ABSTRACT

Kelly Makepeace, SCHOOL TRANSFORMATION: EXAMINING THE IMPLEMENTATION OF PROFESSIONAL LEARNING CYCLES TO INCREASE COLLECTIVE TEACHER EFFICACY IN A RURAL MIDDLE SCHOOL IN NORTH CAROLINA (Under the direction of Dr. Travis Lewis). Department of Educational Leadership, May, 2024.

The state of education is impacted by many variables. Teachers, administration, schools and districts are constantly in a high stakes race to grow students academically. Administration is charged with creating a culture in which teachers are provided the capacity for teachers to grow professionally in order to continue to grow students at a rate which keeps them at or above pace with their peers. Studies indicate that professional development and collective teacher efficacy are linked to increased teacher effectiveness and student achievement. Utilizing Bandura's social cognitive theory to understand human behavior and influences in conjunction with conceptual theories of professional development and learning cycles, a framework for professional learning was developed. This mixed methods action research inquiry sought to discover if an implementation of professional learning cycles would positively impact collective teacher efficacy. Teachers and support staff met weekly and engaged in four 8-week professional learning cycles with targeted instructional focuses. Each week these educators participated in a structured task with the focus of the instructional target. Qualitative and quantitative data was collected through pre- and post-surveys and concluded with a focus group interview. The findings indicated that teachers were positively impacted by participating in the structured learning cycles which provided authentic professional growth relevant to the specific needs of the participants and learners. Increases were also reported in overall collective efficacy. This framework for professional learning was found to be replicable in any instructional setting, and its design allows for targeted school improvement needs to be addressed.

SCHOOL TRANSFORMATION: EXAMINING THE IMPLEMENTATION OF PROFESSIONAL LEARNING CYCLES TO INCREASE COLLECTIVE TEACHER EFFICACY IN A RURAL MIDDLE SCHOOL IN NORTH CAROLINA

A Dissertation
Presented to the Faculty of the Department of Educational Leadership
East Carolina University

In Partial Fulfillment of the Requirements for the Degree
Doctor of Education in Educational Leadership

by
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May, 2024

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DEDICATION

To my Mom and Dad, who have been my greatest role models. I have learned from you that everything in life is earned, and I am so thankful you never allowed me to be anything less than my potential. My dreams saw no bounds because of your beliefs in me. You have encouraged me to take risks and find strengths I could have never found in myself. You have also taught me that failure is just part of the process, and to learn from it, live through it, and there's nothing a good laugh won't heal. Your unwavering support and endless encouragement have shaped me into the person I am today. I am forever grateful for you.

To my husband, Brad who has supported and encouraged me through this journey. You believed in me when I didn't believe in myself. Your patience and understanding over the last 3 years is something I will forever be grateful for. You are my rock, a constant source of strength and inspiration and I am beyond blessed to have you by my side through every step of our journey.

To my children, Shelby, Evan and Aubrey. Thank you for your understanding, patience and grace with me as I struggled with finding a balance with our family's crazy schedules. You 3 are the reason I stuck with it when this goal seemed unachievable. I hope that I serve as a role model of being a lifelong learner, and that there is nothing you cannot achieve if you are willing to work for it. My goal as your mom is to show you that you can accomplish hard things, achieve big goals, and that you are more capable than your wildest dreams. You are my why and what truly matters in life. I am beyond proud to be your mom.

ACKNOWLEDGEMENTS

To my brothers, David and Scott, who never stop achieving. Your paths in life inspire me and I am so proud to be your big sister.

To my favorite co-pilots, Rosalyn and Lauren. You have made this accomplishment possible. I have relied on your encouragement, understanding and friendship more than you'll ever know. Thank you for joining me on this adventure and providing me with just what I needed before I knew I needed it.

To my leader, Dr. Cheeseman, who has played a pivotal role in my growth as an educator and leader. Your ability to help us find our strengths and chase dreams we never knew we had has changed the trajectory of so many lives.

To my chair, Dr. Lewis, who has been the greatest mentor through this journey. Your time, patience, understanding, encouragement, and humor has made this marathon turned sprint a reality. Thank you.

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CHAPTER 1: INTRODUCTION

Academic expectations and accountability remain at the forefront of conversations surrounding education across the United States. School funding, school choice, and school laws governing accountability measures have been topics that once may have only been discussed among educators, however, are now easily accessible and contentious issues of discussion across the country. Accountability measures such as student proficiency, student growth, graduation rates, suspensions, absenteeism, and teacher qualifications drive federal funding allotments, school designations, and ultimately the way a community views a school. Therefore, many education leaders across the country are urgently working to improve their educational systems and outcomes to ensure the doors to their schools stay open.

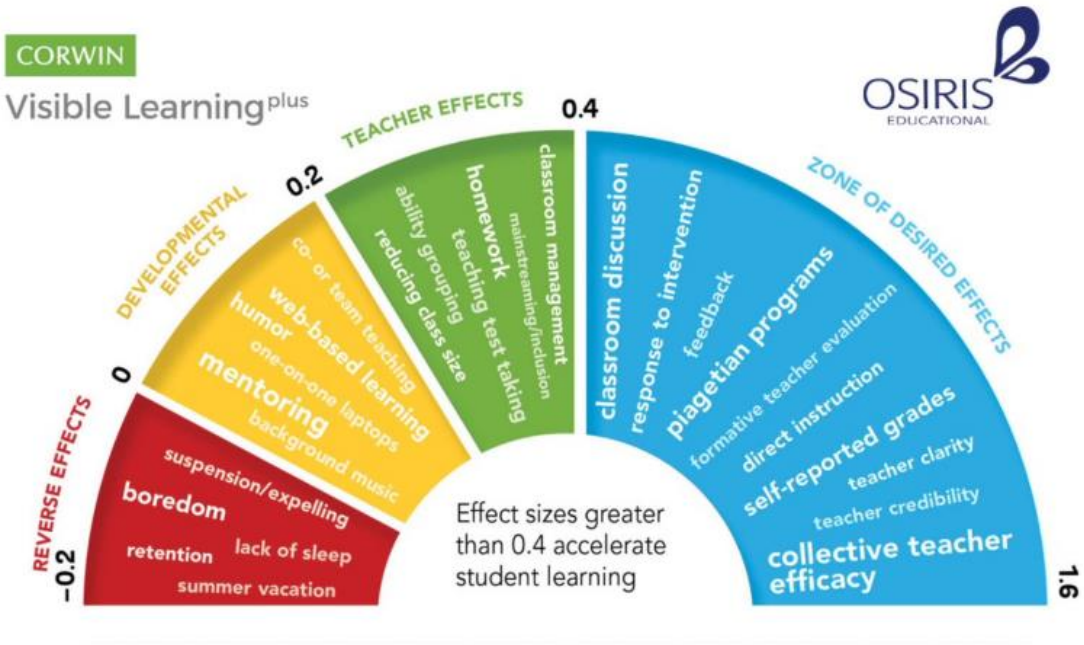
The Every Student Succeeds Act (ESSA) is the federal K-12 education law of the United States. ESSA was signed into law in 2015 and replaced the previous education law called "No Child Left Behind." ESSA extended more flexibility to States in education and outlined expectations of transparency for parents and for communities. ESSA also requires every state to: measure performance in reading, math, and science; develop a concise "State Report Card" providing data on test performance, graduation rates, suspensions, absenteeism, and teacher qualifications; increase transparency on funding; and publish reports listing the lowest performing 5% of schools and the support plans for improvement (OESE, 2020).

In North Carolina, student proficiency is measured with School Performance Grades (SPG) ranging from A to F, which were first assigned to schools during the 2013-2014 school year (Nordstrom & Tillitski, 2021). North Carolina's SPG formula is based on 80% achievement and 20% growth on the End of Grade (EOG) or End of Credit (EOC) assessments. Achievement is a point-in-time measure that evaluates how well students perform against a standard. In

contrast progress is measured by how much "growth" students make over time, typically from one year to the next. These measures are used to identify schools as "low-performing" or "continually low-performing" and require public reporting of deficiencies and mandatory improvement plans (Nordstrom & Tillitski, 2021). All schools are expected to produce results with all students, regardless of background, income, race, or identification; however, the state's grading system has uncovered racial and socioeconomic inequalities (Nordstrom & Tillitski, 2021). With the pressure of the accountability models within ESSA and SPGs, school districts have been hurriedly seeking new curricula, professional development, and the most current research-based instructional strategies in the hopes of improving student performance (Stapp, 2018).

While school and district leaders began implementing new practices to meet the latest accountability expectations, researchers were busy studying what practices yielded the greatest results in relation to student achievement. John Hattie, who has systematically studied "What Works Best in Education?" for over 25 years, identified Collective Teacher Efficacy (CTE) as the number one influence among 195 factors related to student achievement (Hattie, 2016). CTE tops the list reporting an effect size of 1.57, with the average effect size of all interventions studied being 0.40 (see Figure 1). Effect size is a quantitative measure of the magnitude of the experimental effect. The larger the effect size the stronger the relationship between two variables (Hattie, 2016).

Collective teacher efficacy (CTE) refers to the perceptions and judgments of a group of educators regarding their ability to positively influence student outcomes (Bandura, 1997). Hattie's (2016) meta-analysis including over 1,500 studies indicates CTE is more than three times more influential and predictive of academic achievement than socioeconomic status,



Note. From Corwin Visible Learning Plus & Corwin & Osiris Educational, 2019.

Figure 1. Visible learning barometer of influences.

concentration, and more than twice as influential as prior achievement. Research also indicates that there is a significant relationship between collective teacher efficacy and job satisfaction of teachers (Klassen et al., 2010). Collective teacher efficacy leads to the commitment of teachers towards common objectives, the creation of high professional expectations, and acceptance of responsibility for their students' academic outcomes (Tschannen-Moran & Barr, 2004). When teachers feel efficacious about their collective capability to affect the quality of teaching and learning at school, there is a subsequent improvement in academic outcomes of their students (Donohoo, 2017).

Not all schools contain a high level of collective teacher efficacy. This means students are likely not reaching their academic achievement potential while teachers are less likely to experience job satisfaction, which leads to attrition (Klassen et al., 2010). Donohoo (2017) states, "Fostering collective teacher efficacy should be at the forefront of a planned strategic effort in all schools and school districts" (p. 1). Recent studies suggest that understanding the determinants and factors that encourage CTE is helpful in identifying areas of strength as well as opportunities for improvement (Donohoo & Katz, 2020). Donohoo and Katz (2020) identified the following as antecedents to CTE:

- advanced teacher influence (empowered teachers)
- assessment as feedback (embedded reflective practices)
- cohesive teacher knowledge
- goal consensus
- responsive (supportive) leadership

Given the research surrounding the effectiveness of CTE on student achievement, as well as the research of the determinants that produce a school culture that yields empowered, high

achieving teachers, school leadership may benefit from establishing a framework within their schools that yields the antecedents to CTE referred to by Donohoo and Katz (2020). This chapter outlines the design of this inquiry that will attempt to establish a culture of collective teacher efficacy through a framework of professional learning cycles, a model for authentic continuous professional learning and improvement. This chapter also describes the background and context of the inquiry, and the demographics of the school site in which the inquiry takes place. The guiding questions and the inquiry process utilized are framed and detailed. Finally, this chapter also discusses the significance of this inquiry as it relates to advancing equity and future educational practices, as well as the theoretical foundation and conceptual frameworks that support this inquiry.

Background of Focus of Practice

Since 2014, Tar River Middle School, a pseudonym, has earned a School Performance Grade of "D" in school years 2013-2014 and 2015-2016. The school was designated a "C" school during the 2016-2017, 2017-2018 and 2018-2019. Despite earning a "C", the school only met growth during the 2017-2018 school year according to North Carolina's accountability model (North Carolina School Report Card, 2022). Due to the COVID-19 pandemic, School Performance Grades were not calculated during the 2019-2020 or 2020-2021. For the 2020-21 school year, the U.S. Department of Education and the North Carolina General Assembly (Session Law 2021-130) waived requirements for reporting the school-level accountability model and School Performance Grades; including achievement and growth. As a condition of the federal waiver, test scores were reported in the NC School Report Cards (North Carolina School Report Card, 2022). Additionally, individual and school growth were reported to each Local Education Agency (LEA), or school district.

According to the North Carolina School Report Card (2022), Tar River Middle School reported overall school proficiency in Math as 52%, 40% in Reading, and 56% in Science, giving the school an overall performance grade of 50. Educator Effectiveness Growth for the 2020-2021 school year was reported in the Educator Value-Added Assessment System (EVAAS) and measured a growth index of -7.04 (see Figure 2). The index value is the growth measure divided by its standard error, and it provides a signal as to whether the growth estimate is significantly different from the expected growth. The index value also standardizes growth measures across different models, subjects, grades and/or years for a more equitable comparison than the growth measure alone (SAS EVAAS, 2022). The calculated negative growth measure for Tar River Middle School indicates that students are not meeting expected growth and are significantly below the average standard index growth measure. According to SAS EVAAS (2022), in order to show evidence that the school's students made growth as expected, the school's index is between -2 and 2. The current data at Tar River Middle School reveals an urgent need for transformation of systems, structures, and personnel to change the trajectory of the school.

For disclosure of my positionality, at the beginning of this inquiry, I was assigned to be the new principal of Tar River Middle School. The administrative team met with each individual staff member in an informal interview prior to the start of this inquiry in an effort to become more informed about the school including identifying any trends and understanding the current culture. Through conversations with stakeholders, it was evident the school lacked an established structure of professional learning communities or framework for professional learning that encourages teachers to collaborate, analyze data, identify instructional goals, or create a shared vision. According to the 2022 North Carolina Teacher Working Conditions (see

Year	Achievement Score	Performance Grade	Growth Index	Growth Status
2016-2017	62	C	-2.16	Not Met
2017-2018	66	C	-1.02	Met
2018-2019	57	C	-5.82	Not Met
2021-2022	50	D	-7.04	Not Met

Note. Data retrieved from North Carolina School Report Cards.

