DISTRIBUTED LEADERSHIP WITHIN PLCs: EXAMINING THE IMPACT OF TEACHER LEADERS ON COLLABORATIVE TEAM PERFORMANCE

by

HEATHER LAW TALLANT

(Under the Direction of Karen Bryant)

ABSTRACT

The purpose of this action research study was to understand the role leadership development plays in strengthening the collaborative team process in K-12 schools. Utilizing a distributed leadership framework, the study was designed to provide professional learning supports to teacher leaders and measure the effects on team performance. Findings explored the perceptions of teacher leaders and collaborative team members on professional learning and collaborative team facilitation, providing new insights into the innerworkings of teacher teams. The study also addressed the impact of the action research process on school leader efficacy.

INDEX WORDS: Professional Learning Communities, Collaborative Teams, Distributed Leadership, Collective Efficacy, Teacher Leadership

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DEDICATION

Like any teacher, my desire to keep chasing answers is in direct response to the questions raised by children. Like any mother, the voices of my own children are the loudest in my ear.

To Maddox & Dalton Tallant- my inspiration to keep chasing answers.

and

To Kevin James Tallant, my best friend, most ardent love, and always the best part of my day.

"Day by day and night by night we were together- all else has long been forgotten by me."

– Walt Whitman

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Additionally, I am grateful to the members of my doctoral advisory committee, Dr. Jami Berry and Dr. Walker Swain, whose suggestions for improvement led to a better study and a more insightful product. Dr. Berry, your reassurance over the years has been immeasurable and contributed greatly to this accomplishment.

To the greatest doctoral cohort in the world: I am forever grateful for the gift of our time together, spent uplifting, embracing, championing, and celebrating the joys of life. Our togetherness was salve for the moments of individual struggle. What a blessing you have each been to me in our three years together. I will be always in your corner, cheering you on. Thanks for the comfort.

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CHAPTER 1

INTRODUCTION

The rise of professional learning communities (PLCs) in K-12 education has been one of the major developments in the field over the past four decades. The evolutionary beginning of PLCs in schools came by way of other fields of research, including the fields of psychology, sociology, and business. Over time this related work made its way into K-12 education research. Dewey's (1933) writings on reflective thinking and its impact on the learning process was foundational work for PLCs. In *Schoolteacher: A Sociological Study* Lortie (1975) described the pervasiveness of teacher autonomy and the lack of teacher collaboration within schools. Burns's (1978) work on transformational leadership further engaged school leaders in discussions of traditional hierarchies and power within schools.

Almost a decade later, Argyris et al. (1985) built upon Dewey and introduced action science, or what is commonly referred to as action research. Senge (1990) expanded on Lewin's (1936) organizational development theory to describe learning organizations. Additionally, Watkins and Marsick (1990) discovered that informal and incidental learning occurs through the non-linear, collaborative interactions teachers have with one another in their search to understand their experiences in the classroom (Watkins et al., 2018). Hord (1997) recognized the characteristics of Senge's learning organization in her own school and began her study of schools that shared these same elements; she called them professional learning communities. According to DuFour and Eaker (1998), PLCs encompass seven qualities: they collectively work toward

shared goals, collaborate about student learning, implement best practice for student achievement and school practice, demonstrate a cycle of inquiry, promote continuing improvement through system processes, and focus on results.

The research on professional learning communities is divided into two main frames: studies that describe PLCs as a mode of school reform that can raise student achievement levels (Goddard, et al., 2007) and studies that describe PLCs as a system of professional development that can sharpen teacher practice and increase professional knowledge (Zepeda, 2014). Regardless of how PLCs are framed in the research, teacher collaboration is at the heart of the transformation. Without a school-wide collaborative culture, schools cannot be highly effective professional learning communities (DuFour & Marzano, 2011).

The Problem

The research findings have been promising; schools that operate as highly effective professional learning communities produce teacher behaviors that increase student achievement (Akiba & Liang, 2016; DuFour & Marzano, 2011; Goddard et al., 2017; Huffman & Kalnin, 2003; Lomos et al., 2011; Miller et al., 2010; Ronfeldt et al., 2015; Vangrieken et al., 2015). Yet, for the school leaders at Keating High School (all proper nouns related to the context are pseudonyms), the knowing-doing gap of professional learning communities has been difficult to cross. This is in large part because changing the culture of schools is a difficult task (DuFour & Fullan, 2013). To bridge that gap, teacher leaders require support and development (DeMatthews, 2014). While research has focused on establishing the defining elements necessary for schools to transform into highly effective PLCs, it has not focused on how school leaders build the skills of teacher leaders to support such transformation. As Spillane et al.

(2004) asserted, “While there is an expansive literature about what school structures, programmes, roles, and processes are necessary for instructional change, we know less about how these changes are undertaken or enacted by school leaders” (p. 4). This qualitative study will examine how school leaders in one large, public, suburban high school attempted to increase collaborative team effectiveness by focusing on the professional development and support of team facilitators.

Purpose of the Study

The purpose of this action research study was to determine the role leadership development plays in strengthening the collaborative team process. Specifically, this study focused on the professional development of collaborative team leaders to increase team effectiveness.

Research Questions

To address the purpose of this study, the following research questions guided this inquiry:

1. How do teacher leaders perceive the impact of professional learning on collaborative team performance?
2. How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs?
3. In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process?

Definition of Terms

- “Professional Learning Community” in the context of Keating High School referred to the definition provided in *Learning by Doing* (DuFour et al., 2016): “It is 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" (p.10).

- "Collaborative Team" in the context of Keating High School referred to the organization of teachers into teams based on the content they teach. Collaborative teams worked interdependently to achieve a common goal.
- "Collaborative Team Facilitator" in the context of Keating High School referred to the member of the collaborative team that has been selected to facilitate team meetings and processes. All voices on the collaborative team were equal; the collaborative team facilitator organized the work of the team so that the team remained on an agreed upon timeline.
- "Leadership Team" in the context of Keating High School referred to the school administrators, instructional coach, instructional technology specialist, media specialist, and the department chairpersons in each of the 10 academic departments (English/Language Arts, Science, Social Studies, Mathematics, World Languages, Fine Arts, Career, Technical and Agricultural Education (CTAE), Physical Education, English for Speakers of Other Languages (ESOL) and Special Education).
- "Facilitator Tuesday Meetings" in the context of Keating High School referred to the meetings between collaborative team facilitators and the Teacher Support Team.
- "Teacher Support Team" in the context of Keating High School referred to the Assistant Principal over Professional Learning and the two Instructional Coaches.

For this study, the Teacher Support Team also acted as the Action Research (AR) Implementation Team.

- "PLC Design Team" in the context of Danbury County Schools refers to the DCS Director of Professional Learning, DCS Personalized Learning Specialist, and the Principals and Assistant Principals at the three PLC pilot schools. For this study, the PLC Design Team also initially acted as the AR design team until the spring of 2021.

Conceptual Framework

Professional learning communities operate as systems of action research whereby teachers within content teams identify student achievement issues and work interdependently to select and apply interventions that remedy the student achievement issue at hand. As such, student learning is the focus of the work of collaborative teams, and teacher learning is the vehicle by which the work is achieved. This is precisely why PLCs are both systems of school reform and systems of professional learning: student learning and teacher learning are beneficiaries of the action research process (DuFour & Eaker, 1998; DuFour & Marzano, 2011; Harris et al., 2018; Zepeda, 2014).

There is much research focused on the elements necessary to produce effective professional learning communities, the process of collaborative teams, and the systems and tools necessary for PLC success, however, little research within the field of education has focused on the interpersonal skills and abilities of the adults who are tasked with the work of professional teaming. In teacher preparatory programs, teachers are trained in pedagogy as it relates to behavioral strategies and instructional strategies. They are not, however, trained in collaboration

skills and andragogy. To put it simply: while K-12 teachers have been trained to work with children, they have not been trained to work with adults. It should be noted that school leaders are provided limited training in these areas, as well. School leaders are rarely trained on adult learning theory or adult teaming which is noteworthy since many school leaders are charged with creating and delivering professional learning that contributes to effective teacher teams.

A review of the literature in the areas of teacher collaboration, adult learning theory, effective teaming, and distributed leadership is included in Chapter 2. Each of these areas of research can aid and inform school leaders on how to create professional learning opportunities to support the work of collaborative teams within a professional learning community. Because professional learning communities operate within a system of distributed leadership in which teachers and teacher leaders are empowered to conduct action research cycles to solve student achievement issues, the theoretical framework of distributed leadership was applied.

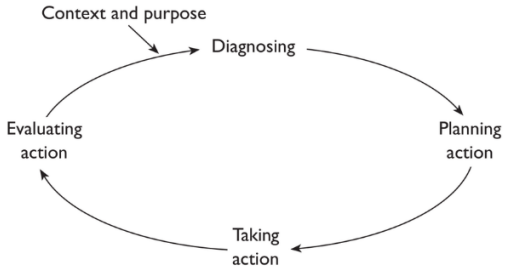
Overview of the Methodology

This study was a qualitative research study, informed by quantitative data. It incorporated action research, a type of applied research, in which the scientific method is used by practitioners to solve problems within the educational context (Glanz, 2014). Figure 1 shows the action research cycle as described by Coghlan and Brannick (2014), in which action research follows four steps: constructing (diagnosing), planning action, taking action, and evaluating action. These steps occur following a period in which the researcher examines the context of the project and establishes the purpose of the project. Glanz (2014) asserted that the benefits of action research "are enormous for the professional development of the educational leaders who use

action research and for the school as a whole" (p. 8). As leaders move through the action research process, they reflect on new learning generated by the process.

Figure 1

Action Research Cycle



Note. Coghlan & Brannick (2014)

Action research was particularly well suited for this study because it validates the work of collaborative teacher teams throughout the school. As teachers were engaged in their own action research within their collaborative teams, school leaders were engaged in the action research of this study. The opportunity for school leaders to model the action research cycle as part of this study was an intentional choice in the hopes it would encourage commitment to the process already begun by collaborative teams.

This study incorporated the descriptive research method which relied on survey and observational data, reported in a qualitative manner. A qualitative approach was selected because, as Glanz (2014) stated, "the power of qualitative research is in its ability to enrich our understanding of a given phenomenon" (p. 80). For practitioners, the understanding that comes from qualitative data is of value. Because this study focused on the effects of teacher leader development on team collaboration, it was important to collect and report data that not only shed light on project outcomes, but that gave voice to the perspectives of the actors involved.

Therefore, the action research team was careful to include the perspective of school leaders, collaborative team facilitators, and collaborative team members in the data collection and analysis process, as qualitative research uniquely allows.

Intervention

Seeking to increase the interactions of leaders and followers within the structure of a PLC, three interventions were designed. The AR design team selected the first intervention, an in-depth training for team facilitators, as described in the literature review (see Chapter 2). The focus of this training was to identify and develop the skills needed to facilitate a team of adults. The second and third interventions centered on a system of continuous support for the team facilitators. This system was comprised of Facilitator Tuesday meetings and instructional coaching support meetings. The purpose of the Facilitator Tuesday meetings was to provide an opportunity for team facilitators to come together and seek real-time feedback on issues they experienced within their teams in building psychological safety and trust. Instructional coach support meetings addressed team issues that coaches observed during content team meetings.

Significance

Recently teacher collaboration has moved from being a topic of research studies to being a topic of public policy. It has appeared in federal and state legislation and in teacher and school leader evaluation tools as expected standard operating procedure for public schools across the nation and state. Teacher collaboration can also be found in educator professional standards in a variety of national professional organizations. The importance for schools to adopt authentic teacher collaboration as a method for job-embedded teacher improvement and as a system of school reform has never been clearer, as lawmakers and professional organizations have made it

policy. However, true teacher collaboration that yields the results of increased student achievement will not be met without solving the knowing-doing gap of professional learning communities. This study sought to understand that gap and bring new understanding around the remedy.

Although federal and state policy widely supports and encourages the creation of professional learning communities within schools, the successful development of PLCs relies on local school and district leaders and their knowledge of the necessary systems and structures to make it a reality in schools. The missing piece could be professional learning for school and district leaders addressing interpersonal skills necessary for teaming. One of the Top Ten Education Issues in 2020 identified by the State Partnership for Excellence in Education is teacher quality (State Partnership for Excellence in Education, 2020). In this report, the State Partnership (2020) identified teacher quality as the largest school factor in student achievement: "Empowering school-level leaders to transform and support a culture of learning is one of the most important steps districts and schools can take to support student learning" (p. 28). The emphasis on school leader preparation programs and systems of support that are linked to the recruitment and retention of quality teachers and, ultimately, increased student achievement was clear. Current policies at all levels provide the expectation for teacher collaboration and embedded professional development. The question is whether school and district leaders know how to create the conditions necessary for a professional learning community to thrive.

Organization of the Dissertation

This dissertation was organized into six chapters. This first chapter provided an overview of the problem, the purpose of the study, the research questions addressed by the study, and the

methodology of the study. Chapter 2 offers a review of the related literature in the areas of teacher collaboration, adult learning theory, and effective teaming. In Chapter 3, the methodology of the study is reviewed, including the theoretical and conceptual frameworks. An analysis of the case is provided in Chapter 4. Chapter 5 includes the findings of the action research cycles as they relate to the research questions. Finally, Chapter 6 summarizes the major findings of the study and the implications for future research.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

This literature review contains an examination of the related literature pertaining to this study of distributed leadership within PLCs. It includes a variety of resources, including research journals and articles, books, and multimedia sources related to teacher collaboration at the secondary level. This chapter is organized by the themes that emerged from the literature.

Teacher Collaboration

PLC development involves organizational change, shifting from the traditional top-down school hierarchy to a bottom-up structure, where teacher teams investigate student achievement issues and apply interventions to address them. The embedded practice of *effective* teacher collaboration has sometimes been difficult to achieve because it counters the traditional system of education. In the United States, the evolution of the public school system directly contributes to the traditional hierarchical structure. Because public school systems are governed by state governments, schools around the nation developed differently based on local needs and policies (Urban & Wagoner, 2009). The one room schoolhouse, in which one teacher was responsible for the education of all children, fostered a system built primarily on full teacher autonomy. As populations increased and the separation of grade levels developed, school systems were organized to guide and shape policies of curriculum and instruction, attendance, discipline, schedules, et. cetera. These systems shared only loose ties and teacher autonomy remained. Atul Gwande, American surgeon, writer, and public health researcher, discussed a similar evolution

within the U.S. system of medicine in his 2012 TED Talk titled, *How Do We Heal Medicine?* he said this about the nature of systems:

> *Making systems work- whether in healthcare, education, climate change, making a pathway out of poverty- is the great task of our generation as a whole. In every field, knowledge has exploded, but it has brought complexity. It has brought specialization. And we've come to a place where we have no choice but to recognize, as individualistic as we want to be, complexity requires group success. We all need to be pit crews now.* (para. 25).

The research that follows emphasizes this need for professional collaboration in schools so that our systems of education work for all students. However, leaders of schools and school systems must recognize and plan for the difficulty that comes when shifting from the traditional system that honors teacher autonomy to a professional learning community that honors teacher collaboration.

Teacher Collaboration & Student Achievement

Previous research has linked the practice of teacher collaboration to increased levels of student achievement (Akiba & Liang, 2016; DuFour & Marzano, 2011; Huffman & Kalnin, 2003; Goddard et al., 2017; Lomos et al., 2011; Miller et al., 2010; Ronfeldt et al., 2015; Vangrieken et al., 2015). When teacher teams analyze student data to inform teacher instruction, student achievement outcomes increase, as well (Hamilton et al., 2009; Huffman & Kalnin, 2003; Schildkamp et al., 2016). Therefore, if the focus of teacher collaboration is on student outcomes, both the students and teachers benefit. Additionally, teacher collaboration that provides opportunities for teachers to promote research-based learning activities improves

student achievement (Akiba & Liang, 2016, Goddard et al., 2010). Poortman & Schildkamp (2016) assert that "the chances of success are higher if a subject-focused team focuses on all of these three school improvement pillars: curriculum, assessment, and instruction" (p. 432). These studies have shown that teacher collaboration can increase student achievement and professional practice, but how can leaders encourage teacher collaboration?

Building a Collaborative School Culture

Developing a strong collaborative school culture is important for teacher collaboration to thrive and impact student achievement. "The far better strategy for improving adult practice is developing the results-oriented collaborative culture of a strong PLC, a culture committed to building the collective capacity of a staff to fulfill the purpose and priorities of their school or district" (DuFour & Marzano, 2011, p. 67). Donohoo et al. (2018) highlight the role of school leaders in raising the collective impact of teacher teams engaged in the evaluation of student learning. "By promoting a culture of collaboration focused on 'knowing thy collective impact,' leaders have the potential to support school improvement in ways that positively influence teachers' collective efficacy beliefs and thus promote student achievement" (Donohoo et al., 2018, p. 43).

Instructional leadership also weighs significantly on teacher collaboration, according to Miller et al. (2010) who stated, "Our findings suggest that in schools where the principal provides instructional leadership, higher rates of teacher collaboration occurred" (p. 14). Research also indicates that shared leadership increases the success of teacher collaboration (DuFour & Marzano, 2011; Waldron & McLeskey, 2010). In fact, when school leadership and decision-making are shared throughout the school, the results can include increased teacher trust,

increased buy-in for organizational change, and increased student achievement (Mangin, 2005; Scribner et al., 2007). This understanding leads to the next theme in related research: distributed leadership.

Distributed Leadership

Distributed leadership is closely tied to the organizational change that takes place when schools transform into professional learning communities (DuFour & Marzano, 2011; Harris et al., 2018). Several studies have provided additional insights into how distributed leadership, a cornerstone of professional learning communities, clashes with more traditional roles, responsibilities, and relational norms within schools (Harris, 2008; Hauge et al., 2014; Murphy et al., 2009). Although this clash of norms is something that must be anticipated and addressed, distributed leadership creates cultures of collaboration and self-efficacy, increased job satisfaction, and increased student achievement (Garcia Torres, 2019). Some barriers to distributed leadership, such as this clash with traditional leadership views, may be more easily navigated within PLC schools as the tenets of professional learning communities provide context for the redistribution of leadership (Louis et al., 2013).

Teacher Agency

Distributed leadership requires that teachers take control of their own learning and development so that they can make necessary decisions to increase student achievement. Hunzicker (2012) found that when school leaders create a culture of collaboration and continuous learning, it engulfs teachers in various learning and leadership experiences, thereby increasing their professional experience and self-efficacy. According to Frost (2003), “It is not a matter of delegation, direction, or distribution of responsibility, but rather a matter of teachers’

agency and their choice in initiating and sustaining change" (p. 8). When we discuss the shift in power and authority to make decisions because of distributed leadership, we are really acknowledging "the work of individuals who contribute to leadership practice, whether they are formally designated or defined as leaders" (Harris & Spillane, 2008, p.31). Designating teacher leaders as change agents may help provide increased teacher agency within professional learning communities as it further defines their role within the school reform context (Turner et al., 2018). "If, however, change agents can create conditions in which the risks associated with the status quo are actually greater than the risks associated with change, then they will increase the chances of producing systemic change" (Nehring & Fitzsimmons, 2011, p.527). The research seems to outline a cycle of teacher empowerment that is set off when leadership is distributed and teachers have strong motivations to take risks.

Role of Principals

For schools in which leadership is widely distributed, the principal still plays a very central and important role. DeMatthews (2014) found that the principal was still called on to provide answers, support, or additional authority, even when teachers and teacher leaders operated in a system in which they had expanded authority and flexibility to lead. Principals also provide the accountability piece to ensure fairness within the system and uphold high expectations among professionals (Bush & Glover, 2012; Hulpia & Devos, 2010). Others advocated the importance for principals to communicate a long-term view of leadership and management that is consistent over the long haul (Lynch et al., 2016) and makes sense of a distributed leadership initiative for the benefit of teachers (Harris, 2009). Many principals lead

the work of collaborative teams in their buildings and therefore, must also be knowledgeable of the best practice pertaining to adult learning.

