A Mixed Methods Study Identifying and Describing Factors to Promote Psychological Safety in Middle School Professional Learning Communities: Making the Bread Rise

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A Mixed Methods Study Identifying and Describing Factors to Promote Psychological Safety in Middle School Professional Learning Communities: Making the Bread Rise

A Dissertation by

William Cloo

Brandman University
Irvine, California
School of Education
Submitted in partial fulfillment of the requirements for the degree of
Doctor of Education in Organizational Leadership
May 2020

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May 2020
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I never thought that I was capable of reaching this level of education and am proud to be the first in my family to achieve this accomplishment. This journey truly changed my vision of community and showed me the love and support that it takes to create real change. I sincerely appreciate Dr. Carol Riley for her wisdom and feedback on this study. Your confidence and keen eye contributed greatly to this product. Dr. Marilyn Saucedo, your attention and enthusiasm motivated me keep researching and not to be satisfied with just surface knowledge but to study with a purpose. To my dissertation chair and mentor Dr. Jonathan Greenberg, thank you for seeing more potential in me than I see in myself and enduring my self-doubt throughout this journey. Your compassion and wisdom allowed this to happen and I am grateful to have you in my life. This study is an example of your true mentorship and I hope to continue making you proud.

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I want to thank all of the people who encouraged me through words and deeds. To my friends who provided encouraging words and understanding. To my family who gave me space and understood the sacrifices needed to achieve this. I appreciate my family who have set the bar with love and support. To my grandmother who fostered the lifelong learner in me. To Mrs. Brodrick who taught me to enjoy the journey of
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ABSTRACT

A Mixed Methods Study Identifying and Describing Factors to Promote Psychological Safety in Middle School Professional Learning Communities: Making the Bread Rise by William Cloo

Purpose: The purpose of this mixed methods explanatory study was to identify and describe factors of risk-taking behavior among Riverside County Professional Learning Community (PLC) middle school teachers. It elicited teacher perspectives of a psychologically safe PLC that promotes risk-taking. Additionally, it sought to identify factors that increase psychological safety in a PLC.

Methodology: This mixed methods study uses a sequential explanatory 2-step process to produce results. The quantitative-qualitative study started with a quantitative survey that collected and analyzed numerical data on levels of risk among the population. Qualitative interviews provided context and further explanation on the methods to foster risk-taking among group members.

Findings: The study revealed that middle school PLC teachers perceive that there is a supportive environment for risk-taking. However, risk-taking creates anxiety because of personality driven conflicts and lack of recognized contributions to the PLC. Identified factors that influence risk-taking are increased awareness of psychological safety, a learner’s mindset among team members, and a designated facilitator that is focused on team development.

Conclusions: The conclusions from this study suggested that PLC environments are systematically healthy for psychological safety. PLC teams must focus on team
development in order to encourage risk-taking within the group. Conflict resolution efforts must be put in place for the team to produce effective work for student outcomes.

**Recommendations:** Further research should include a correlation study to look at the levels of psychological safety among middle school teachers and identify specific variables that increase the psychological safety among them. A replication study of this mixed methods explanatory study should identify and describe levels of psychological safety among teachers and PLCs at different educational levels (K-5, 9-12, and postsecondary). A correlation study must be conducted to identify the relationship that exists between conflict resolution and levels of risk-taking. Another recommendation is a case study to identify and explore the relationship between psychological safety and performance. A phenomenological study should be performed which describes the institution of psychological safety within its PLC.
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CHAPTER I: INTRODUCTION

Professional learning communities (PLCs) have become the standard for improving student achievement (Smith, 2015). The processes within the PLC meeting allow teachers to systematically improve instruction for all students within any school or school district (DuFour, DuFour, Eaker, & Many, 2010). Efforts from these teacher teams positively affect student outcomes when the teams work collaboratively toward improved instruction (Bretz, 2013). Central to the PLC process is the need for teachers to work effectively as a unit. With successful teamwork in PLCs, departments will improve student outcomes and learning for the students at their site.

Teams build their foundation of learning through the process of observation, analysis, brainstorming, and action. Caine and Caine (2010) described the process well: “[An] effective and sustainable learning community needs to have some accepted protocols for talking and behaving, and an atmosphere conducive to effective functioning” (p. 3). When districts apply this model, they often miss the need for sustainability of the program, which results in inefficiency and stagnation (Muñoz & Branham, 2016; Peters, 2013).

Leaders of PLC groups must influence all characteristics for team effectiveness in order for the teachers to generate any outcome (Harvey & Drolet, 2004). A significant characteristic of the team is the ability for its members to maintain high levels of interaction for successful decisions and implementation of ideas (Harvey & Drolet, 2004). The central tenet of member interaction is the feeling that each member can take risks without ridicule, or what Amy Edmondson (1999) defined as psychological safety.
The purpose of this study was to identify and describe factors that foster high levels of risk-taking behavior. Relationships between members of a PLC are essential to the success of the team (Polhemus, 2010). Research shows that greater levels of sharing among teachers result in higher achievement for students. Bretz (2013) found that “administrators and teachers believe professional learning communities are a place for teachers to share instructional strategies and share resources and ideas that can assist in teaching and learning” (p. 91). Teachers generate a genuine concern for all student achievement and strategies to create better instruction (Andrews, 2014; Little, 2003). Maximizing the potential of the PLC through the lens of relationships will broaden the success of the PLC team, thereby improving student learning.

PLCs can become havens of apathy for teachers when they decide to remain in isolation (Dalal, 2013; DuFour, 2004; Hargreaves & Dawe, 1990). Central to combating this potential situation is the PLC leader—the department chair in most schools. The PLC leader must be equipped with strategies that encourage all members to share their shortcomings in order to gain support (Doğan & Yurtseven, 2018; DuFour, 2004). PLCs should be a collegial atmosphere where teachers who thrive with some aspects of learning coach the struggling teacher (Bretz, 2013). Bloom and Vitcov (2010) claimed that “to be successful, a PLC needs to be a cultural habit built on trust and the intrinsic motivation for everyone to hold themselves accountable to one another through de-privatized and transparent practice” (p. 24).

Creating openness among the members of the PLC diminishes the isolated workings of teachers and expands positive results beyond the classroom and school
(Kimmons, 2016). A dynamic environment emerges where teachers self-mentor and strategize the best plans for student achievement.

Building psychological safety, or the ability of someone to risk without fear of ridicule (Edmondson, 1999), will strengthen the talents of all teachers in the group and keep the craft of teaching fresh. Trust is paramount to establishing psychological safety among team members (Edmondson, 2018). Employees maintain psychological safety while establishing trust to deal with failures in a productive manner in order to improve their overall work (Carmeli, Tishler, & Edmondson, 2012; Edmondson & Mogelof, 2005). Doerffer (2017) offered a system to foster psychological safety using the acronym CANDY, which guides leaders to observe and reflect on the dynamics within any group when they “create safety . . . analyze the problem . . . notice factions . . . diagnose yourself . . . and ask Y [why]” (pp. 7-10). However, no constructs detail the method of fostering psychological safety. Students will be the true beneficiaries of this research through the continually progressive pattern of improvement (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Thus, increased effort toward developing team trust and sustaining trust throughout the school culture can improve education for all students (Bryk & Schneider, 2002; Stoll et al., 2006; Tschannen-Moran, 2001).

**Background**

The No Child Left Behind (NCLB) initiative in 2000 drove the majority of schools to focus solely on testing strategies in order to obtain the highest annual yearly progress scores (Gyesaw, 2012). Many critics contend that the result of these strategies left students unable to perform the critical thinking necessary for college readiness and future career aspirations, along with the punitive aspect of the initiative that no school
could ever gain 100% proficiency (Klein, 2015). Additionally, states refused to participate or calibrate the requisite measurements of skill for effective analysis (Klein, 2015). The results left states unable to meet projections on obscure standards.

In response to this perceived crisis, the Department of Education established the Common Core State Standards (CCSS) during the Obama era. This initiative ordered schools to focus on higher levels of critical thinking with an emphasis on English expression and math solutions (Mathis, 2010). The test that California adopted to assess student knowledge is the Smarter Balance Assessment Consortium (SBAC), which is still used today. This interactive testing platform requires students to express themselves in written form and perform multiple stage problems or performance tasks to show mastery of knowledge (Darling-Hammond et al., 2013). These dramatic changes require schools, administrators, and teachers to cooperate together for the student to be successful.

Given these new demands for teachers, districts have attempted to restructure the educational experience in order to accommodate the new rigor of the CCSS. Responses to these difficult situations have been made by experimenting with the process and progress of education for students. Education publishers tried to save money by adapting their old materials to the new standards with limited results. Professional development and structured support for teachers have been ineffective because of the high demands given by the CCSS (Goldman & Pellegrino, 2015). Ultimately, teachers have been confused with balancing new standards with shifting expectations while adapting to an evolving technological world. This feeling of not being in direct control affects work satisfaction, which perpetuates a spiraling effect for the entire school site (Allen, 2013).
Teacher collaboration is the determining factor in school achievement at this time (Friend & Cook, 1990). By identifying effective methods of increasing psychological safety within the group, trust can continue to expand (Abraham & Jody Hoffer, 2009; Bloom & Vitcov, 2010). PLC teams can make innovative changes in their work for the betterment of the organization (Edmondson & Mogelof, 2005). Fueling this situation with focused training for the department chairs can prepare them not only to start this process but to handle any deviations that might occur within the group.

**Middle Schools**

Middle schools are difficult to study given the 2 to 3 years that students are in the school. Onetti, Fernandez-Garcia, and Castillo-Rodriguez (2019) concluded that a student’s self-concept diminishes throughout the middle school experience. The middle school student experiences “important academic, physical, social and family changes” (Akos, Rose, & Orthner, 2015; Fenzel, 2000; Rudolph, Lambert, Clark, & Kurlakowsky, 2001)” (Onetti et al., 2019, p. 7). Buehler, Fletcher, Johnston, and Weymouth (2015) argued that because middle school bridges the elementary structure of a child’s identity to the adult development through the high school experience, the middle school staff has a pivotal role in developing the student’s academic success. They asserted, “Negatively perceived aspects of the school environment, such as inadequate support from teachers and feelings of insecurity or unsafeness, create vulnerabilities for youth” (Buehler et al., 2015, p. 57). Successful middle schools possess a positive learning climate, teacher support, and school safety (Buehler et al., 2015).

Middle school PLCs must work at high levels of efficiency to successfully help guide students through the many changes in their life. They must use more pedagogical
tools than at any other educational stage (DuFour et al., 2010; Senge, Cambron-McCabe, Lucas, Smith, & Dutton, 2012). Intervention strategies must be the norm and must be used consistently (Andrews, 2014; Polhemus, 2010). Flexibility must be employed continually for students to remain engaged and motivated to learn (Horn, Garner, Kane, & Brasel, 2017). The results of these influences require middle school teachers to have a wider breadth of pedagogy and experience in order to traverse these obstacles so students can thrive.

Buehler et al. (2015) explored the perceptions of culture and the level of its influence on middle school students in their first semester. They found that students have a better vision of school when the site portrays a positive learning environment where teachers are seen as supportive (Buehler et al., 2015). Block (2016) reinforced the importance by stating, “One of the most significant changes adolescents will experience in the transition from middle school to high school is in the realm of academics” (p. 45). The best teaching collaboration produces the most gains in the middle school realm given the complexity of this student population (Block, 2016).

Collaboration

Student success is best achieved by teachers who care for their students, collaborate well together, and are respected by their fellow staff members (Fullan, 2001). Allen (2013) expressed the importance of collaboration; he said, “If improving instruction is the heart of school improvement, collaboration is the soul” (p. 23). Collaboration models were created to calibrate instruction and share best practices for students. A key element of any collaborative model is the disclosure of ineffective practices accompanied by the appropriate data for a group of peers. The group then
considers what is presented and provides constructive criticism to refine the practice with appropriate follow-up meetings. Teachers feel the need to collaborate with peers to confront the problems they are having with their practice and find ways to limit future instructional ineffectiveness (Kimmons, 2016). However, placing individuals in a collaborative environment does not automatically create a supportive environment (Gyesaw, 2012; Szczesiul & Huizenga, 2015).

**Professional Learning Communities**

The Professional Learning Community has become a tool of success for student achievement. Student achievement increased with PLC’s over previous isolative practices (Hord 2004; Polhemus 2010; Caine & Caine 2010). Assessments analysis has increased knowledge of effectiveness, goal setting and accountability within the group (Bretz 2013; Caine & Caine 2010; Dalal 2013; DuFour et al., 2010). These positive results form an attractive reputation that many districts adopt for their students.

PLCs mainly focus on the process of accurate measurements and ensuring analysis of the numbers, which results in a limited amount of success (DuFour et al., 2010). True success is attained through high levels of sharing and questioning. Siskin (1991) suggested in his study that departments with high levels of social cohesion and commitment to common goals and purposes can be powerful mechanisms for establishing shared norms and goals for instruction. The challenge for most teams is the actual sharing of more than their results, which fosters what Fullan (2005) described as a true leadership culture. General team reactions to the PLC process over time begin with compliance but devolve into eventual apathy. The repetition of the process with no direct benefit to the teacher leaves the group feeling like there is another task they must
complete in addition to their already overworked days. Leaders continually struggle with refreshing the process to elicit high levels of motivation. Teachers must take ownership of the learning and the craft of their teaching on a continual basis.

**Role of Administrator**

The role of the educational leader or administrator can be ineffective in developing teams with high efficacy. Administrators are expected to indirectly foster change without any direct focus or guidance. The educational leader is expected to foster an environment where “empowered employees appear to be more likely to reciprocate with higher levels of commitment to their organization” (Avolio, Zhu, Koh, & Bhatia, 2004, p. 962). The nature of the PLC movement is a teacher-driven group that collegially brainstorms methods of success and which is free from evaluation or direct negative focus (Kohm & Nance, 2009, p. 70).

Administrative contributions must be hands off, but maintain enough influence to guide the team and keep them accountable to agreed-upon goals. Their directives are to establish a level of trust in the room, as Liou (2010) described: “The presence or absence of trust between teachers and principals around subject matter point toward areas where leaders and teachers bridge existing expertise to address new problems of instructional improvement” (Abstract, p. ix). Instructional goals and overall measurements must be provided to the group for analysis. Finally, the team must be autonomous in order to cultivate the free flow of ideas and experiment with the styles of teaching (DuFour et al., 2010).

Team success is created when teachers evaluate their level of responsibility along with the academic results. Teachers too often use their students’ lack of effort in order to
justify their discontinuation of research or learning. Unfortunately, tools to directly motivate teachers to develop their methods are limited for administrators because their role is to foster redistributive leadership (Hargreaves & Fink, 2006). While this position restricts the administrator from directly influencing change, the role of the department chair, who leads the PLC team, guides the process by fostering change with creating motivational challenges, limiting miscommunication, and ensuring compliance (Szczesiul & Huizenga, 2015).

**Statement of the Research Problem**

The problem that hinders sustained success of the PLC is the reluctance of team members to share struggles and failures for fear of ridicule. In order for any group to share appropriately, they must truly bond beyond the socially perceived working relationship. Combating the isolation of the classroom along with the differing curriculum is a challenge that must be addressed for real change to occur (Fuchs & Moore, 1988; Hargreaves & Dawe, 1990). These challenges add to the multifaceted process of education and the multiple variables that influence success on a daily basis. An example is Google’s (2012) attempt to address the effectiveness of management, which concluded that the first order of any group is to become dependent on one another. Teachers can grow by depending on the knowledge of one another.

Most PLCs share and analyze data as a group. Some groups actually brainstorm methods to reteach segments for students with the intention of motivating students to master the skill. Unfortunately, groups generally share an apathetic nature to the spirit of this time and do not challenge their craft of teaching for the betterment of each other. This lack of effort prevents the team from achieving focused analysis of engagement and
developing instructive pedagogy for students to effectively learn. If teachers can increase their levels of sharing with an emphasis on personal growth, real coaching can occur.

**Purpose Statement**

The purpose of this mixed methods explanatory study was to identify and describe factors of risk-taking behavior among Riverside County PLC middle school teachers.

**Research Questions**

1. How do middle school teachers describe a psychologically safe PLC that promotes risk-taking?
2. What factors do middle school teachers perceive increase their psychological safety when working in a PLC?

**Significance of the Problem**

The PLC provides a framework to allow teachers to strive for the best teaching practices possible. The PLC has been implemented with the hope that teachers will grow and develop as a unit utilizing the best practices. The need for the best teaching practices to be implemented across all schools is immediate due to students of poverty averaging one grade lower than others and disparate ethnic groups falling behind other students (Loeb, Edley, Imazeki, & Stipek, 2018).

Teachers are struggling to deal with the different levels of English learning acquisition students in their classrooms (Loeb et al., 2018). The research is clear; effective professional development is needed at the site level to be as effective as possible (Allen, 2013; Andrews, 2014; Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Joyce & Showers, 2002). Implementation of these practices share the pitfalls of limited resources, lack of teacher ownership, and a culture of competition rather than
collaboration (Provini, 2013). Carmeli et al. (2012) identified that learning from failures within a psychologically safe group is a key indicator of good decision-making. Edmondson and Lei (2014) summarized the findings of Choo, Linderman, and Schoeder (2004) when they said that “a psychologically safe environment enables divergent thinking, creativity, and risk taking and motivates engagement in exploratory and exploitative learning, thereby promoting team performance” (p. 31). By examining methods to increase psychological safety, this study can assist in correcting the competitive environment and building cohesiveness among the teachers. Through the examination of risk-taking, the researcher desires for school leaders, both administrative and fellow teachers, to use this information in a practical way to construct high levels of security in sharing, thereby building opportunities for teacher growth.