Figure 2. Tar River Middle School performance data.

	State	District	School
a. Sufficient resources are available for professional development* in my school.	78.80%	83.10%	58.62%
b. An appropriate amount of time is provided for professional development.	71.24%	78.87%	51.72%
c. Professional development offerings are data driven.	67.80%	77.46%	44.83%
d. Professional learning opportunities are aligned with the school's improvement plan.	74.53%	86.32%	72.41%
e. Professional development is differentiated to meet the individual needs of teachers.*	56.69%	61.97%	34.48%
f. Professional development deepens teachers' content knowledge.	72.34%	78.87%	79.31%
g. Teachers have sufficient training to fully utilize instructional technology.	73.13%	73.04%	62.07%
h. Teachers are encouraged to reflect on their own practice.	90.02%	95.17%	89.66%
i. In this school, follow up is provided from professional development.	66.04%	77.87%	48.28%
j. Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.	72.20%	82.70%	62.07%
k. Professional development is evaluated and results are communicated to teachers.	56.54%	68.61%	48.28%
l. Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs.	78.10%	86.32%	72.41%
m. Professional development enhances teachers' abilities to improve student learning.	81.58%	88.73%	79.31%

Figure 3. NC Teacher Working Conditions Survey: Tar River Middle School professional learning opportunities.

the teachers at Tar River Middle School fall well below the state and district average for professional development opportunities, resources, and meeting teachers' professional needs.

As I connected the observational data, informal interview data, and quantitative measurers of data, it became evident that teachers feel as if they are isolated and unsupported in their professional learning, and that there is an urgent need for a research-based structure of professional development that builds collaboration and shared leadership to increase collective teacher efficacy and, ultimately, student achievement.

Context of Inquiry

The inquiry took place at Tar River Middle School (a pseudonym) located in Southeast County, North Carolina (also a pseudonym). Tar River Middle School (TRMS) which consists of a unique grade span of four grade levels, fifth through eighth grade, with 369 students and 33 certified staff members as of September 2022 (see Table 1). The school is designated a Title 1 school, which means at least 40% of the children it serves come from low-income households. Title 1 is a federally funded education program that offers federal assistance to educationally and economically disadvantaged children to help ensure they receive an equitable, high-quality education (U.S. Department of Education [USDOE], 2018). Of the student population at TRMS, 47% are considered Economically Disadvantaged (ED). Economically Disadvantaged students are those that qualify for free meals or reduced-price meals from school based on the amount of annual family income under the National School Lunch and Child Nutrition Program (Kids Count, 2020). Tar River Middle School is settled in a small rural town of just over 1,000 residents. It has a median household income of $26,181with a 21.6% poverty rate (North Carolina Census Bureau, 2021).

Table 1

Tar River Middle School Demographics

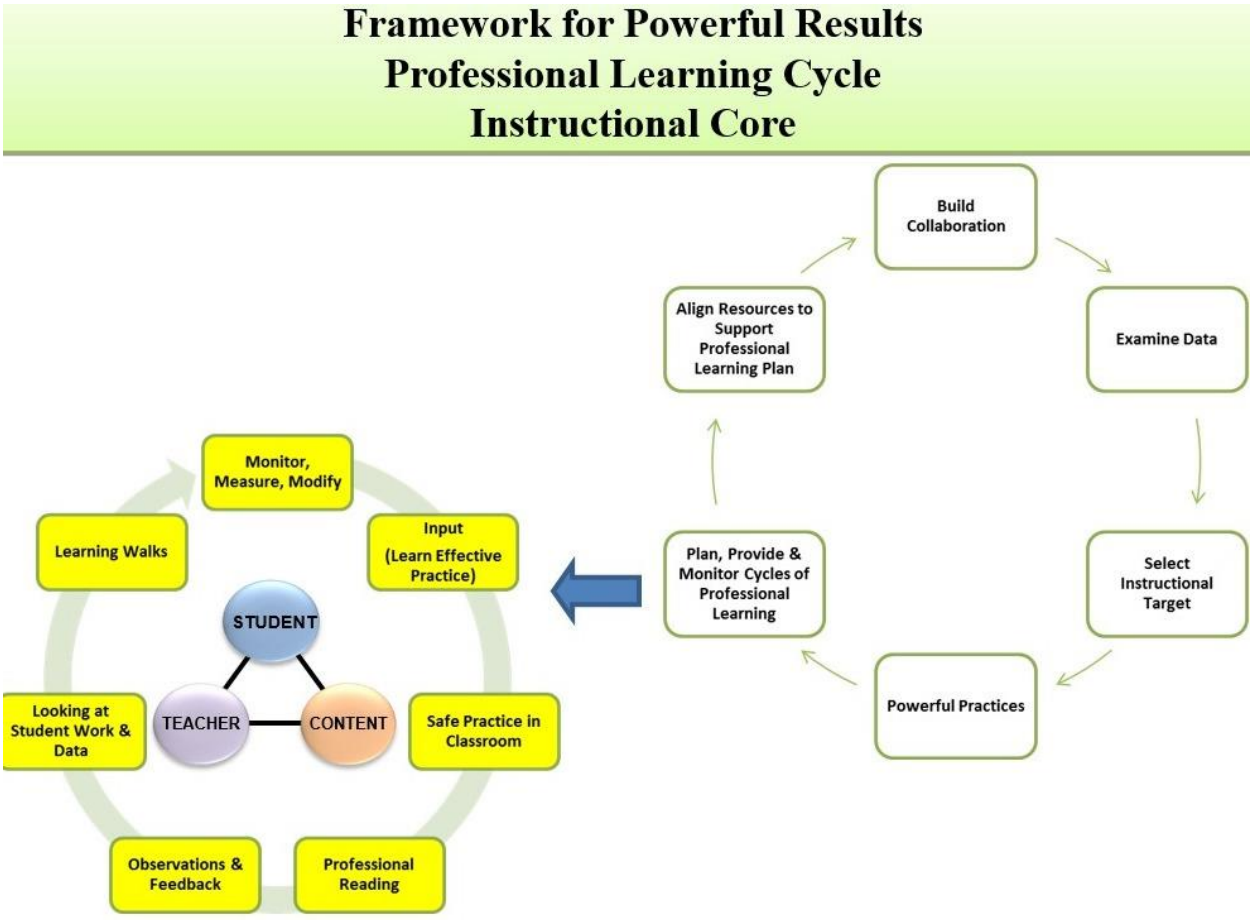
Demographic	# of Students
Enrollment	
Grade 5	89
Grade 6	89
Grade 7	90
Grade 8	101
Total	369
Ethnicity and Race	
American Indian or Alaska Native	1
Asian	1
Black	96
Native Hawaiian/Pacific Islander	1
White	181
Hispanic	58
Two or More	31
Subgroups	
AIG	70
EDS	172
ELS	27
SWD	42

Note. Data retrieved in 2022 from PowerSchool Data Base, which is our real time data base with up-to-date demographic information.

Over the past five years, student growth and achievement has steadily declined from EVAAS growth indexes of -2.18 in 2017, to -5.82 in 2019 to -7.04 in 2022, and only meeting growth once since 2014. Due to the COVID-19 pandemic, accountability measures were not reported in 2020 or 2021. According to the Department of Public Instruction, Tar River Middle's Students with Disabilities (SWD) subgroup received an "F" for the past three reported years and has been consistently underperforming, designating the school as a Targeted Support and Improvement (TSI) with Consistently Underperforming (CU) subgroup school. As required by the Every Student Succeeds Act (ESSA), North Carolina must identify schools with low performance on various measures for the purpose of providing additional support. A school is designated as a TSI-CU school if the same subgroup receives a grade of "F" for three years in a row (North Carolina Department of Public Instruction [NCDPI], 2021).

In recent years, there has been a high number of administrative turnovers at Tar River Middle, while teacher turnover has remained relatively low. Of the total staff at the time this inquiry was conducted, 75% have 10 or more years of experience. This data is important to the context of the professional learning structure within the school as it can be argued that due to the inconsistent leadership, a capacity for norms and expectations around teaching and learning has not been thoroughly established.

In 2019, the Superintendent of Southeastern School District outlined a framework for school transformation. This consisted of building the capacity of the School Improvement Team, the governing body within a school representing all stakeholder groups with the goal of improving student performance. The Superintendent provided a framework and model for building leaders to implement professional learning cycles around the instructional core. The framework represented in Figure 4 is an adaptation of the work of Jeff Nelsen and Amalia



Note. (Nelsen & Cudeiro, 2009).

Figure 4. Framework for powerful results professional learning cycle and instructional core.

Cudeiro (2009) and the Targeted Leadership Consulting (TLC), a national education consulting organization. This served as the premise of the implementation of professional learning cycles within each of the fourteen schools which make up Southeastern School District. Each school is in a different stage in their implementation, with Tar River Middle at the very inception. As school year 2021-2022 served as a baseline for the inquiry, implementation of the inquiry began at the start of during the 2022-2023 school year.

Statement of Focus of Practice

The focus of this inquiry was to provide teachers within a rural middle school in school transformation with the skillset to engage each other in action research and onsite professional development while developing a culture of shared leadership and collective teacher efficacy. Through the leadership of administration and the School Improvement Team, the staff learned how to identify areas of weakness and implement a learning cycle to improve problems of practice to enhance student achievement. This type of professional development involved all stakeholders with the same goals: to organically grow teacher leadership and create a collective teacher efficacy among the staff. Research shows that when teachers share a belief through their collective actions, they can positively influence student outcomes and, ultimately, student achievement increases (Bandura, 1993; Eells, 2011; Hattie, 2016; Hoy et al., 2002; Sandoval et al., 2011). Bandura (1993) generated interest in this theory as he demonstrated that the effect of a perceived collective efficacy on student achievement was stronger than the link between socio-economic status and student achievement.

Adams and Forsyth (2006) noted, “at the organizational level, perceived collective efficacy reflects a teaching faculty’s belief in its collective ability to carry out teaching tasks that promote student achievement” (p. 626). Teachers with high collective efficacy are motivated to

act and achieve challenging goals and to persist until they are successful (Hoy, 2012; Hoy et al., 2006, 2002). Thus, the higher a group of teachers' collective efficacy, the more motivated they will be to act, take risks and achieve challenging innovation goals (Schwabsky et al., 2020). With this theory at the center of this inquiry, teachers will participate in and lead strategically designed learning cycles to improve teaching strategies, establish a collective teacher efficacy, and ultimately improve student achievement.

Focus of Practice Guiding Questions

This inquiry examined the implementation of a professional learning cycle framework for continuous improvement to increase teachers' self-efficacy and overall collective teacher efficacy. The following questions helped to guide the inquiry:

1. How does the implementation of professional learning cycles impact efficacy at Tar River Middle School?
    a. How does the implementation of professional learning cycles impact self-efficacy?
    b. How does the implementation of professional learning cycles impact collective teacher efficacy at Tar River Middle School?
2. What are teachers' perceptions of the implementation of the professional learning cycle?

The data and feedback collected from this inquiry were used to identify the resources, strategies, and supports necessary to improve collective teacher efficacy. Additionally, the data determined if there was a relationship between professional learning cycles and perceived collective teacher efficacy.

Overview of Inquiry

To answer the guiding questions of this inquiry and understand the relationships between professional development, teacher efficacy and collective teacher efficacy, I engaged in a mixed-methods action research design following the Plan-Do-Study-Act Model of Improvement (Langley et al., 2009). As the scholarly practitioner leading the inquiry, I conducted early, informal interviews prior to the start of the school year to learn the background and culture of the school. A pilot study was conducted to ensure the data collection instrumentation planned would align with the guiding questions of the inquiry. This inquiry consisted of three phases of action research that included: the administration of a pilot study and pre-implementation survey, four professional learning cycles with embedded professional development, and data collection including individual teacher interviews, post-implementation surveys and student achievement data measures to provide. This combination of qualitative and quantitative data collected was examined and analyzed in collaboration with inquiry partners and triangulated to support results and related findings.

Collaborative Inquiry Partners

Providing ongoing professional development was a task for the entire school community. A culture and mindset shift of isolated professional development to ongoing professional development for continuous learning required a number of stakeholders and partners to be involved in this practice. In order to provide professional development within our own school community, I collaborated with the following: school improvement team members, teachers, assistant principals, intervention coaches, district coaches, and administration and staff of other middle schools within the district.

In order to successfully implement any initiative, staff buy-in is critical. This effort began with the heart of the school, the School Improvement Team. The School Improvement Team consisted of teachers, staff, and parent leaders who each were elected by their respective team to represent them in this capacity. Typically, they are a trusted peer to whom staff and parents report to for suggestions and guidance. These leaders served as the direct link between administration, staff, and families. It was critical for the collaborative inquiry partners and I to build the capacity of this group of leaders to maintain a culture of positive growth mindsets and ensure adult learning becomes as important as student learning.

Staff within the school who do not serve on the School Improvement Team were also called on to demonstrate leadership as the school takes on a new culture of learning. They were required to take part in professional development, participate in targeted learning walks, engage in reflection, and provide feedback to peers and administration. Some also provided professional development in an area of strength or opened their classroom for teacher observations.

Assistant principals, instructional coaches, and district coaches were called to lead and monitor the implementation of the professional learning cycles. Instructional Coaches and District Coaches worked hand in hand with administration to improve the quality of teaching and assist with teachers' professional learning. They worked in teams and with individuals to serve as mentors and support the teachers' development as it related to the school improvement goals. These members of the team were critical partners who helped guide School Improvement Team members and staff and kept the focus of practice at the forefront while providing support throughout each cycle of learning.