Adult Learning Theory

Knowles (1978) developed adult learning theory as an extension of Lindeman's (1926) concepts which include: 1) adults are motivated to learn as they experience needs that learning will satisfy; 2) learning is self-centered through life situations; 3) experience is the richest resource; 4) adults have a deep need to be self-directing, and 5) adult learners need individualized learning. Mezirow (2000) brought a new perspective to adult learning theory, whereby a person could have an experience that upon reflection makes them change a previously held viewpoint. It is through the examination of our own interpretations of events and concepts that transformative learning occurs. Because professional learning communities are systems of professional learning through which teacher practice is transformed it is important to examine PLCs within the context of adult learning theory, we must ensure that all school professionals, including teachers, teacher leaders, and school leaders, receive professional development in line with how we understand adults learn.

Andragogy and Professional Learning Communities

The elements of embedded professional development found within professional learning communities parallel the principles of adult learning theory (Servage, 2008). Hellner (2008) concluded, "A PLC requires learners to work actively with new knowledge: drawing on prior knowledge and experiences; discussing, sharing, reflecting with other learners; modifying and adjusting beliefs and practices; and applying them to the specific school setting" (p. 51). There are clear similarities between the collaborative work of teams and the elements of adult learning

theory, including transformational learning theory (Kelly, 2017). One of these similarities is active learning which addresses individual classroom needs of teachers and has been found to improve teaching practices (Stewart, 2014). PLCs operate more smoothly when school leaders present themselves as co-learners instead of PL instructors and when school leaders provided a school-wide goal that create a sense of urgency (McManus, 2016). Because teacher learning is a "lynchpin" in the school transformation process, we must take into consideration the extent to which teachers must experience transformation before long-term change is to be made (Servage, 2008, p. 67). Zepeda (2019) asserts that teacher improvement is continuous and occurs within their daily work which is precisely why job-embedded learning should be our current approach.

Teacher Leader Development

Servage (2008) argued convincingly that transformative learning theory has been "underutilized in school reform discourse" while asserting that one of the reasons PLC development is difficult for many schools is that leaders forget to consider that it requires transformational learning of teachers (p. 66). She states:

> *By building trust among PLC participants and encouraging critical reflection beyond the immediate day-to-day concerns of practice, pedagogy for transformative learning has the further value of getting at the heart of the sorts of deeply held beliefs and values that, unaddressed, can plague PLC efforts with debilitating dissent, mistrust, and conflict.* (p. 74-75).

For teacher leaders, professional development that aligns with adult learning theory is a more complex undertaking. Blase and Blase (2006) described teacher leaders as caught between the world of teacher and the world of school leader. Planning professional development that supports

teacher leaders should include collaborative time together. In other research, the professional development found most helpful in the transitioning from teacher to instructional leader has been a combination of in-service training and mentoring (Yost et al., 2009). Opportunities for embedded professional development that is specific to the unique needs of teacher leaders can support their growth and success.

Effective Teaming

The interpersonal skills that are present in effective work teams have been studied by researchers primarily outside of the field of education. These skills hinge on the level of psychological safety among members of the team. If professional learning communities rely on the work of effective teacher teams, then research about the development of teaming skills must be considered.

Psychological Safety in Work Teams

For a little more than two decades, researchers have made new discoveries regarding the characteristics of effective teams in the workplace. Propelling this discussion is a term coined by Edmondson (1999) who defines psychological safety as "a shared belief held by members of a team that the team is safe for interpersonal risk taking" (p. 1). Edmondson found that "structural and interpersonal characteristics both influence learning and performance in teams" (p. 19) and later found that the degree of leadership inclusiveness made the difference in terms of team effectiveness (Edmondson, 2019). Edmondson defined leadership inclusiveness as "words and deeds by leaders that invite and appreciate others' contributions" (Nembhard & Edmondson, 2006, p. 27). Her work on leadership inclusiveness contended that when leaders create team

norms that expect and respect every voice at the table, they contribute to the psychological safety of the team and decreases the risk for members to share and learn.

In 2012, Google launched Project Aristotle, which studied why some teams within the organization were effective and others were not. Google's research findings pointed to team psychological safety as the primary determinant of highly effective teams (Duhigg, 2016). Google found that teams with high levels of psychological safety exhibited two traits: equality in conversational turn-taking among team members and high average social sensitivity (Cauwelier, 2019; Duhigg, 2016). Project Aristotle specified that "psychological safety, more than anything else, was critical to making a team work" (Duhigg, 2016, para. 36).

The Role of Leaders

In his book, Sinek (2014) describes the workplace as a circle of safety where it is a leader's job to eliminate internal danger and establish trust so that the group can focus their energy on external dangers. Sinek wrote, "This feeling of belonging, of shared values and a deep sense of empathy, dramatically enhances trust, cooperation and problem solving" (p. 24). Without the circle of trust, Sinek says "paranoia, cynicism and self-interest prevail" (p. 29). According to Sinek, it is a leader's job to eliminate the internal threats to the trust within the company or organization.

Lencioni (2002) listed the pitfalls of teams in his book, *The Five Dysfunctions of Teams*: absence of vulnerability-based trust, fear of conflict, lack of commitment, avoidance of accountability, and inattention to results. Lencioni asserts that trust is of utmost importance to a team saying, "Trust lies at the heart of a functioning, cohesive team. Without it, teamwork is all but impossible" (p. 195). The vulnerability-based trust Lencioni referred to allows team members

to discuss “weaknesses, skill deficiencies, interpersonal shortcomings, mistakes, and requests for help” (p. 196). Edmondson’s (1999) concept of psychological safety shares this same component of vulnerability-based trust that Lencioni refers to where team members can speak openly without fear, admit to mistakes, and seek understanding.

Brown (2018) argued that vulnerability is the source of brave leadership. Leaders who normalize vulnerability in the workplace build teams who trust each other to have honest conversations, move past failures, and build strong teams. In classrooms, Brown (2017) said that learning requires vulnerability. In the same vein, a teacher team who has committed to learning more about why some students are failing to master standards and what they can do to remedy that also requires vulnerability. This is the reason why Lencioni (2002) called his concept vulnerability-based trust; the willingness to be vulnerable with each other is what creates the trust within the team.

Chapter Summary

Professional learning communities operate on seven key concepts: they collectively work toward shared goals, collaborate about student learning, implement best practice for student achievement and school practice, demonstrate a cycle of inquiry, promote continuing improvement through system processes, and focus on results (DuFour & Eaker, 1998). A review of the related literature indicated that teacher collaboration improves student achievement and principal leadership can positively impact the collaborative school culture and the collaboration of teachers (Akiba & Liang, 2016). The literature also revealed that the distributed leadership opportunities found in a PLC allow for decision-making power to be widely shared (Harris & Spillane (2008), contribute to the success of organizational change (Fairman & Mackenzie,

2015), and foster teacher agency (Hunzicker, 2012). Strong principal leadership can help distributed leadership take root (DeMatthews, 2014). Job embedded professional learning reinforces the best practices of adult learning (Zepeda, 2019). However, professional learning in collaborative teams should allow for transformative learning to occur and maximize positive changes in the classroom behaviors of teachers (Kelly, 2017; Servage, 2008). The professional development of teacher leaders should also include leadership mentoring to help support them in their unique role (Yost et al., 2009).

Although professional learning communities as a school reform initiative have been studied for several decades, gaps in the literature remain. Research exploring the development and support of teacher leaders to increase collaborative team effectiveness is scant. Charner-Laird et al. (2016) noted that more information is needed from the perspective of those being led by teacher leaders in the context of professional learning initiatives. Why is it that the research holds such promise for professional learning communities, yet schools struggle to become effective PLCs? One possible answer is that teachers and school leaders are not trained in the skills of effective teaming. The literature surrounding effective teams in the workplace insisted that vulnerability-based trust is a foundational component and contributes to psychological safety (Edmondson, 1999; Duhigg, 2016; Lencioni, 2002) and that leaders are responsible for establishing and protecting trust among teams (Brown, 2018; Sinek, 2014). This study aims to bring greater understanding to how school leaders can strengthen collaborative teams in a PLC through a distributed leadership model.

Chapter 3 includes a discussion of research design and methodology. The theoretical and conceptual frameworks are outlined, and an explanation of the action research methodology is

provided, which includes the interventions, data collection methods, and data analysis process. Limitations of the research study are also addressed in the next chapter.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

This action research study was designed to identify the impact of team leader development on collaborative team effectiveness. The research questions that guided this study were: 1) How do teacher leaders perceive the impact of professional learning on collaborative team performance? 2) How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs? 3) In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process? This chapter will discuss the action research approach, why it was appropriate for this study, and how it was applied.

Theoretical Framework

One of the most transformational aspects of Professional Learning Communities (PLCs) is that leadership and decision-making are the responsibility of every member of the organization (DuFour & Marzano, 2011). This diffusion of power, in which teams of teachers collaborate to solve student achievement issues and adopt policies and practices that enhance student learning can be an empowering experience for all involved. However, to reach that level of empowerment, teachers must first be willing to reject the traditional system of teacher autonomy (Nehring & Fitzsimmons, 2011). Therefore, school leaders are charged with the job of creating collaborative cultures, where teachers value collaboration over autonomy (DuFour & Marzano, 2011). As Hord (2009) stated, “of equal importance to guiding a professional learning

community is the principal's willingness to share power and authority" (p.43). Hence, this study was designed within a distributed leadership framework.

Distributed Leadership in a PLC

According to Harris & Spillane (2008), "a distributed perspective on leadership acknowledges the work of all individuals who contribute to leadership practice, whether or not they are formally designated or defined as leaders" (p.31). Therefore, in Figure 2, leaders and followers can be comprised of any mix of stakeholders: administrators, teachers, specialists, parents, and students. The situation noted in Figure 2 represents a variety of factors that determine the context of the interaction between leaders and followers, such as the systems, policies, procedures, school culture, and routines that define the interaction.

Figure 2

Distributed Perspective of Leadership Practice

Note. Spillane (2006)

Distributed leadership frameworks increase the effectiveness of job-embedded professional learning (Campoli, 2011) and were found to increase the success of teacher action learning (Dinham et al., 2008). Additional research advocated that teacher leaders receive professional development that focuses on effective leadership skills such as facilitation, active listening skills, conflict resolution (Fairman & Mackenzie, 2015) and effective communication (Scribner et al.,

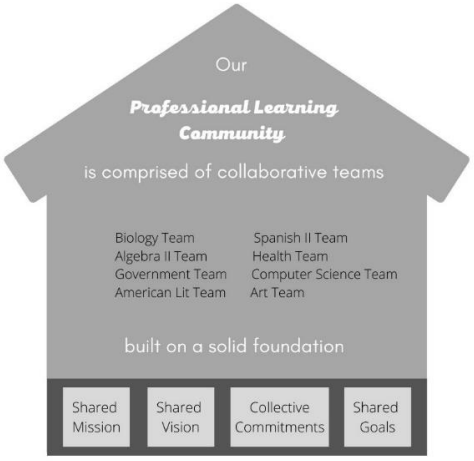
2007). Nehring and Fitzsimmons (2011) remarked in their own findings about the potential importance of the facilitative skill for teacher leaders stating, "While the literature reviewed for the theoretical frame does not identify facilitative skill as a leadership attribute associated with a high-performing PLC, it is apparent in this study that the lack of facilitative skill by some of the teacher leaders had a negative impact on the outcome of the initiative" (p.525). Harris (2004) suggested that the "structural, cultural, and micropolitical barriers" that create difficulties for distributed leadership implementation will require the development of interpersonal skills among teacher leaders (p.19). Research has also shown teachers grow in their leadership capacity when supported by professional development focused on improving teacher practice that is paired with job-embedded collaboration (Hunzicker, 2012).

Conceptual Framework

Keating High School used a PLC structure that is rooted in both the distributed leadership model and in action research. The school district's PLC Design Team attended PLC at Work Conferences and adopted the process outlined by DuFour et al. (2016) as their guide in 3 PLC pilot schools. According to DuFour et al. (2016), teachers in collaborative teams determine team goals, deconstruct standards and learning targets together, develop common assessments and pacing guides, create intervention plans when students lack mastery of essential standards, and extend the learning when students master essential standards early. Thereby teachers are leaders of the work and decision-making is shared by all who are engaged. "The PLC process empowers educators to make important decisions and encourages their creativity and innovation in the pursuit of improving student and adult learning" (DuFour, et al., 2016, p. 13). The structure of the professional learning community at Keating High School is represented in Figure 3 below.

Figure 3

PLC Schematic

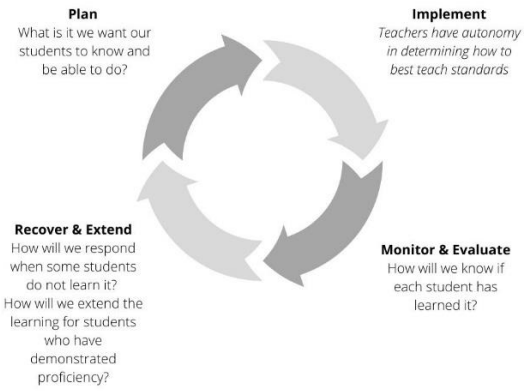


Note. Adapted from DuFour et al., (2016)

Additionally, as collaborative teams identify student achievement problems, collect and analyze classroom data, and create student intervention plans, they conduct their own action research cycles. Action research was included in DuFour's concept of a professional learning community which he defined 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., 2016, p.10). As teachers identify student achievement issues, they work together to understand the root cause and resolve learning issues. Therefore, it was especially appropriate to design this study as an action research study. In doing so, school leaders became partners with teachers in the action research cycle and the outcome was shared learning. Figure 4 depicts the action research process of collaborative teams at Keating High School. Collaborative teams plan, implement, monitor, and respond to the needs of students in cycles that parallel the action research of this study.

Figure 4

Action Research Within Collaborative Teams



Note. Adapted from DuFour et al. (2016)

Action Research

Because collaborative teams at Keating High School are engaged in action research cycles of their own, a study that models that work is uniquely appropriate. Not only was action research a natural choice in the study design because it was already part of the day-to-day work of educators within the school setting, but as Coghlan and Brannick (2014) pointed out, "action research focuses on research *in* action, rather than research *about* action" and they continue the point by explaining that the "central idea is that action research uses a scientific approach to study the resolution of important social or organizational issues together with those who experience these issues directly" (p. 6). This makes action research particularly useful in school settings where teacher teams, and the school leaders who lead them, may experience both social and organizational issues that affect team performance. Although any organization can utilize action research, Glanz (2014) directly connected it to the educational setting by describing action

research as a type of applied research whereby practitioners work to improve educational practice within schools. This qualitative, action research case study was designed to identify the effects of team facilitator skill development on collaborative team effectiveness. As school leaders employ strategies for school improvement, they engage in the evaluation of programs and processes in their ability to achieve those gains. Glanz (2014) asserted that "action research, as a disciplined inquiry, is an invaluable tool that allows educational leaders to reflect on their practices, programs, and procedures" (p. 25).

The research questions addressed in this study focus on the impact of professional learning on team performance, on team facilitator development, and on school leader efficacy. As Glanz (2014) outlined, over time practitioners have used action research as a tool to address a variety of educational issues:

> *Historically, action research served as a problem-solving strategy for improving the school organization (Corey, 1953; Lewin, 1948), as a process of individual reflection on practice (Elliot, 1991), as a process to support staff development (Oja & Smulyan, 1989), as a collaborative process to support teachers' professional development (Sagor, 1992), and as a strategy to guide site-based school improvement (Glickman, 1998) (p. 15).*

The ways in which action research has been successfully used to increase educational practice and performance make it the best research design for this study.

Glanz (2014) outlined the benefits of the action research study design as it pertains specifically to research in schools and includes the following: building a school-wide culture of learning, enhanced agency and efficacy, increased reflective and self-assessment practices, higher commitment to cycle of continuous improvement, direct impact on practice, participant

empowerment, and a focus on teaching and learning. These outcomes would be beneficial to any school setting, but for schools attempting to make the transition to professional learning communities, these benefits are especially impactful.

Researcher as an Instrument

This action research study was designed to address the problem of ineffective collaborative teaming at Keating High School. In this study, the researcher acted as the action research facilitator and participated in all phases of the action research cycle. As Glanz (2014) noted, "Administrators and supervisors (and other educational leaders) conduct action research in order to address a specific problem by using the principles and methodologies of research" (pp. 7-8). Particularly effective in the school setting, action research allows the researcher a participatory role in the implementation of interventions. In fact, Glanz (2014) stated, "One of the major intents of this book is to suggest that supervisors can and should become involved in action research for their own professional development" (p. 16). This case study follows the qualitative paradigm "that events cannot be understood unless one understands how they are perceived and interpreted by the people who participated in them" (Glanz, 2014, p. 80). This view of research is based on the premise that "reality is socially constructed and is best represented by the subjective perceptions or observations of individuals" (Glanz, 2014, p. 80).

Action Research Design Team

During the fall of 2018, the district innovative learning specialist and the assistant principals of one elementary, one middle, and one high school (Keating High School) attended a PLC at Work conference. From that starting point, the district determined the need to form a

team of school leaders to begin piloting PLC work in their own schools and the principals of each of the three schools joined this team. Each school agreed to engage in the work and act as a PLC pilot school for the school district. School leaders began implementing system changes to support the work and professional learning for faculty members. When selecting the action research design team for this study, the natural choice was to select the members of the district's PLC design team to serve as action research team members. During the pre-initiating phase, this team met to initialize the overall design of this research study. However, in the spring and summer of 2021, many personnel changes led to this team's dissolution. Ultimately a new AR design team was formed and consisted of Keating High School's principal, the lead researcher, and another assistant principal (Table 1).

Table 1

Action Research Design Team

Design Team Member	Primary Role at Keating High School	Action Research Role
Member 1- Primary Researcher	Assistant Principal responsible for Professional Learning and Curriculum & Instruction at Keating High School	Leaded and conducted all research with the action research team, for the purpose of data analysis. Brought three years of previous administrative experience to the team.
Member 2	Principal at Keating High School	Provided context and direction for school-wide leadership team. Brought nine years of previous administrative experience to the team.
Member 3	Assistant Principal at Keating High School	Provided professional learning and curriculum experience from previous district. Brought four years of previous administrative experience to the team.

Action Research Implementation Team

The teacher support team at Keating High School was responsible for planning and implementing professional learning and instructional support. Program responsibilities for this

group included instructional coaching for teams and individuals and facilitating professional development sessions. Because this study focused on the professional development of team facilitators, members of the teacher support team were chosen to serve as members of AR implementation team (Table 2).

Table 2

Action Research Implementation Team

Implementation Team Member	Primary Role at Keating High School	Implementation Team Role
Member 1	Assistant Principal responsible for Professional Learning and Curriculum & Instruction at Keating High School	Facilitated implementation plan discussion and oversaw implementation timeline. Administered data collection tools.
Member 2	Instructional Coach	Assisted in implementation plan creation and execution.
Member 3	Instructional Coach	Assisted in implementation plan creation and execution.

Action Research Timeline

The action research portion of this study spanned seven months and included action research team meetings, interventions, and data collection. The timeline for action research was guided by the three action research cycles. The action research design team first met in July 2021 to discuss the problem and possible interventions. After a review of prior learning, the team determined a multi-tiered system of support for team facilitators was needed. The team identified the target timeframes for each action research cycle: Cycle 1 occurred between July and August 2021, Cycle 2 occurred between September and December 2021 and Cycle 3 occurred between December 2021 and January 2022. All cycles concluded in January 2022. February 2022 was reserved for any follow-up the action research design team deemed necessary. For a detailed description of the timeline of the research study, refer to the Action Research Timeline (Table 3).