This study has contributed to the existing literature by examining the subject of psychological safety in relation to the efficacy of a PLC from the position of middle school teachers. Most importantly, the study has served to verify different attributes that create psychological safety among teachers (Edmondson, 2018). Research has yet to address the middle school experience through identifying possible factors that encourage risk-taking among the members of this unique group (Gerlach & Gockel, 2018).

This research has added to the concept of how willing teachers are to share in a conversational learning environment. The reflection that occurs during the conversational exchange fosters new developments for the teacher (Cranton & King, 2003). Baker, Jensen, and Kolb (2002) posited that exploration in conversational learning is crucial in today’s knowledge-based society.
School leaders can benefit from this study by recognizing low risk-taking and determine the need for an intervention within the PLC. Additionally, the school leader will understand the attributes that can build psychological safety from teachers’ perspectives. Leaders will discover methods to modify the PLC environment for team building, this increasing trust and resolving conflict among the group (Harvey & Drolet, 2004). By measuring the level of risk and possible methods to build psychological safety, leaders can effectively transform the productivity and performance of their current teams (Edmondson, 2018).

Definitions

Theoretical Definitions

Middle school. A school serving students in Grades 6-8 or in Grades 7-8 that is characterized by the following: (a) a home base and teacher for every student that can provide guidance and support, (b) a program that offers balanced attention to personal development and the development of skills and application of knowledge, (c) an instructional system focused on individual progress, (d) the use of interdisciplinary teams for instruction and evaluation, (e) a wide range of exploratory activities for socializing and interest developing (Alexander, 1978; Block, 2016).

Psychological safety. A crucial component for success among teams is for all members to have high levels of what Amy Edmondson (1999) defined as psychological safety. For the purpose of this study, psychological safety is defined as “a shared belief that the team is safe for interpersonal risk taking” (Edmondson, 1999, p. 359).

Professional learning community. The active definition being used for this study is expressed from the seminal authors as “an ongoing process in which educators
work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve” (DuFour et al., 2010, p. 11).

**Operational Definitions**

**Collaboration.** Collaboration is commonly seen as people, in this case teachers, coming together to achieve a set objective with no known structure to achieve the goal (Szczesiul & Huizenga, 2015). The premise was to bring knowledgeable people together with a common problem and allow them to generate ideas to solve the problem in the best possible fashion (Little, 2003). The hope is that by pooling resources, talent, and knowledge together, the best solution would materialize.

**Trust.** Trust has been a well-documented and studied phenomenon in the PLC process. Investigations from the Cold War detail methods of building trust between leaders of countries (Liou, 2010). For schools, the use of trust has been mainly focused on the relationship between teachers and administrators or teachers and students (Liou, 2010). Research still proposes the need for high levels of trust for agreement and learning to occur. Additionally, many studies agree that high levels of trust among adults directly affect student learning (Liou, 2010).

For the purposes of this study, trust is defined from Hoy and Tschannen-Moran’s (1999) multidimensional definition of trust, which is “an individual’s or group’s willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest and open” (p. 189).

**Delimitations**

This study was delimited to Riverside County full-time middle school teachers working in a PLC. The researcher only used full-time teachers who have attained tenure
in order to gather the most secure data on safety. Middle school teachers were used because of their early adolescent experience. Teachers outside the general instruction curriculum, such as English learner and special education teachers, were excluded.

**Organization of the Study**

This study began with an overview of the problem and the effect of successful collaboration within PLCs. Chapter II examines the current literature of psychological safety and other topics related to PLCs, collaboration, and the middle school environment. Research design, population, sample, data collection methods and analysis, limitations, the study’s validity and reliability, and limitations are presented in Chapter III. Chapter IV includes the research findings accompanied by tables and narrative analysis. Finally, Chapter V presents the summary of findings, unexpected findings, conclusions, recommendations for further research, and researcher reflections.
CHAPTER II: REVIEW OF THE LITERATURE

This chapter presented a board review of literature to provide a theoretical background of the elements within this study. A synthesis matrix was created to organize the literature presented in this chapter (Appendix A). The literature review was organized in seven main parts by a funneling approach. The first section presents a background of education from the general perspective. The second section specifically focuses on the middle school experience, highlighting its unique challenges. The third section details the effectiveness of collaboration on student learning and its impact of teams. The fourth section explores the professional learning community (PLC) from conception through implementation along with mandatory elements for successful sustainability. The fifth section identifies the impact of trust on teams and its necessity within the PLC. The sixth section defines psychological safety and details its evolution as a key element of team effectiveness across many environments. The seventh section offers the theoretical framework for this study. These elements provide the ingredients to examine factors that foster high levels of risk-taking behavior among Riverside County PLC middle school teachers, with is the purpose of this mixed methods study.

Educational Environment

Today’s educational climate is in a state of flux with multiple changes and societal needs that the world economy and globalization have provided for American society. Since the inception of No Child Left Behind (NCLB), education has focused much of its attention on the process necessary to increase the skills of students to be better equip them for the 21st century. The Turning Points 2000 report provided additional analysis describing the areas that educational institutions need to focus on for
students to succeed (Jackson & Davis, 2000). Since then, Common Core State Standards (CCSS) and Race to the Top, provided by the Obama administration, have continued this legacy. Concentration on skills-oriented teaching methods must continue so the American student can compete in a global economy. Goldman and Pellegrino (2015) concluded that the current educational system falls short of filling all the needs of its students for the 21st century. According to these researchers, the most crucial elements are the perspectives of how people learn and the styles of assessment (Goldman & Pellegrino, 2015). These conclusions echoed the previous findings of Hattie’s (2012) meta-analysis that the most influential element of student learning is the teacher’s view of their role and the constant evaluation of impacts on the student learning.

The Blueprint for Reform provided a structure and plan for schools throughout the United States to improve the process of education across all areas (U.S. Department of Education, 2010). Within that framework is a directive for all schools to increase teacher knowledge in order to effectively intervene with students. Gulbranson (2016) summarized Strouse (2001) who contended that education should help prepare children with social tools to survive in society. The future of American education will evolve from the concerted efforts of teachers to progress in the art of teaching rather than continuing to treat it as a science (Hattie, 2012).

**Middle School**

**Introduction and History**

The middle school movement was established to transition students from the one-room classroom experience to the subject-based, institutional model of high schools (Harley, 2010). An environment was devised for students to acclimate to the demands of
higher level education that is subject specific (Eccles et al., 1993). Students experience a variety of educational styles in six or more classes versus the teaching style of one teacher through different subjects (Eccles et al., 1993; Ellerbrock, Main, Falbe, & Pomykal Franz, 2018; Harley, 2010), which Ellerbrock et al. (2018) have argued restricts the relationship development between teachers and students.

No other area magnifies the needs and successes of educational efforts more than the middle school (Allen, 2013). However, Greene et al. (2008) noted, “The scarcity of systematic research in middle grades education, inadequate funding, insufficient sponsored research, and the lack of a national database for middle level education resulted in a shallow research foundation” (p. 44). This lack of overall knowledge of the middle school experience impacts the skills and progress of students and limits the ability for proper systemic interventions to be put in place.

Adding to this landscape is the increased awareness of the student’s development. Middle school students generally exhibit amplified behaviors because of their ever-changing environments and physical development (Onetti et al., 2019). Increased socialization and puberty are expressed through high levels of confrontation, mood shifts, and emotional sensitivity, which all teachers have to traverse while trying to increase the student’s subject knowledge (Harley, 2010). Higher levels of diversity and emotional strain from a constantly changing society magnify the complexities that must be dealt with during the students’ education (Onetti et al., 2019).

Importance

The middle school experience is paramount to the development of students as they begin their journey through adolescence (Ellerbrock & Kiefer, 2014). Physical
development occurs during this time, which complicates the experiences of self-esteem and identity. Hormonal changes amplify the topics of sexuality and attraction. Onetti et al. (2019) declared, “Education is important for the acceptance of oneself as a preventive tactic to achieve psychological adaptation in adolescence (Fuentes, Garcia, Gracia, & Lila, 2011)” (p. 3). Competition among peers is highlighted as a positive goal and reinforced by peer pressure. Change is a major theme during this time affecting every aspect of the student’s life.

Adults raise behavioral and cognitive expectations for each student along with an awareness of social maturity (Harley, 2010). Communication between peers is expected to be conducted with little or no redirection. Identified “childish” behaviors are discouraged for a more adult-oriented presence, along with decision-making justification when a student misbehaves.

The instructional shift of multiple teaching styles exposes the student to societal differences and potential obstacles in personality conflicts (Johnson & Smith, 2008). Personal responsibility is stressed with task completion, along with the ability to deal with advanced concepts for each new topic (Harley, 2010). Finally, middle school students struggle with their sense of self in relation to others in their environments in different ways (Onetti et al., 2019).

**Requirements for Effectiveness**

Effective middle schools have created environments that support student behavior, instruction, and academic advancements. Buehler et al. (2015) found that students were satisfied with the new middle school atmosphere when the environment felt safe and positive with supportive teachers. These conclusions are strengthened with the
addition of interdisciplinary support teams described by Ellerbrock et al. (2018). Support for all aspects of student life is reinforced in a collaborative effort so students can learn at their different levels but still achieve success within the learning environment (Block, 2016; Dever & Lash, 2013; Taylor, 2013). Combining support and focus among staff members will yield benefits for student success.

**Challenges**

The craft of teaching must adapt to a fast-paced environment of multiple changes for the 21st century. Technology and the ability for students to instantaneously communicate with people outside of the direct environment have put a strain on the building of relationships with peers and authority (Bataller, 2018). The reputation and authority of the schoolteacher has diminished with the change to the technologically oriented thinking model. Middle school lesson structures typically have a collaborative construct of educational environment put forward by the Freire (1990) dialogue and conversation models of knowledge. Shifting the focus of student attention solely to the vision of the teacher reinforces the banking model of teaching that Freire and others advocated against. This brings middle school teachers to an environment where they must relearn their current, long-held teaching methods from the past while innovating for the future. Or, as Harley (2010) described, “As a middle school teacher, one must possess a strong degree of adaptability and flexibility, as well as a wide variety of teaching strategies” (p. 148).

**Collaboration**

The need for collaboration within schools was generated from the understanding that the school is responsible for the whole child. Collaboration provides consistencies in
instruction which, in turn, creates inclusion among stakeholders. A school district can better guarantee a level of instruction for each child’s education when it has created a collaborative structure for the success of instruction (Taylor, 2013). The transactional change of bringing teachers together to share the happenings within their lessons is meant to gain insight on dealing with student behavior and aligning their instruction across the subject or grade for consistency of learning throughout the school site (Little, 2003; Szczesiul & Huizenga, 2015). The premise was to increase instructional practice through the sharing of experiences and struggles among teachers while forming new ideas for success.

Mitchell, Ripley, Adams, and Raju (2011) hypothesized a direct correlation between levels of trust and collaboration. They asserted that collaboration requires “parties to come together and to share both responsibility and accountability” (Mitchell et al., 2011, p. 147). Further, effective collaboration needs members to “trust the other party will act in a manner that can be counted on and that is in the best interest of all concerned” (Mitchell et al., 2011, p. 147). They described the benefits of collaboration on the different aspects of the school site and came to the conclusion that collaboration ultimately benefits the capacity of the teacher, which, in turn, builds on the school’s ability to change (Mitchell et al., 2011).

The desired benefits of collaboration come in many different forms. Taylor (2013) identified four categories of benefit from common planning time:

(a) CPT built a sense of community and mutual support; (b) teachers with CPT generated new knowledge and effectiveness; (c) teachers with CPT were
committed to support students’ social, emotional, and intellectual development;

(d) CPT benefited the whole school, not just the team. (p. 118)

Discussions that center on instruction guarantee student learning across the entire school site are the same in content and assessment (Szcesiul & Huizenga, 2015). Student intervention ideas between collaborating teachers are generated to engage students in the classroom and deal with behavioral challenges. Instructionally, the school site becomes a more unified program of education that is easier to understand.

Ancillary benefits have occurred from the implementation of collaboration on school sites. Higher levels of relationships within the school teams have been generated. Teacher bonding with the school site becomes stronger (Taylor, 2013). New research and strategies are shared among the group for consideration, which fosters further sharing among the participants (Adams, 2009). Methodologies, like grading and teaching style, are debated with general consensus reached by most parties for increased fidelity of instruction. Most of all, teachers began sharing methods that challenged them and sought advice on how to overcome these challenges (Mertens, Anfara, Caskey, & Flowers, 2013). This shared learning journey generates higher levels of pedagogy and intervention.

Little (2003) studied the concept of sharing among teachers outside of the classroom. Her findings described the daily accomplishments for the teacher within the collaborative climate. She suggested that the occurrences within a separate collaborative meeting are the following:

The groups demonstrably reserve time to identify and examine problems of practice; they elaborate those problems in ways that open up new considerations
and possibilities; they readily disclose their uncertainties and dilemmas and invite comment and advice from others; and artifacts of classroom practice (student work, lesson plans, and the like) are made accessible. In all these ways, the groups display dispositions, norms, and habits conducive to teacher learning and the improvement of teaching practice. (Little, 2003, p. 938)

These additional avenues of inquiry and decision-making simultaneously enhance the craft of teaching in multidirectional manners with numerous pedagogical strategies. Therefore, it is not a surprise for leaders to see different methods to control or organize such a dynamic phenomenon.

Collaboration positively affects the efficiency of teachers. Gyesaw (2012) noticed a teacher’s struggle of wanting to be a part of a collegial group while maintaining self-importance. Teachers are more productive in the community format while advancing their teaching methods (Corcoran & Silander, 2009; Doğan & Yurtseven, 2018). Teacher inductions become a teacher-led endeavor rather than administrative (Allen, 2013; Tschannen-Moran, 2001). However, Gyesaw’s (2012) conclusions do not support a high level of “joint work” described by Little (2003). The idea that a minority of teachers have intense work, yet all must produce, demonstrates that teachers must come together through support, thereby building confidence for future work. When teachers are empowered, they are more likely to produce better quality instruction (Avolio et al., 2004).

**Professional Learning Communities**

DuFour et al. (2010) are the founders of the concept of a professional learning community (PLC), and their continued research improves this process. Many others have
investigated the different elements of the PLC process and expanded them for success. From ethnic and special education implications to adaptation to CCSS and Smarter Balanced Assessment Consortium (SBAC) testing processes, many broad challenges currently face teachers. Research shows that PLC groups must bond together for sharing to occur on a regular basis (Bretz, 2013; Harvey & Drolet, 2004). There must be a high level of what Amy Edmondson (1999) identifies as psychological safety for all members in order for them to truly share all facets of their teaching strategies. Caine and Caine’s (2010) analysis reinforced this idea in recognizing that “participants in a good learning community find that it helps to have colleagues with whom to talk things through, reflect, analyze, and discuss” (p. 17). The basic and continual communication about student progress is the element that provides the program’s success.

PLCs have become the standard approach by districts for student achievement (Smith, 2015). The processes within the PLC meeting allow teachers to systematically improve instruction for all students within any district (DuFour et al., 2010). Efforts from these teacher teams positively affect student outcomes when the teams work collaboratively toward improved instruction (Bretz, 2013). Hord (2004) described five different dimensions that a PLC exists as:

- Supportive and shared leadership
- shared values and vision
- collective learning and application of learning
- supportive conditions
- cheer practice. (p. 7)
Central to the PLC process is the need for teachers to work effectively as a unit. With successful teamwork, PLC departments will raise scores and learning for students at their site (Gulbransen, 2016; Polhemus, 2010).

Bretz (2013) explored the effectiveness of the PLC process on an individual high school from the perspective of the teachers. Through focus groups and interviews, Bretz delved into the attitudes and perceptions of the collaborative nature of the PLC process and its effect on teacher feelings through the implementation phase of the program. He found that the PLC process positively influenced all aspects of school culture. It limited the feelings of isolation and aligned the teaching of the school into a common experience. Teachers were able to reflect on their current practices and improve their methods (Bretz, 2013). Sharing was described as a benefit to both teachers and students (Bretz, 2013). The study described the challenges associated with the process as being inflexible for teachers to explore new methods (Bretz, 2013). The fostering of psychological safety could open the channels of communication between teachers, which could allow further exploration of methods and practices.

Leaders of PLC groups must influence all characteristics of team effectiveness in order for the teachers to generate any outcome (Harvey & Drolet, 2004). The groups journey through the creation of “teamness,” as articulated by Jones and Bearley (2001), to forge a cohesive unit. A significant characteristic of the team is the ability of its members to maintain high levels of interaction for successful decisions and implementation of ideas (Harvey & Drolet, 2004). The core of member interaction is the feeling that each member can take risks without ridicule, or what Edmondson (1999) defined as psychological safety.
Teacher sharing and collaboration is central to the success of the PLC (Bretz, 2013; Dever & Lash, 2013; Hadar & Brody, 2010). A requirement for this collaboration is the ability for all members to openly share with their colleagues, which Bloom and Vitcov (2010) described as an opportunity to build deeper trusting relationships. Unfortunately, the research does not describe applicable methods for fostering this sharing. Hadar and Brody (2010) articulated that there should be a “safe and comfortable environment for the talk about mistakes and attempting new teaching methods” (p. 1646). It is presumed that teachers will openly share their mistakes and seek better practices based on their professionalism.