Theoretical Foundation and Conceptual Framework

The theoretical foundation of this inquiry includes the Social Cognitive Theory (Bandura, 1986), Self-Efficacy Theory (Bandura, 1977) and Collective Teacher Efficacy theory coined by Bandura in 1997. These theories study human behavior and the influences that affect them. These theories are important to apply to this inquiry due to the natural phenomenon of human behavior as individuals and in group settings. Teachers are influenced by many factors, and the implication of these theories within the implementation of the inquiry may help create a positive environment that promotes teacher and student growth and achievement.

The conceptual frameworks within this inquiry will serve as a design to implement professional learning cycles. These research-based frameworks have resulted in a positive impact on student achievement and professional growth results (DeWitt, 2018; Donohoo, 2017; Joyce & Showers, 2002; Knight, 2007; Nelsen & Cudeiro, 2009; Tobias, 2007). Understanding theories of human behavior and motivations in congruence with engaging in research-based learning cycles is the foundation of this inquiry. The integration of these frameworks and the implications for this inquiry will be discussed in detail in Chapter 2.

Definitions of Key Terms

The following terms will be used throughout this inquiry and are defined as follows:

Collaboration - "A systematic process in which people work together, interdependently, to analyze and impact professional practice in order to improve individual and collective results" (DuFour et al., 2008, p. 464).

Collective Teacher Efficacy (CTE) - the perceptions and judgments of a group of educators regarding their ability to positively influence student outcomes (Bandura, 1997).

Economically Disadvantaged Student (EDS) - any student identified by a Public School Unit (PSU), meeting the criteria of Directly Certified, Categorically Eligible, or a method consistent with state or federal guidance for financial assistance regardless of participation or eligibility in the National School Lunch Program (NSLP) (NCDPI, 2022).

Every Student Succeeds Act (ESSA) - the latest reauthorization of the 1965 Elementary and Secondary Education Act (ESEA) and was approved by the U.S. Congress and signed into law in December 2015. ESSA reauthorizes the nation's national education law and longstanding commitment to equal opportunity for all students and replaces the No Child Left Behind Act of 2001 (NCDPI, 2022).

End-of-Course (EOC) Tests - designed to access the competencies defined by the Standard Course of Study for three mandated courses: NC Math I, English II and Biology. Tests are taken during the last two weeks of school for students on a traditional calendar and the last week of the course for students on a block schedule (NCDPI, 2022).

End-of-Grade (EOG) Tests - in English language arts/reading and mathematics (grades 3-8) and science (grades 5 and 8) that are taken by students during the last ten days of the school year (NCDPI, 2022).

Education Value Added Assessment System (EVAAS) - a customized software system available to all North Carolina school districts that provides diagnostic reports quickly to district and school staff. EVAAS tools provide a precise measurement of student progress over time and a diagnosis of opportunities for growth that help to identify which students are at risk for under-achievement (NCDPI, 2022).

No Child Left Behind (NCLB) – legislation that grew out of concern that the American education system was no longer internationally competitive—significantly increased the federal

role in holding schools responsible for the academic progress of all students. And it put a special focus on ensuring that states and schools boost the performance of certain groups of students, such as English-language learners, students in special education, and poor and minority children, whose achievement, on average, trails their peers (Klein, 2015).

Plan-Do-Study-Act (PDSA) Cycle - an iterative approach to quality improvement in your practice (Langley et al., 2009).

Professional Development (PD) - A comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement (Showers et al., 1987).

Professional Learning Community (PLC) - a continuous process of educators working together "in recurring cycles of collective inquiry and action research to achieve better results for the students they serve. PLCs operate under the assumption that the key to improved learning for students is continuous job-embedded learning for educators" (DuFour et al., 2016, p. 10).

Professional Learning Cycle - A framework to continuously and intentionally refine a method for improving outcomes. Educators begin by using data to identify a problem, then select a research-based approach to address that problem. Next, they test the approach, collect, and examine new data, reflect on the effectiveness of the approach, consider adjustments, and implement again (Langley et al., 2009).

School Improvement Team (SIT) - the principal of each school, representatives of the assistant principals, instructional personnel, instructional support personnel, and teacher assistants assigned to the school building, and parents of children enrolled in the school shall constitute a school improvement team to develop a school improvement plan to improve student performance (NCDPI, 2022).

Social Cognitive Theory - Once known as Social Learning Theory (Bandura, 1977), this theory indicates that people are capable of exercising influence over what they do and contribute to what happens to them (Bandura, 1986; LaMorte, 2019).

School Performance Grades (SPG) - awarded to schools as defined by G.S.§115C-83.15. A-F letter grades are calculated using achievement, growth, and performance measures.

Teacher Self-Efficacy - Teacher self-efficacy is the belief in one's own capabilities to positively impact student achievement (Nordick et al., 2019).

Title 1 - the largest federal education funding program for schools. Its aim is to help students who are behind academically or at risk of falling behind. School funding is based on the number of low-income children, generally those eligible for the free and reduced-price lunch program (NCDPI, 2022).

Targeted School Improvement (TSI) - schools who have a subgroup who achieve a letter grade of 'F' for the most recent and previous 2 years (NCDPI, 2018).

Teacher Working Conditions (TWC) [Survey] - biennial survey of all North Carolina public schools' licensed staff, the TWC survey provides educators with an opportunity to express their perceptions about working conditions at their schools (NCDPI, 2022).

Assumptions

For the purpose of this inquiry, it was assumed that teachers lacked appropriate instructional strategies to engage and grow their students. Due to the relatively low enrollment of the school, each teacher served as the only instructor in the grade and content area, therefore leaving them with no one to collaborate or plan with. As such, it was assumed that there is a culture of isolation with little to no collaboration or collective efficacy. It is also assumed that the steady decline in student growth and proficiency has been the result of the barriers due to the

nature of the size of the school, isolated teachers with little intentional collaborative professional learning.

This inquiry assumed that teachers are willing to learn and grow as professionals. Without a minimal growth mindset, this inquiry would have likely faced resistance, resulting in unfavorable outcomes. Finally, it was assumed that with buy-in from the staff, a collective teacher efficacy would be established through the collaboration of this work.

Scope and Delimitations

The inquiry was designed to measure the effectiveness of professional learning cycles on improving student achievement and its impact on collective teacher efficacy. All certified teachers at Tar River Middle School were engaged participants in the implementation of the learning cycles throughout the year. The teachers engaged in weekly professional learning communities (PLCs) to evaluate data, share instructional strategies, discuss professional reading, and analyze student work which are all practices within the professional learning cycle. PLCs were facilitated by a coach, administrator or teacher who provided a safe, transparent environment where teachers were equipped with the support to ask questions, provide critical feedback, and hold each other accountable for student learning. Due to the variables in staff, leadership, culture, experiences, and implementation, the results are delimited to TRMS and may not be applicable to other schools.

Limitations

As the scholarly practitioner leading this inquiry, I was in my first year as principal at Tar River Middle School. Along with myself, both assistant principals were new to the school. As such, the first potential limitation was a lack of trust from the staff for the new administration. As with any relationship, trust takes time to establish, therefore it may take time for the staff to be

completely engaged in the professional development that will drive this inquiry. Additionally, there was a potential that teachers felt less inclined to be active and truthful throughout this process as I also served as their direct supervisor. I mitigated this limitation by employing a non-staff, non-biased interviewer to help ensure the anonymity of the participants throughout the data collection process. I worked to build relationships and remain objective and unbiased throughout the course of the inquiry and kept both teacher growth and my own personal leadership growth at the forefront.

Significance of Inquiry

The purpose of this inquiry was to measure the effectiveness of the implementation of professional learning cycles on collective teacher efficacy and its impact on student achievement. This inquiry will be implemented at Tar River Middle School, currently a school showing declining academic achievement and growth. This school does not have a current formal structure for professional learning to take place and does not have active professional learning communities.

As collective teacher efficacy has been studied, there have been strong findings as to the impacts within a school: deeper implementation of school improvement strategies, increased teacher leadership, high expectations, a strong focus on academic pursuits, greater risk taking, and a receptiveness to new ideas on the part of educators (Donohoo, 2018). However, there is limited research that help us understand the determinants of collective teacher efficacy and how this can help school leaders and teachers to shape this important shared perception more accurately. According to Bandura's (1997) social cognitive theory, collective teacher efficacy, defined as the perception of teachers as part of the teaching staff to which they belong, could positively affect students' outcomes. Belief in collective efficacy affects the aspirations of the

group, the level of persistence of its members, and the resilience of the group when faced with difficulties (Bandura, 2000). If the establishment of intentional, targeted professional learning cycles and learning walks increase collective teacher efficacy and improves student achievement, this inquiry could be generalizable to other turnaround schools, rural schools, and schools in transformation seeking urgent results.

Advancing Equity and Social Justice

This inquiry took place in a rural Title 1 school with high poverty, high administrative turnover, and declining student achievement and growth. The school has had declining enrollment with many families choosing to attend private schools or transfer to other middle schools in the district over the past five years. This exodus not only impacts the families with school-age children, but it also affects the entire community. In a rural town, the community school is a source of pride and sentiment, the loss of which can devastate the vitality of the community. “The relationship between rural schools and communities are intertwined and inextricable. These schools are the embodiment of permanence for many, those who choose to stay as an integral part of their community” (Whaland, 2020, p. 1).

Many underperforming schools serve students from minority and socio-economically disadvantaged backgrounds (Payne, 2008). These deficits can transfer throughout the educational experience and can include lower standardized test scores, high school completion, and lower rates of college attendance (Children’s Defense Fund, 2017). While socio-economic status may considerably impact a child’s life, schools can mitigate this impact by simply changing their beliefs. Collective teacher efficacy is the collective belief among the staff and their ability to positively affect students (Goddard & Skrla, 2006; Hattie, 2016). The establishment of collective teacher efficacy has been shown to be a powerful tool for overcoming the challenges associated

with low socio-economic status (Bandura, 1993; Goddard et al., 2000; Hattie, 2015). The implementation of powerful professional development practices with a focus on collective teacher efficacy provided attempted to mitigate the inequities within the educational system and provide the students at Tar River Middle School with the same learning opportunities as those students from more affluent parts of the state with greater resources by equipping teachers with the skills and confidence to provide a sound instruction.

Advances in Practice

The findings from this inquiry may be beneficial at the school and district level, in schools in transformation, and schools that are experiencing a decrease in growth, achievement, teacher retention. This inquiry provides a system and structure for professional learning that could improve overall climate, teacher efficacy, collective teacher efficacy and the implications on student achievement. The findings of this inquiry could be valuable to schools across the country with varying economic means as this practice is not tied to fiscal means. Schools and school districts can implement the approach outlined within this study with a minimal budget. If the outcomes of the inquiry indicated a positive impact on teachers and students such as an increase in climate and culture, increased sense of efficacy and increased student achievement measures, this practice could be replicated at other schools that are experiencing a decline in achievement, growth, retention or overall climate and culture.

Summary

Professional development for educators is not only a requirement to maintain licensure status, but also one of the keys to improving the quality of schools. As a result, governments worldwide invest billions in teacher professional development annually with the intention of enhancing teachers' knowledge and practice (Birman et al. 2000; Bowe & Gore, 2017).

However, few studies have shown rigorous evidence of the impact of professional development on teachers and their practice, or most importantly, student outcomes (Gore et al., 2017; Hill et al., 2013; Wayne et al., 2008). Teachers experience a vast range of activities and interactions that can increase their knowledge and skills, improve their teaching practice, and contribute to their personal, social, and emotional growth (Cohen & Barnes, 1993) while their professional development comes in forms of formal and informal structures such as workshops and conferences to hallway conversations and peer observations. Within recent years, more emphasis has been placed on professional learning that is less isolated and based on classroom practice and involves teachers in professional learning communities (Borko et al., 2010) while incorporating elements such as the provision of coaches and external support, modeling of effective practice and ensuring opportunities for feedback and reflection (Darling-Hammond et al., 2017; Gore & Rosser, 2022).

This action research inquiry sought to integrate the latest research on professional learning and Hattie's (2016) findings on collective teacher efficacy, which has been identified as the primary influence related to student achievement to improve teacher and student outcomes. The next chapter, Chapter 2, will expand on the research behind the theoretical foundation and conceptual frameworks that establish the integrative model of learning cycles for this study. The chapter will explore the literature around professional development, professional learning communities, and the theories that support adult learning and behaviors. The concepts of teacher behaviors, beliefs, and efficacy will serve as support for the design of the learning cycles to be implemented in the study. Chapter 3 will explore the methods used to conduct this study, while Chapters 4 detail the results. Chapter 5 will discuss the findings of the study, their implications, and recommendations for practice and future research.

CHAPTER 2: REVIEW OF LITERATURE

Studies indicate that professional development and collective teacher efficacy (CTE) are linked to increased teacher effectiveness and student achievement (DeWitt, 2018; Donohoo, 2017, 2018; DuFour et al., 2016; Eells, 2011; Hattie, 2016; Hoy, 2012; Hoy et al., 2006, 2002; Joyce & Showers, 2002; Knight, 2007; Nelsen & Cudeiro, 2009; Sandoval et al., 2011; Schwabsky et al., 2020; Tobias, 2007). High-quality, relevant professional development for teachers, such as Professional Learning Cycles within a Professional Learning Community (PLC), is essential for fostering increased self-efficacy, CTE and overall improved student outcomes (DuFour et al., 2016; Thornton et al., 2020). This chapter examines the literature surrounding CTE, the theory now identified as the number one influence related to student achievement. Four theoretical frameworks exploring human behaviors are examined: Social Cognitive Theory (Bandura, 1986), Self-Efficacy Theory (Bandura, 1977), Teacher-Efficacy (Bandura, 1986, 1997) and Collective Teacher Efficacy Theory (Bandura, 1997). Additionally, four professional learning cycles of continuous improvement conceptual frameworks were researched: The Framework (Nelsen & Cudeiro, 2009), Professional Learning Cycle (Nelsen & Cudeiro, 2009), Professional Teaching and Learning Cycle (PTLC) (Tobias, 2007), and Collective Teacher Efficacy Framework (Dewitt, 2018). These theories and conceptual frameworks served as the foundation of the Integrative Model of Professional Learning and Collective Teacher Efficacy model applied as the framework in this action research inquiry.