Table 3

Action Research Timeline

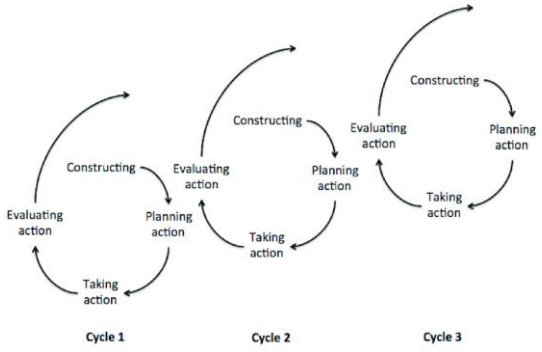
Date	Action Research Activity
August, 2019 – May, 2021	Pre-initiating Phase • Development of context and purpose of this research project • IRB approval • Establishment of collaborative relationships
July, 2021	Action Research Design Team Meeting • Initial consent to research participation • Introduction of research problem • Identification and review of related literature review topics • Identification and selection of intervention
July, 2021	Action Research Implementation Team Meeting • Initial consent to research participation • Team Facilitator Training planning • Data collection
July 30th, 2021	Team Facilitator Training
August, 2021	Action Research Design Team Meeting • Reflect on research cycle 1 data • Conduct Team Facilitator Training • Plan research cycle 2 interventions • Data collection
August, 2021	Action Research Implementation Team Meeting • Team Facilitator System of Support planning and execution • Data Collection
September 14th, 2021	Facilitator Tuesday Meeting #1
November 30th, 2021	Facilitator Tuesday Meeting #2
September– December, 2021	Action Research Design Team Meetings • Reflect on research cycle 2 data • Plan research cycle 3 interventions • Data collection
September– December, 2021	Action Research Implementation Team Meetings • Team Facilitator System of Support planning and execution • Data collection
December 10th, 2021	Mediation Team Meeting #1
December 13th, 2021	Mediation Team Meeting #2
January 5th, 2022	Mediation Team Meeting #3
January 17, 2022	Final data collection

Intervention

The intervention in this study was originally created by the district PLC design team. During the pre-initiating phase, this team determined that a combination of supports for team facilitators was the appropriate intervention plan for this project. The chosen intervention for Cycle 1 was a one-day professional development session that focused on skill development of successful teaming practices. The literature review in Chapter 2 identified the development of psychological safety and trust among team members to be an important teaming skill (Brown, 2018; Duhigg, 2016; Edmondson, 1999; Sinek, 2014), as well as the facilitation of conflict, commitment, accountability, and results orientation (Lencioni, 2002).

Figure 4

Spiral of Action Research Cycles



Note. Coghlan & Brannick (2014)

Cycle 2 focused on meetings designed to further support the skill development of team facilitators. The Facilitator Tuesday meetings were designed as support meetings and created time for team facilitators to connect with the primary researcher and the instructional coaches. This recurring meeting was designed as a forum for team facilitators to discuss the challenges they were experiencing in real time and find support and strategies to use immediately. These

meetings provided job-embedded, just-in-time skill development connected to the initial training intervention.

Once the study was underway, a situation involving one of the teams surfaced that required mediation by the implementation team. The design team decided it was appropriate to include this work as Cycle 3 of the research study. The implementation team designed a series of meetings with team members to serve as the intervention for this cycle.

Table 4

Team Facilitator System of Support

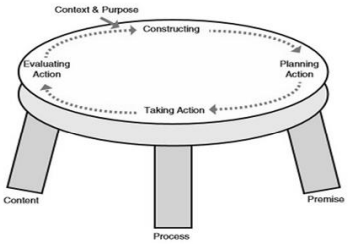
Intervention Activity	Target Group	Frequency
Team Facilitator Training	Facilitators of Select Teams in Core Departments	Once per year
Facilitator Tuesdays	Team Facilitators meet with Instructional Coaches and Assistant Principal over PL	Twice per semester
Coaching Support	Team Meeting Observations and Team Meeting Support	Once per grading period or as requested

Research Design

This action research study is designed with what Coghlan and Brannick (2014) described as a meta-learning approach. The meta-learning approach occurs when a reflection cycle "which is an action research cycle about the action research cycle" is used to evaluate "how the action research cycle is going and what you are learning" (pp. 12-13). Coghlan and Brannick (2014) described the meta-cycle of action research as encompassing three forms of reflection as identified by Mezirow (1991): content, process, and premise. Figure 6 depicts the meta-cycle of action research and shows how content, process, and premise reflections are applied in action research.

Figure 6

Meta-cycle of Action Research



Note. Coghlan & Brannick (2014)

During content reflection, the researcher reflects on the content of the action research interventions. When applied to this research study, the content reflection focused on the team facilitator support interventions. Because process reflection refers to the decision-making behind the methodology for data collection, the decisions of the action research design team and the action research implementation team were addressed. Premise reflection refers to the contextual elements of the study setting. As such, this research study considered the problem in relation to the school's position as a new high school in a high performing school district. Coghlan and Brannick (2014) called these forms of reflection "critical" and emphasized that "it is the dynamic of this reflection on reflection that incorporates the learning process of the action research cycle, and enables action research to be more than everyday problem-solving" (p. 13).

Contextual Setting

Keating High School opened its doors to students, staff, parents, and community partners in August of 2018. This research study began in the spring of the school's third year of operation. The school opened with a five-year goal of establishing itself as a highly effective professional learning community. After one fully operational year, the COVID-19 pandemic

caused Keating High School to temporarily close its doors as students and teachers fully switched to a virtual platform in March of 2020. The school doors re-opened to students and staff in August of 2020, but the district provided students and parents a choice of educational settings: virtual, in-person, or a hybrid of virtual and in-person platforms. Although collaborative teaming remained on-going throughout, the professional development of faculty was diverted away from effective teaming toward effective virtual teaching and learning strategies. This first project intervention began in April of 2021 in preparation of the 2021-22 school year with a new focus on building effective teams. New urgency for team facilitator support emerged as reports of team dysfunction and course failure rates skyrocket. The context of the research site, Keating High School, is examined more fully in Chapter 4.

Selection

This action research project was firmly centered on the strengthening of collaborative teams through the development of team facilitators. The literature review in Chapter 2 revealed a potential need for facilitation and leadership skill development among teacher leaders. The interventions developed by the action research design team address this area of need. When the action research implementation team met in March of 2021, it was determined that it was not feasible to involve all team facilitators in the Team Facilitator Training in July due to the number of team facilitators at Keating High School, which was 46. The substitute pool could not accommodate that many absences in the building and, even if it could, the professional learning budget could not cover the cost of substitutes. Instead, the action research design team decided to focus on content teams within each of the four core departments of English, math, science, and social studies. The team facilitators from the course teams that currently had state assessments

attached to them or had those assessments in the past were included in the list which included U.S. History, 11th grade Literature & Composition, and Algebra I. The action research implementation team determined two more facilitators could be accommodated at the Team Facilitator training. Thus, Spanish II was added as a representative of the World Language department which is often included with the core departments and Geometry was added as the other 9th grade math course.

Table 5

Team Facilitator Participants

Team Facilitators
11th Grade Literature
U.S. History
Biology
Geometry
Spanish II
AP US History
Algebra I

Data Collection Methods

"We do not simply "collect" data; we fashion them out of our transactions with other men and women" (Coffey & Atkinson, 1996, p. 108). This view of data collection within qualitative research underscores the emphasis placed on understanding problems and processes from the perspective of the participants. As Glanz (2014) stated, "qualitative modes assume that reality is socially constructed and is best represented by the subjective perceptions or observations of individuals" (p. 80). The data collection methods in this study were designed to capture a variety of voices allowing the action research design team to understand the problem, process, and progress at a deeper level.

The action research design team sought the perspectives of three groups (team facilitators, collaborative team members, and action research team members) to achieve a complex understanding of the problem and treatment. Research questions were purposefully designed to ensure that each of these perspectives were captured by the data. To establish triangulation, multiple informants and multiple instruments were incorporated in the data collection design. As Glanz (2014) explained, triangulation is "critical to ensuring a more accurate view of reality" (p. 36). Table 6 shows the connection of each research question to the research methodology.

Table 6

Research Question Connection to Methodology

Research Question	**Method of Data Collection**	**Method of Analysis**	**Approximate Timeline**
How do teacher leaders perceive the impact of professional learning on collaborative team performance?	Teacher Leader Questionnaire Researcher Journal Notes Participant Observations	Coding/Analysis of Themes Researcher Reflection Researcher Reflection	August, 2021 January, 2022 Ongoing through January, 2022 September–December, 2021
How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs?	Critical Incident Technique Interviews Researcher Journal Notes Participant Observations	Coding/Analysis of Themes Researcher Reflection Researcher Reflection	December, 2021 January, 2022 July, 2021 – January, 2022 September – December, 2021
In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process?	School Leader Efficacy Questionnaire Researcher Journal Notes Focus Group	Coding/ Analysis of Themes Researcher Reflection Coding/ Analysis of Themes	August, 2021 December, 2021 Ongoing through January, 2022 December, 2021

Questionnaire

Glanz (2014) called questionnaires "an invaluable means of collecting data for an action researcher" and "one of the most common types of data collection instruments used in action research projects" (p. 120). This study utilized two questionnaires for data collection. Both were administered prior to the interventions and again after the interventions to determine the effectiveness of interventions in two areas: leadership skill development of team facilitators, and self-efficacy of the action research team members.

The research design team agreed to use an adapted version of the Teacher Leader Self-Assessment (2017) tool developed by the American Institutes for Research (AIR). The AIR developed this tool to help teachers "assess their level of readiness for being a teacher leader and develop a plan to prepare themselves for leadership" (American Institutes for Research, 2017, p.1). The Teacher Leader Self-Assessment tool was designed as a fixed response questionnaire whereby participants rated their development level across several leadership skills.

The second questionnaire used in this study was the School Leader Efficacy Questionnaire (n.d.) developed by Tschannen-Moran. In a 2004 study, Tschannen-Moran and Gareis assert, "Self-efficacy is a perceived judgement of one's ability to effect change, which may be viewed as a foundational characteristic of an effective school leader" (p. 573). This tool was designed to effectively measure the self-efficacy of school leaders because "principals with a strong sense of self-efficacy have been found to be persistent in pursuing their goals, but also more flexible and more willing to adapt strategies to meeting contextual conditions" (Tschannen-Moran & Gareis, 2004, p. 574). In this study, the questionnaire was used to determine the level of self -efficacy of the Action Research Team members both before and after engaging in the

action research process. The School Leader Efficacy Questionnaire was developed as a fixed response questionnaire and as is noted within the questionnaire directions, “the scale of responses ranges from ‘None at All’ (1) to ‘A Great Deal’ (10) with ‘Some Degree’ (5) representing the mid-point between these low and high extremes” (Tschannen-Moran, n.d., p. 1).

Participant Observations

The researcher conducted observations of collaborative team meetings and Facilitator Tuesday meetings. These observations took place throughout Cycle 2 and were designed to collect data about team dynamics. Stringer and Aragon (2021) stated “Observation in action research is more ethnographic, enabling an observer to build a picture of the lifeworld of those being observed and to develop an understanding of the way they ordinarily go about their everyday activities” (p. 140). During these observations, members of the AR implementation team took field notes and recorded and transcribed the meetings. Combined with a questionnaire or interview, participant observations help “acquire a record of important elements of the context of participants” (Stringer & Aragon, 2021, p. 140).

Researcher Journal Notes

The researcher kept a written journal during the study, took notes of observations and documented the events related to the study. Coghlan and Brannick (2014) argued that journaling enables researchers to “integrate information and experiences which, when understood, help you to understand your reasoning processes and consequent behavior and so anticipate experiences before embarking on them” (p. 34). Through this meta-learning, the researcher engages in the reflection cycle by “evaluating how the action research project itself is going, and what you are learning” (Coghlan & Brannick, 2014, p. 13). In addition, researcher journal notes provide a

check on researcher bias and judgement by providing “a structured reflection process that works back from action to judgement to reaction to observation” (Coghlan & Brannick, 2014, p. 35).

Interviews

Stringer and Aragon (2021) noted, “The constructivist intent of action research requires participants to be free to define and describe issues and events in their own terms, unfettered by the necessity of framing their responses according to the terms and directions of previous defined questions” (p. 127). Interviews were used in this research study to record the perspective of collaborative team members on team meeting dynamics. Stringer and Aragon (2021) described interview questions in qualitative studies as “merely triggers that enable participants to explore and describe what is happening in their lives or to reflect on events associated with issues of concern” (p. 129). With this view in mind, the Critical Incident Technique was chosen. Flanagan (1954) developed the Critical Incident Technique and emphasized that it “should be thought of as a flexible set of principles which must be modified and adapted to meet the specific situation at hand” (p. 335). Butterfield et al. (2009) call the Critical Incident Technique “exploratory by nature and… appropriate to use when the researcher is interested in learning more about little-understood events” (p. 268).

Because the purpose of the study was to examine the effectiveness of team facilitator training on the collaborative team process, the interview protocol was a crucial study component. The Critical Incident Technique interviews with collaborative team members were semi-structured in format with questions written in an open-ended style. This structure allowed participant perspective to permeate all aspects of the data collected. Probing questions were prepared so that additional pertinent information could be captured where appropriate in the

conversation. The AR design team adapted a critical incident protocol from an earlier study on collaborative team experience (Kain, 1997). Participants were asked about both positive and negative teaming experiences to avoid an imbalanced approach. Interviews of collaborative team members were conducted in December and transcribed for accuracy.

Focus Group

The researcher conducted two focus group sessions of the action research team as a method of data collection for this study. The Focus group session occurred in December to capture the thinking of action research team members about the action research process. Glanz (2014) likened focus groups to interviews in that "carefully devised questions provide the means to focus the group on the issue at hand and enable them to express their experience and perspective in their own terms without the constraints of interpretive frameworks derived from researcher perspectives, professional or technical language, or theoretical constructs" (p. 148). The researcher included the focus group method of data collection to lend action research team perspective to the School Leader Questionnaire results. The pairing of the two methods provided richer data for analysis.

Data Analysis

Researchers have shared an array of views as to what constitutes data analysis. According to Coffey and Atkinson (1996), "what analysis actually means is complex and is contested by qualitative researchers" (p. 10). Glanz (2014) defined data analysis as "the process of bringing structure and meaning to the mass of data collected" (p. 165). Qualitative researchers do this through a process called coding. Coffey and Atkinson described the coding process as "condensing the bulk of our data sets into analyzable units by creating categories with and from

our data" (p. 26). It is important to note that coding is not synonymous for analysis. "The important analytic work lies in establishing and thinking about such linkages, not in the mundane processes of coding" (Coffey & Atkinson, 1996, p. 27).

Glanz (2014) also distinguished qualitative data analysis from quantitative data analysis in that "qualitative data analyses are on-going; that is, they may occur while data are still being collected" (p. 165). As discussed previously, this study was designed according to the meta-learning approach whereby content, process, and premise were areas of reflection while data were still being collected (Coghlan & Brannick, 2014). This constant focus on what the researcher was learning is what Coghlan and Brannick described as "central to the development of actionable knowledge" (p. 13).

Reliability and Validity

Action research involves construction. Coghlan and Brannick (2014) argued, "constructing is never a neutral act, it rarely affects stakeholders in the same way" (p. 151). Because "gaining access, using data, disseminating and publishing reports are intensely political acts," political dynamics are inherent in action research (Coghlan & Brannick, 2014, p. 151). To navigate the politics of action research within one's own organization, Coghlan and Brannick (2014) emphasized the importance of building relationships with superiors, peers, and colleagues to ensure the legitimacy of the research project. The importance of the establishment of such relationships is emphasized by the pre-step found at the beginning of Coghlan and Brannick's action research cycle. One purpose of this pre-step is the "establishment of collaborative relationships" with those who will be working on the project with the researcher (p. 10). Such relationship building was nurtured over a three-year period in the case of this study which

provided a foundation for the work. Finally, because the researcher held the position of assistant principal at Keating High School, the researcher was the direct supervisor for some of the participants in the study. The researcher was intentional about discussing with all participants the voluntary nature of study participation and extended the opportunity to participate in team facilitator training and support meetings regardless of participation in the study.

Although a quantitative researcher "tries to maintain a degree of objectivity and detachment from whatever is examined" a qualitative researcher "may be more actively involved by participating at the same time, for example, that observation is undertaken" (Glanz, 2014, p. 80). Because "reality is socially constructed and is best represented by the subjective perceptions or observations of individuals," qualitative researchers are actively involved in the research process. To address researcher subjectivity, the researcher kept a research journal throughout the process to document the meta-learning that occurred over the course of the study. This journal captured action research team meetings and team members, along with the major professor, were consulted during the data collection and analysis process.

Limitations

Replication

One of the ways in which action research differs from traditional research is as Glanz (2014) explained, "findings from action research are often not generalizable to other groups and situations" (p. 17). Because case studies "involve an in-depth investigation of an individual, a group of individuals, a site, or a scene," they are not easily transferable or replicated (Glanz, 2014, p. 88). Although the findings of this study are limited in this way, there were significant

learning outcomes that all school leaders may find useful. However, it is important to address issues that may not transfer to all school settings.

Context of the Study

This action research study was conducted in one large, high performing, suburban high school. The dynamics of the school setting influenced participant and researcher attitudes and beliefs about collaborative teaming. The challenges of collaborative teaming, team facilitator support, and student achievement issues in rural and urban districts may be different from those of suburban districts. Issues of teacher experience, teacher training, and school leader development are also important variants to consider when applying study outcomes to other school or district contexts.

Chapter Summary

This chapter described the methods used for data collection and data analysis incorporated in this research study. Because this study sought to measure the perceptions of collaboration team members, team facilitators, and school leaders regarding the effectiveness of professional learning, data collection centered around the use of questionnaires, interviews, and a focus group. Additionally, participant observations and researcher journal notes provided depth and clarity to the data analysis process. The next chapter of this dissertation details the context of Keating High School, discusses problem-framing within the context and site, and discusses data collection within the context.

CHAPTER 4

THE CASE

This action research study was designed to identify the impact of team leader development on collaborative team effectiveness. The research questions that guided this study were: 1) How do teacher leaders perceive the impact of professional learning on collaborative team performance? 2) How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs? 3) In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process? This chapter will discuss the context, problem-framing within the context and site, and data collection within the context.

The Context

In the Fall of 2018, Keating High School (all proper nouns related to the context are pseudonyms) opened as the newest traditional high school in Dansbury County, located in the southern region of the United States. At the time of the study, the Dansbury County School System consisted of six traditional high schools, one non-traditional high school, one alternative school, ten middle schools, and 21 elementary schools. The school system served roughly 50,000 students.

During the 2018-19 school year, Keating High opened with 9th, 10th, and 11th grade students. The following year, it served 9-12th grades. When the COVID-19 pandemic closed schools around the world in the spring of 2020, Keating High was only in its second year of

operation. The 2020-21 school year brought uncertainty and the choice of in-person or online learning for Dansbury School System families. Therefore, it is important to note that this research study was conducted in the fall of 2021, after three years of constant change. The collection of statewide school data was impacted by COVID-19 policies. The data presented in this chapter is the most recent data available. Future research could potentially show widening achievement gaps where in-person instruction was interrupted. However, that data is not currently available.

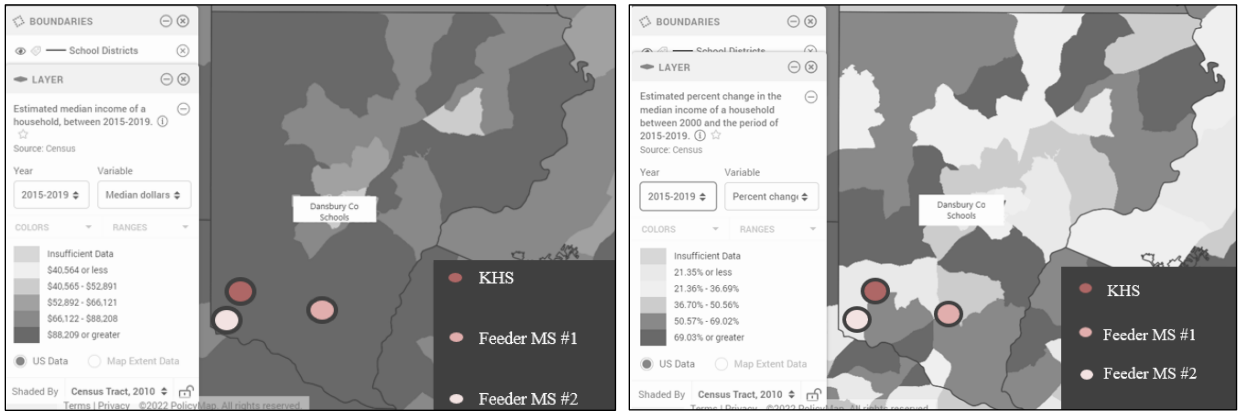
Over recent decades, Dansbury County experienced demographic shifts. When it opened, Keating High was the most racially diverse high school in the school system and had a majority-minority student population. In the decades that preceded the opening of Keating High, the county became one of the fastest growing counties in the state and one of the wealthiest counties in the nation (DePietro, 2021; DiRico et al., 2021). This rapid economic transformation and population growth stimulated the demand and production for mid to upper priced housing, forcing families with lower socioeconomic status to seek housing elsewhere. As higher median family income levels rose, the income homogeneity of neighborhoods increased in the school district.