Relationships and their development within the PLC were explored using the school principal’s perspective by Cranston (2011), who advanced Hargreaves’ (2007) notion that teachers must value one another with high levels of trust in order to maintain a strong PLC climate. He found that relationships are crucial for the PLC to be successful. The challenge for most PLC leaders is to create an environment that is cohesive to high levels of productivity. Allotting time in the schedule and placing teachers in a room will not produce great learning strategies or teaching (Dever & Lash, 2013).

**Purpose.** The premise behind DuFour et al.’s (2010) idea of the PLC is that, through examination of data and shared knowledge, each teacher will advance his or her own craft of teaching. By measuring and analyzing the success of the classroom, teachers will be motivated to better their instruction, thereby advancing student achievement (Little, 2003). This position relies on a few assumptions. One assumption is that teachers are knowledgeable enough about the practice of teaching that they will solve any problems that might arise (Andrews, 2014; Dalal, 2013). Next, designated
groups will work homogeneously toward the common goals (DuFour & Eaker, 1998; Polhemus, 2010). Finally, teachers must willingly participate in the processes outlined in the PLC meeting and consistently follow through with their commitments.

Hord (2004) outlined the dimensions of collaborative PLCs: “(1) supportive and shared leadership, (2) shared values and vision, (3) collective learning and application of learning (formerly identified as collective creativity), (4) supportive conditions, and (5) shared personal practice” (p. 7). All of these elements rely on the team collaborating together in each aspect for success. Cohesion of the group is what ensures the effectiveness of the work (Harvey & Drolet, 2004). The absence of any one of these elements is a hindrance to the productivity of the team.

**Team dynamics.** According to DuFour et al. (2010), the PLC environment is supposed to be one of collegial learning. Assessment creation by the team commits the group to common elements of the curriculum, which increase fidelity at the school site. Data analysis identifies areas of need along with successful strategies for students. Proven pedagogy based on the school population is shared for the implementation comparison. Troubled teachers openly share frustrations and mistakes with their colleagues in order for them to gain insight from peers in the hopes of advancing their practice. Conflict that around important issues and decisions is resolved in positive ways (Lencioni, 2012). New methods and initiatives are presented for adoption to ensure cohesion among all members. In sum, all aspects of teaching are evaluated, shared, and improved for the teachers to learn the best practices for their students at that time.

Little (2003) examined this dynamic and confirmed the structure as somewhat effective. She found that sharing increased among the participants within communities
and that efficiency also increased among the members. However, a struggle emerged within the group that Little described as affor dances or “the ways in which the practices of the group open up some opportunities and constrain or close off others” (p. 939). With the speed at which current students change, the new demands of the teacher to be proficient in many aspects of the teaching profession are more crucial.

The influence of personality on the team affects the creativity produced. Gong, Cheung, Wang, and Huang’s (2012) integrative model shows that proactive personalities foster information exchanges, which generate trust and create ideas among the group. They found that this perspective advances a new dimension of psychological safety with “the finding that the workplace trust relationship relates positively to individual creativity supports the psychological safety perspective at the individual level” (Gong et al., 2012, p. 1628). There is benefit for team members who possess the internal drive to better themselves and seek out methods to create that improvement. However, the challenge for some members is the courage to proactively risk themselves rather than react to negative responses.

**Leadership.** Leadership in PLCs was meant to be solely based on the teachers motivating themselves (Gyesaw, 2012). The concept of self-driven meetings was purposed to allow a high level of trust and sharing, thus creating an environment of learning among teachers (DuFour et al., 2010; Senge et al., 2012). Administrators are to assume a more transformational role for the success of the PLC by fostering an environment in which to amplify the team’s talents (Eaker, DuFour, & Burnette, 2002; Moller, 2006). Avolio et al. (2004) referenced Shamir et al. (1998) who postulated that transformational leaders sway commitment by affecting members’ intrinsic value to the
organization. Administrators ensure that the workings of the PLC align with the district goals and culture of the school site (Avolio et al., 2004). New resources for the team are provided by the administrator to ensure the process runs efficiently (i.e., data results, testing platforms, and curriculum). The administrative role is to support the PLC leader’s needs of keeping the team accountable to the processes and to their fellow team members. The true leader of the PLC is the teacher leader and not the administrator. Currently, implementation of the PLC process has been conducted in a Draconian manner with the administrator having direct oversight of the meeting (Moller, 2006). The chilling effect this produces on sharing and collaboration is monumental and is a true disservice to the school and the teaching profession.

The true leader within the PLC is one who facilitates the dynamics within the team while fulfilling the expectations of the group. Hargreaves and Fink (2006) outlined eight strengths that good leaders possess:

- Modeling and building strong and rewarding relationships by paying attention to the human side of school change
- Establishing a high trust environment
- Developing and renewing a culture of learning and improvement at all levels through problem solving, inquiry, and intelligent evidence-informed decision making
- Helping the school community to develop and commit to a cohesive and compelling purpose that prevents dissipation of initiative and effort
- Stimulating a culture of professional entrepreneurship in innovations and ideas that benefit student learning
• Establishing and regulating grown up professional norms of civil argument and productive debate
• Ensuring the voices of minority members of the culture always receive a proper hearing
• Doing all this within an unswerving commitment to improving all students’ learning and achievement, especially for those who are furthest behind.

(p. 560)

These attributes to great leadership require in-depth interactions with the team on a regular basis with the absence of evaluative pressures with leadership distributed throughout the school site (DuFour et al., 2010; Hargreaves & Fink, 2006).

Avolio et al. (2004) examined the interrelationship between transformational leadership and organizational commitment. They concluded that there is a correlation between the feelings of people being empowered by their leaders and their ability to make crucial decisions. The result is larger commitment by the employee to the company and a genuine concern for others’ wellbeing. Employees also experienced increased productivity and work quality based on these feelings (Avolio et al., 2004). One factor the researchers detail as influential is the physical distance between leaders and the employees (Avolio et al., 2004). Administrators are removed from the inner workings of the PLC on a continual basis. The result is that the distance interferes with the empowerment necessary for the PLC to work at optimal levels. The best solution is the need to shift the leadership role to the department chairs within the environment.

**PLC needs.** Struggles with the PLC model come from lack of commitment, which is manifested in complete refusal or reluctant participation with extreme
limitations. Teachers become passive in the process and lose the true focus of the program (Muñoz & Branham, 2016). Some teachers refuse to participate in the process because they believe the student is solely to blame for the assessment numbers and they refuse to reflect on their own methods of instruction (Horn et al., 2017). Some departments are not clear about the purpose and process of PLCs, which alters the way they function with troubling results (Joyce, 2004; Little, 2003). These obstacles stifle every level of the process and collapse any hope of improved teaching.

PLC teams are effective with high levels of trust (Hord, 2004). Teachers who do not trust the department leadership will hold back on sharing. School leadership who do not create a positive culture in PLCs foster apprehension or denial (Peters, 2013). Miscommunication or perceived attacks on the teacher suppress enthusiasm in the process (Tschannen-Moran, 2014). Additionally, high levels of support and encouragement through difficult work within the PLC must be cultivated in order to prevent gradual apprehension (Eaker et al., 2002).

**Trust**

Mitchell et al. (2011) explored the definition of trust and argued that there must be an element of risk in order for trust to be established. According to Lencioni (2012), trust is the foundation for teams to become cohesive units. Trust is vital to work within the school site (Mitchell et al., 2011; Tschannen-Moran & Hoy, 1998). Mitchell et al. (2011) concluded, “When teachers trust the principal, their colleagues, and parents, they are more likely to collaborate with their fellow colleagues on instructional decisions” (p. 164). Cranston (2011) found that high levels of relational trust lead to more effective collaboration. Peters (2013) found the inverse that established collaboration creates
trusting relationships through vulnerability. The reciprocal nature of these relationships continually increases the levels of information, sharing, and productivity.

Relational trust is established from intrapersonal, interpersonal, and organizational levels (Bryk & Schneider, 2002). As information is shared among participants, it causes a dynamic environment where the support and strains of the work affect the relationship. The relationship currency exchanged during these times makes all parties evaluate their social capital with others (Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Penuel, Frank, & Krause, 2006).

The central elements needed to establish trust among people is the sharing of one’s self in authentic honesty and the proven commitments between those same individuals (Tschannen-Moran, 2014). This evolving relationship begins at the first introduction and continues with every following interaction (Tschannen-Moran, 2014). Tschannen-Moran (2014) described a trustworthy individual as a person who needs to “demonstrate benevolence, reliability, competence, honesty and openness” (p. 314). Weisman (2010) and Escalante (2019) reinforced these characteristics through the Values Institute’s five domains of competence, consistency, concern, candor, and connection.

The exploration of mistrust has focused on the methods of resolving conflicts in a productive way in order to maintain high levels of performance. Trust is a fragile thing to maintain given the dynamic elements of individuals and their environments. In most teams, the opportunities for mistrust are greater because people are assigned to a group in which they cannot choose their teammates. According to Bies and Tripp (1996), trust is violated by damaging the person’s identity or the norms of the group. Trust violations also hinder organizational performance (Tschannen-Moran, 2001). Wicks, Berman, and
Jones (1999) stated that dealing with mistrust in an optimal situation occurs with the violation happening within a range of the relationship’s current position, thereby allowing the violator to regain enough trust to maintain the same relative level when the conflict is completed.

**Psychological Safety**

The sharing of instructional strategies with one another via appropriately received feedback can increase the skill of the teacher and can advance his or her learning and instruction (Kimmons, 2016). Research conducted examining the interactions of people within a PLC is limited (Cranston, 2011; Little, 2003). The application of the new feedback allows the team to shift the mindset of the group to a clinical exploration rather than a job. Horn et al. (2017) described this phenomenon as the mindset struggle of being a *doer* rather than a *thinker*. By exploring different styles and strategies within lessons, the PLC exhibits conversational learning to advance the teaching craft.

Edmondson’s (1999) seminal study of team effectiveness established the term *psychological safety* by her work with hospitals. She examined the levels at which nurses were willing to admit mistakes to their colleagues and superiors with all facets of their work. As Edmonson stated, “An aim of the present study was to investigate whether beliefs about the interpersonal context vary between teams in the same organization, as well as to examine their effects on team outcomes” (p. 352). From this initial work, the focus of effective team interaction has continued to grow in a variety of areas. Project Aristotle, sponsored by Google (2012), reinforced the need for high levels of psychological safety among teams in a corporate setting for optimal effectiveness. Throughout the research, led by Edmondson’s (2018) work, it was established that
psychological safety is not a personality trait or a chemistry dynamic within the team, but an environmental situation that can be influenced. All findings found trepidation on the part of workers to share with their bosses (Edmondson, 2018). Organizations must establish a psychologically safe environment in order to combat the conditions that hinder progress, or as Edmondson identified, as VUCA conditions: volatility, uncertainty, complexity, and ambiguity. Edmondson established a correlation between levels of psychological safety and job performance, which is expressed with the following graphic in Figure 1:

<table>
<thead>
<tr>
<th></th>
<th>Low Standards</th>
<th>High Standards</th>
</tr>
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<tbody>
<tr>
<td>High Psychological Safety</td>
<td><strong>Comfort Zone</strong></td>
<td><strong>Learning &amp; High Performance Zone</strong></td>
</tr>
<tr>
<td>Low Psychological Safety</td>
<td><strong>Apathy Zone</strong></td>
<td><strong>Anxiety Zone</strong></td>
</tr>
</tbody>
</table>


Ultimately, according to Edmondson, a psychologically safe environment is one where “people believe they can bring their full self to work and more specifically it means they feel they can speak up and their ideas will be welcomed” (Crowley, 2019, n.p.). A psychological study has found that psychological safety builds positive relationships between team members, strengthens relationship ties, and increases advice sharing among team members (Schulte, Cohen, & Klein, 2012). Lencioni (2012) corroborated this idea when “colleagues are truly committed to something, they confront one another about issues without feeling defensiveness or backlash” (p. 55). It is a necessity that psychological safety be established within small teams for the optimal productivity of the organization.
Use of psychological safety in the educational environment is being explored as a component of a larger relationship dynamic. Psychological safety has been confirmed as a large contributor to trust (Bloom & Vitcov, 2010). Hutt (2007) studied experiential learning spaces in dealing with the high anxiety subject of math and detailed the need for more examination of psychological safety among teachers. The term *experiential learning space* derives from the Kolb framework of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb & Kolb, 2017). However, the Kolb framework is not a source of psychological safety but the result of establishing the safety within the individual. Hutt (2007) agreed with previous research that psychological safety occurs within “a well-bounded experiential learning space as a norm and shared cultural belief” (p. 77).

Choo et al. (2004) found that learning from sharing within a psychologically safe environment is different from more structured methods. This corroborates the findings that team psychological safety has a positive relationship to team learning (Raes et al., 2013). Psychological safety also needs to be established in order to change teacher practices and increase productivity within the classroom (Wagner et al., 2006). Instructional practices are enhanced and innovated within teams that have high levels of psychological safety. The need to build the capacity of teacher teams to create the highest levels of psychological safety will be paramount for the added success for teachers and students.

**Conversational Learning Theory**

This study utilized the conversational learning framework proposed by Wyss-Flamm (2003), as outlined in Appendix B. The PLC is a challenging phenomenon to
examine for true success because teachers have to balance new leadership roles within the group (Moller, 2006). The teachers within the PLC must create a simultaneous focus on both student-centered learning and teacher learning within the same environment. Finally, they must analyze current progress, evaluate teaching methods, and generate new instruction within a limited time frame. These demands convolute the method to analyze success of what teachers learn from the experience.

Teacher development and learning must be a part of the PLC process in order for teaching to advance (Dalal, 2013). The challenge is to create an environment in which that can occur. Horn et al. (2017) stated that “for concepts to come together, two things need to happen interactionally. First, both formal and lived concepts need to surface. Second, these concepts need to be brought into dialogue” (pp. 42-43). The sentiment that exposure to new knowledge must be discussed and reflected upon is supported by Wyss-Flamm (2003) through her framework (Appendix B). This framework is multidimensional and accounts for all the internal variables teachers bring into the PLC (Wyss-Flamm, 2003). According to Wyss-Flamm, the best method of examining the conversational space of a group is to measure the psychological safety of the members within the group. By looking at psychological safety levels of the PLC members through the conversational framework, this study sought to identify the elements necessary to foster higher levels of safety, thereby increasing the conversational learning of the PLC group.

**Summary**

Research has focused on the processes of instruction in the PLC and has not addressed the team development aspect of collaboration and trust building. Hallam,
Smith, Hite, Hite, and Wilcox (2015) suggested that further inquiry in trust is needed: “Educators should continue to study the role of trust, the development of trust, and the strategies for building and maintaining trust among members of collaborative teams” (p. 212). Further research is suggested to find “conditions and factors that support real teacher collaboration or what Little (1990a) described as joint work” (Gyesaw, 2012, p. 174). Rasmussen (2015) found that high levels of psychological safety can generate high levels of trust among teachers, which encourages inter-teacher observations and feedback. The area of focus needed to advance the PLC for the betterment of student success comes from transporting the focus of psychological safety into the realm of the middle school PLC. Describing the elements necessary in the middle school PLC experience can generate more conversational learning between its members, thereby improving the teaching practice.

The best PLC is similar to the making of good bread. Wet and dry ingredients are gathered separately, and dough is created when they are mixed together; however, this mixture produces a flat bread. The raised bread loaf is created when the yeast reacts with the sugar to produce a healthy bread loaf. Similarly, each member comes into the PLC environment with his or her own ingredients. When mixed together during a PLC meeting, the curricular and academic needs of the PLC need to be balanced with the psychological safety development of the group. This matured mixture through conversational learning will produce the successful PLC experience, and better outcomes for students.
CHAPTER III: METHODOLOGY

This chapter explains the methodology used for this study to describe the levels of psychological safety among teachers and identify characteristics to influence those levels. The purpose statement and research questions are provided. Next, a justification is given for the design of the study, population, target population, and sample used for the study. The creation of the instrumentation for the study is described along with an explanation of the data collection and data analysis. The chapter concludes with a description of the limitations for the study and a chapter summary.

Overview

Professional learning community (PLC) success depends on the complete participation of its members to form a cohesive unit (DuFour et al., 2010). PLC groups must have trust with their leadership and each other for the system to work (Liou, 2010). They must possess willingness to share data, identify areas of need, and collaborate on methods to deliver the material, all of which can only be achieved through trust (Smith, 2015). Unfortunately, school leaders currently organize PLCs along old hierarchical systems. PLCs should embrace a collegial atmosphere where teachers support and coach each other (DuFour et al., 2010). One key way to make this possible is by ensuring the psychological safety of all members from peer ridicule.

The research relating to the concept of psychological safety by Edmondson (1999) is a stepping-stone to generating high levels of collaboration, the premise being that teams with a willingness to share areas of need among one another will progress faster than those with low levels (Gill & Hoffman, 2009). Building real trust will strengthen the talents of all teachers in the group and keep the craft of teaching fresh.
The necessary step is a pragmatic method of creating trust among the group for self-guidance and accountability.