This chapter will also explore the history of Professional Learning Communities (PLCs), the evolving development of PLCs among educators, the progression from PLCs to ongoing Professional Learning Cycles, and how these professional learning opportunities impact collective teacher efficacy and student achievement.

Theoretical Framework

The theoretical frameworks outlined in this study include the Social Cognitive Theory (Bandura, 1986), Self-Efficacy Theory (Bandura, 1977) and Collective Teacher Efficacy theory coined by Bandura in 1997. These theories study human behavior and the influences that affect them. These theories are important to consider in the study due to the natural phenomenon of human behavior as individuals and in group settings. Teachers are influenced by many factors, and the implication of the theories within the implementation of the inquiry may help create a positive environment that promotes teacher and student growth and achievement.

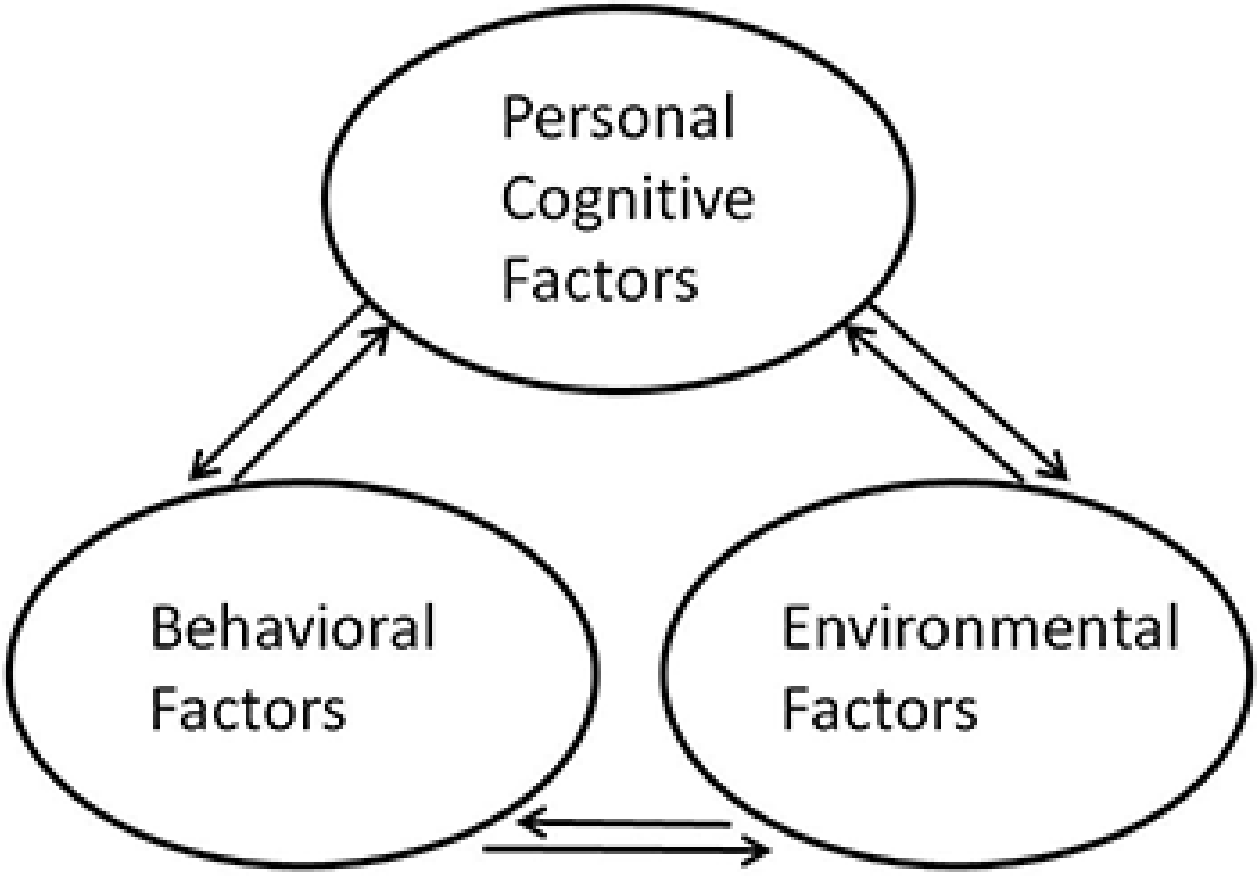
Social Cognitive Theory

Social Cognitive Theory, once known as Social Learning Theory (Bandura, 1977) believes that people are capable of exercising influence over what they do and contribute to what happens to them. Social Cognitive Theory considers the unique way in which individuals acquire and maintain behavior, while also considering the social environment in which individuals perform the behavior. The theory considers ones past experiences factoring into whether behavioral action will occur (Bandura, 1986; LaMorte, 2019).

According to Bandura (1986), individuals operate within an interdependent causal structure involving triadic reciprocal causation of Personal Factors, Behavioral Factors and Environmental Factors, (Bandura, 1986). These three determinants critically impact what we believe about ourselves, the choices we make and the actions we take (see Figure 5).

Self-Efficacy Theory

Self-Efficacy is a person's particular set of beliefs that determine how well one can execute a plan of action in prospective situations (Bandura, 1977). Self-Efficacy is hypothesized to affect one's choice of activities. A person who has a low sense of self-efficacy for



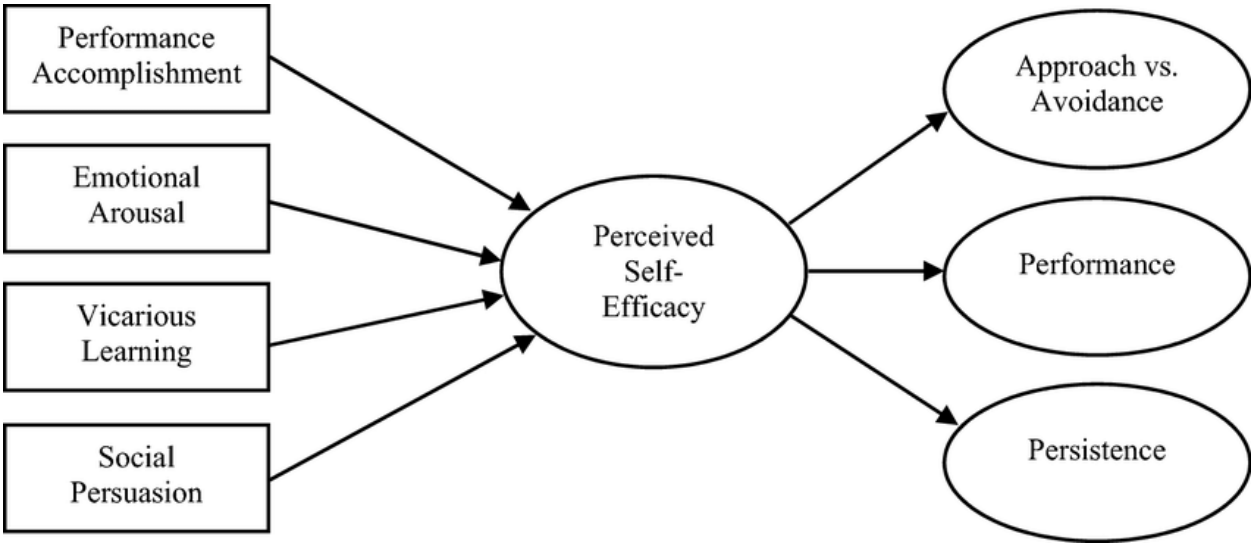
Note. (Bandura, 1986).

Figure 5. Social Cognitive Theory.

accomplishing a task may avoid it, whereas those who believe they are capable are likely to participate with greater ambition and confidence. Self-efficacy is also hypothesized to affect effort, expenditure, and persistence (Bandura, 1982). Individuals assess their own sense of self-efficacy through their own experiences and influences. These four sources of influence are shown in Figure 6 and include:

1. Mastery Experiences (Performance Accomplishment). This refers to the experiences one gains when they take on a new challenge and are successful at the task. *"Mastery experiences are the most influential source of efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to succeed. Success builds a robust belief in one's personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established"* (Bandura, 1997).
2. Emotional Arousal- Bandura (1997) states that an individual's emotional state can influence how they feel about their own abilities in a given situation.
3. Vicarious Learning- Observing people similar to oneself successfully complete a task.
4. Social Persuasion- People can be persuaded to believe that they have the skills to succeed.

Experiences influence one's beliefs and our beliefs influence thought patterns and emotions that invoke actions. They determine the effort in pursuit of goals, persistence in the face of adversity, the ability to rebound from temporary setbacks, and exercise some control over events that affect their lives (Bandura, 1986, 1993, 1997).



Note. (Bandura, 1977).

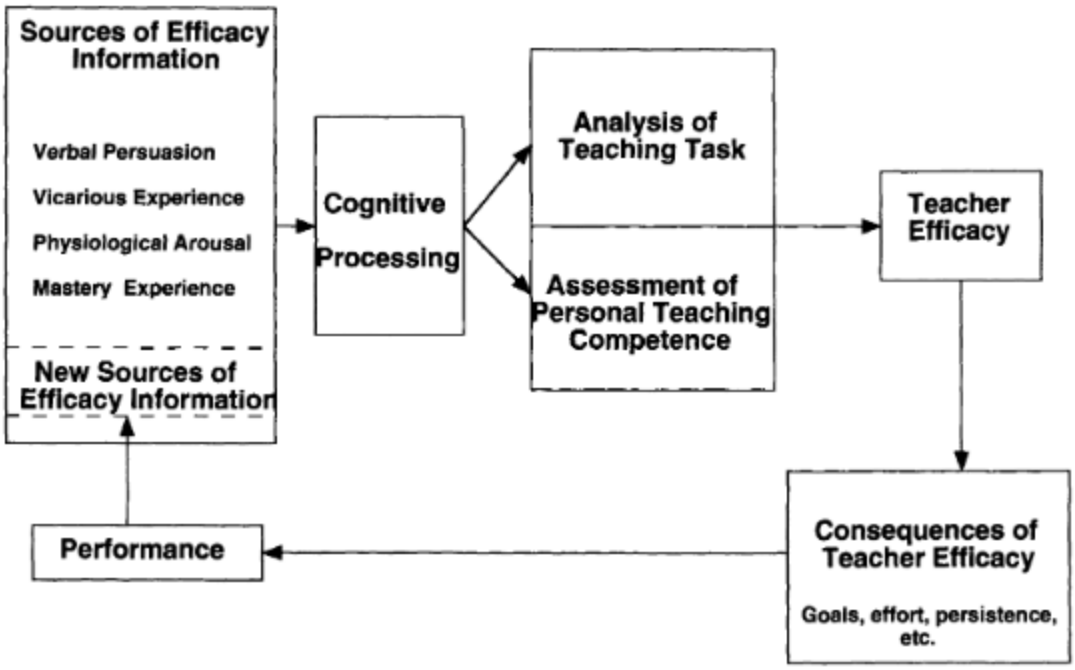
Figure 6. Self-Efficacy Theory.

Teacher-Efficacy

Teacher efficacy, a type of self-efficacy, is a teacher's belief in his or her capability to affect student performance (Ashton & Webb, 1986). "Teacher efficacy, as a motivational construct, proposes that level of efficacy affects the amount of effort a teacher will expend in a teaching situation and the persistence a teacher will how in the face of obstacles" (Tschannen-Moran et. al, 1998, p. 213). Teachers with a high sense of teacher efficacy believe that difficult students are teachable and that they can overcome outside negative conditions (Bandura, 1997). Researchers Wu et al. (2013) state that when people with high self-efficacy work with and observe others who also have high self-efficacy, they often subsequently develop shared positive collective teacher efficacy. However, when people with high self- efficacy work with and observe others who have low self-efficacy, low collective efficacy results, and those with high self-efficacy develop a distrust of their peers' abilities to perform tasks (Wu et al., 2013). Tschannen-Moran et. al (1998) proposed an integrated model of teacher efficacy which weaves together Bandura's (1986, 1997) four sources of self-efficacy (mastery experience, physiological arousal, vicarious experience, and verbal persuasion) with teacher's context specific interpretations (see Figure 7). For example, "Teachers feel efficacious for teaching particular subjects to certain students in specific settings, and they can be expected to feel more or less efficacious under different circumstances" (Tschannen-Moran et al., 1998, p. 228).