Median family income data showed an increasing homogeneity of neighborhoods based on income level. The areas with median family incomes of $61,333 or less decreased over time as the areas with median family incomes of $76,197 or more increased (U.S. Census Bureau, 2018). As shown by Figure 7, the most recent census data shows the median annual household income around Keating High School was $88,209 or greater and the percent change in median annual

household income shows anywhere between a 20% and 60% increase in household income or more since 2000.

Figure 7

Median Household Income Data, Dansbury County School District



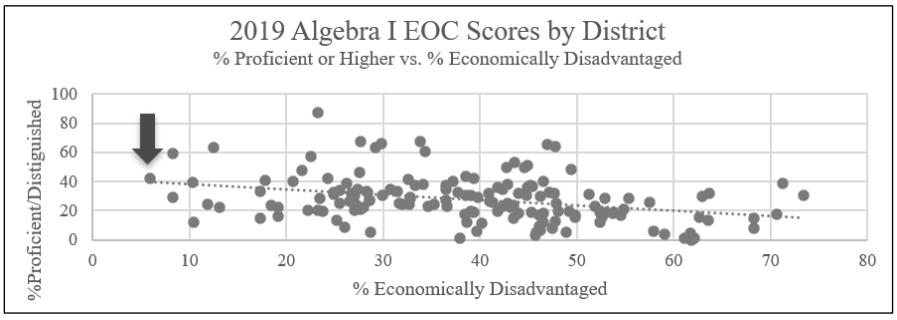
Note. U. S Census Bureau, 2018

State standardized assessment data reports student achievement trends across the Dansbury County School System are not in line with national and state trend research. In the figures below, the negative trend line indicates that school districts with higher percent ages of students from low-income families tended to perform lower on state assessments. In 2019, Dansbury County Schools had an economically disadvantaged student rate of only 5.9% with 42.2% of 9th grade students scoring in the proficient and distinguished learner bands on the Algebra I State Standardized Test (GOSA, 2021). On the 8th grade Math End of Grade Test, 60.6% of students in the system scored in the proficient and distinguished learner bands in 2019 (GOSA, 2021). Interestingly, although Dansbury County was home to the lowest percentage of economically disadvantaged students in the state, it did not boast the highest performance percentages. Rather, there were 16 school districts that outranked Dansbury County Schools in

performance percentages on the 8th grade Math EOG, and more that outscored Dansbury students on the Algebra I EOC, all with higher percentages of economically disadvantaged students (GOSA, 2021). The arrows in Figures 8 and 9 indicate the student performance of Dansbury County Schools on both the 2019 Algebra I state standardized exam and the 2019 8th Grade Math state standardized test. According to Reardon (2013) the national income achievement gap has widened over the last three decades placing the U.S. system of education at risk of no longer filling the role of "the great equalizer" (p. 14).

Figure 8

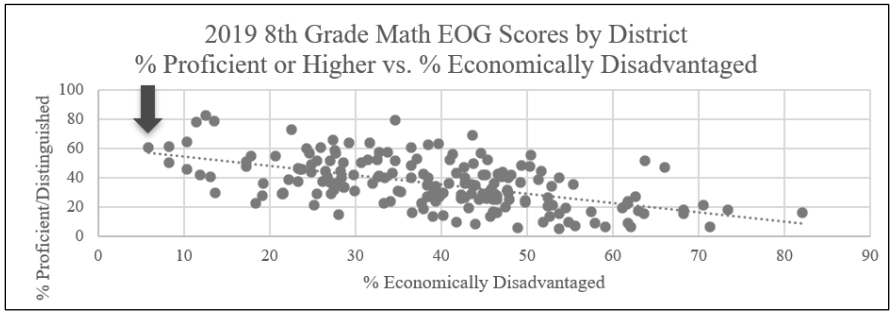
2019 Algebra 1 Scores by School District



Note. Governor's Office of Student Achievement, 2019

Figure 9

2019 8th Grade Math Scores by School District

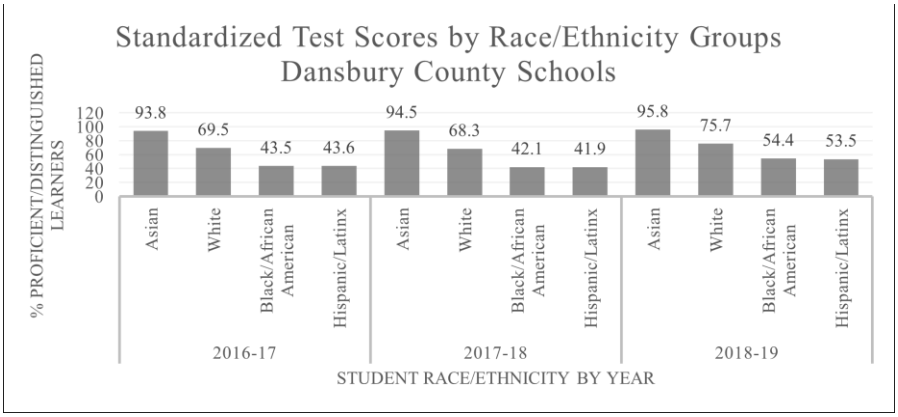


Note. Governor's Office of Student Achievement, 2019

In addition to an income achievement gap, there was evidence of an achievement gap across student race/ethnic groups. Figure 10 displays Dansbury County Schools achievement gaps by race/ethnicity for a three-year span on the Algebra I EOC Test (GOSA, 2021). During the 2016-17 and 2017-18 school years there was roughly a 50-point gap between the highest and lowest achieving groups. During the 2018-19 school year the gap between highest and lowest achieving groups was roughly 40 points for students across the county.

Figure 10

Algebra 1 Scores by Race/Ethnicity Groups



Note. Governor's Office of Student Achievement, 2019

Although the percentage of Dansbury County students who experience achievement gaps based on socioeconomic status or race/ethnicity is low, researchers report the educational risks for the impacted students is great (Reardon, 2013). The implications for students who are unsuccessful in the k-12 system include higher unemployment rates, higher poverty rates, higher incarceration rates, a cost to taxpayers (Breslow, 2012), lower wages (Organisation for Economic Co-operation and Development, 2014), and lower life expectancy rates (Tavernise, 2012). Therefore,

achievement gaps are extremely concerning not only for the at-risk student, but for society at-large.

In 2019, even with these gaps in student achievement, Dansbury County Schools was one of the highest performing school districts on state standardized assessments, was named an Advanced Placement Honor Roll District, and led other large, metro-area districts in graduation rates, SAT/ACT scores, and on the state accountability measurement (Dansbury County Schools Public Information and Communication Department, 2019). Although the student achievement gaps were high, the total number of students experiencing income and racial/ethnic achievement gaps was relatively low, as the table below indicates (GOSA, 2021). Therefore, student performance averages masked the growing achievement problem.

Table 7

Dansbury County School System Student Demographic Data

Economically Disadvantaged (ED)	
Economically Disadvantaged	5.9%
Non-Economically Disadvantaged	94.1%
Student Population by Race/Ethnicity	
White	54%
Asian	23%
Hispanic/Lantix	14%
Black/African American	4%
Multi-Race	3%
Hawaiian/Pacific Islander	1%

Problem Framing in the Context

This research study occurred during the fall of 2021, in Keating High School's fourth year. Over the course of the school's first three years, the student and teacher populations increased dramatically. As new teachers were hired, teacher collaborative teams grew in membership and/or changed in membership. Recurring changes in teacher content assignments

and teammates made it difficult to establish a learning culture and a universal teaming protocol. Teachers had various experience with professional learning communities in other schools and districts, and administrators found it difficult to create common understanding for the PLC vision at Keating High.

Teacher collaboration teams were not the only teams experiencing change. At the end of the third year, a new principal and four new assistant principals were assigned to Keating High School. The school also hired two new instructional coaches and a new graduation coach. All of these changes created unique challenges to the further development of existing content teams into high functioning collaboration teams. The Action Research design team agreed to focus on a plan to develop the skills of team facilitation to establish and strengthen collaboration teams.

Closing the Teaching Gap to Close Student Achievement Gaps

Organization for Economic Cooperation and Development (OECD) studies have shown that school systems in countries with higher student performance intentionally focus on creating opportunities for teacher collaboration, resulting in more skillful teaching and strong student achievement (Darling-Hammond, 2015). Results of the 2014 Teaching and Learning International Survey (TALIS), in which the U.S. had never previously participated, shed light on how different countries approach teacher development and what that means for student achievement. One of the findings Darling-Hammond underscores is that teachers within the United States today "receive less-useful feedback, receive less-helpful professional development, and have less time to collaborate to improve their work" (p. 14).

It is vital to focus on teacher collaboration and development when addressing student achievement gaps, because "meeting the needs of traditionally underserved students likely will

require teachers to learn new teaching practices" (Levine & Marcus, 2007, p. 121-122). School and district leaders cannot expect to narrow student achievement gaps when teachers continue to teach in the ways they always have. Instead, it is incumbent upon school and district leaders to provide the structure and supports necessary for teachers to forge new ways of reaching high-needs students. Teacher collaboration was found to be effective in narrowing the teaching gap (Berry et al., 2009). Levine and Marcus (2007) point out the complexity of the causes of achievement gaps and poignantly argue that in response to this complexity, "schools could help teachers engage in multiple and complex types of learning" (p. 135). While this is certainly a valid assessment, it raises yet another question. Are school leaders prepared to lead professional development that addresses complex types of learning? To fully investigate the answer to this question, it is important to ascertain, first, whether professional learning is effective in changing student outcomes, and second, whether school leaders are adequately prepared to lead such efforts.

Preparing Educators to Close Achievement Gaps

Thomas Guskey (2009) argues that a gap exists between educators' beliefs about the characteristics of effective professional development and the evidence that exists to validate those beliefs. In 2007 and 2008, Guskey (2007) and others (Yoon et al., 2007; Blank et al., 2008) raised alarms that the link between effective professional learning and increased student outcomes was not as strong as was originally thought. With little empirical data at the time to guide school and district leaders in the attributes of effective professional learning, the effectiveness of professional learning varied widely. Since then, professional learning research has grown and we now know teacher professional learning that includes "content focus, longer

duration, multiple activities, hands-on teacher learning, specific learning goals, and collective teacher participation has a significantly better chance to improve teacher skills and knowledge and, subsequently, to raise student achievement" (Blank, 2013, p. 53). Guskey's (2009) advice for school leaders to clarify the goals for improving student learning and become inquiry-based in approach is echoed today (Zepeda, 2019).

Johnson and Uline (2005) report that the knowledge, dispositions, and skills school leaders used in schools that have closed achievement gaps fit into the Interstate School Leadership Licensure Consortium (ISLLC) standards. ISLLC has identified the important standards as 1) vision of learning, 2) culture of teaching and learning, 3) management of learning, 4) relationships with the broader community to foster learning, 5) integrity, fairness, and ethics in learning, 6) the political, social, economic, legal, and cultural context of learning. Within the second standard of establishing a culture of teaching and learning, Johnson and Uline said effective leaders create a culture that remains focused on whether students have learned what teachers attempted to teach.

This focus on student learning is consistent with the PLC model of DuFour et al. where the work of collaborative teams was focused on the mastery of standards for all students (DuFour et al., 2016). The PLC model is uniquely equipped for schools seeking to narrow student achievement gaps because PLCs have operated as meaningful systems of professional learning for teachers (Darling-Hammond & McLaughlin, 1995), addressed student learning gaps in real time, increased student achievement, increased student equity (Lee et al., 1995), and increased teacher agency and efficacy (Lieberman, 1995). As Singham (2003) explained, "the gap we should be focusing on is the difference between where all students are now and where we believe

they should be" (p. 589). The collaborative teams within professional learning communities work to accomplish success for every student.

Meaningful professional learning for teachers has the potential to solve many school issues. The special thing about collaborative teams of teachers working within a professional learning community is that the data-driven action research teachers engage in is focused on raising student achievement. Such investigation of both student achievement and teacher practice takes teacher teams in a variety of areas, such as: assessment practices, standards alignment, instructional strategies, standards-based grading, and issues of diversity, equity, and inclusion. When schools switched to virtual learning in an instant in March of 2020, the collaborative teams of teachers at Keating High School navigated the issues together. The collaborative teams in a professional learning community are focused on raising student achievement and because teachers are the engine, collaborative teams can address in real time the issues impeding student achievement. Whether the issue stems from a global pandemic or achievement gaps, teacher collaboration provides solutions to relevant problems as they arise.

While we are still learning about the long-term effects the COVID-19 pandemic will have on our education system, we have been aware of income and racial achievement gaps for decades. The bulk of achievement gap research has focused on high needs schools. However, for schools without this designation, achievement gaps are still present among students. Keating High School is a high performing school in a high performing school district. The numbers of high needs students that attend Keating High School is low. But, for these students, achievement gaps are a real problem with real consequences. Regardless of whether income and racial achievement gaps affect one student or hundreds of students within a school, the urgency to

make gains in student achievement should be the same. In schools with low numbers of minority and economically disadvantaged students, it is especially important that collaborative teacher teams compare student assessment data and determine how to effectively help students who need remediation. When teachers operate in open action research cycles to enhance student performance, both students and teachers benefit.

Problem Framing Based on the Site

Opening a new school provided unique circumstances and opportunities for the school leaders at Keating High School. Administrators decided in the summer of 2018, prior to the school opening, to embed professional learning through collaborative teams within a Professional Learning Community (PLC). Several factors were considered when this decision was made. Teachers were hired from a variety of other schools: from schools within the school system, from other systems within the state, and from systems outside of the state. Because the school culture would be built with a staff without shared experience, administrators determined that work in collaborative teams within a PLC would help create a school culture that placed value on the sharing of knowledge and experience. Much like the faculty, students entered Keating High School from a variety of places and with a variety of experiences. Teachers needed to work together to identify and meet the needs of the students who were to enter Keating High School.

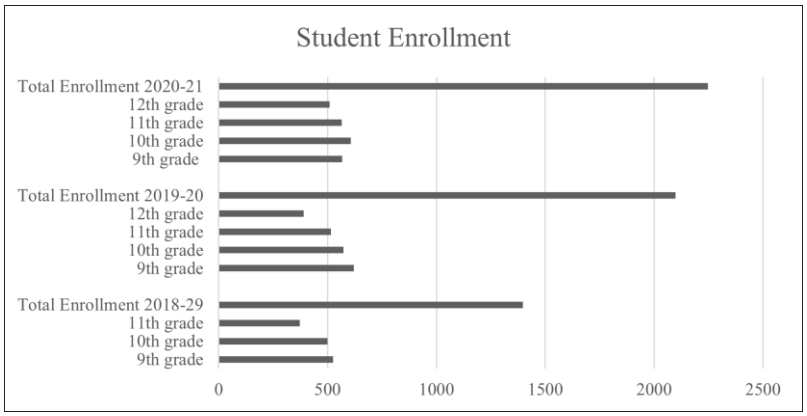
Student Context

Keating High School opened with 1,398 students in grades 9-11. The first senior class arrived on campus in the fall of 2019, and, with it, total enrollment numbers grew to 2,099, a

gain of 843 students in one year. At the time of this study, 2,454 students were enrolled for the 2021-22 school year.

Figure 11

Keating High School Enrollment Data, 2018-2021



School data showed that during the 2019-20 school year, the racial/ethnic make-up of Keating's student body was as follows: White- 44%, Asian- 26%, Hispanic/Latinx- 18%, Black/African American- 9%, Multi-racial- 3% (GOSA, 2021). Additionally, of the 2,099 students who attended Keating High School during the 2020-21 school year, 16.5% were classified as economically disadvantaged, 9.3% received special education services, 7.7% were English language learners, and 13.91% were gifted learners (GOSA, 2021).

Table 8

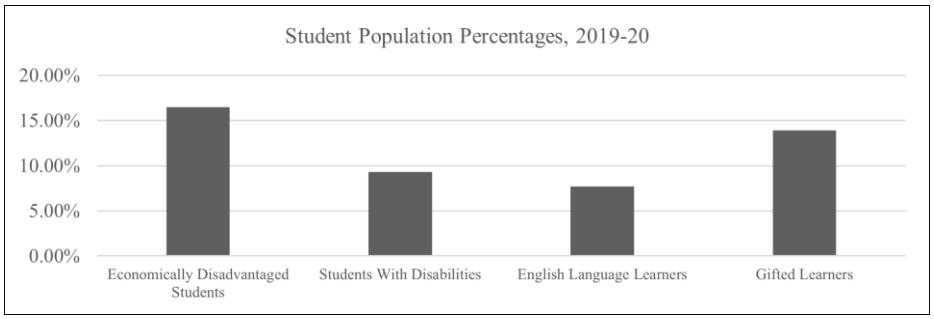
Keating High School Enrollment Demographics, 2019-2020

2019-20 Student Enrollment by Race/Ethnicity	
White	44%
Asian/Pacific Islander	26%
Hispanic/Latinx	18%
Black/African American	9%
Multi-Race	3%
American Indian/Alaska Native	0.3%

Thus, when compared to the district percentages, Keating had a higher minority student population and a higher economically disadvantaged student population.

Figure 12

Keating High School Student Demographic Data, 2019-2020



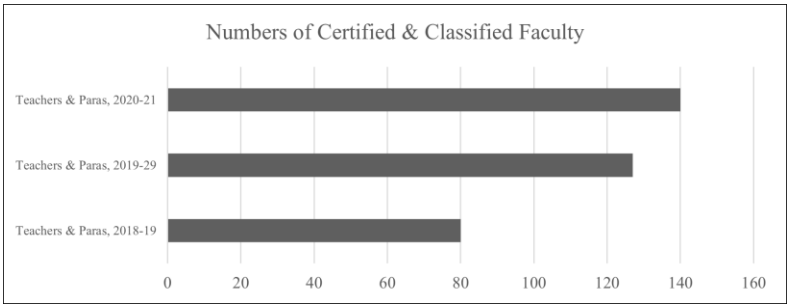
Note. Governor's Office of Student Achievement, 2020

Faculty Context

Keating High School was built to alleviate high student enrollment numbers at two other high schools in the county. When student enrollment numbers dropped at these other high schools to fill the halls at Keating, teacher allotment numbers dropped, as well. Therefore, school survey data indicated 57% of the teachers Keating hired in the first year came from other schools within the school system.

Figure 13

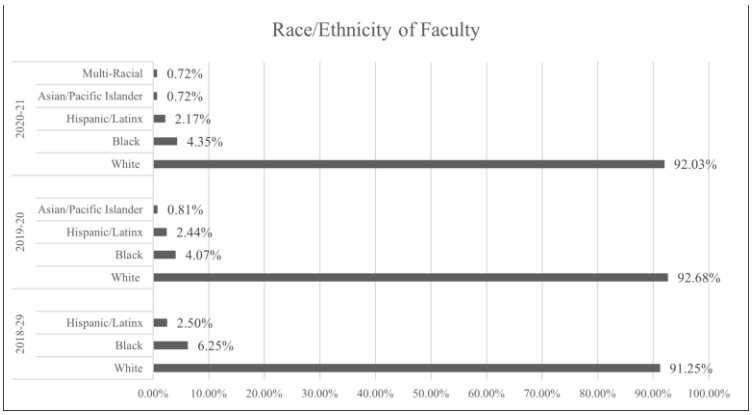
Keating High School Faculty & Staff Growth, 2018-2021



As is evident in Figure 13 above, KHS staff roster data showed significant growth. Between the fall of 2018 and the fall of 2021, the faculty size grew from 80 teachers to 140 teachers. The size of this increase over the course of the first three years hindered forward progress in the development of the school culture and the professional learning community. Due to this dramatic increase in faculty size, school leaders decided to spend time reestablishing school goals, priorities, and identity.