**Purpose Statement**

The purpose of this mixed methods explanatory study was to identify and describe factors of risk-taking behavior among Riverside County PLC middle school teachers.

**Research Questions**

1. How do middle school teachers describe a psychologically safe PLC that promotes risk-taking?
2. What factors do middle school teachers perceive increase their psychological safety when working in a PLC?

**Research Design**

This mixed methods study uses a sequential explanatory two-step process to produce results. This method of examination was one where “the researcher first conducts quantitative research, analyzes the results and then builds on the results to explain them in more detail with qualitative research” (Creswell & Creswell, 2018, p. 15). The quantitative-qualitative study started with a quantitative survey followed by qualitative interviews meant to elaborate on the quantitative results (McMillan & Schumacher, 2014). Numerical data on levels of risk among the population were collected and analyzed. A section within the survey identified those participants who would volunteer for follow-up interviews. Next, interviewees were randomly selected based on an affirmative answer in the survey that they would volunteer for an interview. Interviews provided context and further explanation on the methods to foster risk-taking among group members. Examining the phenomenon of psychological safety from
different data points throughout both quantitative and qualitative methods created the triangulation necessary to form conclusions (Creswell, 2012). Figure 2 graphically illustrates the sequential, explanatory, mixed methods design.

![Sequential, explanatory mixed methods research design.](image)

**Quantitative**

Quantitative research is defined as a method whereby the researcher gathers data, which allows for analysis through statistics (Patton, 2015). Nonexperimental research, similar to that used for this study, can be implemented using a number of designs, such as descriptive, correlational, comparative, ex post facto, standards of adequacy, and surveys (McMillan & Schumacher, 2014). According to McMillan and Schumacher (2014), “Surveys are used to learn about people’s attitudes, beliefs, values, demographics, behaviors, opinions, habits, desires, ideas and other types of information” (p. 253). The focus of the data is to identify the levels of risk each teacher takes when he or she is in the PLC environment among other middle school teachers. The study was descriptive because the Likert ratings gathered describe levels of perceived psychological safety among middle school teachers. This descriptive data explained the traits centered on risk-taking for the PLC group (McMillan & Schumacher, 2014).

**Qualitative**

Qualitative research refers to “an in-depth study using face-to-face or observational techniques to collect data from people in their natural settings” (McMillan
& Schumacher, 2014, p. 5). The level of psychological safety each teacher feels during the meeting is crucial for the success of the entire group’s performance (Edmondson, 1999). The study’s purpose—to explain psychological safety—was phenomenological because the research attempted to capture the essence of a situation. According to Patton (2015), this matched his understanding of phenomenology because “[it] is a focus on exploring how human beings make sense of experience and transform experience into consciousness” (p. 115). The study endeavored to examine how people make meaning in sharing with each other, which supports the need for qualitative analysis (Creswell, 2012). These levels become the lens through which each teacher sees the education of their students (Patton, 2015). By exploring the methods through which psychological safety is developed, teams will increase levels of trust, thus creating a truly collaborative environment for generating intervention strategies.

Sharing the aspirations and results of a teacher’s classroom experience is a mandatory occurrence for PLCs to examine the effectiveness of their work (Gill & Hoffman, 2009; Hord, 1997). New strategies and pedagogy can be generated from these interactions (Gyesaw, 2012; Horn et al., 2017). Additional benefits could be tactics to extend learning or intervene with students who struggle with mastery. By exploring the participants’ experiences, the researcher aimed to identify possible methods of creating psychological safety within the PLC environment. The commonality of these experiences and the levels at which teachers are willing to share with one another can be extended to other communities that experience low levels of sharing (Patton, 2015).
Population

A population is defined as “a group of individuals or events from which a sample is drawn and to which results can be generalized” (McMillan & Schumacher, 2014, p. 5). California Department of Education defines middle school as “the middle grades consist of early-adolescent students, ten to fourteen years of age, generally in grades six to eight” (CDE, n.d.-b, para. 1). The overarching goal of middle school is universal: to bridge the gap between elementary school and high school, and ease the transition of young students into adolescence (CDE, n.d.-c). The middle school teacher deals with many challenges of adolescence from their students on a daily basis (Harley 2010). According to Harley (2010), middle school teachers are challenged to stay up-to-date in current psychological research on working with adolescents, explore and share effective instructional methods and uphold the best classroom management strategies. The CDE (n.d.-a) listed 1,296 middle schools in California served by 47,635 teachers. It is not feasible due to time and cost constraints to study a large group, so a target population was identified.

Target Population

A target population for a study is the entire set of individuals chosen from the overall population for which the study data are to be used to make inferences (McMillan & Schumacher, 2014). The target population defines the population to which the findings are meant to be generalized (McMillan & Schumacher, 2014). It is important that target populations are clearly identified for the purposes of research study (McMillan & Schumacher, 2014). It is typically not feasible, due to time or cost constraints, to study large groups; therefore, the researcher chose population samples from within a larger group. The target population was identified as Riverside County middle schools with 26
districts that serve 76 middle schools. Of the 76 middle schools in Riverside County, 61 have a PLC organizational structure.

Sample

Creswell (2012) defined sample as “a subgroup of the target population that the researcher plans to study for generalizing about the target population” (p. 141). A further subgroup of the target population was selected as participants to collect data, which was classified as a study sample (McMillan & Schumacher, 2014). Nonprobability sampling was used. This refers to the participants being chosen because of their acceptability to the researcher (McMillan & Schumacher, 2014). The sample population for this study was identified as 30 middle school teachers from five unified school districts within a 25-mile radius from the Riverside County Office of Education in Riverside, California, that conducted PLCs within their structure. Twenty-eight schools within those five districts were identified as potential schools for the study, which aligns with the definition presented by Creswell (2012) as “a group of individuals (or a group of organizations) with some common defining characteristic that the researcher can identify and study” (p. 141).

The quantitative survey portion of the study employed purposive sampling, which involves the selection of “particular elements from the population that will be representative or informative about the topic of interest” (McMillan & Schumacher, 2014, p. 152). Thirty participants within the five unified districts were selected for the quantitative portion of the study and asked to respond to the survey. Participants were identified based on the following criteria:
• They were teachers in seventh and eighth grades.
• They were teachers with 1 year or more of teaching in middle school.
• These teachers were active participants in a PLC.
• These teachers were recommended by the principal.
• These teachers participated in PLCs for 1 hour a week or more.

The second phase of this mixed methods explanatory study was to conduct qualitative interviews to explain the participants’ perceptions and experiences. Convenience sampling was employed by using available subjects in the geographical area of the researcher, along with results of the survey data (Creswell, 2012; Patten, 2014). This form of sample was employed to accommodate different constraints while maintaining high levels of accessibility (McMillan & Schumacher, 2014). A question on the quantitative portion of the study requested the participant to volunteer for a later interview. Positive responses were collected from the 30 quantitative responses with 10 interview participants identified for the qualitative portion of the study from more than three districts within the 25-mile radius. If more than 10 individuals volunteered for interviews, names were randomly selected for the interview sample. Figure 3 illustrates the process of limiting the population to an acceptable sample.

Instrumentation

In order to explain the different perceptions of middle school teachers from the perspective of all teachers involved, both quantitative and qualitative data were collected (McMillan & Schumacher, 2014). A mixed methods research method was chosen to provide a more comprehensive picture of the PLC’s happenings using both quantitative and qualitative data. McMillan and Schumacher (2014) explained that “using a single
method is inadequate to completely answer the research questions” (p. 426). Qualitative data were then collected to develop a deeper understanding of the quantitative picture based on the results (Creswell, 2012).

Figure 3. Process for study sample creation.

A sequential approach was used to complete this mixed methods study. Quantitative data were gathered from middle school PLC members. An electronic survey was then utilized with set responses that measured the level perception of psychological safety of each individual within the PLC group. Qualitative interviews were held with a smaller sample of respondents based on the answers provided in the survey to clarify and expand on responses to the survey data.

The development of the survey directly related to the literature review to expand the effectiveness of psychological safety in the educational environment. Previous work has been developed in a number of different environments (Edmondson, 2018). Edmondson and Mogelof (2005) examined a number of different leadership qualities in order to make teams effective. Google’s Project Aristotle indicated that psychological
safety is paramount to the success of teams (Edmondson & Mogelof, 2006; Google, 2012). Examinations of hospital settings improved patient care in a real way (Edmondson, 2003). Production teams have been able to increase productivity from the investigation of psychological safety (Edmondson, 1999, 2003). Management teams have become more innovative based on the studies (Harvey & Drolet, 2004) and understanding of psychological safety. By examining the middle school PLC, the researcher attempted to broaden the effectiveness of psychological safety into the team dynamic within a school setting.

**Quantitative Instrumentation**

Descriptive statistics explain and summarize a large set of observations for conclusions to be drawn (McMillan & Schumacher, 2014; Patten, 2014). Surveys gather participant perspectives in a manner that can be interpreted through nominal quantitative analysis (McMillan & Schumacher, 2014). The survey for this study was developed by Edmondson (2018) and adapted to different populations in other studies. Permission was granted by Edmondson for this instrument to be used for the study (Appendix C). The Psychological Safety Survey (Appendix D) was generated from previous variations that were adapted to different environments. Because the middle school environment has not been examined with the psychological safety protocol, a single survey was not able to be used for the study. It was necessary to use previously tested surveys to formulate the instrument. The variations were published by Edmondson (2018) in The Fearless Organization. The researcher gathered the quantitative data for the study through a digital survey of 30 middle school teachers to measure their feelings toward psychological safety and risk-taking among their peers.
Qualitative Instrumentation

Interviews were conducted as a secondary method of collecting data in order to describe factors that foster psychological safety. Qualitative interviewing is used to examine the things that an observer cannot directly observe, which allows the researcher to see the person’s feelings and viewpoint (Patton, 2015). As clarified by McMillan and Schumacher (2014), phenomenological studies “describe and interpret the experiences of participants regarding a particular event in order to understand the participants’ meaning ascribed to that event” (p. 372). The ability of the researcher to describe the internal feelings based on the lived experiences of the subject determined the need for interviews to be used for study completion.

An interview protocol and field test was initiated with a participant who matched the criteria for the study and whose responses would not be included in the actual study instrumentation. Feedback was elicited after the field-test interview was completed (Appendix E). An expert observer was present during the field-test interview and provided additional feedback on the interview process, interview questions, and the possible biases communicated by the interviewer. Next, the researcher and expert observer discussed the responses from the feedback response survey (Appendix E) and observational findings. Feedback was then used to augment the interview questions and create the final protocol for the study (Appendix F). Question alignment to research questions was completed (Appendix G).

Ten face-to-face interviews were conducted with subjects that volunteered in the quantitative survey portion of the study. These interviews meant to determine the factors that contribute to high levels of psychological safety. Selected interview participants
were invited via e-mail (Appendix H) and scheduled for face-to-face meetings. Participation in the interview was strictly voluntary, and participants were not required to answer any question they did not want to answer. Each participant was contacted within 3 weeks, post interview, and offered the transcript of the interview. Transcript accuracy was confirmed by each participant with an option to clarify and questions from the participant.

Validity

The validity of a study was defined by Patten (2014) as “the extent that it measures what it is designed to measure and accurately perform the function it is purported to perform” (p. 71). The mixed methods design was chosen to increase the validity of this study because the research questions demanded complex answers that a single form study could not achieve (McMillan & Schumacher, 2014). Triangulation can be created by combining both qualitative and quantitative methods in examining different data sources (Creswell, 2012; Patton, 2015).

Quantitative validity. McMillan and Schumacher (2014) defined design validity as “the degree to which scientific explanations of phenomena match reality” (p. 116). They proceeded to identify four types of design validity: “(a) statistical conclusion validity; (b) internal validity; (c) construct validity; and (d) external validity” (p. 117).

The survey instrument (Appendix D) was developed in alignment with the purpose statement and the research questions for the study. Permission was given by the originator of the instrument, Amy Edmondson (Appendix C), for the purpose of the study. Quantitative validity was established through the measurements of the survey. Construct validity was determined by “the extent to which interventions and measured
variables actually represent targeted, theoretical, underlying psychological constructs and elements” (McMillan & Schumacher, 2014, p. 117). Creswell and Creswell (2018) described quantitative validity as “whether one can draw meaningful and useful inferences from scores on particular instruments” (p. 251).

The validity of the survey instrument was based on its administration in a number of previously conducted studies. Additionally, the researcher utilized an expert panel to support the validity of the survey instrument. This expert panel was comprised of leaders in the field of education with expertise in the middle school environment.

**Qualitative validity.** The qualitative portion of this mixed methods study increased the level of validity by examining other explanations that might have been overlooked. Qualitative validity requires that the researcher convince others that their findings are accurate from the analysis (Creswell & Creswell, 2018). Validity demands that a common understanding of the phenomenon is described within the study (McMillan & Schumacher, 2014; Patton, 2015). The researcher must provide evidence to inferences outlined in the study (McMillan & Schumacher, 2014). The interview process within the qualitative examination was left open so that participants could contribute all other forms of psychological safety or influences of psychological safety for a better explanation in the qualitative section of the study.

Construct validity in a qualitative understanding was developed through the assistance of an expert panel and an extensive review of the literature. Questions were developed based on previous qualitative studies that were conducted in the realm of psychological safety. The expert panel reviewed and provided feedback to the initial interview protocol. Additionally, the interview protocol was field-tested with a
participant and an observer. Exit surveys were conducted and analyzed to increase the construct validity of the qualitative instrument. The interview protocol used the following strategies to increase validity and reliability of the study:

1. Initial script was developed based on previous studies conducted in the literature review.
2. The initial protocol was reviewed by an expert panel.
3. The instrument was field-tested to clarify language and understanding among the participants.
4. Exit interviews were conducted for feedback in order to revise the protocol.
5. Interviews were recorded digitally and transcribed for the study.
6. A post-interview review of the interview transcripts was conducted for accuracy of answers.

Throughout the interview, the researcher provided definitions of key terms and variables that were utilized in the question protocol. Follow-up questions and probe questions were used in the interviews to clarify answers during the interview sessions, which were outlined in the interview protocol (Appendix F). Digital recordings of each interview were conducted for future review of the verbatim testimony of each participant for accuracy. Finally, each participant was given the opportunity to review and clarify any answers within the interview, which assured its credibility.

**Data Collection**

**Quantitative Data Collection**

An online survey, which was developed from previously validated surveys in psychological safety, was utilized for quantitative data collection. Department and
contact information of willing parties was compiled via e-mail requests and sent to school principals (Appendix I). An initial list of potential participants was compiled based on the responses to the e-mails. Formal request letters were e-mailed to districts requesting participation with a follow-up confirmation within a few weeks of initial contact. Upon district approval, formal letters of participation were sent via e-mail to principals with another follow-up confirmation. Finally, formal letters (Appendix J) were sent via e-mail to the participants identified with a follow-up e-mail of confirmation for each person’s involvement. Letters of consent (Appendix K) were then collected to finalize respondent participation.

Once consent letters were received by the researcher, online links to the survey were sent to the participants via e-mail. Those confirmed participated in the online survey (Appendix D) within a secure platform, SurveyMonkey (http://www.surveymonkey.com). Prior to beginning the survey, reconfirmed consent was requested by a check box on the survey to ensure each respondent’s voluntary participation. Additionally, confidentiality in the survey was recomunicated to all of the participants.

**Qualitative Data Collection**

All surveys were generated with a request of the participants to volunteer for possible follow-up interviews. Those respondents who volunteered were then contacted via e-mail to schedule an interview. Face-to-face interviews were conducted with 10 participants to triangulate the conclusions of the study. Interview meetings were finalized and confirmed with each respondent. The meeting place and time were chosen by the respondent with his or her optimal comfort in mind. Observational notes and
digital recordings of each interview were taken during the process with permission of the participant. After the interview was completed, all interviews were transcribed and made available for the participants to review and clarify their answers.

**Ethical Considerations**

Prior to the study being conducted, the Brandman University Institutional Review Board (BUIRB) approval was provided to the researcher. The criteria for approval required the understanding of dealing with human subjects and fairness. The study’s procedures, purpose, voluntary participation, and risks were explained to each participant. Additionally, each participant was informed that his or her data and identity would remain confidential with the understanding that withdrawal from the study, or a refusal to answer any question, would be without penalty. Understanding of the above information was confirmed with each participant prior to the beginning of each component of this mixed methods study. Any questions offered by the respondents were answered by the researcher.

A formal proposal of the study was presented to BUIRB. Approval is required for all studies that utilize human subjects. The BUIRB reviewed all protocols and provided approval prior to the administration of the study. All necessary documentation was submitted to BUIRB, and the study was approved to commence with data collection (Appendix L).

**Data Analysis**

In order to identify and describe the levels of psychological safety among the middle school PLC teachers, themes and opinions were analyzed in relation to each research question. As McMillan and Schumacher (2014) stated, “Surveys are used
frequently in educational research to describe attitudes, beliefs, opinions, and other types of information” (p. 32). Surveys are used to investigate what people believe, how they act, and their ideas on different types of information (McMillan & Schumacher, 2014). Descriptive statistics were analyzed from the data collected in the survey and reported in tables within the study. Qualitative data were analyzed by a computer application, which creates themes and frequencies.