Collective Teacher Efficacy

Bandura (1997) introduced the concept of collective efficacy as "a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments" (p. 477). This theory is rooted deeply within Bandura's social cognitive theory and his theory on self-efficacy. Bandura (1993, 1997) and Goddard et al. (2000)

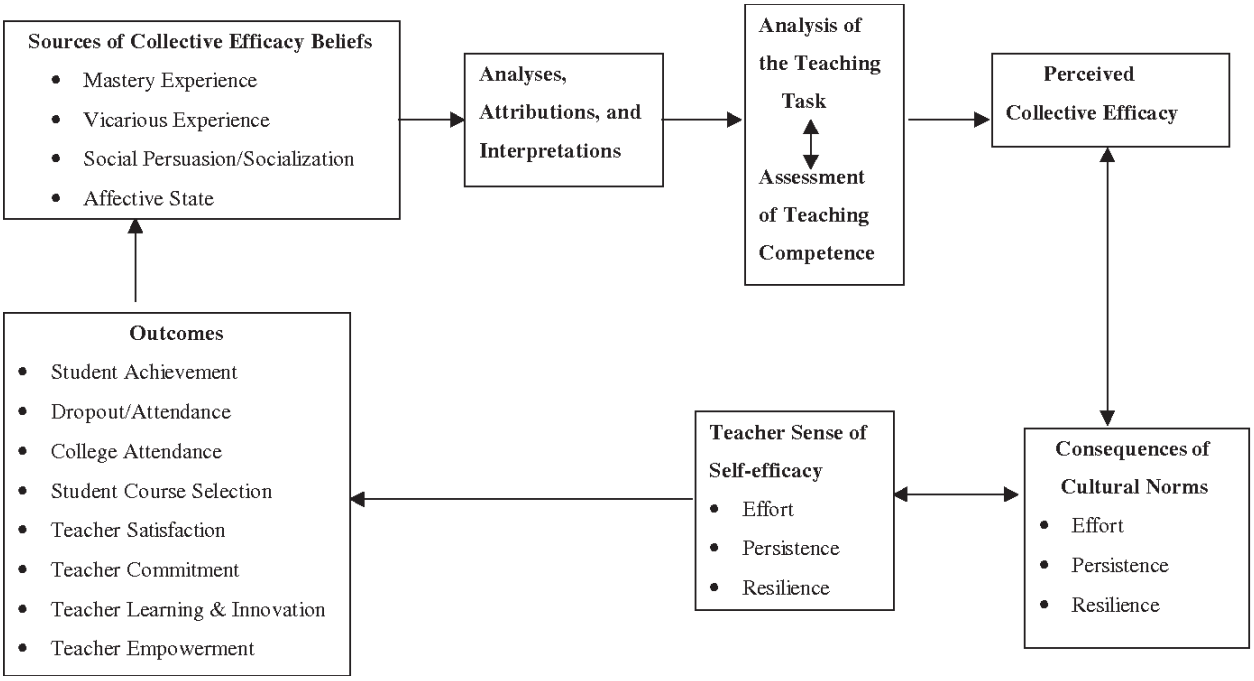


Note. (Tschannen-Moran et al., 1998).

Figure 7. The cyclical nature of teacher efficacy.

find that a strong sense of shared group capability establishes a cultural norm for success that can encourage group members to work toward desired ends and is directly reflected in student achievement. Collective Teacher Efficacy, therefore, has the potential to contribute to our understanding of how schools differ in the attainment of their most important objective-the education of students (Goddard et al., 2000).

It is found that schools that are characterized as having a culture of collective efficacy, students achieve at higher levels (Bandura, 1993; Donohoo, 2018; Eells, 2011; Goddard et al., 2000; Tschannen-Moran & Barr, 2004; Waters & Cameron, 2007). Goddard (2002) found that CTE positively predicts teachers' involvement in school decision making. CTE influences how educators feel, think, and behave; therefore, it is a significant contributor to the school's culture (Donohoo et al., 2018). Donohoo et al. (2018) found that CTE was associated with several positive teacher behaviors which included assuming leadership roles and exhibiting greater risk-taking. Beliefs influence actions, therefore, collective teacher efficacy is the link between effort and results (Donohoo & Katz, 2020). When collective efficacy is well-established, teams persist through discomfort. "They go outside their comfort zones; use focused, goal-driven activity to improve an area of weakness; and make changes based on feedback" (Donohoo & Katz, 2020, p. 31). Conversely, if educators lack collective efficacy, they hold lower expectations, give up more easily and deliver poorer results (Donohoo et al., 2018). These integrated theories are important to this study as this supports the impact of one's own beliefs on their performance and describes the causation between self-efficacy and collective efficacy. Bandura's (1997) Collective Teacher Efficacy Model seen in Figure 8 has integrated the Self-Efficacy Theory, Teacher Efficacy Theory and Collective Teacher Efficacy Theory that will guide the motivations and actions within this action research inquiry.



Note. (Bandura, 1997).

Figure 8. Collective Teacher Efficacy Model.

Conceptual Frameworks

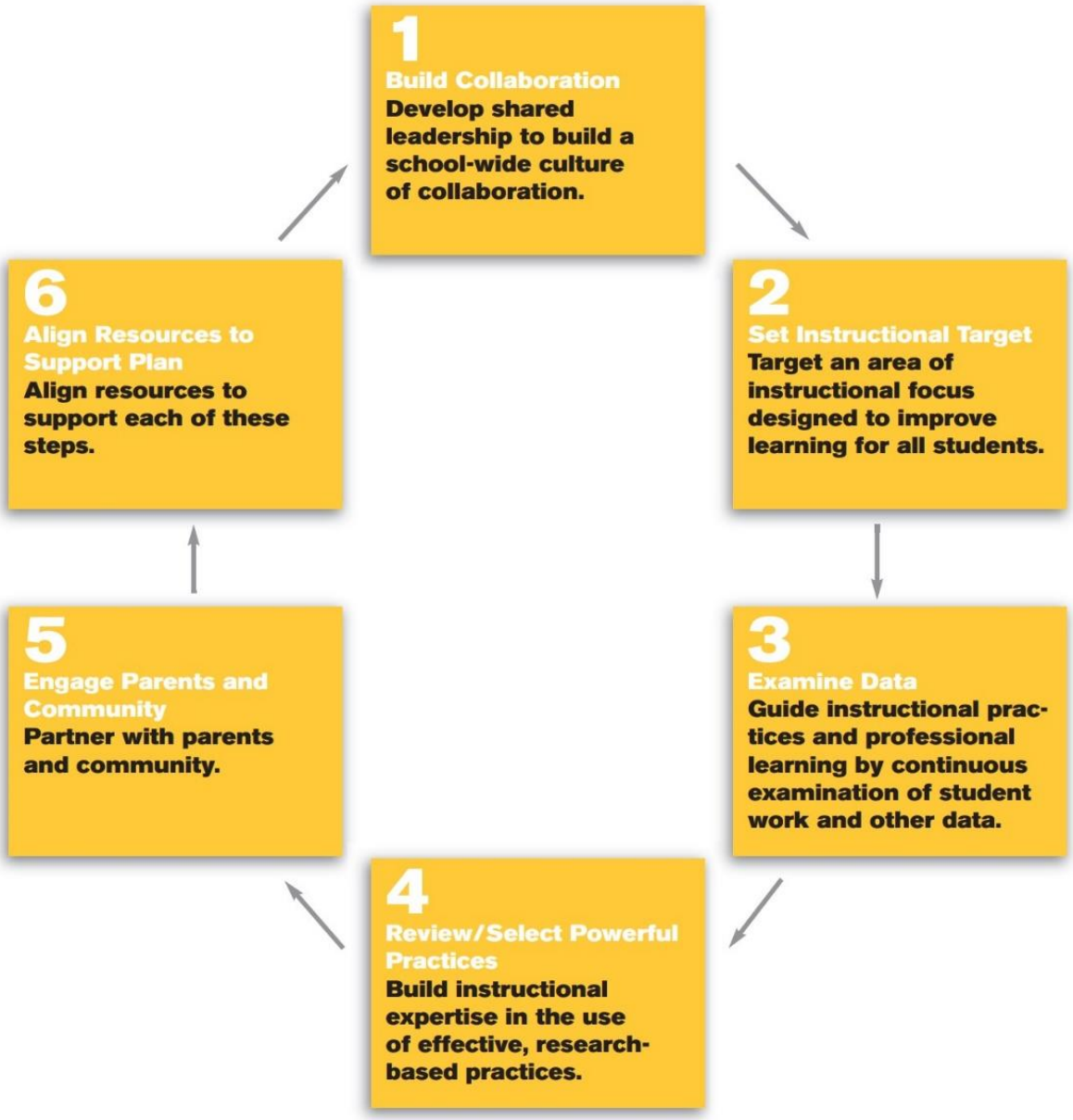
The Conceptual Frameworks in this inquiry will serve as a design to implement professional learning cycles. The learning cycle frameworks referenced in this section are cited based on research findings and the positive impact on student achievement and professional growth results. Understanding theories of human behavior and motivations in congruence with engaging in research-based professional learning cycles for continuous improvement is the foundation of this inquiry.

The Framework

In September 2008, Chicago Public Schools set out to address the growing deficit in student achievement. The Partnership for Instructional Leadership was established, a three-year initiative to help a group of neighborhood elementary schools build the internal capacity to improve school achievement for all students at all grade levels. The Framework (see Figure 9) implemented, originally developed by Jeff Nelsen and Amalia Cudeiro of the Targeted Leadership Consulting, a national education consulting organization, has proven great results in a number of school districts across the country (Business and Professional People for the Public Interest, 2011). This framework aligns with similar learning cycles researched and implemented over the years.

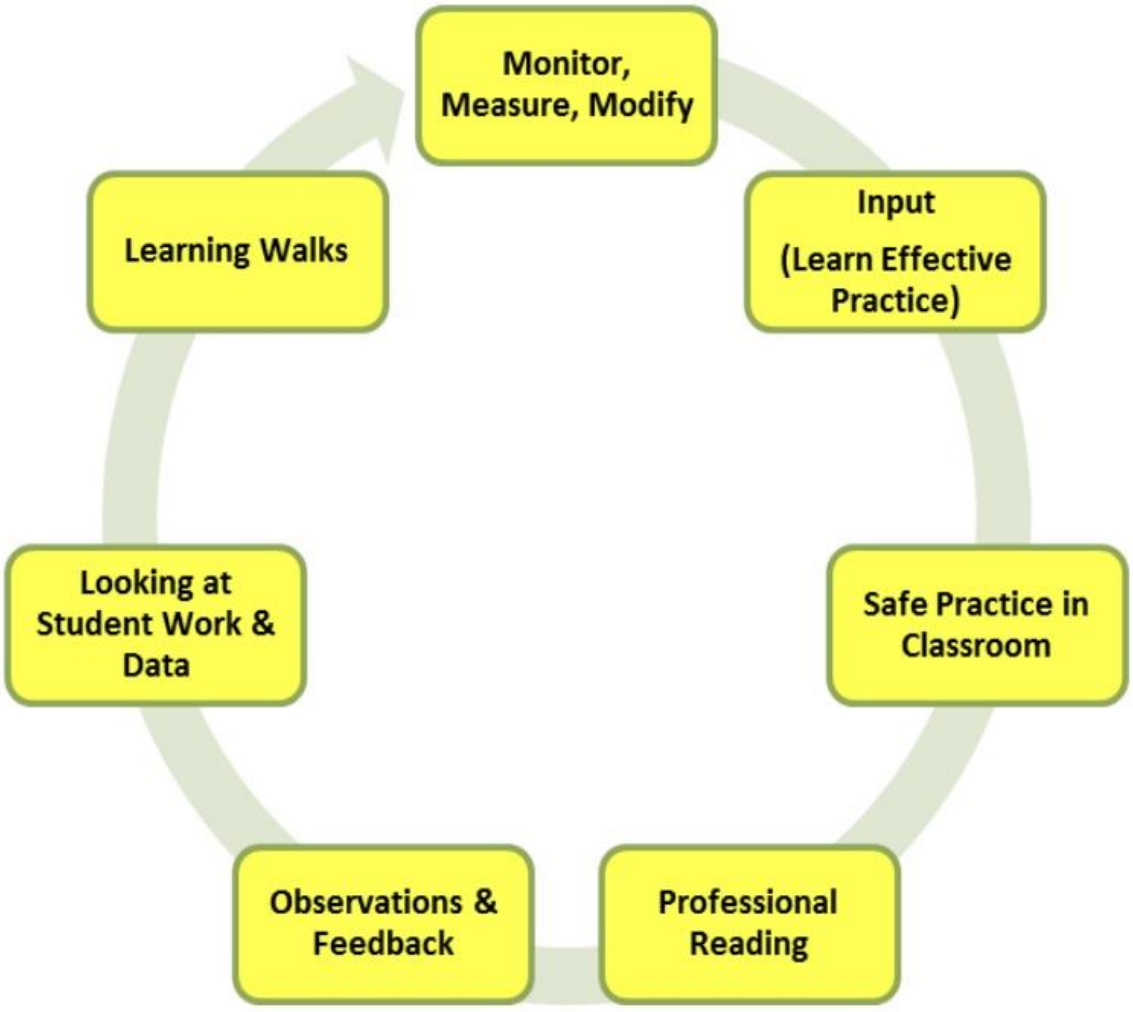
Professional Learning Cycle

The Professional Learning Cycle, a framework coined by Jeff Nelsen and Amalia Cudeiro (2009) is best described as a culture shift in professional learning. This framework (see Figure 10) focuses on targeted learning goals and repeated cycles of learning with supports such as professional readings, analyzing student work, observation, coaching through learning walks, and providing and receiving feedback within a safe environment. These supports



Note. (Business and Professional People for the Public Interest, 2011; Nelsen & Cudeiro, 2009).

Figure 9. The framework for powerful results.



Note. (Nelsen & Cudeiro, 2009).

Figure 10. Professional Learning Cycle.

are essential for full implementation of the learning in every classroom for every student every day (Joyce & Showers, 2002; Nelsen & Cudeiro, 2009).