Figure 14

Keating High School Faculty Demographics



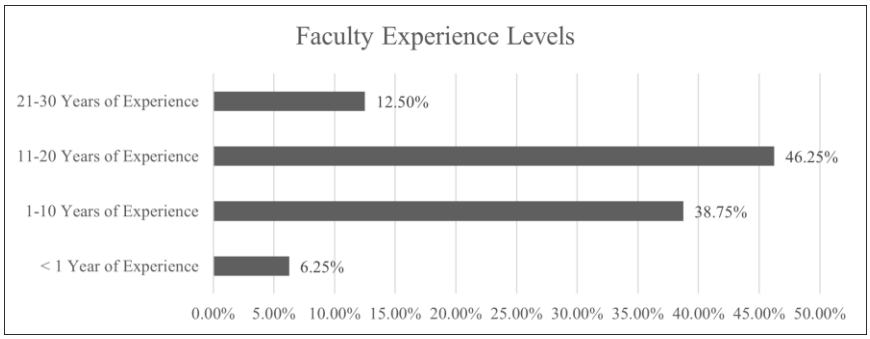
Note. Governor's Office of Student Achievement, 2018-2021

Although there was little racial/ethnic diversity among faculty, there was broad diversity in terms of experience level. During the 2018-19 school year, Keating teachers averaged 12.35 years of experience (GOSA, 2021). In that year, 6.25% teachers held less than 1 year of experience, 38.75% of teachers held between 1 and 10 years of experience, 46.25% of teachers held between 11 and 20 years of experience, and 12.5% of teachers held between 21-30 years of experience (GOSA, 2021). In terms of education level, 41.25% held a Bachelor's degree, 47.5%

held a Master's degree, 12.5% held a Specialist's degree, and 2.5% held a Doctoral degree (GOSA, 2021). Collaborative teams generally shared a variety of experiences levels.

Figure 15

Keating High School Faculty Years of Experience, 2018-2019



Note. Governor's Office of Student Achievement, 2019

In November of 2018, Keating High School became one of three schools in the system designated as PLC pilot schools. The central office chose one school from each level, one high school, one middle school, and one elementary school, to serve as pilot schools. The Director of Professional Learning formed the PLC Design Team which consisted of one assistant principal of each school. In 2019, the principals of each pilot school also joined the PLC Design Team. This group attended PLC at Work conferences, determined next steps in district-wide PLC professional learning, and provided district-wide support to other school leaders through resource sharing and professional learning opportunities. Over the past two years, the PLC Design Team worked to encourage the cultural components necessary to develop an effective professional learning community in each of the three schools. This group continued to observe team progress and identify areas of teacher support needed to move forward in the work.

Because professional learning communities have operated as meaningful systems of professional learning for teachers (Darling-Hammond & McLaughlin, 1995; Wood, 1995), addressed student learning gaps in real time, increased student achievement, increased student equity (Lee et al., 1995), and increased teacher agency and efficacy (Lieberman, 1995), the Administration Team at Keating High School was excited to begin this work. The work of collaborative teams in a PLC is focused on the mastery of standards for all students (DuFour et al., 2016); therefore, school leaders felt the teaming process would keep the focus on the ultimate goal: success for all.

For these reasons, school leaders made the decision to focus on professional learning community development in the first year of operation. Survey data collected at the end of the 2018-19 school year showed a desired level of understanding about PLCs. Relationship building (teacher-to-teacher, teacher-to-student, and student-to-student), the designated focus of the first school year, helped connect students and faculty. In the second year of operation, administrators focused on relationship building once again as 47 faculty members were hired. At the end of year two, survey data showed a disparity between the progress ratings of collaborative team members and administrators. Although, overall, teams rated themselves most often in the "implementing" and "developing" categories, school leaders found evidence in their observations that most teams were operating in the "pre-initiating" and "initiating" categories.

Administrators agreed that collaborative teams at Keating High School were making progress; however, most teams were not effectively impacting student achievement gaps. This study was designed to investigate whether increased professional learning for team facilitators is the key to effective collaborative teams.

The Story and Outcomes

The Action Research design and implementation teams set out to better understand the effects teacher leader development would have on collaborative team performance. The pre-initiating phase spanned from August 2019 to January 2021. During this pre-initiating phase, discussions focused on how school leaders could help support teacher team success. In March of 2020, the focus shifted to the impact of COVID-19 on our school, our teachers, and our students. As school policies changed, so too did the requirements of teachers and students. From February through May of 2021, the AR design team discussed and determined a course of action that would balance the needs of teachers and students with the lingering stressors of the pandemic. The AR implementation team also met during this window to provide accurate accounts of what they felt would be possible within this context. In the summer of 2021, a research plan was designed for Cycle 1 and drafts were created for Cycles 2 and 3 to be revisited after Cycle 1 data was collected. The implementation team completed Cycle 1 in August 2021 and the AR design team reviewed the data and planned Cycle 2. The second cycle began in September and ran through December of 2021. In early December 2021, an emerging situation within one of the teams was brought to the lead researcher's attention and the design and implementation teams determined that Cycle 3 would focus on work with that team alone. Details from each research cycle follows.

Pre-initiating Phase

In the fall of 2019, as initial discussions began among school leaders about how to best strengthen the school's collaborative teams, the need for stronger team facilitation emerged. However, that discussion would be tabled in the spring of 2020. In March of 2020, as the threat

of Covid-19 infection spread across the globe, U.S. schools transitioned from face-to-face to online instruction. As Paul Campbell (2020) states, “the immediacy and urgency of schools’ responses to this unfolding situation positioned teachers and school leaders as education’s front-line responders” (p. 337). The unanticipated closing of schools in March of 2020 across the United States created what has been termed crisis teaching. Cutri et al., (2020) defined crisis teaching as characterized by three components:1) the rapid transition to online instruction, 2) the transition to online instruction under conditions of a pandemic, and 3) extended online instruction without clear understanding of the length of time online instruction would be necessary. As the new phenomenon of crisis teaching arose, school leaders attempted to support teachers through, what was surely for most, the new world of online teaching.

Just as teaching and learning moved to the virtual platform, professional learning in all its varieties (i.e., large group professional development sessions, collaborative teacher teams in a PLC, instructional coaching, etc.) moved to the virtual platform, as well. For many educators, learning to navigate the online world, while simultaneously teaching online, was just the first of many challenges ahead. Professional learning about best virtual teaching practice was vital to teachers as they found themselves in unchartered waters. Similarly, challenges existed for school leaders to create PL that would meet this emergent need for educators.

Over the summer of 2020, as school districts across the U.S. made plans for the fall, a variety of school schedules and instructional platforms were adopted by school boards. At Keating High School, families had the ability to attend in-person, virtually, or via a hybrid model where some classes were in-person and some were virtual. Therefore, teachers had to be prepared to teach in all settings. Professional learning goals at Keating High School quickly

shifted to support this new learning for teachers. Where professional learning that strengthened understanding about collaborative teams and leadership development was originally scheduled, district and school leaders shifted to deliver professional learning that focused on best practice for online learning. Although it has been a difficult transition from the physical classroom to the virtual classroom for many teachers at Keating High School, teachers have reported an increase in the perceived importance of collaboration with other teachers. The changes to K-12 education practices due to the Covid-19 pandemic have been so great that even the most ardent classroom isolationist seemed to find it difficult to work alone and without the help of the teachers around him. Thus, it appeared crisis teaching strengthened the PLC at-large at Keating High School by garnering increased buy-in for the work in collaborative teams.

The Impact of Covid-19 on the Context of the Study

As Keating High School prepared to open for the 2020-21 school year, teachers ranked virtual classroom skills the highest area of need within professional learning. The Teacher Support Team, under the guidance of the Dansbury County Teaching and Learning Department, focused on the development of teacher skills in the virtual classroom during pre-planning PL sessions. Specifically, district and school leaders focused on the navigation of online tools and platforms to ensure best practice in the online learning environment was supported. The Teacher Support Team had originally planned to focus PL in two areas: leadership development for Department Chairs and Team Facilitators and a tighter understanding of the collaborative team process for the whole staff. Instead, the Covid-19 pandemic presented the more emergent need for greater knowledge and skill in virtual learning.

Because the district granted parents a virtual and face-to-face option, the number of virtual learners varied at each of the 41 schools in the district; therefore, the number of teachers who taught virtually at each of the schools varied, as well. At Keating High School, 85% of teachers taught at least one virtual class during the 2020-21 school year. Virtual classroom numbers generally held up to 40 students. Higher student-teacher ratios in virtual classes created a higher volume of student work to grade per teacher. Teachers also struggled with new problems such as virtual student absenteeism, cheating on virtual assignments, and behavior in live help sessions. These challenges placed new strains on teacher time outside of the workday. In addition to teaching duties, teachers had to find new ways to connect with absent students, create new types of assignments or additional versions of assignments to thwart cheating, and create ways to correct virtual misbehavior. These extra layers made teaching feel impossible at times. Administrators at Keating High School noted a significant increase in teachers who expressed signs of fatigue, stress, and feeling overwhelmed with the new workload.

The challenges of the emergent switch to virtual learning led the Teacher Support Team to edit the 2020-21 Professional Learning Plan. The revised Professional Learning plan included only the following: instructional coach support for induction teachers and teachers seeking help, instructional coach support for Collaborative Teams, and leadership development for Department Chairs. Due to the risk of Covid-19 contamination, large-group professional development sessions were not scheduled. Additionally, to avoid furlough days, the Dansbury County Board of Education reduced the number of Professional Learning Days originally built into the staff calendar. By keeping collaborative teams as the primary mechanism through which professional

learning occurred at Keating High School, the Teacher Support Team could work with small groups during planning periods already built in during the school day.

The Teacher Support Team struggled to balance the professional learning needs of collaborative teams with the newfound stress caused by COVID-19 protocols. By the end of May 2021, the research design and implementation teams returned to earlier conversations about strengthening the skills of team facilitators. There was still a degree of uncertainty for what the 2021-22 school year would hold, but the consensus of the group held that team effectiveness would be crucial in meeting the potential achievement gaps caused by online learning during the 2020-21 school year.

Research Cycle 1

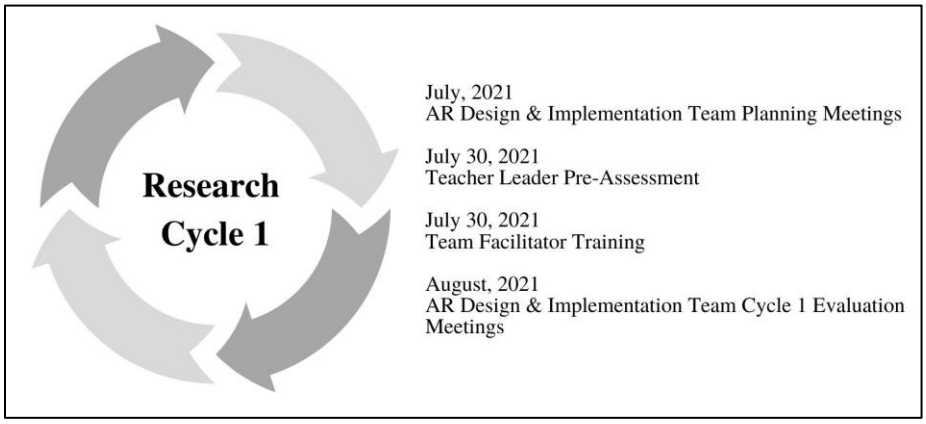
The AR research design team met in July 2021 to develop the initial plan for the research study. The team agreed on the use of a pre-assessment and post-assessment to measure team facilitator growth over the course of the research study. The Teacher Leader Self-Assessment was selected because the instrument aligns with the work of team facilitators across multiple domains.

Additionally, guided by the literature review, the AR design team determined that the best intervention for Cycle 1 would be an intensive training with the selected group of team facilitators to introduce them to the concept of psychological safety and its effectiveness on team performance. The AR design team agreed that the training should occur during pre-planning in August. Because the school's two instructional coaches were both newly hired and would not be on contract until pre-planning, the team determined that the primary researcher should facilitate

the training with the team facilitators. Figure 16 depicts the Cycle 1 process determined by the AR design team.

Figure 16

Research Cycle 1 Process



Teacher Leader Self-Assessment (Pre-Test)

The AR design team met to review the self-assessment data and to determine the plan for the second cycle. The data from the Teacher Leader Self-Assessment indicated that team facilitators perceived weakness in the following subdomains: group processes, facilitation, and coaching skills; conflict resolution and mediation; understanding adult learners; facilitating professional learning among colleagues; understanding data and research; using data and research to improve practice; and demonstrating systems thinking.

Researcher journal notes indicated that the AR design and implementation teams recognized alignment between the areas of weakness that team facilitators identified and what Lencioni (2002) described as the five most common dysfunctions of teams. This data provided direction for the AR design and implementation teams in terms of the professional learning topics to focus on in the upcoming sessions.

July 30 Team Facilitator Training

The three-hour training was designed to familiarize team facilitators with research-based elements of effective teams and to provide resources and tools that facilitators could use to incorporate those elements on their own teams. The implementation team designed the training presentation and the accompanying reflection handout.

The training was conducted on July 30. The lead researcher began the meeting with an explanation of the research study. Once consent forms were signed and collected, the first data collection tool, the Teacher Leader Self-Assessment, was distributed. Team facilitators completed the self-assessment and the training session began after the researcher collected the self-assessment forms.

At the end of the training session, the primary researcher gave copies of all tools and activities mentioned in the training to facilitators. Facilitators agreed to select those they felt met the needs of their team and use them with their team members before the first Facilitator Tuesday meeting. Although the design team originally planned for three follow-up sessions, the team facilitators expressed concern about the number of meetings. Stress among teachers at Keating High was already high as the 2021-22 school year approached because the pandemic continued to keep everyone in a state of fluctuation. It was not clear at the time if the school would continue with in-person learning or switch to online learning once again. The group agreed to meet again in September to assess the needs of their teams at that time.

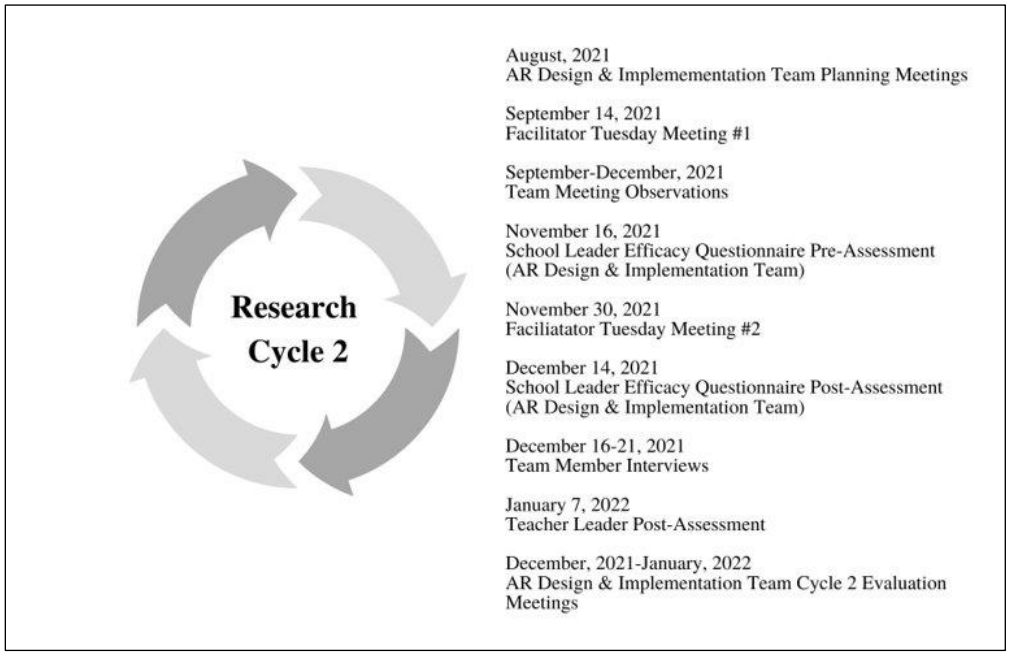
Research Cycle 2

The intervention selected by the AR design team during the second cycle in the study utilized the school's two instructional coaches and the primary researcher in a system of ongoing

support. Two Facilitator Tuesday sessions were scheduled for September 14 and November 30. Additionally, members of the AR implementation team would conduct team observations from September through December, 2021. The AR design team hoped the team observations would provide further insight into team operations.

Figure 17

Research Cycle 2 Process



September 14 Facilitator Tuesday Meeting

The participant numbers shifted during the months of September and October. The facilitator of Team 5 took a leave of absence and, within the semester, left the teaching profession altogether. Additionally, the Facilitator of Team 6 went on extended leave and did not return until after the study concluded. The AR design team decided to continue collecting data on all seven teams with the exception of the Facilitator Self-Assessment. With these participant changes, the post-test was administered to the five remaining facilitators in the study.

Based on the Teacher Leader Pre-Assessment data, the AR design team determined team facilitators should rate their team status across Lencioni's (2002) five dysfunctions of a team: trust, conflict, accountability, commitment, and result orientation. By doing this, the action research design and implementation teams could compare team facilitator perception of team performance to upcoming team observations. Three team facilitators attended the Facilitator Tuesday meeting on September 14. The lead researcher followed up with those not in attendance.

The meeting on September 14 opened with the reflective question: "What tools have you tried with your team to build psychological safety, trust, conflict, commitment, accountability, or results orientation?" One by one, the team facilitators reported not using any of the tools presented during the July 30 training. According to research journal notes one team facilitator stated, "My team has been working together for a while now, so we've already developed how we do things." After hearing the consensus from team facilitators that no one utilized the tools within their teams, the lead researcher read aloud self-assessment items, while team facilitators scored their team on each team dysfunction category. As the meeting progressed, each facilitator reported their two lowest scoring categories reflected in Table 9 below.

Table 9

Team Dysfunction Ratings by Facilitators

Team Dysfunction Ratings by Facilitators		
Team	Dysfunction #1	Dysfunction #2
Team 1	Commitment	Accountability
Team 2	Accountability	Results Oriented
Team 3	Commitment	Accountability
Team 4	Results Oriented	Accountability
Team 5	Accountability	Results Oriented
Team 6	Conflict	Accountability
Team 7	No results reported	No results reported

Two team facilitators reported a problem with accountability. Two team facilitators described problems with commitment. One facilitator talked about a lack of focus on student results. The facilitator for Team 1 was quiet and reflective as the conversation continued and ultimately chimed in to discuss a problem with conflict within the team. The primary researcher closed the meeting by redirecting attention back to the tools distributed at the initial training meeting. The instructional coaches offered to come into team meetings to help facilitate any of the tools the facilitators thought would be helpful.

Team Observations

At the next AR implementation team meeting, members reported that no facilitators reached out to set up time with their teams to utilize the resource tools or help strengthen their weakest areas. Upon hearing this, the AR design team determined it was vital for members of the AR implementation team to conduct team meeting observations. AR implementation team members observed team meetings between September and December. During observations, AR implementation team members recorded behaviors related to vulnerability-based trust, conflict, commitment, accountability, and results orientation.

Table 10

Team Meeting Observation Data

Team Meeting Observations					
Team	Trust	Conflict	Commitment	Accountability	Results Oriented
Team 1	X	X	X	X	X
Team 2		X		X	X
Team 3	X	X	X	X	
Team 4	X	X			X
Team 5		X	X	X	
Team 6	X	X	X	X	X
Team 7	No Team Meetings Occurred				

In Table 10 above, observation data most commonly revealed issues related to unhealthy conflict. The implementation team reviewed the data and set an agenda for the final meeting with the team facilitators

November 30 Facilitator Tuesday Meeting

Based on the team meeting observation data, the AR implementation team began the meeting with a brief review of the five dysfunctions of a team by showing a video by Lencioni (2018). The primary researcher led the group in a discussion of the conflict dysfunction and provided additional detail regarding the differences between healthy and unhealthy conflict on teams. The implementation team members asked team facilitators to reflect on the nature of healthy conflict on their own teams and reminded the facilitators that conflict between team members shows a level of psychological safety and trust. Team facilitators were invited to share their own reflections about the ways in which their teams engage in conflict. Two facilitators revealed their own desire to eliminate conflict by "making decisions for their team." One facilitator felt that her team engaged in healthy conflict and team members did not "take it personally when we disagree about pedagogical differences." Two facilitators reported being unaware that conflict was necessary to the health of a team. One facilitator remained quiet during the discussion. AR implementation team members once again extended the offer to attend team meetings and help facilitators engage in activities that would strengthen their team effectiveness.

After the meeting concluded, the facilitator of Team 1 approached the primary researcher and asked if there were specific tools that could help her work through some issues with her team. They scheduled a meeting on December 2 to further discuss the specific issues that were occurring on the team and develop a plan. Although this development was not part of the original

research design, the AR design team decided to conduct a third research cycle around the experience of this particular team. The AR design team agreed to collect the Teacher Leader Self-Assessment and the team member interviews from this team in January once the third cycle was complete.