**Quantitative Data Analysis**

Data collected through surveys can be generalized to a larger population or subgroup in order to make formal conclusions (McMillan & Schumacher, 2014). Descriptive statistics were utilized for the quantitative data analysis because they “portray and focus on what is with respect to the sample data” (McMillan & Schumacher, 2014, p. 163). Data were collected to assess the levels of participants’ willingness to risk by utilization of the Likert scale. All questions asked participants to rate the occurrence of each question on a 5-point scale. Respondents indicated an occurrence rate of 1 as the occurrence never happened, to 5 meaning the occurrence always happened. The instrumentation tool that was utilized for the study preassigned themes attached to it to identify different applicability to psychological safety. Questions 1 through 3 focused on clarity of directions for the team. Questions 4 through 6 dealt with team composition and how the team was grouped together. Team efficacy was the focus of Questions 7 through 9. Measurements of risk and psychological safety were measured by Questions 10 through 16. Leadership influence and coaching were analyzed in Questions 17 through 19. Finally, Questions 20 through 26 focused on team learning as a process. Following the survey, all scores were analyzed, and the mean score was calculated for each
The data were then examined to find overall attitudes and themes of each research question based on the influences within the psychological safety survey using descriptive statistics.

**Qualitative Data Analysis**

Interview questions were written prior to the administration of the study in order to determine influences that describe psychological safety with possible motivators of psychological safety for participants. During the interview, participants were asked open-ended questions regarding psychological safety and how to foster it (Creswell, 2012; see Appendix F). Recordings of the interview were collected during each session and transcribed post interview. Content analysis was conducted to count recurring themes (Patton, 2015).

Transcripts were then coded to determine themes and patterns within the interviews (Creswell, 2012). All interviews were coded utilizing a computer application (NVivo) to house and code data. Although software was used, the researcher synthesized the data into a few themes to determine meaning (Creswell, 2012). Data in the form of words and sentences were examined and provided labels, or codes, for identification. The frequency of these codes was determined to contribute to the themes and used to better describe how psychological safety is established among a group of teachers.

**Limitations**

Limitations are problems that the researcher identifies that could weaken the overall study (Creswell, 2012). A key limitation for the study was the fact that it was conducted among middle school teachers in Riverside County, which limited the ability for the findings to be generalized to a larger construct. Also, survey instruments from
previously published studies could limit contributions within the middle school environment. Purposeful convenience sampling was used, which is not random, and it is difficult to generalize conclusions on the phenomenon of psychological safety (Creswell, 2012). The sample size of this study was small from those being surveyed and interviewed. Another limitation was the possibility that participants did not completely answer or communicate their feelings or speak truthfully during data collection. Finally, because interviews were utilized during the qualitative section of the study, the researcher was an instrument within this study who could influence results.

**Summary**

Chapter III explained the methodology for this study, reviewed the research questions, and described the study process. The purpose of this study was to identify and describe factors that foster high levels of risk-taking behavior among middle school teachers in the PLC environment. An explanatory mixed methods design was utilized for this study. Quantitative data were gathered through an electronic survey, and qualitative data were collected to further describe the phenomenon through interviews. Quantitative data were analyzed through descriptive statistics. Psychological safety behavior was examined from qualitative data that were coded and analyzed for themes and trends. Limitations for the study were also noted.
CHAPTER IV: RESEARCH, DATA COLLECTION AND FINDINGS

Overview

This mixed methods study identified and described levels of risk-taking among middle school professional learning community (PLC) members. This chapter describes the results of both quantitative and qualitative sections of the study. The quantitative results were collected through an electronic survey, with qualitative results obtained through face-to-face virtual interviews utilizing an electronic platform (Zoom). This chapter begins with a review of the demographic data of the participants and a description of the analysis used to collect the data. Next, the data are examined for each research question and articulated through conclusive themes within both the qualitative and quantitative processes of the study. Chapter IV concludes with a presentation of key findings from the study.

Purpose Statement

The purpose of this mixed methods explanatory study was to identify and describe factors of risk-taking behavior among Riverside County PLC middle school teachers.

Research Questions

1. How do middle school teachers describe a psychologically safe PLC that promotes risk-taking?

2. What factors do middle school teachers perceive increase their psychological safety when working in a PLC?

Population

The population for this study was identified as middle school teachers within California. The California Department of Education (CDE, n.d.-a) listed 1,296 middle
schools in California served by 47,635 teachers. The population was narrowed from 1,296 middle schools to a target population of 76 middle schools having a PLC organizational structure within Riverside County (see Figure 4 in Chapter III). The target population for the study was 76 middle schools.

Sample

Nonprobability sampling was used for this study. The sample population was identified as 30 middle school teachers from five unified school districts within a 25-mile radius from the Riverside County Office of Education in Riverside, California, that conducted PLCs within their structure. The quantitative survey portion of the study employed the purposive sampling of 30 participants within the five unified districts. Participants were identified based on the following criteria:

- They were teachers in seventh and eighth grades.
- They were teachers with 1 year or more of teaching in middle school.
- These teachers were active participants in a PLC.
- These teachers were recommended by the principal.
- These teachers participated in PLCs for 1 hour a week or more.

The qualitative interview portion of the study used convenience sampling based on a question on the quantitative portion of the study that requested the participant to volunteer for a later interview. Positive responses were collected from the 33 quantitative responses with seven interview participants identified for the qualitative portion of the study from more than three districts within the 25-mile radius.
Research Methods and Data Collection Procedure

In order to explain the different perceptions of middle school teachers from the perspective of all teachers involved, both quantitative and qualitative data were collected (McMillan & Schumacher, 2014). This mixed methods study used a sequential explanatory two-step process to produce results. Quantitative data were gathered from middle school PLC members. An electronic survey was then utilized with set responses that measured the level perception of psychological safety of each individual within the PLC group. Each of the 33 study participants answered a survey that was developed by Edmondson (2018) and adapted to the different population for the study (Appendix D). Qualitative interviews were held with a smaller sample of respondents based on the answers provided in the survey to clarify and expand on responses to the survey data. Each of the seven interview participants answered the same five unstructured interview questions (Appendix F). All seven interviews were held virtually through a video conference platform (Zoom) and lasted between 18 and 32 minutes. Interviews were recorded and translated through the conferencing software.

Demographic Data

Thirty-three teachers were selected for participation in the study. All of them were considered based on the established criteria for the study. Twenty-six of the 33 respondents had 5 or more years of teaching experience. All middle school grades were well-represented for the study with a majority teaching the seventh and eighth grades. The educators participating in the study have been assigned multiple grades for instruction. All departments, with a majority being English and math, provided data. Other disciplines were represented such as special education and electives. PLC
participation was high with 75% of respondents dedicating more than 1 hour of time to PLC work per week.

**Presentation and Analysis of the Data**

The following section presents an analysis of data obtained through an online survey of 33 participants and a virtual face-to-face interview of seven participants. Both qualitative and quantitative research methods were used in answering the two research questions for the study. The findings are reported in the following paragraphs by their contribution to each research question.

A quantitative survey was constructed and distributed through an online survey program (SurveyMonkey). Each survey was distributed through an e-mail with a link for the participant to submit their data. The survey program collected and compiled the data for analysis and presentation.

The seven interviews that were conducted via a virtual face-to-face meeting platform (Zoom) were recorded and transcribed through digital means, reviewed for their accuracy, and then uploaded into NVivo (a digital qualitative coding software program). The use of the digital software program provides the researcher with the ability to synthesize large amounts of data and identify emergent themes within the transcriptions (McMillan & Schumacher, 2014). After coding was completed, the strength of each theme was analyzed through the frequency computations in NVivo. These frequencies are presented with the contributions of the data.

**Data Analysis for Research Question 1**

The first research question that was addressed in the study was, “How do middle school teachers describe a psychologically safe PLC that promotes risk-taking?” Results
from the quantitative and qualitative portions of the study identified four areas that describe the PLC environment in relation to psychological safety. The four areas that contribute to the psychologically safe environment are skills and talents of the members, risk-taking, dealing with mistakes, and handling conflict.

**Skills and Talents**

PLCs are successful when all teachers share ideas based on the competence each brings into the community. Teachers expressed that their teams were well equipped with training and abilities and can accomplish any outlined goal within the composition of the PLC team with 88% of respondents strongly agreeing or agreeing. Additionally, 69% of respondents expressed that their unique talents are valued and utilized (Table 1).

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Mdn</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>All members of this team have more than enough training and experience for the kind of work that they have to do.</td>
<td>45.45%</td>
<td>42.42%</td>
<td>9.09%</td>
<td>0.00%</td>
<td>3.03%</td>
<td>2.00</td>
<td>1.73</td>
</tr>
<tr>
<td>Working with team members of this team, my unique skills and talents are valued and utilized.</td>
<td>21.21%</td>
<td>48.48%</td>
<td>24.24%</td>
<td>6.06%</td>
<td>0.00%</td>
<td>2.00</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Within the PLC process is the understanding that team members must develop as educators while working on student achievement. Teachers should develop their pedagogy and strategies in order to become better educators throughout their entire careers. The survey indicates that leadership has provided an environment for that development to occur; however, it is not entirely effective.
Although there was a lot of leadership presence within the PLC, 84% of respondents reported that team processes for improving the PLC environment are limited. Of the respondents, 48% stated that opinions are shared offline or outside of the meeting environment. Additionally, 56% stated that the team either always or usually reflected on teamwork processes (see Table 2). The result is that PLCs do not work on improving team efficiency despite having present leadership.

Table 2

| Question: The team leader is an ongoing “presence” in this team—someone is readily available. |
| N | Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly disagree | Mdn | M |
|---|---|---|---|---|---|---|
| 33 | 36.36% | 48.48% | 9.09% | 6.06% | 0.00% | 2.00 | 1.85 |

| Question: We regularly take time to figure out ways to improve our team’s work processes. |
| N | Always | Usually | Sometimes | Rarely | Never | Mdn | M |
|---|---|---|---|---|---|---|
| 33 | 30.30% | 27.27% | 30.30% | 9.09% | 3.03% | 2.00 | 2.27 |

An unexpected finding was the indication that the workload detailed within the regular meeting generally surpasses the allotted time allowed. Teams believe they need to go beyond reasonable time and effort in order to accomplish their goals. Of other responding teachers, 52% strongly agree or agree with this statement (Table 3). The intrigue of these results was the additional time that team sharing needs in order to increase productivity. Therefore, strategic planning of PLC meetings needs occasional review in order to maintain effectiveness.
Table 3

*Perceptions of Time Needed to Attain Goals*

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Mdn</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>33</td>
<td>30.30%</td>
<td>42.42%</td>
<td>9.09%</td>
<td>12.12%</td>
<td>6.06%</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**Question:** This team can achieve its tasks without requiring us to put in unreasonable time or effort.

**Risk-Taking**

Participants described risk-taking as the ability to share their opinions of a situation within a group. A key element about risk-taking is the fact that the opinion being shared could contradict group understanding or traditions of the PLC group (Table 4). It is during these times that most participants express anxiety toward sharing. A portion of the hesitation stems from the fear that “we don’t make anyone feel bad about what they said, or thought or if they made a mistake” (Participant 5). Six of the seven participants described standing alone when the risk was being taken. A conclusion from these perspectives is that there is an element of separating oneself from the collective in order for new information or new opinions to be viewed. It seems that any deviation from a standard norm of thought creates a sense of alienation. That alienation hinders the group collective, thereby generating conflict.

The qualitative results contradict the quantitative survey responses. Of participants within the survey, 63% stated that they *always* or *usually* feel it is safe to take a risk (see Table 5).
Table 4

*Risk-Taking Measurements*

<table>
<thead>
<tr>
<th>Name</th>
<th>n</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk-taking definition</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Unpopular opinion</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Taking a risk</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 5

*Survey Response of Risk-Taking*

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
<th>Mdn</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question: It is safe to take a risk on this team.</td>
<td>33</td>
<td>30.30%</td>
<td>33.33%</td>
<td>18.18%</td>
<td>15.15%</td>
<td>3.03%</td>
<td>2.00</td>
</tr>
</tbody>
</table>

This inconsistency indicates that although on the surface they feel safe enough to start taking a risk, the concerns causing or receiving ridicule create the anxiety. Therefore, people are more afraid of a response from a risk rather than the risk itself.

**Dealing With Mistakes**

The survey disclosed that problems or mistakes can be brought to the team and not have them ridiculed (57%; see Table 6). More participants (62%) believed that they can ask for help and will take a risk within the team. Only 30% noticed that team members are respected because of their differences, which indicates levels of rejection among 70% of the team. Misunderstandings of talents and knowledge are seen through 39% of participants stating that certain individuals lack needed skills for good teamwork (see Table 6).
Table 6

Survey Levels of Sharing Mistakes

<table>
<thead>
<tr>
<th>$N$</th>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
<th>Mdn</th>
<th>$M$</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>27.27%</td>
<td>30.30%</td>
<td>21.21%</td>
<td>15.15%</td>
<td>6.06%</td>
<td>2.00</td>
<td>2.42</td>
</tr>
</tbody>
</table>

Question: Members of this team are able to bring up problems and tough issues.

<table>
<thead>
<tr>
<th>$N$</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Mdn</th>
<th>$M$</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>6.06%</td>
<td>33.33%</td>
<td>18.18%</td>
<td>30.30%</td>
<td>12.12%</td>
<td>3.00</td>
<td>3.09</td>
</tr>
</tbody>
</table>

Question: It is difficult to ask other members of this team for help.

Question: Certain individuals in this team lack the specific skills needed for good teamwork.

Qualitative data show an inverse of the survey data. As Table 7 indicates, all but one interviewee described that mistakes are presented with full ownership of the situation. These results were accentuated with phrases like “I really messed up” (Participant 2), “I screwed up” (Participant 3), and “you know, make a genuine apology” (Participant 4). The interviewees also described that people on the teams accept those mistakes with grace and do not express ridicule or demean the person who made the mistake. Participants described having a feeling of support during these times of humble confession.

Table 7

Qualitative Levels of Sharing Mistakes

<table>
<thead>
<tr>
<th>Name</th>
<th>$n$</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mistake ownership</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Accepting others’ views</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Not addressed</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
The conflict between the qualitative data and the quantitative responses indicates that team members have high levels of psychological safety when the mistake is theirs and they are willing to communicate that to the community. Yet, voicing other members’ possible areas of need is met with anxiety. The idea of being different supports the perception of alienation when a person makes a mistake or takes a risk. This struggle generates anxiety, which prevents the sharing from occurring in the first place.

**Handling Conflict**

Conflict seems to be generated through the idea of team members attributing ideas or disagreements as an attack on another member’s personality. When an opposing view or comment is made, a member of the team will pay tribute to that comment as a reflection on their experience, personal identity, or level of intelligence. These offenses contribute to long-term grudges or continued conflicts (see Table 8). As Participant 7 described it, “We don’t honestly conflict on that team. It just grows, it just festers and grows and it becomes an elephant in the room that nobody wants to talk about and it gets really, really frustrating.” Participants 1, 2, and 6 all described their method of dealing with conflict with avoidance. They described acquiescence as the way of getting out of the conflict, which is similar to Edmondson’s (2018) conclusions.

These numbers indicate that the team members do not reflect or think about the methods of improving their team dynamic in order to be more productive and efficient. Limited sharing seems to result in less team development, which then limits production of team ideas. With nearly half of the teachers sharing their feelings offline, or outside of the meeting, benefits of shared struggles are kept outside of the environment to limit conflict (see Table 8).
Table 8

*Perceptions of Dealing With Team Conflict*

<table>
<thead>
<tr>
<th>Name</th>
<th>n</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>Not addressed</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Reconciliation</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Facilitator-mediator</td>
<td>6</td>
<td>17</td>
</tr>
</tbody>
</table>

In summary, the data indicate that teams are provided with the necessary environment and direction for risks to be shared. However, something still prohibits these team members from taking risks and the fear of ridicule still exists within the mindset of the teachers during the PLC meetings. The result is a slow destabilization of the environment and a hindrance of further risk-taking, thereby disappearance of psychological safety within the PLC team.

**Data Analysis for Research Question 2**

The second research question for this study was, “What factors do middle school teachers perceive increase their psychological safety when working in a PLC?” Results from the quantitative and qualitative portions of the study identified five areas that describe ways to increase psychological safety within the PLC environment. The five areas are a positive PLC environment, the need for a facilitatory, specific factors that foster psychological safety, addressing conflict, and recognition of contributions.

One factor that contributes to the level of psychological safety within the PLC is the elements of the environment, which are positively reflected in the data. Participants stated that they have clear directions necessary for them to accomplish their team objectives with at least 75% of answers being *strongly agree* or *agree* in this area (see
Table 9). Time spent to ensure that the team’s objectives and processes are clear had 81% of participants indicating strongly agree or agree (see Table 9). Of the members, 84% believed that goals were well within reach. These data indicate that there were no impediments to the tasks or purposes of the meetings. Most members were clear about their responsibilities with a successful method of clarifying any misconceptions.