Professional Teaching and Learning Cycle

In the early 2000s there was an emphasis put on professional development and teacher collaboration to integrate in the form of Professional Learning Communities (PLCs). After much research, it became clear that almost none of the work teachers were doing when they met as a "PLC" resulted in any real sustained change in what happened in classrooms (Tobias, 2007). Building on this previous work around PLCs, lesson study, analyzing student work, and standards-based instruction, the Southwest Educational Development Laboratory (SEDL) staff developed the Professional Teaching and Learning Cycle (PTLC) (see Figure 11). Tobias (2007) states, "The PTLC process is based on elements of research from both effective adult learning and effective instruction tied to increased student achievement." The steps within this process are similar to the previous frameworks and focuses on the professional cycle of learning to impact student achievement.

Collective Teacher Efficacy Cycle

Tschannen-Moran and Barr (2004) define collective efficacy as the "collective self-perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities" (p. 191). Therefore, when teachers lead the charge of defining targeted goals towards the improvement of teaching and learning and see the difference they make while working together, collective efficacy begins to root within the establishment. As a building administrator, Peter Dewitt (2019) piloted his own implementation of a learning cycle for targeted improvement. He documented the steps adapted from a variety of sources to help educators start to work towards collective

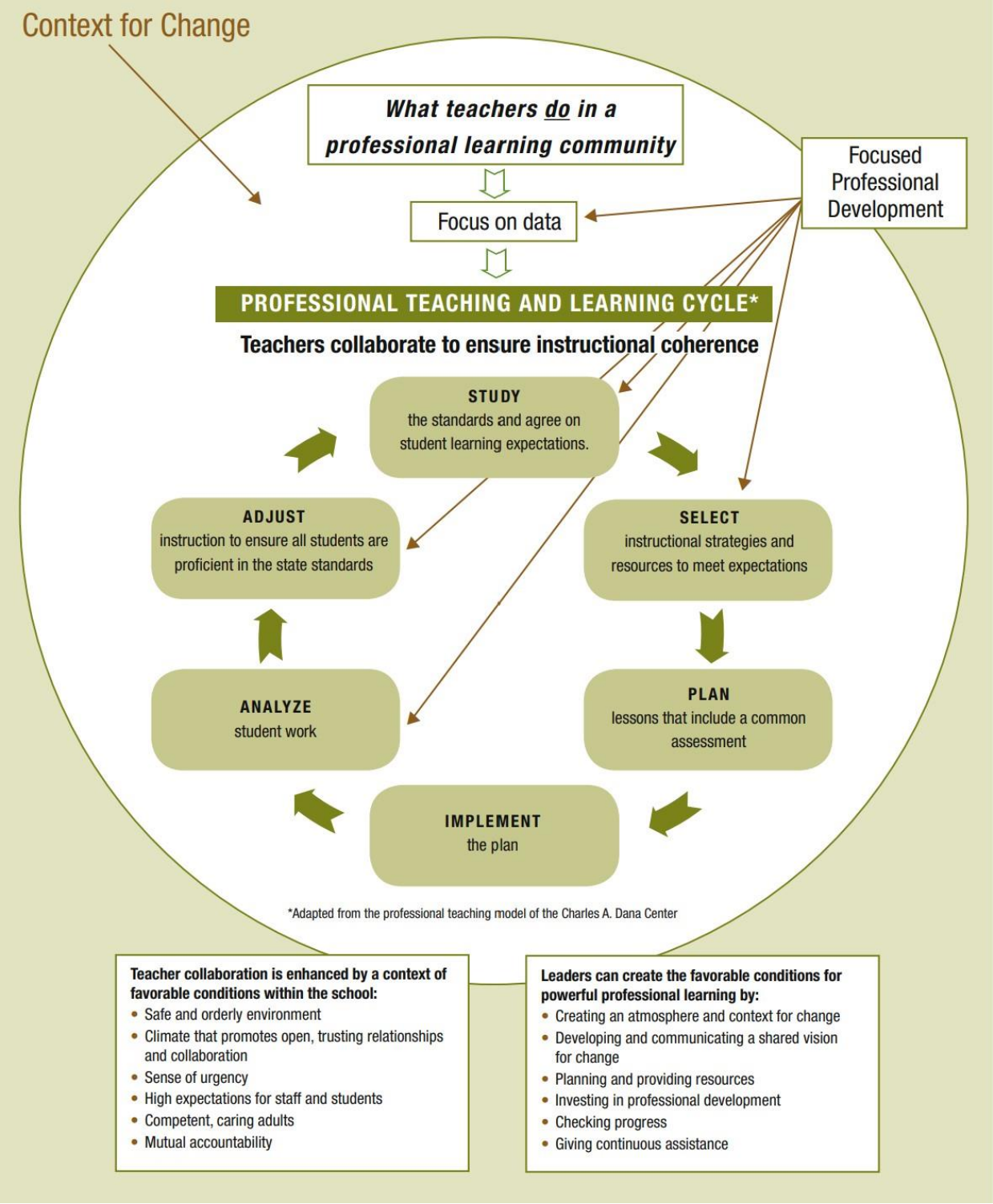


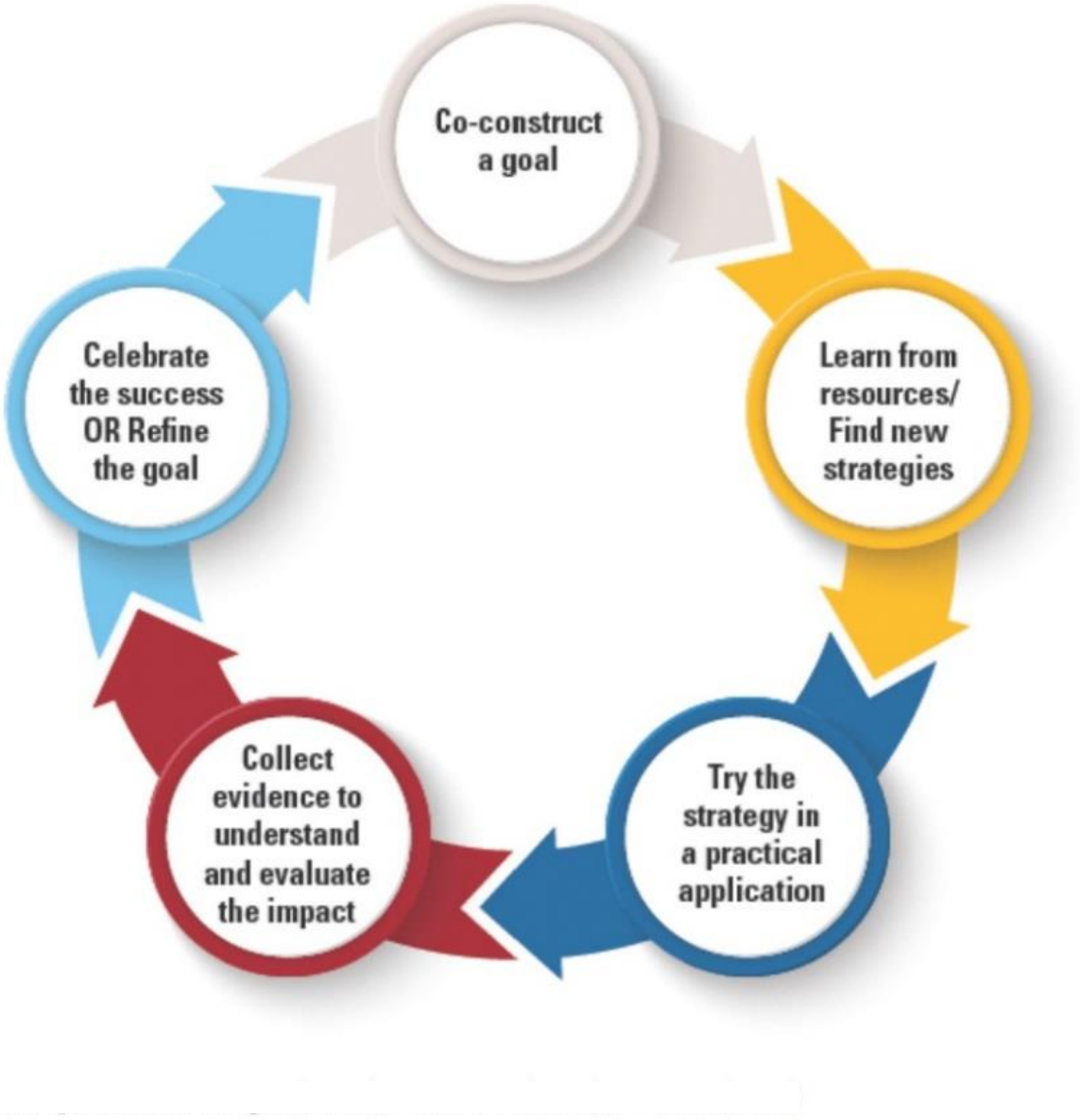
Figure 11. Professional Teaching and Learning Cycle (PTLC).

efficacy (see Figure 12). DeWitt (2019) shares that the work starts with co-constructing a goal by allowing teacher voice within the process. He then states that using the work of Hattie (2012), the team works together to "examine and test solutions and examine evidence of impact." If these strategies do not produce positive results, the collective efficacy process necessitates refining ideas and trying again (DeWitt, 2019). Lastly, team members should reflect on the pleasure of working together through a challenge and take time to celebrate their success (Donohoo, 2013). The elements with this adapted cycle of Collective Teacher Efficacy along with the Professional Learning Cycles and the Professional Teaching and Learning Cycle serve as support of the integration of the models for the research design.

Integrative Model of Professional Learning and Collective Teacher Efficacy Cycle

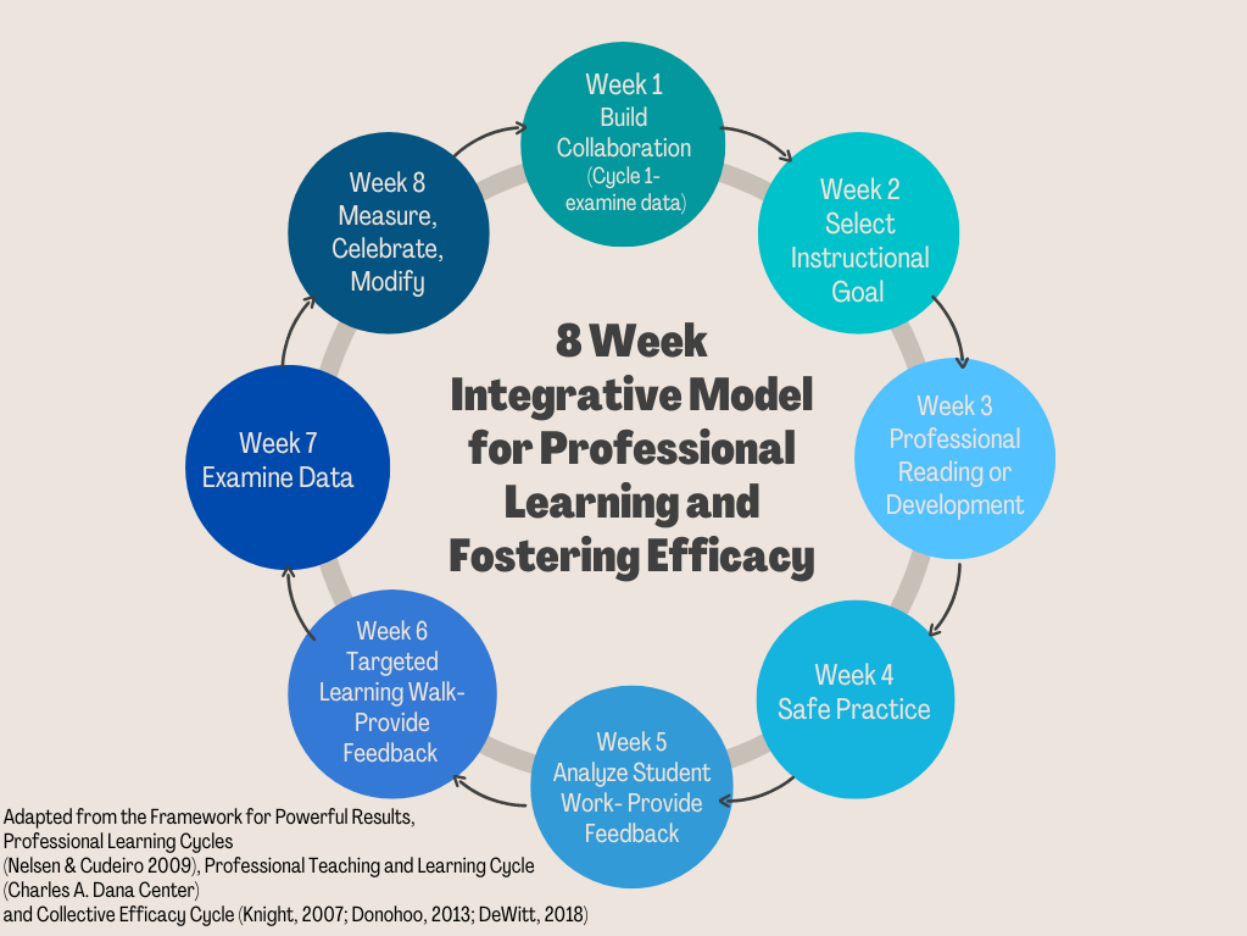
This action research inquiry was designed to implement a professional learning cycle framework that supports site-based authentic professional learning and development to increase collective teacher efficacy and ultimately have a positive impact on student achievement. In collaboration with my inquiry partners, we have integrated the theories, models and frameworks identified within this chapter to create the Integrative Model of Professional Learning and Collective Teacher Efficacy Cycle. This integrative framework combines research-based models for continuous learning embedded with research on collective teacher efficacy. I will implement this cycle, seen in Figure 13, in four 8-week cycles throughout a school year. The 8-week practice includes:

1. Week 1: Examining data and building collaboration within the leadership team. This includes administrators, coaches, and School Improvement Team members.
2. Week 2: Selection of an instructional goal based on data analyzed with stakeholders.