AR Design & Implementation Team Data

The AR design and implementation teams took the School Leader Self-Efficacy Questionnaire on November 16 and again on December 14. The data was compared to see what, if any, fluctuations in self-efficacy were detected. The greatest areas in which growth in self-efficacy was reported by multiple AR implementation team members were: facilitate student learning in your school; create a positive learning environment in your school; and motivate teachers.

The AR implementation team participated in a focus group interview on December 14 following the second administration of the self-efficacy questionnaire. The discussion focused on the difference in ratings over time on four questionnaire items. AR implementation team members reflected on their work over the semester as they discussed their levels of efficacy and the factors that played a role in a change in efficacy where one existed. Members felt stronger in their abilities later in the study as they worked more with content teams. On AR team members explained her shift in efficacy this way:

> *I believed in the work, in what we were doing, but I wasn't sure that it would truly impact students because we are dealing directly with teachers. But I think my perception that I can impact student achievement through the work I do with teachers has become much stronger through this process.*

This evolution in the efficacy of AR team members was echoed again and again. Team members repeatedly described a stronger belief in their ability to impact teacher and student learning over the semester. Upon viewing her different ratings on the pre- and post-administrations of the School Leader Self-Assessment, one AR team member stated, “I think what I’ve learned is that although it feels counter-productive, we will change things one team at a time.” Another member shared the difficulty she found when trying to impact adult behavior. She reported, “Adults are not as easy to motivate to have that learning environment but it’s not going to stop me.” The resolve shown in that AR team member’s statement was solidified by the “small wins” she described during the focus group. As the team experienced breakthroughs, their belief in their ability to create more breakthroughs increased.

Team Member Interviews

Members of six of the study’s seven content teams were invited to interview sessions between December 16 and December 21. The AR Team’s decision to engage in a third research cycle with Team 6 delayed interviews with the members of Team 6 until the end of Cycle 3. After consent forms were signed by content team members, the AR implementation team conducted the interviews in the Media Center Conference Room. The Critical Incident Protocol was used as the interview structure for the questions which required members to recall team experiences during the fall semester. The lead researcher used a transcription application called Otter to record the interview sessions so that transcriptions could be analyzed for major themes.

Emerging themes from the collaborative team member interviews included what team members felt were the elements of successful teams and what they thought were specific skills of successful team facilitators. When discussing the elements of successful and unsuccessful team

experiences, collaborative team members most commonly reported the following elements: effective communication, a willingness of the team to try new things or be flexible, all members have a voice in team decisions, members trust each other, members can rely on each other and hold one another accountable, there is an organized leader who has clear direction, team members view conflict as a professional necessity, and the team has a common goal. Each of these elements are related to Lencioni's (2002) five dysfunctions of a team. Additionally, when team members recounted effective facilitation skills of team leaders that they believe lead to successful team experiences, they credited the team facilitator's ability to protect collaboration, provide organization, ensure voice equity, keep the team focused on results, and ensure effective communication. AR team members agree that the collaborative team member interview data was rich with information that will help school leaders plan further support and training for collaborative teams, develop the leadership skills of team facilitators, and redesign the team facilitator selection process.

Teacher Leader Self-Assessment (Post-Test)

Once Teacher Leader Self-Assessments were collected on January 7, 2022, the data were compiled. Overall, team facilitators self-reported their greatest area of weakness in the Professional Learning and Growth domain on both the pre-test and the post-test. Some specific growth was reported in the following areas of this domain: ensure continuous improvement of practice; ask for feedback; encourage reflection among colleagues; and differentiate professional learning for adults at different skill levels. Other areas of growth indicated by the Teacher Leader Self-Assessment fell into the Culture and Context domain, the Instructional Leadership domain, and the School Community and Advocacy domain. In the Culture and Context domain, growth

was indicated in the areas of: provide and get feedback; express interest in others; and resolve conflict. Facilitators also showed growth within the Instructional Leadership domain in the areas of: use content knowledge and enact high quality instruction; engage in effective assessments; improve the practice of other teachers; understand how to use data; apply educational research; engage in the data reflection cycle; and use data to inform decision making. Within the School Community and Advocacy domain, facilitators reported growth in all areas: participate in school initiatives; advocate for students; and understand local, regional, and national education trends.

Research Cycle 3

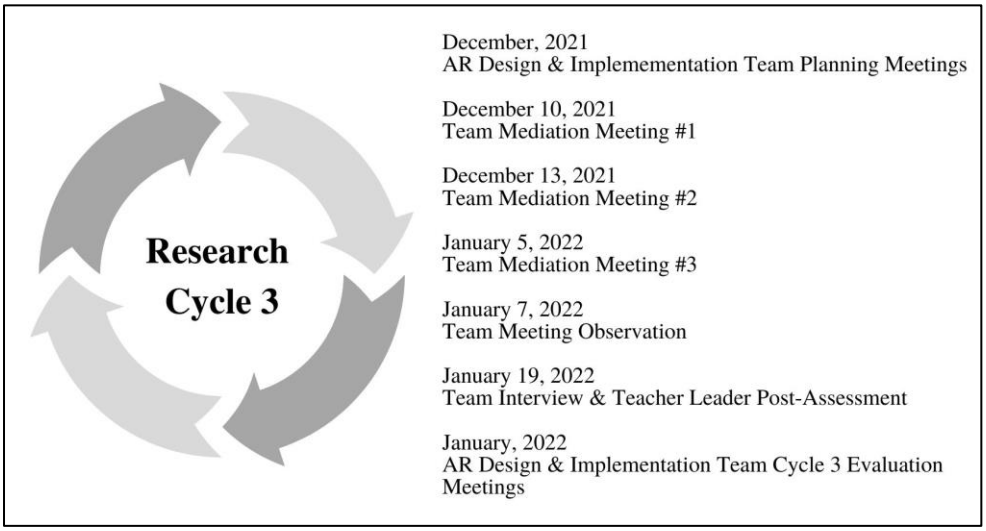
The meeting with the facilitator of Team 1 on December 2 revealed a series of events among team members that fractured the psychological safety and trust on this team. The two members of Team 1 also shared membership on Team 6 with an additional teacher. The AR design team determined that the lead researcher and instructional coaches should seize the opportunity to engage the larger team (Team 6) in a series of three activities aimed at rebuilding the trust that had been damaged. AR design team members felt that by addressing these issues with the larger team, they would also address the issues on Team 1.

The chosen activities were items included in the initial team facilitator professional development in August and included in the resources provided to facilitators. The AR implementation team decided the primary researcher should lead these activities due to a variety of reasons. Relationships between the instructional coaches and members of the teams created potential conflicts. Additionally, the instructional coaches were both new to the role and did not have the same familiarity with the research or tools as the primary researcher. Therefore, the team decided that the primary researcher would lead and conduct the intervention and the

department chair would observe and take notes. Additionally, the AR design team decided that all team members would meet individually with the lead researcher to discuss what had occurred within the team. This information was used to ensure all perspectives were honored and incorporated in preparations for the team meetings to come. Figure 18 displays the timeline of Cycle 3 activities.

Figure 18

Research Cycle 3 Process



December 10 Mediation Meeting

The first mediation meeting was held on December 10 with the team. At this meeting the primary researcher summarized the current team reality in three statements based on what each member had shared in individual meetings. This was done to establish clarity around the level of trust team members were experiencing with each other so that they could move forward. Team members were given an opportunity to amend the statements. No amendments were made and all members agreed to the statements. The lead researcher reviewed the ground rules for behavior

while the team was in the mediation process. All team members agreed to the ground rules. Then, the primary researcher reviewed the guidelines and protocols for teams at Keating High School. During the individual meetings with team members, it became clear that some misunderstandings existed among team members as the team lacked required protocols. After a review of these items the primary researcher answered clarifying questions and the team agreed to make necessary changes where needed. Finally, the researcher walked the team through Lencioni's (2002) personal histories activity. The activity asks members to share their answers to three questions: 1) Where did you grow up? 2) How many siblings do you have? 3) What was the biggest challenge of your childhood? The purpose of these questions was to provide an opportunity for team members to establish vulnerability-based trust with each other so that when discussions turned to work-related issues and pedagogy, the team has already practiced being vulnerable with one another. Once this activity concluded, team members agreed to meet again on December 13 to continue to repair trust within the team.

December 13 Mediation Meeting

Prior to the second intervention meeting, the primary researcher collected the Myers-Briggs personality types for each team member and printed descriptions of each personality type, as well as the stressors for each personality type. After reviewing the descriptors with team members at the beginning of the meeting, the primary researcher asked team members to place the stressor descriptions side by side on the table for comparison. The primary researcher then asked team members to share what they noticed. The discussion revealed that the things that comfort some members, for example, attention to detail, adherence to rules, making plans well in advance, are stressors for other members. Where some members were comforted by creativity,

flexibility, and big ideas, other members were stressed by those same things. The primary researcher concluded the meeting by instructing members to reflect on their new understandings about the dynamics of their team. Team members agreed to come to the next meeting with two or three suggested norms that would help establish a process for navigating around the stressors of each personality type. Team members scheduled the next meeting on December 20.

January 5 Mediation Meeting

One team member did not attend the meeting on December 20. Unfortunately, this created a setback for the team. The other members of the team expressed disappointment in this behavior. The primary researcher cancelled the meeting and rescheduled it for January 5, 2022. During this final team mediation meeting, the team created norms for future team meetings. The lead researcher asked members to think about the personality types of each member and the stressors for each personality type when creating norms that would work for all members. Once team members agreed to the list of norms, the meeting was adjourned and a team planning meeting was scheduled for January 7.

January 7 Team 6 Meeting Observation

During the January 7 meeting, the lead researcher observed Team 6 as they planned Unit 10 using the backwards design method. The team discussed the standards corresponding to Unit 10, agreed to summative and formative assessment dates, and began creating common assessments. According to the researcher's journal notes, "the team has made much progress, but does not require all member voices in the team discussion." Journal notes indicated an improvement in interpersonal communication among team members, increased organization during the team meeting, and clarity of team process.

Teacher Leader Self-Assessment (Post-Test)

On January 19 the facilitator for Team 6 completed the Teacher Leader Self-Assessment post-test. The self-assessment data for the facilitator of Team 6 indicated perceived growth in the areas of: express interest in others, engage in effective assessment, and improve the practice of other teachers. A decline in the following areas was perceived: develop positive relationships among adults; run effective meetings; mediate diverse viewpoints; differentiate professional learning; provide continuous and actionable feedback; and understand local, regional, and national educational trends. The AR team believed it was possible that the decline in self-reported skills in the aforementioned areas may not have represented a true decline in facilitator's skill level, rather a realignment in the facilitator's perception of her skill ability.

Team 6 Member Interviews

Two members of Team 6 were interviewed individually on January 19 following the conclusion of the Cycle 3 interventions. Both trust and psychological safety among team members had been badly damaged over the course of fall semester due to a perceived lack of accountability and commitment by all members. Through individual meetings with team members at the beginning of December, the lead researcher learned that the team had not created norms and had not established a clear team goal. There was also a strong desire among some team members to avoid conflict at all costs. This resulted in few direct conversations about problems perceived by team members. Left unaddressed, team member frustration grew. After the mediation meetings, observation data indicated the team seemed to be more functional in these areas. Data from the member interviews supported the improvement, as well. Through these interviews members reported that all team members developed an equal voice in team

decisions and that there was a clear team goal in place. Members also reported the implementation of team meeting tools, including meeting agendas and effective pre- and post-meeting communication.

Chapter Summary

This chapter described the case and context of this action research and detailed the actions taken by the AR design team, the AR implementation team, and study participants. The AR teams designed and implemented professional learning training and a system of support to strengthen team facilitator skills. By engaging team facilitators in professional learning, facilitator support meetings, and instructional coaching support, the AR design and intervention teams worked to develop the capacity of teacher leaders in team facilitation roles. Self-assessment surveys, team meeting observation notes, self-efficacy questionnaires, team member interviews and focus group interviews, in addition to researcher journal notes, were used to evaluate the effectiveness of the interventions through participant perceptions. In the next chapter, a discussion of the research findings as related to the research questions will be presented.

CHAPTER 5

FINDINGS

The purpose of this action research study was to determine the role leadership development played in strengthening the collaborative team process to increase the effectiveness of teacher teams in one metropolitan-area high school. By studying this relationship between team facilitators and content teams, the researchers believed it would allow school leaders to better understand how to support the growth of effective teams to increase student achievement. This chapter presents the key findings obtained from five teacher leader self-assessments, nine critical incident interviews involving 17 content team members, six team meeting observations, six school leader efficacy questionnaires, a focus group, and researcher journal notes. The researcher initially read through all the interview and focus group transcripts, journal notes, and team observations. After an initial reading, the researcher re-read the data, grouped like comments, and created categories that summarized the most common responses. Categories were compiled into themes. Once themes were identified, the researcher analyzed each one from the viewpoint of the different participant groups. Additionally, two participant groups completed pre- and post- self-assessment data: team facilitators and AR implementation team members. The researcher analyzed the results from these pre- and post-assessments. Five major findings emerged from this study.

The findings of this qualitative action research study addressed the research problem: How

do school leaders build the skills of teacher leaders to increase collaboration team effectiveness? Findings 1 and 2 addressed the first research question, which asked: How do teacher leaders perceive the impact of professional learning on collaborative team performance? Findings 3 and 4 addressed the second research question, which asked: How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs? Finding 5 addressed the final research question, which asked: in what way is the collective efficacy of design and implementation team members impacted by participating in the action research process? Table 11 aligns each finding to its related research question.

Table 11

Summary of Research Findings

Research Questions	Findings
Q1. How do teacher leaders perceive the impact of professional learning on collaborative team performance?	F1. The majority of team facilitators reported at least one barrier to team engagement with the professional learning topic. F2. A gap in the perceptions of team performance existed between team facilitators and team members and became more aligned through participation in trust building activities.
Q2. How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs?	F3. A majority of team members linked team leader facilitation skill to successful collaboration experiences. F4. All teams reported successful team performance is linked at least one of the following team elements: trust, conflict, commitment, accountability, and results orientation.
Q3. In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process?	F5. The efficacy of the AR implementation team grew slightly as they engaged in the action research process with teams.

What follows is a discussion of the findings. As the data was coded and categorized, findings emerged. Synthesized data from a variety of data collection instruments appear in the following section, providing an analysis of the findings as they relate to the research questions.

Finding 1

The majority of team facilitators reported at least one barrier to team engagement with the professional learning topic.

Team facilitators showed interest in the professional learning topic at the Facilitator Training on July 31. At the conclusion of the meeting, facilitators were asked to incorporate one or more of the strategies and activities with their teams before the first Facilitator Tuesday meeting on September 14. At the meeting, facilitators reported not engaging in the professional learning topic with their teams. The AR implementation team members offered to lead the teams in the strategies and activities that facilitators believed were most pertinent to their team. At the November 30 meeting, facilitators reported they had not engaged in the professional learning topic with their teams. One facilitator came forward at the end of the meeting to seek AR implementation team assistance with a team issue which launched the unplanned third cycle of the research study. However, researchers sought to understand why four out of five facilitators participating in the study did not engage their teams in the professional learning topic. When researchers analyzed their meeting notes, the themes shown in Table 12 emerged.

Table 12

Finding 1 Summary Data

Q1. How do teacher leaders perceive the impact of professional learning on collaborative team performance?	
F1. The majority of team facilitators reported at least one barrier to team engagement with the professional learning topic.	
Barriers	Participants *n = 7*
Time Constraints Impede Implementation of PL	4
Time Constraints Impede Engagement in PL	3
Skill level of team members	3
PL Topic not Relevant	4
Size of Team	2

Over the course of the two Facilitator Tuesday meetings, the actions and statements of facilitators indicated potential barriers might prevent the professional learning topic from impacting team performance. The most common feedback related to the lack of time facilitators felt teams had to devote to the professional learning topic. One facilitator described this stating that teachers were "stretched this year because of the new learning gaps the pandemic caused" and thought meetings that did not focus on "the work we must complete would frustrate the team." Others echoed the sentiment indicating that the lingering effects of the COVID-19 pandemic created a "situation where our time is devoted to these new issues we see with student performance and behavior."

Team facilitators reported time constraints were an issue that impacted their ability to participate in the Facilitator Tuesday meetings. According to researcher journal notes, "Attendance was low at the first Facilitator Tuesday meeting today. Three of the six facilitators attended." At the second Facilitator Tuesday meeting, participant absences continued to be an issue. The researcher noted, "One facilitator reported a scheduling conflict and another facilitator stated she had an abundance of early morning parent meetings to attend."

Three facilitators made statements regarding the readiness of their team members to engage in the professional learning topic. One facilitator was skeptical that she could encourage collaboration due to the skill level of her relatively inexperienced team. She stated, "sometimes when they make suggestions I know it won't work because I've already tried that so I feel the need to shut that down for the benefit of the kids. They don't have those experiences yet." Two other facilitators expressed the same concern. Although the researcher discussed strategies to handle those situations while still encouraging collaboration, it was clear that some facilitators

felt the limited skills of their team members were a barrier to the implementation of the professional learning with their teams.

Evidence that some facilitators may not have perceived the professional learning topic relevant to their own teaming experience was found. The researcher journal notes reflected that three facilitators "reported at today's meeting that the interactions among their team members were good in their view. They indicated there may not be reason to pursue the PL strategies and activities with their teams." One facilitator was especially complimentary about the way her team functions, stating "over time we've worked out how to work effectively with each other."

Finally, researchers found one additional barrier to facilitator implementation of the professional learning topic with their teams. Two facilitators reported the size of the team played a factor in their ability to engage in the strategies and activities. Both facilitators were leaders of small teams with only two members. Facilitators of these teams seemed to feel the small size of the team made it awkward to lead this work. One facilitator stated, "when there is conflict and it's just you and one other person, who settles the dispute? It is a tough position to be in." AR team members assisted in trouble-shooting these situations on small teams, but researcher journal notes confirm that "it seemed to be a big wall that these facilitators couldn't see past."

The AR team believes the barriers reported by team facilitators explain possible reasons why, in four out of five teams, the professional learning that team facilitators were engaged in did not make an impact on team performance. For the one team that ultimately engaged in some of the professional learning activities presented to team facilitators, a positive impact was recorded on that team's performance. Once team member reflected on the changes she saw in the team's performance after the use of the PL strategies:

I think the key is making sure everyone is involved from the beginning. And I think we tried to do that. I'm not sure exactly where things got sideways. But I think that the key is making sure that everybody brings something to the table. And I do like the, actually I never really thought about this, but I did like the personality type exercise because that explains a lot. And I've done that with my students before, right. So, I don't know why I didn't really think about it. But I think that's the main thing that I would say and you know, create some sort of norms where everybody feels comfortable and everybody feels valued for what they bring to the table. That's the biggest thing.

Finding 2

A gap in the perceptions of team performance existed between the majority of team facilitators and team members.

The AR implementation team noted a potential divergence between what team facilitators reported in the Facilitator Training and the two Facilitator Tuesday meetings and what was observed in team meetings or reported in interviews. Researcher journal notes reflect this disconnect as early as the initial training where facilitators made statements like, "My team has worked together for a while so we've already established trust." Another facilitator stated the team "has no conflicts" and "agrees on everything." These statements alerted researchers to possible misconceptions around the concepts discussed in the initial Facilitator Training in August. Researchers wondered whether facilitators perceived the team issues that had been captured by observation data. This prompted the lead researcher to administer a team status self-assessment that allowed facilitators to rate their teams in the areas of vulnerability-based trust, healthy conflict, team commitment, mutual accountability, and results orientation. Facilitators

took turns reporting the areas of team weakness according to the self-assessment and a discussion ensued of the behaviors of effective teams. When sharing the self-assessment results, facilitators reflected on the related interpersonal issues that occurred within their teams. Their recollection of issues aligned with the AR team observation notes.

Of the team members that discussed team issues related to vulnerability-based trust, healthy conflict, team commitment, mutual accountability, and results orientation in their interviews, 12 team members linked these elements to team performance issues. Five team members reported that their teams were not currently experiencing these issues. Researcher journal notes, team meeting observation notes, and team member interviews described a divergence in perspective of team performance. A summary of the data is provided in Table 13.