Table 9

Team Understandings of Goals and Objectives

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Median</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. It is clear what this team is supposed to accomplish.</td>
<td>30.30%</td>
<td>45.45%</td>
<td>12.12%</td>
<td>12.12</td>
<td>0</td>
<td>2.00</td>
<td>2.06</td>
</tr>
<tr>
<td>2. The team spent time making sure every team member understands the team objectives.</td>
<td>33.33%</td>
<td>48.48%</td>
<td>6.06%</td>
<td>12.12</td>
<td>0</td>
<td>2.00</td>
<td>1.97</td>
</tr>
</tbody>
</table>

Facilitator or Mediator

Leadership within the team was positive with 78% of survey respondents indicating that leaders assist in running the meetings and contributing positively through consultation after the meeting. The qualitative interview process detailed the necessity of a team member being a “mediator or facilitator” within the team in order for it to be successful. Participant 1 noted a member of the group as being “cool headed. He doesn’t get nervous about things.” The characteristics of this person were that he or she ensures that the meeting is running well and that the decorum of the team is at a very high level. This person notices body language as well as verbal discussions in a way to produce a higher level of productivity among the group. His or her goals are to seek compromise
and common ground when conflict arises. His or her major focus is not on the task or the elements of a strategy, but he or she is concerned about the interchange and psychological safety of the group as a whole.

Some requirements of that person taking a facilitator role were to deal privately in a mediator role (see Table 10). For example, Participant 1 stated, “So a lot of times if I have something that I think might cause a little bit of agitation or something, I will run it through him first and that just helps.” This is echoed by Participant 6 who met with a supportive teammate outside of the meeting, during a heated disagreement with another member, in order to relieve tension. The presence of this “mediator” person within the team meeting itself provided a higher confidence that resolutions from disagreements would occur more frequently.

Table 10

*Frequencies of Mediator Presence in PLC*

<table>
<thead>
<tr>
<th>Theme</th>
<th>N</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitator-mediator</td>
<td>6</td>
<td>17</td>
</tr>
</tbody>
</table>

**Factors to Foster Risk-Taking**

Areas that seem to limit the psychological safety, or the ability for teachers to take risks, are affected by a desire to protect their ego. Confidence of teachers having the skills needed for good teamwork was low with only 39% believing that people do not have the necessary skill sets (see Table 11). This indicator also reflects the previously stated positive response of people feeling valued with only 69% of respondents positively feeling that their unique skills and talents were valued and utilized. Only 45% of
respondents believed that they could go outside of their own area, of their PLC, to gather new information and new insights to contribute to the team. Finally, occurrences of teachers challenging others in discussions, which increase conflict, happened with 45% stating that it occurs sometimes or never (Table 11). The results of these numbers indicate that people have a level of mistrust with others within the team despite the fact the team members do not show a justifiable cause for this mistrust.

Table 11

Limitations to Psychological Safety

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Mdn</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question: Certain individuals in this team lack the specific skills needed for good teamwork.</td>
<td>6.06%</td>
<td>33.33%</td>
<td>18.18%</td>
<td>30.30%</td>
<td>12.12%</td>
<td>3.00</td>
<td>3.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
<th>Mdn</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>9.09%</td>
<td>27.27%</td>
<td>36.36%</td>
<td>24.24%</td>
<td>3.03%</td>
<td>3.00</td>
<td>2.85</td>
</tr>
<tr>
<td></td>
<td>Question: We invite people from outside the team to present information or have discussions with us.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
<th>Mdn</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>15.15%</td>
<td>39.39%</td>
<td>39.39%</td>
<td>0.00%</td>
<td>6.06%</td>
<td>2.00</td>
<td>2.42</td>
</tr>
<tr>
<td></td>
<td>Question: People in this team often speak up to test assumptions about issues under discussion.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Respondents in the qualitative interview expressed their willingness to risk based on their level of comfort with the team members within the meeting (Table 12). Participant 6 shared, “I’ve never regarded it because this is something that was risk-taking and it’s kind of an interesting term that I always felt comfortable enough to work with my colleagues and not have to worry about any consequences.” Those participants who had the opposite experience expressed possessiveness as a key determinant of why they were not willing to share with others. The reasoning is unclear, but team members
who link their information to their personality have a lower sense of welcoming for those to take risks within a meeting setting. The indicators highlight the need for PLC groups to make efforts for their members to foster constructive criticism in order to de-possess the information within the teaching craft.

Table 12

*Frequencies of Risk Taking*

<table>
<thead>
<tr>
<th>Name</th>
<th>N</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking a risk</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Won’t try</td>
<td>4</td>
<td>11</td>
</tr>
</tbody>
</table>

**Methods of Addressing Conflict**

Disputes and disagreements generally do not center on the topics of discussion or the agenda. The main source of disagreement or conflict comes from the hurt feelings based on the personalities that come into play when sharing information. Participant 1 described a key conflict in the meeting being attributed to “speak[ing] different languages completely for various different reasons. She and I butt heads whatever the ideas.”

Success seems to be generated when the team itself can journey through the disagreement of personality that is unique to the team. Participant 3 described meetings as, “Sometimes we get a little bit confrontational. But I think that’s the beauty of these PLCs is we can continue to push forward.” The other response to the personality situation is complete acceptance and/or silence in order to keep the equilibrium of the meeting. Similar to the findings of Edmondson (2018), team members will follow directions to protect their reputation. They will limit direct ridicule, and the best possible idea, for a nonconfrontational experience. Necessary conflicts within the PLC are not
occurring at the highest levels for shared learning to occur among the team. The end result is that the team does not advance or cohere together as it should; therefore, it is not as productive. Teachers are doing well with the mechanisms of teaching but staying isolated in the styles of teaching and openness to better themselves.

**Recognition of Contributions**

The sharing of successes or contributions to the team is not a new concept within the PLC process. Team members are encouraged to recognize each other for their talents within the meeting in order to promote a better environment for the collective team. These recognitions are reflected within the interview data.

All interview participants reference a time within the regularly scheduled PLC meeting where members share their successes and recognize each other for their talents. Within those descriptions was a tendency that not all members were earnest in their sharings. Respondents do identify a well-received recognition of talents through task-oriented responses rather than direct verbal praise (see Table 13).

Table 13

*Skills and Talent Recognition*

<table>
<thead>
<tr>
<th>Theme</th>
<th>N</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognizing talents</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Praise</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Tasks</td>
<td>7</td>
<td>15</td>
</tr>
</tbody>
</table>

Most recognitions were communicated through requests for information or acknowledgements of a successful task. Respondents generally felt more acceptance when tasks were recognized as a contribution to the team collective. Participant 1 stated,
“It’s like two people will go off and work on one part, then we’ll get back together and then we’ll work on, you know, you’re good at this, so let’s do that.” Participant 5 reflected a similar expression, “I feel reaffirmed when my teammates come to me and ask me for advice on how to present something because they’re not getting through to the students. And I feel like they value my knowledge, my experience in that way.” Respondents were not seeking praise for their own personal ego; they were generally trying to be seen as a positive contributor to the team’s success.

Summary

This mixed methods study identified and described levels of psychological safety within middle school PLCs and identified factors of a psychologically safe learning community. The results of both the quantitative and qualitative measures within the study addressed the following research questions:

Research Question 1

*How do middle school teachers describe a psychologically safe PLC that promotes risk-taking?*

Qualitative and quantitative results supported the idea that PLCs in middle schools have an established environment for high levels of psychological safety. Teachers are well-equipped with the proper training and goals for the PLC to produce at optimal levels. Leadership is present and available to support all levels of the PLC. Unfortunately, the work needed to accomplish the goals is not being handled within the time constraints given to the team for optimal efficiency. Opportunities for members to take risks within the PLC process are known; however, risks are not being shared frequently enough. Mistakes are being communicated within the team and accepted in a
positive manner; however, conflict is not being dealt with in a productive process and is generally not addressed by members of the team. Little time is taken within the team meetings to address the productive process of teamwork for optimal efficiency of the team.

**Research Question 2**

*What factors do middle school teachers perceive increase their psychological safety when working in a PLC?*

The presence of a designated facilitator or mediator within the group establishes a trusted person to guide the team through any conflicts, either productive or nonproductive, within the team meeting. Teachers have not pursued all skills that each member brings to the team for productive work. Outside research and consultation are not shared among the group. A welcoming environment to challenge assumptions has not been established and can decrease mistrust between team members. The methods of productive conflict resolution are not known or implemented for high levels of productivity. Recognition for any contribution is generally conveyed through a task-oriented process rather than by direct praise.

Ultimately, the elements within the environment are in place for a high level of psychological safety within the PLC meeting. Limited risk-taking within the group decreases the exchanges of members, who will not then benefit from those skills and talents of others. Reimagining knowledge and opinions as nonpossessive entities will increase the member’s willingness to share, thereby limiting sensitivity when questioned. Additionally, an identified member taking the role of facilitator must guide the team in
the avenues of productive group work. Finally, productive procedures can be established to positively persevere through conflict.
CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this mixed methods explanatory study was to identify and describe factors of risk-taking behavior among Riverside County professional learning community (PLC) middle school teachers. This dissertation began with Chapter I establishing the rationale for the topic and the background. Chapter II reviewed the literature regarding PLCs, middle school, and psychological safety. Chapter III described the design and the methodology of the study. Data were collected through an online survey and virtual interviews, which resulted in eight key findings. Chapter V provides a summary of the study describing the major findings, unexpected findings, conclusions, implications for action, recommendations for further research, and reflections from the researcher.

Major Findings for Research Question 1

Major Finding 1. Environment

The first research question for this study asked, “How do middle school teachers describe a psychologically safe PLC that promotes risk-taking?” Teachers acknowledged that a comfortable environment is established by leadership and that they are supported in their work within the PLC meeting. Hord’s (2004) five PLC dimensions (i.e., supportive and shared leadership, shared values and vision, collective learning and application of learning, supportive conditions, and cheer practice) are active at high levels because of current training opportunities and experiences. This conclusion is based on 87% of teachers feeling that they are prepared for their work. Leadership is present and active within the PLC with 84% of survey respondents recognizing their presence in the PLC meetings. These results echo that discussions of content and assessment among teachers guarantee student learning (Szczeriul & Huizenga, 2015). However, the entire team is
not aware of all other team members’ talents and skills. According to this study, only
69% of participants recognized their peers’ talents.

Major Finding 2. Teamwork

Teachers feel confident in their abilities to improve instruction and recognize a
welcoming environment for all team members. The element of empowerment and its
effect on instructional quality (Avolio et al., 2004) was reflected in this study. PLC
teams search for ways to improve work processes with 87% of survey respondents
indicating that they seek ways to improve. These findings support the four categories of
benefit from common planning time (CPT) made by Taylor (2013):

(a) CPT built a sense of community and mutual support; (b) teachers with CPT
generated new knowledge and effectiveness; (c) teachers with CPT were
committed to support students’ social, emotional, and intellectual development;
(d) CPT benefited the whole school, not just the team. (p. 118)

Unfortunately, only 42% of teachers believed that all team members have good teamwork
skills, which shows that teachers do not have the ability to increase cohesion.

Major Finding 3. High-Risk Anxiety

Despite the environmental influences, teachers still possess a high level of
hesitancy to share or take risks with their fellow teammates within the environment of the
PLC. Survey responses indicated that only 63% felt safe enough to take a risk within
their team. Qualitative interview frequencies indicated that all members similarly defined
risk-taking with the element of sharing an unpopular opinion (see Table 4). However,
fewer than half of the interviewees admitted to taking risks in the PLC meeting ($n = 3$),
which reinforces the work of Edmondson (2018).
Risk-taking is generally conducted offline with people that the team members would trust, which aligns with the results by Little (2003). Only 46% of the participating teachers stated that they would speak up or test assumptions within a discussion, which highlights the high level of anxiety when it comes to speaking up to others on the team. This was supported with the number of references in interviews (frequencies = 11), which indicated that people avoid taking a risk with others. These results would place middle school teachers in vulnerability, uncertainty, complexity, and ambiguity (VUCA) conditions (Edmondson 2018) in the area of high standards with low psychological safety as shown in Figure 1 (repeated here for ease of reference).

<table>
<thead>
<tr>
<th></th>
<th>Low Standards</th>
<th>High Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Psychological Safety</td>
<td>Comfort Zone</td>
<td>Learning &amp; High Performance Zone</td>
</tr>
<tr>
<td>Low Psychological Safety</td>
<td>Apathy Zone</td>
<td>Anxiety Zone</td>
</tr>
</tbody>
</table>


The data reinforce the conclusion that PLC groups must bond together in order for sharing to continue (Bretz, 2013; Harvey & Drolet, 2004). This study indicates that middle school teachers currently do not actively participate enough through sharing in order to overcome challenges as Mertens et al. (2013) concluded.

**Major Finding 4. Mistakes**

When mistakes are shared with the team, ownership for the mistake is mostly met with acceptance by the group. Gyesaw’s (2012) conclusion that teachers struggle to be a part of a collegial group, while maintaining self-importance, is shown in the openness of teachers to share their mistakes and the graciousness with which the team accepts those
mistakes. Mistakes are handled positively among PLCs based on most interview participants sharing that there is a free exchange of mistakes among the team (Table 7), which shows the existence of a comfortable environment of mistake sharing (Hadar & Brody, 2010). Of the participants, 87% indicated that it is not difficult to ask for help among their team members.

A key element to acceptance is the ownership of the mistake by the person who committed it. The abundance of reported acceptance (frequencies = 12) by the others within the group indicates that grudges are not perpetuated by mistakes. Additionally, only one mistake was not addressed by the group (n = 1), based on the interviews, which means mistakes are generally tackled among the team members. Ultimately, acknowledged mistakes do not inhibit risk-taking or create conflict within the group.

**Major Findings for Research Question 2**

The second research question for this study asked, “What factors do middle school teachers perceive increase their psychological safety when working in a PLC?” The following are conclusions which answer this question.

**Major Finding 5. Conflicts and Disagreements**

All members of the team need to embody a position of accountability for them to develop the craft of teaching in spite of conflicts. Unfortunately conflicts and disagreements are sometimes taken personally rather than all PLC members contributing their ideas toward better work. The response was for team members to withhold their true feelings and quietly acquiesce to the stronger personalities among the team, which reinforces the passivity of the process communicated by Muñoz and Branham (2016). These conflicts are most successfully resolved through a team member in the role of
mediator who concentrates his or her energy toward the team’s progress, rather than on the agenda items the team is addressing (Table 10). This mediator must be present with all eight strengths of a good leader (Hargreaves & Fink, 2006) outlined in Chapter II, who can resolve possible violations of trust with a path to regain that trust (Wicks et al., 1999).

Major Finding 6. Learning Mindset

Within the PLC, process is the understanding that team members must develop as educators while working on student achievement, but current PLC members do not possess this mindset. Teachers should develop their pedagogy and strategies in order to become better educators throughout their entire careers. The recognition of talents among the team members overwhelmingly dealt with recognition of tasks or previous work (Table 13). Praise or inquiries of new strategies were not shared among the interviewees. This inflexibility supports the conclusions forwarded by Bretz (2013) and limits the social capital within the team (Penuel et al., 2006, 2007).

Major Finding 7. Assistance Requests

The members enjoy giving others advice or resources but rarely seek out assistance from others within the PLC. This situation is a hindrance to the PLC because members approach the PLC not as a progressive learner but as an expert, which limits the amount of “joint work” (Little, 1990a) produced. This study indicates that only 45% of survey respondents seek new research and strategies outside of the PLC. Productivity is further limited based on the lack of psychological safety (Wagner et al., 2006), which constricts the team from generating work within the group. With little information coming in, the team does not advance the craft of teaching and productivity is not
developing new avenues of inquiry. The result is further isolation through lack of shared resources and perspective.

**Unexpected Finding**

The only unexpected finding was centered on the amount of time needed to complete the PLC work. Of respondents, 52% surveyed agreed that the work needed for PLCs far exceeded the allotted time of 1 to 2 hours per week. A reasonable amount of time or effort must be given in order to meet the goals laid out by the team. Reflection, data analysis, and assessment creation are within the regular teaching process and should not be designated for a specific time among other team members during a PLC meeting. This result highlights the understanding that the PLC needs to turn its focus away from individual teaching evaluation and shift to team development and strategy improvement. The perception that all work must be completed within the meeting time frame needs to be structured for continued sharing of instruction and pedagogy.

**Conclusions**

**Conclusion 1. PLC Environments**

Based on the findings of this study and supported by the literature, PLCs have a healthy structure, which can foster high levels of psychological safety. Hord’s (2004) dimensions of PLCs are evident within the current systems. This conclusion is supported by 87% of teachers who stated that they have the experience and training necessary to be successful in their PLC. The reflective elements within the PLC process, along with the data sharing of all members within the team, create an opportunity for each member to share, or to take a risk, during the process (Allen, 2013). This conclusion was supported by the sharing of mistakes and the acceptance of those mistakes by the team.
Additionally, sharing successful pedagogy fosters additional opportunities for teachers to risk themselves within the process. District leadership has created a positive PLC environment through clear goals and confidence of teachers to accomplish the different requirements for a successful PLC. This conclusion was supported by 85% of teachers being clear on what they were to accomplish during the meeting, and 81% of teachers being clear on meeting objectives. The interchange of data between all members of the PLC provides the foundation necessary for risk-taking to occur, which can result in better teaching practices. So, all of the elements are structurally in place for an environment to be created where teachers will openly share, take risks, and perpetuate a conversational learning space (Hord, 2004).

**Conclusion 2. Team Dynamics**

Based on the findings of this study and the literature, it is concluded that PLC groups do not evolve in team development within their regular meetings. This conclusion was supported by 42% of surveyed teachers who disagreed that certain individuals in the team lack skills for good teamwork. Therefore, PLC teams show misunderstandings of each member’s potential contribution to the group. Only 48% of teachers stated that they reflect on the team’s work process, which indicates a lack of attention to the group. The PLCs described in the interviews are ones that have not traveled through all phases of team development and left them in a perpetual state of “norming” together (Jones & Bearley, 2001).