Note. Adapted from Knight (2007), Donohoo (2013), DeWitt (2018).

Figure 12. Collective Teacher Efficacy Cycle.



Note. Adapted from the Framework for Powerful Results, Professional Learning Cycles (Nelsen & Cudeiro, 2009) and A Collective Efficacy Cycle (Donohoo, 2013; Knight, 2007), (DeWitt 2018).

Figure 13. Eight-week integrative model for professional learning and fostering efficacy.

1. Week 3: Professional reading or professional development will take place to enhance knowledge and understanding of targeted learning goal of all stakeholders. This includes all certified and classified members of the staff who serve students in an educational setting.
2. Week 4: Safe practice: Teachers and support staff will utilize this week to practice what they have learned within the instructional setting. This allows for educators to take risks without fear of failure.
3. Week 5: Analyze student work and provide feedback. Grade level and/or content area teachers bring student work to the scheduled Professional Learning Community (PLC) to determine quality of lessons and assignments as evidenced by what the students are producing.
4. Week 6: Targeted Learning Walk: Teachers will collaborate with colleagues to observe a minimum of four classrooms per group to evaluate peer teachers on their mastery of the targeted instructional strategy. Teams will provide written feedback to teachers observed and will quantify data at the end of the day. This practice provides data to the teachers that allows them to see their growth and areas for improvement as a whole staff.
5. Week 7: Examine Data: Grade level PLCs will meet the week directly following the Targeted Learning Walks and will discuss finding with peers. This process creates an organic environment for team members to highlight successes within the current learning cycle and help others who may have struggled.
6. Week 8: Measure, Celebrate, Modify: Administrators and coaches conduct final walkthroughs to assess whether the teachers have a clear understanding of the new

instructional strategies and implementation. Following these visits, the team will decide how to celebrate or modify plans for the next cycle.

Further implications and details surrounding the research and implementation of this model will be detailed within the remaining chapters throughout this inquiry.

Professional Development

Professional development is one of the most powerful ways to change teacher practice and increase student achievement (Dana & Yendol-Hoppey, 2008). It has been studied by hundreds of researchers since 1957 (Guskey, 2003). Guskey (2003) notes that professional development is a process that requires intentional, ongoing, and systemic presentation of information. Other characteristics identified over the years as the guidelines for effective professional learning include: incorporating active learning, content focused, collaborative, supported by coaching, and personalized by teacher needs and interests in order to have a more significant opportunity to improve teacher learning and student achievement (Blank & de las Alas, 2009; Cochran-Smith & Lytle, 1999; Darling-Hammond, 1997, 1999; Joyce & Showers, 1982; Showers et al., 1987; Wei et al., 2009). In 1987, Showers et al. outlined the findings from nearly 200 research studies. The team reviewed literature on professional development, summarized their findings, and provided teachers with options that supported teacher learning and development that were more than just isolated workshops. The components of effective professional development that have been determined from within the research to be most effective incorporate theory, demonstration, practice and feedback, and coaching (Showers, 1987).

Developing knowledge and skills in teachers to help students learn and achieve at maximum capacity should be the ultimate goal of professional development (Mindich &

Liberman, 2012), however, professional development can also be effective in recruiting and retaining teachers (Archibald et al, 2011; Darling-Hammond et al., 2017; Labone & Long, 2016).

Professional Learning Communities

Professional Development and Professional Learning Communities are often generalized as one in the same. However, traditional "professional development" and "professional learning" can have very different outcomes. "Professional development, which "happens to" teachers, is often associated with one-time workshops, seminars, or lectures, and is typically a one-size-fits all approach. In contrast, professional learning, when designed well, is typically interactive, sustained, and customized to teachers' needs. It encourages teachers to take responsibility for their own learning and to practice what they are learning in their own teaching contexts" (Scherff, 2018, p. 1). Professional learning communities create the conditions that allow everyone to lead with purpose and positive intent (Hargreaves & Fink, 2006).

Professional Learning Communities (PLCs) are based on the belief that a highly effective PLC engages in continuous cycles of improvement through collective inquiry and action research to improve student learning opportunities through job-embedded, real-time learning for teachers (DuFour et al., 2016; Eaker & Marzano, 2020). When schools have PLC structures in place, reflection and dialogue are engrained, and teachers collaborate and exchange experiences through continuous reflection and dialogue which create a positive impact on student learning promoting continuous teacher growth (DuFour et al., 2006). "Collective leadership has a stronger influence on student achievement than individual leadership, likewise, a school's leaders have an impact on student achievement primarily through their influence on teachers' motivation and working condition" (Louis et al., 2010, p. 19). School leadership should continue to take into account that supporting teachers' professional development to meet the needs of their students is

seen as one of the most influential components to increase student achievement (Darling-Hammond, 1996; DuFour & Eaker, 1998).

History

The notion of Professional Learning Communities (PLCs) began to arise after several failed educational reform attempts in the 1960s and 1970s (Little, 1982; McLaughlin & Marsh, 1979). McLaughlin and Marsh (1979) further went on to describe the failure as a result of the underestimation of teacher training. Little cites the breakdown as "the absence of attention to social organizational features and contexts in which changes were attempted, and in terms of which staff development activities assume particular relevance" (Little, 1982, p. 326). In 1983, a report titled, "A Nation at Risk*"* was released by the National Commission on Excellence in Education, which sparked another transformative reform in education. The report pushes schools to move from a factory model classroom to the goal of a Professional Learning Society (U.S. Department of Education, 1983), progressively influencing the development of Professional Learning Communities (PLCs).

PLCs, a term integrated into the lexicon of American education, has had many different definitions, interpretations and focuses over the years. The theories surrounding efficacy, collaboration and shared decision making began to make its way into schools shortly after the strong push from the U.S. Department of Education in 1983. Rosenholtz (1989) discovered that teachers with a strong sense of efficacy were more likely to embrace new classroom behaviors and that a strong sense of efficacy encouraged teachers to stay in the profession. McLaughlin and Talbert (1993) determined that when experienced teachers had opportunities for collaborative inquiry and job-embedded learning, it resulted in widely shared practices and whole school attainment, further confirming Rosenholtz's findings. Darling-Hammond (1996) further explored

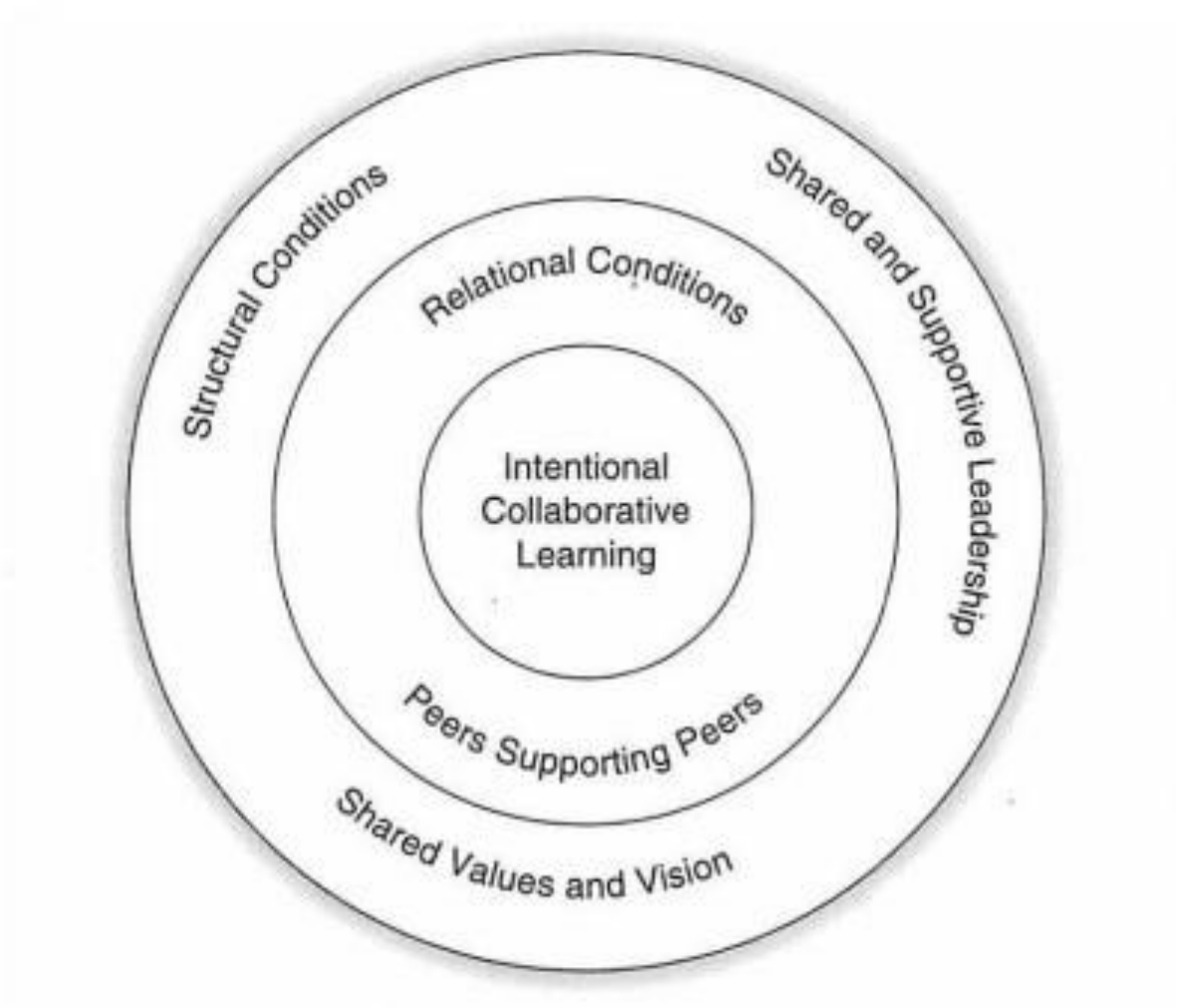
whole school practices and the idea of shared decision making in schools with a structured time provided for teachers to work together in planning instruction, observing each other's classrooms, and sharing feedback. MacMullen (1996) concluded that a significant requirement for impactful learning communities is the inclusion of the whole faculty. Peterson et al. (1996) also determined that successful school restructuring required whole staff initiatives.

Organization and Characteristics of Professional Learning Communities

Prior to Richard DuFour becoming the leading voice in the movement to improve schools through PLCs in the late 1990s and early 2000, Shirley Hord had already begun identifying key characteristics and conditions of effective PLCs. Hord (1997) describes two types of supportive conditions for PLCs to function productively: the physical/structural setup and the relational (human qualities/capacities) of the people involved. Hord also defined key characteristics of professional learning communities and identified five characteristics of professional learning communities. She later refined her characteristics in 2004 as: supportive and shared leadership, shared values and vision, collective learning and application of learning, shared practice, and supportive conditions (see Figure 14). She describes the learning community, "[It] is not an improvement program or plan, but it provides a structure for schools to continuously improve by building staff capacity for learning and change" (Hord, 2004, p. 14). This ideology generated interest among other researchers to further examine structural frameworks for continuous improvement.

Continuous Improvement Defined

Continuous improvement is a cyclical approach to problem solving based on the ideology that making sustainable change takes time, involves a collaborative effort, and requires constant



Note. (Lieberman & Miller, 2014).

Figure 14. Conceptual framework of effective PLCs.

adaptation, data collection, and learning to improve outcomes (Bhuiyan & Baghel, 2005; Langley et al., 2009; Shakman et al., 2020). Continuous improvement processes engage stakeholders with problems of practice, or areas of focus within the instructional core, "through a series of iterative cycles, identify and test change practices (new approaches, tools, or strategies used to address the problem), make predictions, collect data about the change practices, and study the potential influence of those change practices on outcomes of interest" (Shakman et al., 2020, p. 1). "These continuous improvement approaches offer a systematic process through which practitioners can engage in identifying needs, defining the problem, implementing new or modified practices, collecting data, and reflecting" (Shakman et al., 2020, p. II-3). These continuous improvement cycles help build the capacity and efficacy among stakeholders to test new approaches or strategies to address problems of practice, refine those approaches based on evidence, and increase the scale, scope, and spread of the approach over time (Langley et al., 2009).

With increasing pressure on school leadership to employ improvement practices that will increase student achievement, DuFour and Reeves (2016) caution against the overuse of the term "professional learning community" to classify all staff gatherings including department meetings, book studies, and other activities not focused on student achievement (p. 69). PLCs are intended to serve two main purposes: "to improve educators' pedagogical content knowledge through collaboration and to improve learning outcomes of students" (Fisher et al., 2020, pp. 4-5). PLCs have evolved to also incorporate an additional purpose; to enhance educators' attitudes and dispositions about students and learning. Fisher et al. (2020) stated, "Working toward

collective efficacy, taking responsibility for learning, and being flexible in instructional practices transform a PLC from being purely additive to transformative" (p. 5).

Impact of Professional Learning on Collective Efficacy

Professional learning communities build on the theories of organizational learning and create a setting conducive to collaboration resulting in increasing collective teacher efficacy (DuFour, 2002). When educators share a sense of collective efficacy, school cultures tend to be characterized by beliefs that reflect high expectations for student success. You can often hear a shared language that represents a focus on student learning (Donohoo et al., 2018). Donohoo et al. (2018) extend their findings and argue that a group's collective beliefs and high expectations for student success positively impact student achievement and other outcomes. In schools where the culture is characterized as having a high sense of collective efficacy, students achieve at higher levels (Bandura, 1993; Donohoo, 2018; Eells, 2011; Goddard et al., 2000; Tschannen-Moran & Barr, 2004; Waters & Cameron, 2007). Collective Teacher Efficacy is ranked as the number one factor influencing student achievement with an effect size of 1.57. It is more than three times as powerful and predictive of student achievement as socioeconomic status and has more than double the effect of prior achievement (Hattie, 2016).