Table 13

Finding 2 Summary Data

Q1. How do teacher leaders perceive the impact of professional learning on collaborative team performance?	
F2. A gap in the perceptions of team performance existed between team facilitators and team members.	
Facilitator Perceptions	Participants *n = 7*
Team issues exist but do not affect team performance	4
Team issues exist and do affect team performance	2
Team issues do not exist	1
Member Perceptions	Participants *n = 17*
Team issues exist but do not affect team performance	0
Team issues exist and do affect team performance	12
Team issues do not exist	5

The divergence in perceptions of collaborative team performance was an interesting development over the course of the study. Researchers found it provided insight into possible reasons facilitators may not have engaged with their teams in the professional learning. If team facilitators perceived their team performance to be healthy, they may not have perceived a need

to engage their teams in the professional learning. Further data from team facilitators is needed, however it is important to note this possibility for future research.

Finding 3

A majority of team members linked team leader facilitation skill to successful collaboration experiences.

In the team member interviews, researchers asked team members to think of a successful teaming experience and answer a series of questions about that experience. Researchers then asked team members to think of an unsuccessful teaming experience and answer a series of questions about that experience. Team members were not asked specifically about team facilitators or their impact on team performance. However, team members were asked to think of all the elements that contributed the successful and unsuccessful team experiences. At least one member of each team linked team facilitation skills of team leaders to the successful and unsuccessful experiences. Table 14 provides a summary of the data related to Finding 3.

Table 14

Finding 3 Summary Data

Q2. How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs?	
F3. A majority of team members linked team leader facilitation skill to successful collaboration experiences.	
Facilitation Skills	Participants *n = 17*
Protect Collaboration/Team Flexibility	5
Provide Organization/Run Effective Meetings	4
Ensure All Members Have A Voice	2
Keep Team Focused on Team Goal/Results	2
Ensure Effective Communication	3

Members of five teams emphasized the importance of the team leader to protect collaboration. One team member explained it by stating, “I think the difference really lies in the

leader's understanding of their role, which is you know, you are setting the agenda, etc. but you're also kind of the key person that facilitates collaboration." Members also linked team collaboration to the facilitator's ability to establish a willingness to try new things as part of the team culture. One team member stated about the structure of her team, "We are more open and would say something like 'this is an idea and what can we add to it?' The flexibility of the team and the team leader impacts the entire outcome." When team facilitators set the conditions for healthy collaboration and team members feel empowered. The following statement shows this link between collaboration and empowerment:

> *I think we have leaders, not dictators. There's more of the job sharing, like, here's your responsibility, you know. This is what you're good at. You can do this. I'll do that. It's more of that. So, when you give that autonomy, people feel they build more confidence versus someone just saying, "Here's what we're doing."*

Some team members reported the team leader's organization skills and ability to run effective meetings contributed to team success. One team member described team meeting organization as central to whether the team achieves results. He stated, "I've been in meetings where it's like 'This is what we need to do. What is our goal? How are we going to get there?'" Additionally, another member added, "I think having more of a structure-oriented plan of attack helps efficiency. I think before you actually walk into the meeting you need to know what are we talking about today so people can come prepared." Additionally, according to one team member, team meeting organization provided the structure for collaboration and kept the focus on results:

There has to be more assertiveness in the meetings- timeframes, agendas, and knowing what we're doing because you can still get your voice out there, you still have a role in what you're doing, but at least you see the finish line in mind and how we get there.

Some team members credited team success to facilitators who ensured every member had a voice in team decisions. One team member expressed his frustration when team facilitators seized power over decision making stating, "I just don't have a voice because the team leader wants to do absolutely everything." Another team member reported, "Sometimes [the leader] makes a decision and we don't necessarily agree with it, but at a certain point you let things go." Members reported that when this occurs, they stopped contributing to the discussions because they felt their contributions would not be received.

Another facilitation skill that emerged from the team member interviews was the skill of effective communication. Some team members reported that communicating effectively with team members was the difference between successful and unsuccessful teams. "I think it's super important to have communication with your team and if you're the lead of the team you have to plan it," stated one team member. Another team member also honed-in on the aspect of communicating with intention: "I think [a leader's] communication with the team is important. I feel like on some teams it's great, but on others I didn't know what I was doing." The team leader's ability to effectively communicate team goals, resources, expectations, and processes helped improve team performance.

Ultimately, team member feedback emphasized that the facilitation skills level of team leaders contributed to their successful and unsuccessful team experiences. One member explained:

> *I think when it's something that runs well, the leader recognizes that their goal is to support the team and to make sure that they're able to do their job effectively, like they have the things that they need, the resources that they need. And when that doesn't happen then things kind of fall apart.*

AR team members believe this data showed the potential impact team leader development could have when school leaders attempted to increase team performance. Although most team facilitators did not introduce their teams to the strategies and resources provided in the professional learning sessions, Finding 3 indicates the potential for positive impact exists.

Finding 4

All team members reported links between team performance and elements of successful teaming.

When team facilitators reported that they had not used the professional learning strategies with their teams, researchers wondered if they had chosen the wrong topic for their professional learning sessions. Perhaps the AR design team had selected a topic that did not accurately reflect collaborative team needs. Researchers even wondered if the entire premise of the study was flawed. However, once team member interview data collection began, AR team members received feedback from 100% of team member participants that in their view all team experiences, both successful and unsuccessful, were related to the five elements of successful teams.

When interviewed, team members reported a variety of experiences on teams (see Table 12). Of the 17 team members interviewed by researchers, every participant spoke about one or more of the elements of successful teams listed in Table 15 below. When asked what contributes to the success or failure of teams, the most common themes to emerge from team member

interviews were effective communication, the willingness to try new things or be flexible, and ensuring all members have a voice and role on the team.

Table 15

Finding 4 Summary Data

Q2. How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs?	
F4. All team members reported successful team performance is linked to at least one of the following team elements: trust, conflict, commitment, accountability, and results orientation.	
Elements of Successful Teams	Participants *n = 17*
Effective Communication	17
Willingness to Try New Things/Flexibility	15
All Members Have a Voice/Role	15
Trust	13
Relying on Team Members/Mutual Accountability	12
Organized Leader Who Understands Role	11
Team Members View Conflict as Professional Necessity	9
Team Has Common Goal	7

Communication was often discussed in connection with each of the five elements of successful teams and was highlighted in the professional learning with team facilitators. This is remarkable considering only one team facilitator exposed members to the professional learning topic. It was clear from the interviews that team members viewed communication as pivotal to team success, not only because of how many ways it was connected back to trust, conflict, commitment, accountability, and team results, but also because it was the only theme that emerged in all seven interview sessions.

The ability of a team to encourage new possibilities or new ideas was mentioned in six of the interview sessions as an important component to team success. Team members voiced frustration when teams protected “the way we do things” instead of seeking out new ways to help

students. One team member reflected on the possible team outcomes if the team had been encouraged to seek new ideas. She stated:

> *Be open to trying things, new things, things that may be different or out of the box. And then deciding from there if it's working great, if it's not, no big deal. We tried it and we can try something else or tweak it and do it a different way. But be willing to do something different. If something's not necessarily working or even if it is working- there's always room for improvement. So, I think continuing to seek out creative ideas to try to help our students.*

This flexible mindset was tied to the level of trust team members had built with each other and the degree a team is comfortable with conflict.

The feeling that team members had a voice and a role in team discussions and decisions was discussed in six of the seven interview sessions. When team members discussed it, those who felt they did not have a voice or role on a team spoke with emotion. It was clear that team members felt the absence of voice was a psychological safety issue. Multiple members revealed that they had stopped making contributions on some teams because they felt their ideas were not wanted. It was clear that for these team members, trust within the team was lacking. One team member said the following:

> *One area I think one of my teams can improve upon is listening. I think there's an idea of what's going to happen when input is requested, but at some point you just stopped giving input because you know that it's just requested because this is what I'm supposed to do. So, I don't think everyone actually gives input.*

Several team members discussed the importance of trust among team members. In one interview, a team member celebrated the vulnerability-based trust she had built with her teammate. She credited the vulnerability they shared when discussing their mistakes as making their teamwork fun.

> *We've made mistakes. We've emailed and called each other and texted each other about our mistakes. It's actually pretty funny, but we fixed it. And it's just been great. You know, having that with somebody. Being able to trust your teammate to get the job done right and be reciprocated. It was really fun.*

Finding 4 reassured AR team members that the professional learning topic was the right topic for facilitator development but discussed possible ways to improve the structure and format of the professional learning sessions in the future.

Finding 5

The efficacy of the AR implementation team grew as they engaged in the action research process with teams.

The AR design and implementation team members expressed fluctuations in efficacy levels as they moved through the research study. Researcher journal notes reflect these ups and downs. The AR implementation team felt satisfied with the engagement level of participants at the Facilitator Training. "Everyone agreed to participate in the study and seemed pleased with the topics covered and the level of support provided. Participants were engaged in the training and responses to the reflection prompts were quick and lively." However, following the first Facilitator Training, the team felt "discouraged that none of the team facilitators attempted the strategies and tools we provided at the Facilitator Training." Additionally, the absences of

facilitators at the Facilitator Tuesday meetings was disheartening. The positive gains in efficacy for the AR team came in December when one of the team facilitators asked for help with an issue on her team. As the AR design and implementation teams planned the third cycle of the study around this intervention, efficacy levels began to rise. Researcher journal notes stated "Until now we have doubted whether this work is having an impact on the team performance because we do not believe the strategies have been incorporated in team meetings.

The AR implementation team participated in a focus group to discuss the difference between efficacy ratings on pre and post self-assessments. Mean collective efficacy levels increased in all categories between pre and post assessments.

Table 16

Finding 5 Summary Data

Q3. In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process?		
F5. The efficacy of the AR implementation team grew as they engaged in the action research process with teams.		
""In your current role as school leader, to what extent can you..."	Pre-Assessment Mean Score	Post-Assessment Mean Score
Facilitate Student Learning	6.5	8
Generate Enthusiasm for a Shared Vision	7.33	7.66
Manage Change in Your School	6.33	7.66
Create A Positive Learning Environment	7.5	8.5
Raise Student Achievement on Standardized Tests	6.66	7.16
Motivate Teachers	7.33	8.5
Shape Operational Policies & Procedures	7	7.83

One AR team member discussed the increase in efficacy she experienced in the area of managing change. Her response is typical of the group in that as school leaders planned and implemented this research study, their confidence in creating change grew, as well. She stated:

> *I feel a little bit stronger in that category because I've gained the trust of more people. And I think that's the best way to manage change is when you're forming relationships*

with both students and teachers. And you're gaining their trust and they feel like you're in their corner and you'll help and your support that will help facilitate change.

At the end of the focus group, the researcher asked the AR implementation team members one final question: "What has been the biggest obstacle that you have encountered in your effort to enhance teacher practice to increase student achievement?" Their answer was building trust. As it turned out, the key component for school leaders in their work with teachers was the same as the key component for successful teacher teams: vulnerability-based trust.

I feel in a good place. I think it's happening. It's just one of those things that has to happen. You know, it takes time, it takes investment, it takes trying to get to know people and being uncomfortable and all of those things. It takes time to gain the trust.

Chapter Summary

This chapter outlined the findings of this action research by connecting data collection to the research questions and identifying results from each cycle. Findings supported the use of professional learning to support and grow the facilitation skills of teacher leaders. Data collected from Teacher Leader Self-Assessments, researcher journal notes, team member interviews, AR team focus group, and School Leader Efficacy Self-Assessments illustrated the impact of the action research cycles on teacher and school leader practice. The next chapter provides further discussion of the major findings, limitations of the study, and implications and recommendations for practitioners, researchers, and policy makers.

CHAPTER 6

DISCUSSION OF THE FINDINGS

In K-12 education, collaborative teacher teams continue to be the primary vehicle through which gains in professional growth and student achievement are attained. The effectiveness of teacher teams varies greatly. This action research case study sought to increase team facilitator skill development in an effort to improve team effectiveness. Three research questions guided this study:

1. How do teacher leaders perceive the impact of professional learning on collaborative team performance?
2. How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs?
3. In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process?

This chapter will discuss conclusions from the literature analyzed in Chapter 2 and the findings presented in Chapter 5. Implications and recommendations for practitioners, researchers, and policy makers are also presented.

Summary of the Findings

This action research study provided insight into the impact of team facilitator professional development on collaborative team effectiveness. The conclusions that follow were based on analyses of the findings and connections to the literature. Conclusions focused on the

implications for future research in the areas of teacher collaboration, adult learning theory, and effective teaming. Additionally, an analysis of the findings as they related to the distributed leadership framework is discussed.

Major Findings Related to the Literature Reviewed

Teacher Collaboration

Current literature linked an increase in student achievement to the work of effective collaborative teacher teams (Akiba & Liang, 2016; DuFour & Marzano, 2011; Goddard et al., 2017; Huffman & Kalnin, 2003; Lomos et al., 2011; Miller et al., 2010; Ronfeldt et al., 2015; Vangrieken et al., 2015). Over time researchers have discovered the elements necessary to the team collaboration process that affect student achievement: they collectively work toward shared goals, collaborate about student learning, implement best practice for student achievement and school practice, demonstrate a cycle of inquiry, promote continuing improvement through system processes, and focus on results (DuFour & Eaker, 1998). However, little research into the elements necessary to create well-functioning teacher teams has been conducted. This study was created to help fill that gap in the literature.

This study found that teams that collaborate well together developed norms around five elements of successful teams: vulnerability-based trust, healthy conflict, team commitments, team accountability, and results orientation. Researchers found that in the absence of these elements, teacher teams struggled to collaborate effectively. Additionally, evidence was found to indicate that when entire teams engaged in activities designed to build vulnerability-based trust, the teaming process is strengthened. Without effective collaboration, student achievement cannot

be impacted. Finally, this research study found that when gaps in the perception of team performance by team facilitators and members exist, difficulties in collaboration arise.

Adult Learning Theory

Research on Adult Learning Theory specified that adults experience learning that will impact teacher practice through transformative learning. Transformative learning occurs when the following conditions are present:

> *Transformative learning for teachers requires that they be willing and able to critically explore, articulate, negotiate, and revise their beliefs about themselves, their students, their colleagues, and their schools. Only through this level of self-awareness can teachers in turn, understand their colleagues' foundational perspectives and critically evaluate not only the content and processes of proposed practices, but also the philosophies that underlie them, and their potential long-term consequences (Servage, 2008, p. 70).*

This research study found that team facilitators experienced transformative learning when the team facilitator was an active participant of the trust building exercises. Although interventions in cycles one and two involved professional learning with team facilitators, provided activities and strategies for them to use with their teams, and provided ongoing support meetings, four out of five team facilitators did not use the strategies and activities provided in the professional learning with their teams. One team facilitator participated in and experienced the strategies and activities as led by the researcher and the team performance reportedly improved from the experience. Therefore, this research study found that although a system of training and continuous support was used in facilitation skill development, transformative learning did not

occur without the experiential learning of the team facilitator. Current scholarly literature notes that for classroom behaviors to undergo change, transformative learning must occur (Kelly, 2017; Servage, 2008).

Additionally, some of the barriers to team engagement with the professional learning topic that were reported by a majority of team facilitators were related to the ongoing stress from lingering COVID-19 issues. Scholarly research is currently underway to study the effects of COVID-19 on teachers, schools, and school systems, including studies of "crisis teaching" (Cutri, et al., 2020). This study contributes to this scholarly research in that some team facilitators reported higher stress levels related to the increased learning gaps of students who missed instruction during the 2019-20 and the 2020-21 school years because of the pandemic. Facilitators reported this stress led to less time to devote to the professional learning in both the implementation of the topic with their collaborative team and their engagement level in the professional learning meetings.

Effective Teaming

The research on effective teaming did not come from K-12 education studies: rather, it permeates the fields of psychology, social work, and the private business sector. However, researchers found parallels when it was applied to teacher teams. Brown (2018), Edmondson (1999), Lencioni (2002) and Sinek (2014) described vulnerability-based trust, or the ability to feel psychologically safe, as the foundation of all working teams. Sinek (2014) and Lencioni (2002) explained the importance for leaders to construct and protect vulnerability-based trust on work teams.

The researchers of this action research case study worked to increase the knowledge and skills of team facilitators on the five elements of successful teams through multiple interventions. Team member interview feedback overwhelming linked the presence or lack thereof of these five elements to their experiences on collaborative teams. The findings related to the third cycle of the study suggested when team facilitators are trained in the construction and protection of these elements, it could positively impact team performance. The findings of this research study uphold the literature on effective workplace teams conducted outside of the realm of K-12 education (Duhigg, 2016).

Major Findings Related to the Theoretical Framework

This study was designed with a distributed leadership framework. Distributed leadership frameworks increase the effectiveness of job-embedded professional learning (Campoli, 2011) and were found to increase the success of teacher action learning (Dinham et al., 2008). By developing the facilitation skills of team facilitators, this study sought to increase overall team effectiveness. Other studies reported a connection between the facilitative skill of teacher leaders and the success or failure of school initiatives. For example, Nehring and Fitzsimmons stated, "While the literature reviewed for the theoretical frame does not identify facilitative skill as a leadership attribute associated with a high performing PLC, it is apparent in this study that the lack of facilitative skill by some of the teacher leaders had a negative impact on the outcome of the initiative" (Nehring & Fitzsimmons, 2011, p. 525). The AR team believed the findings of this study concurred with those of Nehring and Fitzsimmons (2011) as they supported the link between the facilitative skills of teacher leaders and effective collaboration among team members within professional learning communities.

Major Findings Related to the Research Questions

Question 1

This qualitative research study was designed to answer three research questions. The first research question asked: How do teacher leaders perceive the impact of professional learning on collaborative team performance? The researchers found the majority of team facilitators reported at least one barrier to team engagement with the professional learning topic. Four of the five facilitator participants did not transfer the strategies from the professional learning sessions to their work with their teams. Facilitators cited the following barriers: time constraints that impede implementation of PL, time constraints that impede facilitator engagement in PL, the skill level of team members, the perception that the PL topic was not relevant, and the size of the team.

The researcher also found that a gap in the perceptions of team performance existed between team facilitators and team members and became more aligned through participation in trust building activities. Within this disparity lies another potential reason that team facilitators chose not to use the strategies provided in the professional learning sessions with their teams: team facilitators may not have perceived team performance needs in the same way as team members.

Question 2

The second research question asked: How do members of collaborative teams describe the impact of the collaborative team leader on their ability to address student learning needs? The AR team found that a majority of team members linked team leader facilitation skill to successful collaboration experiences. Specifically, team members noted the following facilitator skills affected collaborative team performance: the ability to foster collaboration and team

flexibility, the ability to organize team meetings and processes and run effective meetings, the ability to ensure all members have a voice in team decisions, the ability to keep teams focused on the team goal and team results, and the ability to communicate effectively. Therefore, a majority of team members reported direct impacts of the collaborative team leader on the team's ability to address student learning needs based on their facilitation skill level.

The researcher also found evidence that all 17 team member participants reported links between team performance and the following team elements: trust, conflict, commitment, accountability, and results orientation. Additionally, as one team participated in trust building exercises, team facilitator and team member perceptions of team performance became more aligned as evidenced by the mediation sessions with Team 6 during the third research cycle. Researchers found that when all team members share experiences, perceptions of team performance and facilitation skill aligned.

Question 3

The third research question asked: In what way is the collective efficacy of design and implementation team members impacted by participating in the action research process? Researchers found that as AR implementation team members engaged in the action research process with teams, their level of efficacy increased. This finding was based on a comparison of School Leader Efficacy Self-Assessment scores on pre and post assessments. The mean scores of AR team members on assessment items increased, reflecting the increased efficacy of AR team members. Because collaborative teams also engaged in action research cycles, researchers believed the efficacy of teachers would increase as teams worked to build trust, engage in

healthy conflict, make commitments, hold each other accountable, and maintain a results orientation.

Limitations of the Current Study

COVID-19

The past two years have been incredibly difficult for educators, as students, parents, and schools struggled to meet the needs of students and families during a global pandemic. The inconsistencies of educational settings, student and teacher attendance, and technology needs contributed to the learning gaps of students. The strain on teachers to diagnose and respond to these learning gaps has been great. Originally the AR design team planned three Facilitator Tuesday support meetings. However, participants expressed concern with the prospect of meeting three times due to the amount of additional time they needed to address learning gaps. The AR design team decided to scale back to two Facilitator Tuesday meetings. Additionally, researchers believed it was possible that the additional teacher stress created by COVID-19 impacted the engagement level of team facilitators over the course of the study.