The findings of the study support the literature that open conversation establishes trust, which yields increased productivity. Because the team had no base knowledge of all team members’ individual skills, conversations were restrained, which limited an
opportunity for members to gain trust within the group. This limited the individual creativity of each member, thereby showing low levels of psychological safety (Gong et al., 2012). PLC members were looking at the artifacts of classroom practice and examining them for themselves; however, the group was not reserving time to bond in order to examine new possibilities in a free and open environment (Little, 2003).

**Conclusion 3. Risk-Taking**

The results of the study show that teachers understand the concept of risk-taking. This conclusion was supported by the common definition given by all interviewees. Results also show that teachers are not eager to take risks within their PLC groups. The hesitancy of teachers to take risks centers on the idea of possible ridicule from others as indicated by 57% of teachers who were not willing to bring up problems. Although this study showed that 63% of teachers say it is safe to take a risk, the interview portion of the study concluded that most teachers do not take risks and will not even attempt to take risks in the future. This study’s results indicate that middle school PLCs are at an “Anxiety Zone” level of psychological safety (Figure 1). These findings support the literature of Edmondson (2018) as it relates to the VUCA conditions.

The results of this study show that there is not a sustainable PLC with trust and a willingness to discuss or disagree as described by Hargreaves (2007) because teachers are respected for being different less than 10% of the time. This study supports the conclusion that there are limited interactions between people in PLCs even when the numbers of participants are extremely small (e.g., four or less; Cranston, 2011; Little, 2003). Additionally, only 9% of teachers found it difficult to ask members for help.
Instructional strategies are not being shared among the team members; therefore, the skills of the teachers are not advancing because of the lack of sharing (Kimmons, 2016).

**Conclusion 4. Conflict**

The results of this study show that there are high levels of conflict within the PLC team with minimal avenues for resolution. Of the sample, 57% were comfortable bringing up new problems and tough issues, which demonstrates that conflict is started by almost half of the group. This is corroborated with 43% of surveyed teachers believing that someone would possibly undermine the efforts of the team. The interview portion of the study found that there are high levels of conflict among PLC members. The majority of those conflicts are not addressed or the reconciliation is forged over time. The study supports that trust is violated by damaging a person’s identity within the group (Bies & Tripp, 1996). Personality affronts are a leading source of conflict, according to interviewees, from perceived attacks on a member to a particular situation or problem, not to the idea that is forwarded. What is lacking in the current PLC model is a process whereby a violator of trust can regain that trust after the conflict has occurred (Wicks et al., 1999).

Based on the findings of the study and the literature, it was concluded that sharing is done through mistakes. This conclusion supports the literature of Hadar and Brody (2010) who stated that PLCs are a safe environment in which to talk about mistakes. However, the challenge of new teaching methods initiates conflict. Because there is limited support for the team through conflict, the team does not get to the difficult work of the PLC. Apprehension is increased within the team meeting out of self-preservation (Eaker et al., 2012). This conclusion was supported by the participants who described
hesitation on discussing things within a PLC meeting and the necessary interactions outside of the meeting for the conflict to be resolved.

**Factors to Influence Psychological Safety**

**Factor 1. Learners’ Mindset**

Teachers do not take a team-oriented perspective when they come into the PLC meeting. Each member sees him or herself as an expert who presents or contributes his or her perspective in order to help others instead of collaborating ideas together for the best practices. Dialogue among the team members that uncovers the differences between formal concepts and lived experience does not occur (Horn et al., 2017). This conclusion was supported by the fact that although 72% of the sample stated that they seek new information for changes and 38% of survey participants invited others to present information, the concept of open learning among colleagues was limited. Possessiveness of information truly limits the ability for the team to create joint work (Little 1990a). This perspective curtails the cohesion of the group and results in inefficiency (Harvey & Drolet, 2004). The mindset of teachers in a PLC should be that of a thinker rather than a doer (Horn et al., 2017).

**Factor 2. Facilitator**

Based on the findings of the study and the literature, it was concluded that the PLC team does not have a resource that focuses on group development and conflict resolution. A team member embodying the facilitator role within the team meeting supports the teacher-driven leadership of PLCs, by Gyesaw (2012), in addition to the self-driven meeting (DuFour et al., 2010). This conclusion was supported by teachers who described (frequencies = 17) a facilitator as a person who assists in mediating all
conflict and focuses on the team for greater success. Teachers noticed a difference when that person was no longer in the room and the level of productivity decreased. Interview participants described similar strengths of this facilitator to the eight strengths of a good leader presented by Hargreaves and Fink (2006). Teachers are looking for someone within the PLC meeting who embodies these leadership qualities and continually focuses on team success. Interview participants described the feelings of encouragement and support by a person taking this facilitator role, which supports the results of correlation between people’s feelings and their ability to make crucial decisions (Avolio et al., 2004).

**Factor 3. Collective Identity**

This study shows that under the current situation, PLCs are not a culture of collaboration which DuFour (2004) exclaimed as “work[ing] together to achieve their collective purpose of learning for all” (p. 9). This conclusion was supported by 43% of teachers believing that someone would deliberately undermine their personal efforts. With 31% of team members not thinking that their skills are valued, an environment of competition was developed and cooperation was not encouraged (Tschannen-Moran, 2014). Team members need to think of themselves as a crucial part of a team learning unit and not as an individual just giving knowledge.

Based on the findings of this study and the literature, it was concluded that current recognition between PLC members limits psychological safety because only completed tasks are acknowledged. Members gain trust from other members when they have demonstrated a task that earns attention, not voicing aspirational ideas. This conclusion was supported by descriptions (frequencies =15) of task-oriented recognition. Because praise is given for contributions of tasks rather than aspirational ideas, new concepts are
not being shared among the group members, which prevents the group from becoming more collegial (Gyesaw, 2012).

**Implications for Action**

The Common Core State Standards (CCSS) initiative given by the Obama administration calls for school districts to maximize the craft of teaching throughout all disciplines. Teachers’ uninhibited collaboration produces the absolute best teaching in an ever-changing environment of requirements that are driven by the political atmosphere. The ability for all teachers to maximize collaborative resources to influence school achievement is more important than ever. It is through the PLC that teachers will have the maximum effect in school success (Friend & Cook, 1990).

The middle school is the most demanding area for teachers because of the intense student experience academically, physically, and socially (Onetti et al., 2019). The requirement of middle school teachers working together at optimal efficiency is more important at this stage of the learning and experience than in any other stage in a child’s life. A central tenet to student success is the ability for teachers to share and to risk with one another so that trust can be expanded for maximum performance and improved student outcomes (Abraham & Jody Hoffer, 2009; Bloom & Vitcov, 2010). The following are the implications for actions based on the findings and conclusions from the study.

**Team Development**

It is imperative that school leadership create training for team development of PLC teams for the most optimal productivity. Although the PLC structure has a reflective component within it, teams need to have dedicated time for reflection and
development practices in order for them to maximize collaboration. School districts must create training for all departmental leadership, or PLC leaders, that helps foster this process among the teams. Training must be done in a collective retreat style with reflective components and feedback. Periodic monitoring and reflection among all team members through a survey or other anonymous process must be conducted with administration evaluating the effectiveness of the training and cohesiveness of the units throughout the entire school year. This training process will create a process of evaluation, reflection, and progression of team development for sustainability.

**Increased Psychological Safety Awareness**

It is highly recommended that an awareness of psychological safety needs to be made among PLC groups along with the benefits that occur from high levels of psychological safety. Although teachers define risk-taking in similar terms, they do not understand the entire dynamics of psychological safety and the influence psychological safety has on trust among groups. Increasing the awareness and understanding of psychological safety should develop the capacity for more sharing, thereby generating constructive pedagogical ideas.

Additionally, psychological safety must be added to the reflective components of the PLC so that its risk is evaluated along with other levels of data collection. The progressive nature of evaluating psychological safety among PLC team members will create awareness and goal setting for the group while making cohesion a goal along with the other structural elements of the PLC. These evaluations and processes are done solely within the team with periodic reporting to administration of the current levels and plans for increasing cohesion.
Conflict Resolution

It is recommended that true conflict resolution processes be established to resolve personality disputes within the PLC meeting along with articulated elements for regaining trust. Team development identifies that conflict is a necessary component for production of work. Conflict resolution training must be given to the leadership of PLCs along with an identified member or “facilitator” to assist with the resolution of conflicts between team members. Another key element will be the inability for restorative practices to be employed for violators of trust to be able to regain that trust among their peers. Results of these efforts will repair relationships between members and strengthen team commitments.

Teachers as Learners

It is acknowledged that the concept of a growth mindset (Dweck, 2004) has been well articulated and marketed among all school districts. However, teachers still do not possess the same mindset when they enter the PLC meeting. It is recommended that leaders expand the PLC structure to include informal professional development through the creation of joint work (Little 1990a). Measurements of success should not be evaluated on an individual teacher basis but at a departmental or grade level. School administration should be apprised of data at a departmental level in order to evaluate instructional or financial resources. Increased accountability as a team, rather than individually, establishes new opportunities for psychologically safe sharing.

It is also recommended that a reframing of teaching, as a concept, needs to be conducted among teams from a knowledge-based deposit bank (Freire, 1990) to investigative journeys that evolve in an ever-changing world. Influences of technology,
global economies, and information-based job markets require increased fluidity of teachers in all aspects of the learning environment. Teachers must shift their mindset to a flexible lifelong learner attitude to keep pace with the demands society requires.

**Designated Facilitator**

It is highly recommended that members of the PLC identify one person to assume the role of facilitator for the team that is separate from the team lead. This position will “build the capacity of staff to sustain a strong culture despite changes in leadership” (DuFour et al., 2010, p. 254). The requirements for selection will align with the strengths of a good leader presented by Hargreaves and Fink (2006):

- Modeling and building strong and rewarding relationships by paying attention to the human side of school change
- Establishing a high trust environment
- Developing and renewing a culture of learning and improvement at all levels through problem solving, inquiry, and intelligent evidence-informed decision making
- Helping the school community to develop and commit to a cohesive and compelling purpose that prevents dissipation of initiative and effort
- Stimulating a culture of professional entrepreneurship in innovations and ideas that benefit student learning
- Establishing and regulating grown up professional norms of civil argument and productive debate
- Ensuring the voices of minority members of the culture always receive a proper hearing
• Doing all this within an unswerving commitment to improving all students’ learning and achievement, especially for those who are furthest behind.

(Hargreaves & Fink, 2006, p. 560)

The institution of this role must come within the PLC group and conduct team development. Systemic time and support should be given to evaluate the group’s effectiveness, sharing, and psychological safety. An opportunity will be established for teachers to share the the PLC group’s current perspectives on the team’s effectiveness. Central to the trust building of this particular position must be the establishment of confidentiality for the team members. It is pivotal that this person not be in a supervisory or administrative position and must not report his or her confidential findings to the administration except in the case of a formal investigation. This level of freedom will allow team members to utilize this resource at a far greater level than current administrative support.

**Recommendations for Further Research**

Based on the findings of this study, the following are recommendations for further research:

1. Conduct a correlation study to look at the levels of psychological safety among middle school teachers and identify specific variables that increase the psychological safety among them.

2. Conduct a replication study of this mixed methods explanatory study identifying and describing levels of psychological safety among teachers and PLCs at different educational levels (K-5, 9-12, and postsecondary).
3. Conduct a case study of five high-performing California middle schools to identify and explore the relationship between psychological safety and high performance.

4. Conduct a phenomenological study from the perspective of middle school regarding the institution of psychological safety within its PLC.

5. Conduct a correlation study to look at the frequency of psychological safety in PLCs and to identify the relationship that exists between levels of risk and levels of conflict resolution.

6. Conduct a study to investigate the impact of team dynamics on psychological safety on a PLC.

7. Conduct a phenomenological study to describe the principal’s perspective of elements of psychological safety to be present for an effective PLC.

Concluding Remarks and Reflections

The term lifelong learner is used so often to describe someone who has an unquenching thirst for knowledge that creates opportunities to make a better world. This dissertation has shown me that it is not the knowledge, but the openness to continue creating, that produces true wisdom. This journey started with my observation as a teacher and administrator that PLCs struggle to be successful in spite of great support and resources. Even the closest teams do not share in ways that could improve them.

Teachers presented ideas to show their best sides, which created the illusion of greatness. Although collaboration was there, isolation still reigned. I sought to find some answers and found psychological safety as a possible ingredient to catapult real sharing among the PLC members.
The study reaffirmed those initial observations many years ago and created new insights that could not be seen. Education is such a personal journey and parents entrust the most valuable item in their entire lives, their children, to the care of teachers. Most teachers hold this responsibility as sacred and guard it at all costs to prevent harm. Although it manifests as ego or self-importance, teachers genuinely care about the lives and legacy of their students. Their entire idea of legacy stems from their perceived contribution to a larger society. The thought that their contribution might be tainted is a true affront to who they are as people because of the deep devotion they have placed on their vocation. Therefore, the idea of opening oneself to more feedback is understandably scary.

The middle school experience was ideal to examine this process. Demands of this period in the education of students is pivotal. Middle school teachers deal with multiple phases of child development in their world. Instability is created for most children in middle school classes because of an entirely new environment, physiological changes, and increased learning expectations. These elements ignore the external challenges that all schools face. Each middle school teacher has a deep commitment to his or her students, and there is a consistent desire of teachers to work together. The small PLC groups highlighted the exchanges greater than larger departments, which made identifying factors easier to influence the PLC meeting. My respect for middle school teachers has increased after completing this study and they are a truly unique breed of educators that deserves far more credit.

An analogy was used in the title of this study that is purposeful. It is proposed that current PLC practices produce good work (aka flat bread) but they do not achieve the
potential of what the PLC could be. This study has shown that psychological safety is a catalyst used to increase all aspects of team development among its members. It is the yeast that makes the dough rise. As this study comes to an end, I cannot help but start applying these conclusions to other aspects and environments, which are happening throughout the world. It is humbling to think that my efforts can contribute in some small way to a larger understanding of how people work.

Psychological safety is in its infancy and can translate to all aspects of society with all types of relationships. From its beginnings within the medical environment, this topic has grown in a number of other industries. Innovative technology, through Google, has benefitted along with growing numbers of production industries (Edmondson, 2018). Now education and crisis intervention has been examined through the lense of psychological safety. Let the journey continue in the human condition so that creativity and innovation can produce the best outcomes for all.
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## APPENDIX A

### Synthesis Matrix

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<th>Risk taking</th>
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APPENDIX B

Wyss-Flamm Learning Framework

*Figure 7.1: Conversational Learning Spiral*

- **Phase 1**: Experiencing Difference
- **Phase 2**: Articulating Mismatch
- **Phase 3**: Re-Experiencing Difference
- **Phase 4**: Resolving Difference: Integrating or Affirming Contrast

- Tacit realm: Internal, personal dimensions of conversational learning
- Explicit realm: External, social dimensions of conversational learning

Conversational flow

- drop-outs
APPENDIX C

Amy Edmondson Permission

Bill Cloo <wcloo@mail.brandman.edu>  Wed, Aug 28, 2019 at 6:25 AM
To: "Edmondson, Amy" <aedmondson@hbs.edu>

Thank you so much for taking the time to reply. As you know, the University requires me
to gain permission for instruments that were used in previous studies. Do I have you
permission to utilize the survey items used in your 1999 study?

I sincerely appreciate the consideration.

Humbly,
William Cloo
Doctoral Candidate
[Quoted text hidden]

William G. Cloo

Edmondson, Amy <aedmondson@hbs.edu>  Wed, Aug 28, 2019 at 6:27 AM
To: Bill Cloo <wcloo@mail.brandman.edu>

Yes of course! Simply cite the source...

Amy C. Edmondson

Novartis Professor of Leadership and Management

HARVARD BUSINESS SCHOOL

Boston, MA 02163

Author of The Fearless Organization: Creating Psychological Safety in the Workplace for
Learning, Innovation, and Growth. (Wiley 2019)

[Quoted text hidden]

Edmondson, Amy <aedmondson@hbs.edu>  Wed, Aug 28, 2019 at 6:58 AM
To: Bill Cloo <wcloo@mail.brandman.edu>

Yes you do. Am delighted to have you furthering knowledge in this important domain.

Amy C. Edmondson

Novartis Professor of Leadership and Management

HARVARD BUSINESS SCHOOL

Boston, MA 02163
APPENDIX D

Psychological Safety Survey

* 1. Welcome to the Psychological Safety Survey

This survey is part of a study that means to identify and describe factors of risk-taking behavior among Professional Learning Community members. A crucial component for success among teams is for all PLC members to have high levels of psychological safety, or what defined as “a shared belief that the team is safe for interpersonal risk taking” (Edmondson, 1999, p. 359). This study is about your perceptions of risk taking among your team and ways to increase risk taking within the team.

All responses to this survey are confidential. Please read the statement below giving your consent to participate before opening the survey.

Thank you for contributing to this research.

Clicking the ”Agree” button indicates that you voluntarily agree to participate and have received and read the following documents: the Informed Consent Form and the Brandman University Research Participants Bill of Rights.

☐ Agree- I have received the Informed Consent Form and the Brandman University Participants Bill of Rights. I acknowledge that I have read the materials and give my consent to participate in the study.

