition, I have studied school demographic and EMIS data, as well as grant evaluation reports submitted to the US Department of Education regarding the school's implementation of a professional learning community initiative.

To triangulate my data, I would like to use the CE-Scale Short Form. My idea is to use the CE-Scale results to support the school's assessment that they are a successful professional learning community hosting a large number of highly productive collaborative teaching teams. It seems to me that an above average level of perceived collective efficacy would be one way to support their claim.

Also I would like to include a copy of the scale in one of my appendices with your permission.

Thank you for your consideration in this matter. I look forward to hearing from you soon.

Sincerely,

Jill Vincent Burke

From: Roger Goddard <rgoddard@tamu.edu>
Date: Mon, Apr 14, 2014 at 1:48 PM
Subject: Re: CE-Scale Short Form
To: Jill Burke <jburke2@ashland.edu>

Dear Jill,

Your dissertation topic is very interesting to me. I would be happy to support you with permission to use the collective efficacy short form scale as you described below. In addition, the journal in which it was published would require a proper citation, however, I'm sure you would do that anyway.

It was great to read your location as well, as I will be returning to the Ohio State University - Columbus this summer as the Fawcett chair in educational administration.

I would be grateful if you could send me a copy of your dissertation, perhaps as a PDF, when it is complete. I will be interested in the results.

Good luck with your studies.

Roger
CE-Scale
Short Form

**Directions:** Please indicate your level of agreement with each of the following statements about your school from **strongly disagree** to **strongly agree**. Your answers are confidential.

1. Teachers in the school are able to get through to the most difficult students.
2. Teachers here are confident they will be able to motivate their students.
3. If a child doesn’t want to learn teachers here give up.
4. Teachers here don’t have the skills needed to produce meaningful student learning.
5. Teachers in this school believe that every child can learn.
6. These students come to school ready to learn.
7. Home life provides so many advantages that students here are bound to learn.
8. Students here just aren’t motivated to learn.
9. Teachers in this school do not have the skills to deal with student disciplinary problems.
10. The opportunities in this community help ensure that these students will learn.
11. Learning is more difficult at this school because students are worried about their safety.
12. Drug and alcohol abuse in the community make learning difficult for students here.

(Copyright © Goddard & Hoy, 2003)
APPENDIX B

HSRB APPROVAL
TO: Jill Vincent Burke
FROM: David Vanata, Chair
DATE: August 12, 2011
RE: Human Subjects Review Board Approval

The Human Subjects Review Board has approved the research proposal you submitted. You may proceed with the project.

The primary function of the HSRB is to ensure protection of human research subjects. As a result of this mandate, we ask that you pay close attention to the fundamental ethical principles of autonomy, justice, and beneficence when establishing your research proposal. These ethical principles pertain specifically to the issues of informed consent, fair selection of subjects, and risk/benefit considerations.

If you have any questions, please contact me.

Sincerely,

David Vanata
Phone: 419-289-5292
Fax: 419-289-5333
E-mail: dvvanata@ashland.edu
September 16, 2011

Dear Prospective Participant,

As a doctoral candidate at Ashland University, I would like to invite you to participate in a research study of the collaborative teaming process I am completing in your building. The research is designed to help understand the processes collaborative teacher teams use to guide their work, function effectively, and influence the learning of students. The primary method of data collection will be through individual and focus group interviews. I also ask that you, along with other building staff members, complete a short survey. Previously submitted demographic and longitudinal data of student achievement submitted to the federal government to fulfill the requirements of the Smaller Learning Communities Grant will also be utilized to obtain a more complete view of the process and its outcomes.

Reflection is a powerful tool in the learning process. As you reflect on your collaborative team experiences during this study, you have the opportunity to glean valuable information that may strengthen and enhance the work and outcomes of your teams. The results of study may also assist other schools by offering information of what environmental factors need to be in place in order to increase the probability of success; subsequently improving instruction and increasing student achievement.

Your identity will be protected in any use of data collected from this research. Participation is purely voluntary and you are free to withdraw consent at any time. Please feel free to contact me at (614) 561-1991 if you have any questions or would like further information.

I look forward to working with you.

Sincerely,

Jill Vincent Burke
Doctoral Candidate
Ashland University
CONSENT FOR PARTICIPATION IN
ASHLAND UNIVERSITY DISSERTATION RESEARCH STUDY

I consent to participating in research entitled: “A Case Study of Effective High School Collaborative Teams.”

Jill Vincent Burke has explained the purpose of the study, the procedures to be followed, the expected duration of participation. Possible benefits of the study have been described.

I acknowledge that I have had the opportunity to obtain additional information regarding the study, and that any questions I have raised have been answered to my full satisfaction. If I have further questions, I understand that I may contact Mrs. Burke at (614) 561-1991 or her dissertation research chairperson, Dr. Carla Edlefson, at (614) 794-0803. Further, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me.

I understand that my identity will be protected in any use of data collected from this research.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _______________ Signed: __________________________________________ (Participant)
Signed: __________________________________________
Jill Vincent Burke (researcher)

CONSENT TO PARTICIPATE IN AUDIO TAPING

I consent to the audio taping of my _____ individual interview or _____ group interview for the research study entitled: “A Case Study of Effective High School Collaborative Teams.”

I understand that the tapes from my interview will be stored in a locked cabinet for the duration of the project; that no one but the researchers will listen to this tape; and that tapes will be destroyed at the conclusion of the project.

I understand that my name and identity will be disguised in any use of the data from my interview.

Date: _______________ Signed: __________________________________________ (Participant)
Signed: __________________________________________
Jill Vincent Burke (researcher)
APPENDIX C

INDIVIDUAL INTERVIEW QUESTIONS
A Case Study of Effective High School Collaborative Teams
Individual Interview Questions

1. How long have you been participating on collaborative teams? How long have you been with the teams to which you have are currently participating?

2. How would you define an effective collaborative team?

3. How would you describe the team with which you are currently working?

4. In what type of activities do you participate that help you with building an effective collaborative team?

5. Who determines success/effectiveness? Who sets expectations?

6. How is this evaluated and measured?

7. What would you conclude as successes from – first year; second year; third year; overall?

8. What are the instructional practices occurring in your school which you would attribute to the work of collaborative teacher teams?

9. What role does data play in your work?

10. Overall, what do you think makes these teams work? What obstructs your work?

11. How would you describe the effect collaborative teaming has on individual feelings of self-efficacy; collective efficacy?

12. What happens when team members do not cooperate?

13. What roles do administrators play?

14. What needs to be in place for both teacher and student learning to be on-going?

15. Reflect on past collaborative team experiences. Are there any “do-overs?”