Researcher as Participant

Action research case studies involve the researcher as a participant in the study. Where other research methods maintain separation between the researcher and the action of the study for the sake of objectivity, in action research the researcher is a participant and records their learning as an involved member of the study. This yields a level of insight believed to be valuable for other practitioners. It also impacts the interactions between participants and the researcher. In this study, the primary researcher was in some cases the direct supervisor of the team facilitators and team members participating in the study. Although the primary researcher

maintained good relationships with all participants involved in the study, the supervisory role of the primary researcher could have affected the feedback of team facilitators and team members.

Context

This study occurred in one large suburban high school. The high school was a relatively new school which at the time of the study was in its fourth year of operation. The school's student and teacher populations over the previous three years more than doubled, adding an element of instability among collaborative teams. Therefore, replication of this study in other school contexts, such as urban or rural schools and well-established schools who are not facing the same fluctuations in the numbers of students and staff, was recommended. Studies conducted in various school contexts would provide a broader understanding of the impact facilitation skill development could have on effective team performance.

Implications and Recommendations for Practitioners

Teacher Leader Selection & Support

AR design and implementation team members believe the findings of this research study supported an analysis of the teacher leader selection process and the professional learning support provided to team facilitators. At Keating High School, the team facilitator selection process encompassed few guidelines and was determined by department chairs. It was the recommendation of the AR design and implementation teams to incorporate team member, administrator, and department chair voice in the selection process. Additionally, the AR design and implementation team recommended the development of a team facilitator job description that outlined clear expectations and skill development. As part of these expectations, the AR

design and implementation team also recommended the development of ongoing support for team facilitators while they were learning about and growing their facilitation skills.

School Leader Support

The AR design and implementation teams also recommended district level support for school leaders as they create systems of support for team facilitators. Collaborative time for school leaders who lead building level professional development is critical to the success of creating well-functioning professional learning communities within schools. Just as teacher collaboration can propel student learning, the AR design and implementation teams believe school leader collaboration could propel teacher learning.

Implications and Recommendations for Researchers

Additional research regarding teacher collaboration was recommended. This research study examined the impact of team facilitator development on effective team performance. Other studies are needed that examine the impact of team facilitator development on student achievement. Such examination could lead to a more comprehensive understanding of the impact of distributed leadership on collaborative team performance.

Implications and Recommendations for Policy Makers

Although federal, state, and local policy widely supported and encourages the creation of professional learning communities within schools, the successful development of PLCs relied on district and school leaders and their knowledge of the necessary systems and structures to make it a reality. One of the top ten issues (State Partnership for Excellence in Education, 2019) was teacher quality. The authors cited research that linked school leader preparation programs and systems of support to the recruitment and retention of quality teachers and, ultimately, increased

student achievement. Policies at all levels provided the expectation for teacher collaboration and embedded professional development. Currently, teacher and school leader preparatory programs are largely silent on the topic how to build teams that collaborate well. It is the recommendation of the AR team that programs leading to initial licensure incorporate direct instruction on facilitation skill development so that teachers and school leaders are well prepared for the teaming expectations of the jobs they hold. To expect these results without explicit instruction would be widely considered ineffective practice.

For school leaders, providing training, coaching, and support for adult teams would be challenging work and without sufficient knowledge of current research on workplace teams, leading those teams would be even more difficult. School building teams include more than teacher teams; custodial, secretarial, counseling, administrative, and food service teams all share experience as work teams. Learning to build and manage teams will continue to be an important skill for school and district leaders, as long as professional collaboration is the goal.

Chapter Summary and Final Thoughts

Like all systems, systems of education continue to evolve. From the one room schoolhouses of the past to the large institutions of learning of the present, the business of teaching and learning is ever changing to meet the needs of the day. Distributed leadership models provide the structure to support current systems of professional learning communities. As systems of education continue to make the necessary shift from individual teacher autonomy to collaborative teacher teams, the preparation and support of those leading the change at the building level is paramount. The researchers of this study found teacher-leader skill development to be an important component in the jump from traditional models of education to effective

PLCs. Additionally, the preparation and support of school leaders whose work is to provide support to teacher leaders is fundamental to this success. Educators know the components of the PLC process. The findings of this study helped chart *how* school leaders and teacher leaders can work to create effective teacher teams that will continue to move student achievement to new heights. By addressing the knowing-doing gap of PLCs, we continue learning how to adequately address the learning gaps of students.

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APPENDIX A
Critical Incident Interview Protocol
Adapted from Kain, 1997

1. Think of a time when you and your team members were especially effective in working together to create a unit or activity for your students.
    a. Could you briefly describe the unit or activity?
    b. What did you and the team do to create/plan this unit/activity? (Probe: how did you go about planning or designing the unit/activity?)
    c. What helped the team accomplish this purpose? (Probe with questions about the school's organization, if mentioned in answer. For example, what about the organization of the school contributed to this?)
    d. What roles or duties did the various team members take in this?
    e. If you were to advise another team on how they could create a successful teaming experience, what elements of your experience would you include in this advice?
2. Think of a time when you and your team members were ineffective in working together to create a unit or activity for your students.
    a. Could you briefly describe the unit or activity you attempted?
    b. What did your team do to create the unit/activity?
    c. What do you see as the explanation for the unsuccessful outcome? (Probe: was there something about the school's organization that impeded your work? Was there an issue of interpersonal interaction that got in the way?)
    d. What differences, if any, did you notice in roles and duties of the team members?

Source: Kain, D. L. (1997). Critical incidents in teacher collaboration on interdisciplinary teams. *Research in Middle Level Education Quarterly, 21*(1), 1-29.

APPENDIX B

Focus Group Discussion Protocol

After reviewing your ratings on the School Leader Efficacy Self-Assessment you took on November 16th and December 14th, respond to the following questions:

1. How do you think your perception of your ability to facilitate student learning in your school has changed, if any, over the course of the semester?

2. How do you think your perception of your ability manage change in your school has changed, if any, over the course of the semester?

3. How do you think your perception of your ability to create a positive learning environment in your school has changed, if any, over the course of the semester?

4. How do you think your perception of your ability to motivate teachers in your school has changed, if any, over the course of the semester?

5. What, if anything, is the biggest obstacle you have encountered in your work with teachers over the course of the semester?

APPENDIX C

Principal Questionnaire

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for principals in their school activities.

Directions: Please indicate your opinion about each of the questions below by marking one of the nine responses in the columns on the right side. The scale of responses ranges from "None at all" (1) to "A Great Deal" (9), with "Some Degree" (5) representing the mid-point between these low and high extremes. You may choose any of the nine possible responses, since each represents a degree on the continuum. Your answers are confidential.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

"In your current role as principal, to what extent can you..."		None at All		Very Little		Some Degree		Quite a Bit		A Great Deal
1.	facilitate student learning in your school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
2.	generate enthusiasm for a shared vision for the school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
3.	handle the time demands of the job?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
4.	manage change in your school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
5.	promote school spirit among a large majority of the student population?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
6.	create a positive learning environment in your school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
7.	raise student achievement on standardized tests?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
8.	promote a positive image of your school with the media?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
9.	motivate teachers?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
10.	promote the prevailing values of the community in your school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
11.	maintain control of your own daily schedule?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
12.	shape the operational policies and procedures that are necessary to manage your school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
13.	handle effectively the discipline of students in your school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
14.	promote acceptable behavior among students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
15.	handle the paperwork required of the job?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
16.	promote ethical behavior among school personnel?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
17.	cope with the stress of the job?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
18.	prioritize among competing demands of the job?	①	②	③	④	⑤	⑥	⑦	⑧	⑨

Source: Tschannen-Moran, M. (n.d.) *Principal Sense of Efficacy Questionnaire.* William & Mary School of Education. https://wmpeople.wm.edu/site/page/mxtsch/researchtools

APPENDIX D

Teacher Self-Assessment: Teacher Leadership (Adapted)

About this Tool: The teacher leadership competencies in this tool are organized into four domains. Each domain includes several competencies: some are foundational, for teachers who are beginning to think about leadership roles, and others are advanced, for teachers who are already taking on leadership roles. Each competency is divided into several indicators that include possible evidence and look-fors to consider when assigning a rating. Teachers can take this self-assessment to determine how they exhibit these foundational and advanced competencies and identify areas of growth.

Instructions: For each indicator, read the primary indicator language and consider the evidence and look-fors, introduced as "Teacher leaders may demonstrate this by…." These look-fors are not intended to be all-inclusive; rather, they provide a few examples of how you might demonstrate the indicator in your practice. Assign yourself a rating for each indicator.

Domain 1: Culture & Context		
Subdomain 1.1: Developing Positive Relationships & Trust	Indicators	Ratings
	Develop trusting relationships among adults Teacher leaders may demonstrate this by: • Creating a safe environment (e.g., by listening to what teachers have to say and providing encouragement and support) for other teachers to take risks (e.g., to try out new practices) and share their experiences • Modeling vulnerability and apologizing when appropriate to foster authentic, trusting relationships • Developing constructive relationships with teachers and partners	□ Not Evident □ Beginning □ Developing □ Advancing
	Provide and get feedback Teacher leaders may demonstrate this by:	□ Not Evident

	• Asking for feedback from district and school leaders and implementing feedback for self-improvement • Asking for feedback from other teachers and "critical friends" or colleagues. • Providing tactful feedback to other teachers when asked • Establishing feedback mechanisms between colleagues (e.g., one-on-one or with teams through instructional rounds, professional learning community meetings, co-planning sessions, and coaching sessions	□ Beginning □ Developing □ Advancing
	Value diverse opinions Teacher leaders may demonstrate this by • Asking for others to share their views and opinions • Respecting all perspectives • Accepting others' opinions and viewpoints without judgement	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 1.2: Listening Skills	Indicators	Ratings
	Express interest in others Teacher leaders may demonstrate this by • Paraphrasing responses of teachers • Asking clarifying questions of teachers • Asking open-ended questions to teachers	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 1.3: Group Processes, Facilitation, and Coaching Skills	Indicators	Ratings
	Run effective meetings Teacher leaders may demonstrate this by • Using agendas and meeting notes effectively • Using "technology to enhance communication," including presentations, conference calls, video conferencing, online document sharing, and other technology tools • Enacting a variety of "strategies for setting up spaces, materials, and pacing" that increase participant engagement • "Reading" a group to determine when members are engaged, disengaged, excited, tired, or in agreement or disagreement with the presentation	□ Not Evident □ Beginning □ Developing □ Advancing

	Use group processes (the processes that people in groups use to solve a problem or make a decision) effectively Teacher leaders may demonstrate this by • Using meeting protocols effectively • Establishing and enforcing norms; clearly defining and enforcing group roles and responsibilities • Moving a group to task completion • Helping colleagues make decisions in a group setting • Promoting meaningful change within small groups, large groups, and the school	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 1.4: Conflict Resolution and Mediation	Indicators	Rating
	Resolve conflict, between both self and colleague, and mediate between other colleagues Teacher leaders may demonstrate this by • Facilitating difficult conversations • Checking in with teachers involved in conflict resolution • Modeling vulnerability and apologizing when appropriate to foster authentic, trusting relationships • Promoting diplomacy and actively establishing diplomacy as an expectation to alleviate future conflict	□ Not Evident □ Beginning □ Developing □ Advancing
	Mediate diverse viewpoints Teacher leaders may demonstrate this by • Synthesizing and summarizing the opinions of other teachers • Using knowledge and understanding of different backgrounds, ethnicities, cultures, and languages to promote effective interactions among colleagues • Actively acknowledging one's biases and privileges	□ Not Evident □ Beginning □ Developing □ Advancing

Domain 2: Professional Learning & Growth		
Subdomain 2.1: Ongoing Self-Development	Indicators	Ratings
	Ensure continuous improvement of practice Teacher leaders may demonstrate this by • Engaging in a continuous improvement process • Exhibiting/demonstrating a growth mind-set	□ Not Evident □ Beginning □ Developing □ Advancing
	Proactively participate in staff development Teacher leaders may demonstrate this by • Engaging regularly in staff development and sharing learnings with others • Intentionally seeking out and advocating for personalizing professional development for self and sharing learnings with others	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 2.2: Ongoing Self-Reflection	Indicators	Ratings
	Actively engage in and demonstrate ongoing self-reflection Teacher leaders may demonstrate this by • Knowing and acknowledging personal strengths and weaknesses • Being willing to say when they do not know something • Reflecting on work style and preferences to improve self-knowledge and effectiveness • Reflecting on the way actions impact colleagues • Managing personal thoughts, feelings, and actions to achieve goals	□ Not Evident □ Beginning □ Developing □ Advancing
	Ask for feedback Teacher leaders may demonstrate this by • Asking for and implementing feedback from district and school leaders • Asking for and implementing feedback from other teachers • Accepting feedback graciously, even if it includes suggestions for improvement	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 2.3: Understanding Adult Learners	**Understand how adult learners differ from students, focusing on the needs, insights, and skills of adult learners when planning or conducting professional learning activities** Teacher leaders may demonstrate this by	□ Not Evident □ Beginning □ Developing

	• Creating a culture of collegiality with a group of teachers • Add specific research to spell out how adult learners differ from student learners • Read different types of adult learners	□ Advancing
Subdomain 2.4: Facilitating Professional Learning Among Colleagues	**Encourage reflection among colleagues** Teacher leaders may demonstrate this by • Modeling reflection • Strategically including reflection time in professional learning activities	□ Not Evident □ Beginning □ Developing □ Advancing
	Facilitate professional learning Teacher leaders may demonstrate this by • Establishing a trusting climate among colleagues, wherein taking risks and making mistakes is acceptable • Creating engaging professional learning that asks colleagues to actively participate • Identifying and disrupting assumptions of teachers to support student learning • Anticipating, being aware of, and addressing the needs of teachers; making professional development valuable and useful and matching learning from professional development to teacher and school needs • Tailoring professional learning when necessary to help teachers feel the explicit connections to grade, content, and classroom/school contexts • Fostering teacher buy-in by identifying needs and delivering professional learning based on those needs.	□ Not Evident □ Beginning □ Developing □ Advancing
	Differentiate professional learning for adults at different skill levels Teacher leaders may demonstrate this by • Fostering responsibility for the group's learning by all group members	□ Not Evident □ Beginning □ Developing □ Advancing

Domain 3: Instructional Leadership		
Subdomain 3.1: Demonstrating Pedagogical Knowledge	Indicators	Ratings
	Use content knowledge and enact high quality instruction Teacher leaders may demonstrate this by • Being viewed as an effective teacher by other teachers but with room to grow-willing to make mistakes and learn from them • Building credibility with peers as an effective teacher • Demonstrating effective use of pedagogical strategies in the classroom • Effectively implementing teaching skills and pedagogical knowledge of his or her subject area • Promoting instructional strategies that address issues of diversity and equity in the classroom • Ensuring that individual student learning needs remain the central focus of instruction	□ Not Evident □ Beginning □ Developing □ Advancing
	Engage in effective assessment Teacher leaders may demonstrate this by • Understanding various formative and summative assessment methods • Selecting and implementing assessment strategies aligned with the curriculum • Consistently checking for student understanding using multiple formats during classroom instruction. • Using data from students' informal and formal assessment to track student progress • Working with colleagues to use assessment and data findings to promote changes in instructional practices or organizational structures to improve student learning	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 3.2: Beginning Coaching Skills	Indicators	Ratings
	Improve the practice of other teachers Teacher leaders may demonstrate this by	□ Not Evident

	• Opening up their classroom to observation by other teachers to share best practices and model effective instructional strategies for colleagues • Facilitating growth-oriented dialogue about instruction • Expanding colleagues' instructional resources and routines and trying them yourself	□ Beginning □ Developing □ Advancing
Subdomain 3.3: Demonstrating Social and Emotional Competency	Indicators	Ratings
	Create a supportive classroom climate Teacher leaders may demonstrate this by • Cultivating a classroom culture that values student collaboration • Modeling emotionally supportive behavior in the classroom • Reinforcing emotionally supportive behavior exhibited by students	□ Not Evident □ Beginning □ Developing □ Advancing
	Supporting student social and emotional learning Teacher leaders may demonstrate this by • Understanding the social and emotional needs of students (feeling safe and supported at school and experiencing meaningful relationships with adults and peers at school) • Addressing student social and emotional needs, in addition to academic standards, in the classroom.	□ Not Evident □ Beginning □ Developing □ Advancing
	Demonstrate strong classroom organization Teacher leaders may demonstrate this by • Promoting strong student engagement in the classroom • Implementing successful rules and routines in the classroom • Engaging in management techniques that keep students in the classroom and focused on the lesson, not in the office or out of school • Organizing time and resources for maximum effectiveness	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 3.4: Understanding Data & Research	Indicators	Ratings
	Understand how to use data Teacher leaders may demonstrate this by • Showing the ability to analyze both subject matter concepts and pedagogical strategies	□ Not Evident □ Beginning □ Developing

	• Collaborating with colleagues in the design, implementation, scoring, and interpretation of student data to improve educational practice and student learning	□ Advancing
	Understand educational research Teacher leaders may demonstrate this by • Reading and being aware of new educational research	□ Not Evident □ Beginning □ Developing □ Advancing
Subdomain 3.5: Using Data and Research to Improve Practice	Indicators	Ratings
	Apply educational research Teacher leaders may demonstrate this by • Identifying relevant practices from educational research and applying them in the classroom or on the job • Assisting colleagues in accessing and using research in order to select appropriate strategies to inform student learning • Teaching and supporting colleagues in collecting, analyzing, and communicating data from their classrooms to improve teaching and learning	□ Not Evident □ Beginning □ Developing □ Advancing
	Engage in a data reflection cycle Teacher leaders may demonstrate this by • Analyzing data regularly as part of individual reflection on practice • Changing practices based on data analysis • Engaging in and sharing the results of action research conducted alone or collaboratively	□ Not Evident □ Beginning □ Developing □ Advancing
	Use data to inform decision making and help others to use data to make decisions Teacher leaders may demonstrate this by • Facilitating and leading the collection, analysis, and use of classroom- and school-based data to identify opportunities to improve curriculum, instruction,	□ Not Evident □ Beginning □ Developing

	assessment, school organization, and school culture • Engaging in reflective dialog with colleagues based on observation of instruction, student work, and assessment data and helping to make connections to research-based effective practices • Modeling data collection, analysis, and reflection and how they should lead to changes in practice	□ Advancing
Subdomain 3.6: Applying Coaching Skills	Indicators	Ratings
	Provide constructive and actionable feedback Teacher leaders may demonstrate this by • Coaching other teachers in how to improve instruction • Ensuring that feedback provided to other teachers is constructive and actionable	□ Not Evident □ Beginning □ Developing □ Advancing
	Lead conversations that prompt self-reflection Teacher leaders may demonstrate this by • Modeling reflection in conversations and in professional development opportunities • Intentionally building time into professional development opportunities for teachers to reflect on practice	□ Not Evident □ Beginning □ Developing □ Advancing

Domain 4: School Community & Advocacy		
Subdomain 4.1: Supporting and Strengthening the School Community	Indicators	Ratings
	Participate in school initiatives Teacher leaders may demonstrate this by • Serving as an active participant in school initiatives, including school improvement efforts • Expressing interest in leading school improvement efforts	□ Not Evident □ Beginning □ Developing □ Advancing
	Advocate for students Teacher leaders may demonstrate this by • Ensuring that student success is the focus of any conversation among teachers	□ Not Evident □ Beginning

	and leaders about students • Working to ensure that their students receive the necessary services and supports	□ Developing □ Advancing
Subdomain 4.2: Demonstrating Systems Thinking	Indicators	Ratings
	Understand local, regional, and national education trends Teacher leaders may demonstrate this by • Understanding how educational policy is made at the local, state, and national levels • Explaining to other teachers relevant education trends, such as college and career readiness standards or the Every Student Succeeds Act • Explaining to other teachers the impact of relevant district initiatives	□ Not Evident □ Beginning □ Developing □ Advancing

Source: American Institutes for Research. (2017). Teacher self-assessment tool: Teacher leadership. https://gtlcenter.org/sites/default/files/TeacherLeadership_TeacherSelf-Assessment.pdf