☐ Disagree- I do not wish to participate in the study.

2. Please enter this initial information to know more about you.

Name
School
Email Address
Phone Number

3. How many years of teaching experience do you have?

☐ 1-2
☐ 3-4
☐ 5-10
☐ 10+

4. Please select the grades you currently teach?

☐ 6th grade
☐ 7th grade
☐ 8th grade
5. What current department do you participate in?

6. How many hours does your department actively engage in PLC work per week.
   - 0-1
   - 1-2
   - 2-3
   - 3-4
   - 4 or more

7. It is clear what this team is supposed to accomplish.
   - Strongly agree
   - Agree
   - Neither agree nor disagree
   - Disagree
   - Strongly disagree

8. This team spent time making sure every team member understands the team objectives.
   - Strongly agree
   - Agree
   - Neither agree nor disagree
   - Disagree
   - Strongly disagree

9. The team has invested plenty of time to clarify our goals.
   - Strongly agree
   - Agree
   - Neither agree nor disagree
   - Disagree
   - Strongly disagree

10. Most people in this team have the ability to solve the problems that come up in our work.
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

11. All members of this team have more than enough training and experience for the kind of work they have to do.
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree
12. Certain individuals in this team lack the special skills needed for good team work.
   - Strongly agree
   - Agree
   - Neither agree nor disagree
   - Disagree
   - Strongly disagree

13. Achieving this team’s goals is well within our reach.
   - Strongly agree
   - Agree
   - Neither agree nor disagree
   - Disagree
   - Strongly disagree

14. This team can achieve its task without requiring us to put in unreasonable time or effort.
   - Strongly agree
   - Agree
   - Neither agree nor disagree
   - Disagree
   - Strongly disagree

15. With focus and effort, this team can do anything we set out to accomplish.
   - Strongly agree
   - Agree
   - Neither agree nor disagree
   - Disagree
   - Strongly disagree

16. If you make a mistake on this team, it is often held against you.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

17. Members of this team are able to bring up problems and tough issues.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

18. People on this team sometimes reject others for being different.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never
19. It is safe to take a risk on this team
   ○ Always
   ○ Usually
   ○ Sometimes
   ○ Rarely
   ○ Never

20. It is difficult to ask other members of this team for help.
   ○ Always
   ○ Usually
   ○ Sometimes
   ○ Rarely
   ○ Never

21. No one on this team would deliberately act in a way that undermines my efforts.
   ○ Strongly agree
   ○ Agree
   ○ Neither agree nor disagree
   ○ Disagree
   ○ Strongly disagree

22. Working with members of this team, my unique skills and talents are valued and utilized.
   ○ Strongly agree
   ○ Agree
   ○ Neither agree nor disagree
   ○ Disagree
   ○ Strongly disagree

23. The team leader initiates meetings to discuss the team's progress.
   ○ Always
   ○ Usually
   ○ Sometimes
   ○ Rarely
   ○ Never

24. The team leader is available for consultation on problems.
   ○ Always
   ○ Usually
   ○ Sometimes
   ○ Rarely
   ○ Never

25. The team leader is an ongoing “presence” in this, team—someone is readily available.
   ○ Strongly agree
   ○ Agree
   ○ Neither agree nor disagree
   ○ Disagree
   ○ Strongly disagree
33. I am looking to find out more about your perceptions of risk taking among your team and ways to increase risk taking within the team.

I am conducting interviews with teachers like yourself to get a better understanding of the feelings associated with risk taking and will further the body of research in the area.

Please indicate that you would be willing to participate in a follow up interview to further this study.

☐ Yes
☐ No

34. If yes, please provide your email (if different from the one above) to set up an appointment that is comfortable for you.


26. We regularly take time to figure out ways to improve our team’s work processes.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

27. This team tends to handle differences of opinion privately or off-line, rather than addressing them directly as a group.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

28. Team members go out and get all the information they possibly can from others—such as customers, or other parts of the organization.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

29. This team frequently seeks new information that leads us to make important changes.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

30. In this team, someone always makes sure that we stop to reflect on the team’s work process.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

31. People in this team often speak up to test assumptions about issues under discussion.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never

32. We invite people from outside the team to present information or have discussions with us.
   - Always
   - Usually
   - Sometimes
   - Rarely
   - Never
33. I am looking to find out more about your perceptions of risk taking among your team and ways to increase risk taking within the team.

I am conducting interviews with teachers like yourself to get a better understanding of the feelings associated with risk taking and will further the body of research in the area.

Please indicate that you would be willing to participate in a follow up interview to further this study.

- Yes
- No

34. If yes, please provide your email (if different from the one above) to set up an appointment that is comfortable for you.
APPENDIX E

Field Test Interview Feedback Form

1. How did you feel about the interview? Do you think you had ample opportunities to describe what you do as a leader when working with your team or staff?

2. Did you feel the amount of time for the interview was ok? Was the pace okay?

3. Were the questions by and large clear or were there places where you were uncertain what was being asked? *If the interviewee indicates some uncertainty, be sure to find out where in the interview it occurred.*

4. Can you recall any words or terms being asked about during the interview that were confusing?

5. And finally, did I appear comfortable during the interview… (I’m pretty new at this)?
My name is William Cloo and I am a teacher with the Perris Union High school district. I’m a doctoral candidate at Brandman University in the area of Organizational Leadership and am conducting research to identify and describe factors of risk-taking behavior among Professional Learning Community members. A crucial component for success among teams is for all PLC members to have high levels of psychological safety, or what defined as “a shared belief that the team is safe for interpersonal risk taking” (Edmondson, 1999, p. 359). This study is about your perceptions of risk taking among your team and ways to increase risk taking within the team.

I am conducting 10 interviews with teachers like yourself. The information shared today will give a better understanding of the feelings associated with risk taking and will further the body of research in the area. I will be reading most of the interview, which I know seems a bit awkward. Please understand that this measure is to guarantee, as much as possible, the all participants will have a similar experience.

Informed Consent (required for Dissertation Research)

I would like to remind you any information that is obtained in connection to this study will remain confidential. All of the data will be reported without reference to any individual(s) or any institution(s). After I record and transcribe the data, I will send it to you via electronic mail so that you can check to make sure that I have accurately captured your thoughts and ideas.
Did you receive the Informed Consent and Brandman Bill of Rights I sent you via e-mail? Do you have any questions or need clarification about either document?

We have scheduled a half an hour for the interview. At any point during the interview you may ask that I skip a particular question or stop the interview altogether. For ease of our discussion and accuracy I will record our conversation as indicated in the Informed Consent.

Do you have any questions before we begin? Okay, let’s get started, and thank you so much for your time.

1. Please tell me a little bit about yourself and your experience with Professional Learning Communities, or PLC’s?

2. Psychological Safety is defined as “a shared belief that the team is safe for interpersonal risk taking” (Edmondson, 1999, p. 359). Describe what risk taking means to you and a time when you took a risk in you PLC meeting?

   Probe: How did the team respond?

   How did you feel after that interaction?

   Could you describe some things you learned from this interaction?

3. Describe how the team deals with disagreements and conflicts?

   Probe: how often do these discussions occur?

4. How do you deal with mistakes by yourself or others on your team?

   Probe: How do you feel about bringing up mistakes that other might be making in their teaching?
5. How does the team reaffirm you as a professional with your talents and skills?

    Probe: Describe some things that help create those feels.

    What factors did leadership contribute to these reaffirmations?
### Question Alignment Matrix

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Dear Participant,

I hope this email finds you well. Recently, you took part in a survey regarding risk taking in Professional learning Communities (PLC). In that survey you volunteered to participate in a follow up interview to delve further into this subject. I would like to include your perceptions of risk taking in my study and would like to set up a meeting time to conduct this interview. The interview will take less than an hour. Given the current situations with COVID-19, I will be conducting these interviews digitally via ZOOM. Please reply back to confirm your participation and some possible time we could discuss meeting dates and times. Once we set the meeting, I will send the interview questions to you in advance for your review.

Thank you for your willingness to further my research and I look forward to your response. Also, you can reach me by phone at (562) 762-5041 to set the meeting or ask any questions.

Sincerely,
APPENDIX I

Principal Invitation E-Mail

Research participation request for your school

Dear Principal,

My name William Cloo and I am a Doctoral Candidate in the School of Education at Brandman University. I am conducting a study to identify and describe levels of risk taking behaviors in PLC teams along with factors that might foster higher risk taking and sharing. I humbly request your support informing your staff of this study and request their participation. More information regarding the study is below. Please feel free to contact me via email at wcloo@mail.brandman.edu or cellphone at (562) 762-5041. I truly appreciate your assistance with this research.

PURPOSE: The purpose of this survey is to gather your perceptions on the level of risk taking within your PLC team and factors that might foster higher risk taking. Results from this study will be summarized in a doctoral dissertation.

PROCEDURES: Participants that choose to participate in the study will complete an electronic survey which will take approximately 15 minutes. The questions ask about their feelings of risk in sharing ideas with their team members without possible ridicule. The survey ends with a request for volunteers that would be willing to participate in a follow up interview to further discuss their answers and gain a deeper understanding. Contact information will be requested from those that volunteer in order to schedule a meeting time. These interviews will be audio-recorded for later transcription.

RISKS, INCONVENIENCES, AND DISCOMFORTS: There are no major risks with participation in this research study. The survey is sent digitally and if chosen, the interview will be scheduled at a time and place which is convenient for them.

POTENTIAL BENEFITS: Although there are no direct benefits to your site, potential benefits could materialize through increased sharing of strategies and increased ideas in PLC meetings. This study is intended to increase shared strategies and new ideas in PLC’s

ANONYMITY: All participants in the survey and / or interview will be assured that their contributions will be completely confidential. All information will remain in locked files, accessible only to the researcher. No employer will have access to specific survey data or interview information.

Thank you for your consideration and, again, please feel free to contact me with any questions or concerns.

Humbly,

William Cloo
Doctoral Candidate
wcloo@mail.brandman.edu
(562) 762-5041
APPENDIX J

Participant Information Letter

Letter of Invite with Survey Link

Good Morning,

Thank you again for participating in my study on identifying factors that foster high level of risk taking. I have attached your consent form and bill of rights. Please read these thoroughly agree at the beginning of the survey if you consent and acknowledge that you have received the Brandman University Research Participants Bill of Rights.

Below is the link for the online survey, which should take approximately 15 minutes. I really appreciate your participation.

SURVEY LINK

If you decide to participate in the face to face interview portion, I will contact you shortly to set up an appointment time.

Thank you again for your help with this study!

Survey Participation consent

Success in Professional Learning Communities (PLC) may depend on the ability of members to share without feeling the possibility of ridicule. The purpose of this survey is to gather your perceptions on the level of risk taking within your PLC team and factors that might foster higher risk taking.

This survey will take approximately 15 minutes. Please choose to become a part of this inquiry. Your viewpoint is truly appreciated.

INFORMED CONSENT
INFORMATION ABOUT: Levels of risk taking in Middle School Professional Learning Communities.

RESPONSIBLE INVESTIGATOR: William G. Cloo

THE FOLLOWING WILL BE INCLUDED IN THE ELECTRONIC SURVEY:

You are volunteering to participate in a research study conducted by William G. Cloo, a doctoral student for the school of education at Brandman University. The Purpose of this mixed methods study is to study was to identify and describe factors that foster high levels of risk-taking behavior among Riverside County PLC middle school teachers.

Your participation is voluntary and you may choose not to participate. If you decide to participate in this electronic survey, please note you can withdraw at any time.

The survey will take approximately 15 minutes to finish. Your responses will be confidential. The questions within the survey will deal with your views regarding risk taking with other individuals within your PLC group.

No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be informed and my consent re-obtained. If I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Executive Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641. I acknowledge that I have received a copy of this form and the Research Participant’s Bill of Rights.

Any questions concerning the completion of this study will be answered by William G. Cloo, Brandman University Doctoral Candidate. I understand that Mr. Cloo
may be contacted by phone at (562) 762-5041 or e-mail at wcloo@mail.brandman.edu.

The dissertation chairperson may also answer questions: Dr. Jonathan Greenberg at Greenber@brandman.edu.

ELECTRONIC CONSENT: Please select your choice on the survey:

Clicking on the “agree” button indicates that you have read the above information and the consent form and that you voluntarily agree to participate.

If you do not wish to participate in this electronic survey, you may decline participation by clicking on the “disagree” button.

The survey will only open for responses if you agree to participate.

Agree: I acknowledge receipt of the complete Informed Consent packet and “Bill of Rights”. I have read the materials and give my consent to participate in the study.

Disagree: I do not wish to participate in this electronic survey.
APPENDIX K

Letter of Consent

Informed Consent Form

INFORMATION ABOUT: A Mixed-Methods Study Identifying and Describing Factors to Promote Psychological Safety in Middle School Professional Learning Communities: Making the Bread Rise

RESPONSIBLE INVESTIGATOR: William G. Cloo, Doctoral Candidate

PURPOSE OF THE STUDY: This study is being conducted for a dissertation for the Doctor of Education in Organizational Leadership program at Brandman University. The purpose of this mixed-methods study was to identify and describe factors that foster high levels of risk-taking behavior among Riverside County PLC middle school teachers.

In participating in this research study, I agree to partake in an audio-recorded semistructured interview or survey. The interview will take place in person at my school site or by phone, and lasts about an hour. During the interview or survey, I will be asked a series of questions designed to allow me to share my experiences as a middle school teacher who has experience with middle school professional learning communities.

I understand that:

1. The possible risks or discomforts associated with this research are minimal. It may be inconvenient to spend up to one hour in the interview. However, the interview session will be held at my school site or at an agreed-upon location, to minimize this inconvenience. Surveys will also be utilized depending upon participants scheduling availability.
2. I will not be compensated for my participation in this study. The possible benefit of this study is to determine whether PLC members can increase their risk taking behaviors regarding pedagogy with minimal feelings of possible ridicule. The findings and recommendations from this study will be made available to all participants.

3. Any questions I have concerning my participation in this study will be answered by William G. Cloo, Brandman University Doctoral Candidate. I understand that Mr. Cloo may be contacted by phone at (562) 762-5041 or e-mail at wcloo@mail.brandman.edu. The dissertation chairperson may also answer questions: Dr. Jonathan Greenberg at Greenber@brandman.edu.

4. I may refuse to participate or withdraw from this study at any time without any negative consequences. Also, the investigator may stop the study at any time.

5. The study will be audio-recorded, and the recordings will not be used beyond the scope of this project. Audio recordings will be used to transcribe the interviews. Once the interviews are transcribed, the audio and interview transcripts will be kept for a minimum of five years by the investigator in a secure location.

6. No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be informed and my consent re-obtained. If I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Executive Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641. I acknowledge that I have received a copy of this form and the Research Participant’s Bill of Rights.

I have read the above and understand it and hereby voluntarily consent to the procedure(s) set forth.

__________________________________  _______________________
Signature of Participant or Responsible Party  Date

__________________________________  _______________________
Signature of Principal Investigator  Date
APPENDIX L

Participant’s Bill of Rights

BRANDMAN UNIVERSITY INSTITUTIONAL REVIEW BOARD

Research Participant’s Bill of Rights

Any person who is requested to consent to participate as a subject in an experiment, or who is requested to consent on behalf of another, has the following rights:

1. To be told what the study is attempting to discover.

2. To be told what will happen in the study and whether any of the procedures, drugs or devices are different from what would be used in standard practice.

3. To be told about the risks, side effects or discomforts of the things that may happen to him/her.

4. To be told if he/she can expect any benefit from participating and, if so, what the benefits might be.

5. To be told what other choices he/she has and how they may be better or worse than being in the study.

6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study.

7. To be told what sort of medical treatment is available if any complications arise.

8. To refuse to participate at all before or after the study is started without any adverse effects.

9. To receive a copy of the signed and dated consent form.

10. To be free of pressures when considering whether he/she wishes to agree to be in the study.

If at any time you have questions regarding a research study, you should ask the researchers to answer them. You also may contact the Brandman University Institutional Review Board, which is concerned with the protection of volunteers in research projects. The Brandman University Institutional Review Board may be contacted either by telephoning the Office of Academic Affairs at (949) 341-9937 or by writing to the Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA, 92618.
APPENDIX M

BIURB Approval

Bill Cloo <wcloo@mail.brandman.edu>

BIURB Application Approved: William G. Cloo
1 message

MyBrandman <my@brandman.edu> Sun, Jan 12, 2020 at 6:47 PM
Reply-To: webmaster <webmaster@brandman.edu>
To: "wcloo@mail.brandman.edu" <wcloo@mail.brandman.edu>
Cc: "Devore, Douglas" <devore@brandman.edu>, "Greenberg, Jonathan"
<ggreener@brandman.edu>

Dear William G. Cloo,

Thank you for your email regarding the BUIRB application. The request has been granted by the Brandman University Research Ethics Board. Please keep your office notified of any changes to the approved protocol.

If you need any further assistance with the BUIRB application process, please follow the instructions provided. The application form is available on the BUIRB website. The application form can be found at BUIRB.Brandman.edu.

Best wishes for a successful project.

Thank you,

BYIRB
Acharya 11th Anniversary
Brandman University
16355 Laguna Canyon Road
Irvine, CA 92618

For more information please visit Brandman.edu or Brandman.edu

Attached is the letter confirming the approval.

If you have any questions, please contact us at buirb@brandman.edu.

Brandman University