Bandura originally studied the phenomena of collective efficacy and its high yielding results on student achievement in 1993. However, there have been few researchers who have been able to define a process or enabling conditions that will increase collective efficacy within a school. Chapter 3 will outline the framework implemented within the study that is intended to provide a supportive structure designed to organically promote and cultivate a culture of collective teacher efficacy.

Summary

This chapter outlined the theories of human behavior, adult learning, and efficacy. Conceptual frameworks of continuous professional learning cycles were shared and the design for the integrative model of professional learning cycles and collective efficacy was explored. Also discussed were the history, organization, and characteristics of PLCs. Continuous improvements were defined and the impact of professional learning on CTE was explored. The mounting research and theories supporting adult behaviors, continuous professional learning, and efficacy will serve as the foundation for the action research inquiry explained in detail in Chapter 3.

CHAPTER 3: METHODS OF INQUIRY

This chapter outlines the implementation of professional learning cycles in a rural middle school in transformation. Each section shares how teachers engaged in cycles of continuous improvement through school-based action research and onsite professional development while refining teaching practices, developing a culture of shared leadership and collective teacher efficacy. This chapter outlines the blueprint of the action research inquiry including the inquiry partners, detailed phases of implementation, instrumentation, data collection and analysis methods, assumptions, delimitations, and limitations. The implementation of this framework aimed to increase teacher self-efficacy and overall collective teacher efficacy.

Focus of Practice Guiding Questions

This inquiry examined the implementation of a professional learning cycle framework for improvement aiming to increase collective teacher efficacy. The following questions helped to guide the inquiry:

1. How does the implementation of professional learning cycles impact efficacy at Tar River Middle School?
    a. How does the implementation of professional learning cycles impact self-efficacy?
    b. How does the implementation of professional learning cycles impact collective teacher efficacy at Tar River Middle School?
2. What are teachers' perceptions of the implementation of the professional learning cycle?

Inquiry Design and Rationale

To gauge the impact of implementation of this framework on perceived self-efficacy and collective efficacy, this inquiry incorporated three action research phases with specific data gathered at each phase. The first phase was the planning and development phase with baseline data collection. This included a baseline survey and interviews with school staff, collections of historic quantitative and qualitative data, as well as a pilot survey with previous staff members familiar and engaged with the professional learning framework. The second phase included a pre-implementation survey, the implementation of four, 8-week professional learning cycles, each with an identified instructional focus, as well as professional learning, targeted learning walks and data collection within each of the four cycles. The third phase included post-implementation surveys, as well as purposeful focus group with school improvement team representatives.

As the scholarly practitioner, I facilitated an exploratory sequential mixed-methods action research design following a multiple phase study:

1. Baseline data collection, planning and development of the study
2. Implementation of Professional Learning Cycles
3. Post-implementation surveys and focus group interviews

Exploratory Sequential Design allows researchers to qualitatively explore the topic and views of participants prior to moving to the next phase of the inquiry. This was important to consider while planning for a study at a new school with little known background knowledge as the researcher. Mixed-methods research design incorporates both quantitative and qualitative data collection. This method tends to be more time consuming; however, is often more practical and allows for multiple perspectives (Mertler, 2021). Action research provides a process to

immediately improve a current educational practice with the goal of finding a better practice to improve educational outcomes within a classroom or school (Mertler, 2021). The purpose of action research was to address local-level problems of practice with the intent of finding answers to questions or solutions of those problems (Mertler, 2018). The study at Tar River Middle consisted of four cycles of continuous improvement. Each cycle began or ended with identifying a problem of practice and then creating steps for improvement. Within this action research study, I sought to answer questions regarding how the school-wide implementation of professional learning cycles will impact individual teacher efficacy and overall collective teacher efficacy.

I conducted this action research inquiry utilizing the Plan-Do-Study-Act (PDSA) model (Langley et al., 2009) to organize and direct each of the three phases. This model utilizes continuous improvement as a process to implement small changes with the goal of making long-term improvement (Shakman et al., 2017). The first phase of the inquiry required me to collect school-wide quantitative data and qualitative data. This consisted of student achievement data from the North Carolina Department of Public Instruction, student growth measures from the Education Value-Added Assessment System (EVAAS) and Teacher Working Conditions Surveys (TWCS). Individual questionnaires (see Appendix D) were distributed along with follow-up meetings with each teacher at Tar River Middle School at the end of the 2021-2022 school year to identify school-wide systems, trends, and beliefs. A pilot study (see Appendix E) was administered with staff members at the school where I was previously principal to test the validity and feasibility of the survey and interview questions.

During the second phase of the inquiry, I collaborated with all identified school-based leadership. This involved administration, school improvement teams members, school counselor and instructional coaches. It was critical these stakeholders had a shared vision of the

implementation plan for improvement as they were the site-based leaders with direct contact and influence on teachers. I conducted a summer retreat prior to the 2022-2023 school year to review collected data to present the first focus of practice for Cycle 1: Teacher Efficacy & School Culture. TRMS worked collaboratively to develop a shared identity by fostering relationships with all stakeholders to boost morale, maximize supports, and strengthen connections. Actions included:

- Developing a new Mission/Vision.
- Engaging in a book study: The Energy Bus by Jon Gordon.
- Establish structured time for professional learning and collaboration each week.
- Establish a Parent Teacher Organization.

With the leadership team members, we established school-wide expectations of the professional learning cycles as well as a protocol, schedules and timelines for the year. It was the goal of the leadership team to provide authentic, quality learning throughout the year that is specific to the needs of the school.

> *Quality learning includes explanation of the concepts underlying the practice, modeling how the practice would look in a classroom, connecting the practice to research and results, providing strategies for differentiating for learners at different levels, giving participants opportunities during the training for experimentation and discussion, and introducing all materials needed to implement the practice* (Nelsen & Cudeiro, 2009).

Prior to the start of the first learning cycle, I sent a Teachers' Sense of Efficacy survey (see Appendix F) and Collective Efficacy Scale survey (see Appendix G) using a Likert-type scale to participants on a voluntary basis. The findings were analyzed as pre-implementation data and utilized to formulate an action plan to meet the needs of the teachers within the school. Four

8-week cycles of professional learning (see Appendix H) took place throughout the year and served as sub-phases within the second phase of the action research cycle. Within these professional learning cycles, teachers examined school-wide data to select appropriate instructional targets. Once an instructional target had been selected, teachers were provided professional reading and/or professional development to enhance the teacher's understanding of the practice. Teachers were then provided with time for safe practice within the classroom setting. This is a time for teachers to experiment with a given strategy or practice in a low-risk environment.

Teachers then opened their classrooms for their peers to conduct learning walks following a structured protocol (see Appendix I) through the lens of the targeted instructional focus. Teachers and administrators were provided specific feedback at this time through a structured walkthrough tool designed for each cycle. Appendix J outlines the learning walk form for cycle 1, Appendix K outlines the learning walk form for cycle 2 and 3, and Appendix L demonstrates the learning walk template for cycle 4. It is important to note that these learning walks were not evaluative. The purpose of these learning opportunities was to provide feedback to enhance each teacher's current practice, to enhance the observers' understanding of the strategy through personal reflection after observing others, and to enhance their own efficacy and leadership by providing opportunities to participate in establishing and monitoring school-wide powerful practices. This cycle concluded with reflections, peer discussions and data talks. Teachers had the opportunity to discuss successes and challenges as well as look at student work and student data. This process allowed teams to decide on how to adjust their practice and/or identify a new learning target. At the end of the first cycle, I provided a condensed version of the Teacher Working Conditions survey with selected survey questions that were identified as

particularly low in the Spring of 2022, as well as questions that align with professional development and efficacy. This survey served to help me understand teachers' perceptions of the professional learning cycle, if they understood the purpose, and if they were beginning to feel a sense of efficacy (see Appendix M).

The third and final phase of the inquiry consisted of the collection and analysis of the quantitative and qualitative data collected. The staff participated in post-surveys with identical questions provided at the beginning of the year and a Spring follow-up of the Teacher Working Conditions Survey administered after the first professional learning cycle. I employed a non-biased, non-participant third party inquiry partner to conduct a focus group interview (see Appendix N) with School Improvement Team members. This inquiry partner also assisted in analyzing the outcome data. The mixed methods action research design allowed for numerous data points and perspectives to enhance the validity of the study. These data points were then triangulated by examining the evidence from the sources to verify the consistency of the findings to answer the two guiding questions (Creswell & Creswell, 2018).

Context of the Inquiry

The inquiry that took place at Tar River Middle School in Southeast County, North Carolina had been designated a low performing school for the 2022-2023 school year. With declining achievement scores and declining enrollment, a new administrative team was assigned to make significant changes to the overall school culture, climate, and structure of teaching and learning. With a staff of 33 certified classroom teachers and an enrollment of 369 students in grades 5-8, Tar River Middle School is designated as a Title 1 school with 63% identified as Economically Disadvantaged. Along with the principal, the leadership team consisted of two

assistant principals, an instructional coach, a school counselor, and a social worker, all of which are new to the school.

Inquiry Partners

In order to provide professional development through the school's own stakeholders to improve student achievement and an overall collective teacher efficacy, I partnered with the following: Superintendent, school-based leadership team, school improvement team members, district coaches and Tar River Middle School teachers. Table 2 describes the selected inquiry partners and their role in this inquiry.

The district Superintendent regularly provides instructional coaching and leadership mentoring to all district Principals. With this coaching, I was able to directly coach and influence my Assistant Principals, Instructional Coaches and Support Staff (Counselor) which make up my core Leadership Team. As a Leadership team, we consulted with District Coaches for content expertise, training, and resources throughout each cycle. The Leadership team was then able to coach and support the School Improvement Team (SIT), staff comprised of grade level and department representatives. Following the training and coaching among SIT members, these representatives provided leadership, coaching and mentorship among their team members for whom they represent.

Ethical Considerations

Prior to the implementation of the inquiry, I obtained consent from the Superintendent of Southeast County (see Appendix B), in accordance with the district's policy, to conduct research on issues related to student achievement and the effective operation of the school system. Following approval, I completed the Collaborative Institutional Training Initiative (CITI) modules related to Social/Behavioral Research Investigators and Key Personnel. I utilized

Table 2

Collaborative Inquiry Partners

Inquiry Partner	Role in Inquiry
Superintendent	Direct coaching with scholarly practitioner as it relates to Professional Learning Cycles and Research-based strategies.
School-based Leadership Team	Meets weekly to discuss monitoring of teachers and professional learning cycle and inform scholarly practitioner of impact of implementation of learning cycles.
School Improvement Team	Meets monthly to examine data and identify professional needs of staff as well as design implementation of future professional development and learning cycles.
District Coaches	Provide Professional Development as identified by needs assessments.
Teachers	Meets bi-weekly (once as grade level, once with partnering middle school teacher) for coaching on identified instructional strategy, discuss data, set goals, and discuss content specific instruction. Teachers will also conduct monthly learning walks.

these training modules by CITI to ensure the participants in the inquiry are protected and ethical guidelines are followed. An application was then submitted to the Institution Review Board (IRB) at East Carolina University (ECU) for consideration and approval. IRB reviewed the inquiry to ensure that no harm will be done to any humans throughout the duration of this action research inquiry. The IRB approval letter is located as Appendix A. In the event there are modifications to the inquiry, I will submit an amendment to the approval from IRB.

Following approval by IRB, all staff members and inquiry participants were provided a copy of the Participant Informed Consent (see Appendix C) outlining accurate information about the inquiry and its purpose, disclosing known risks, benefits, procedures and allowing the participant to make an informed decision as to whether to participate or not. All Tar River Middle School certified staff members participated in the professional learning cycles, but only those who voluntarily consented took part in the data collection of the inquiry.

I understood that given my positionality as the school principal and the scholarly practitioner leading the inquiry there were possible implications of inherent bias. To ensure responses were valid, survey responses were all anonymous, and interviewees were protected with pseudonyms provided by the interviewer. The school and the district were also be assigned pseudonyms to protect the identity and confidentiality of participants involved.

Instrumentation

To determine if the implementation of professional learning cycles and targeted learning walks had an impact on collective teacher efficacy, a mix of quantitative and qualitative data was collected throughout the inquiry. The inquiry began by collecting historic quantitative data measures as reported by NCDPI as well as EVAAS and TWC. These measures will inform the inquiry partners and I of historic student achievement measures, student and school-wide growth

measures, historic individual teacher growth as well as climate and culture measures to provide me with a comprehensive analysis of Tar River Middle School during phase 1.

I then administered two pre-implementation surveys measuring self-efficacy and collective teacher efficacy in phase 2. Teachers' Sense of Efficacy Scale (TSES) (sometimes referred to as the Ohio State Teacher Efficacy Scale) measures a teacher's own sense of efficacy in student engagement, instructional practices and classroom management. The survey has the participant answers using a Likert-type scale from 1 (*nothing*) – 9 (*a great deal*). The Teachers' Sense of Efficacy Scale is designed to see what creates the most difficulties for teachers in daily school activities. This survey is considered a reliable and valid instrument, ranking moderate to highly reliable for both short and long forms of the scales (Tschannen-Moran & Hoy, 2001).

The Collective Efficacy Scale (CES) developed by Goddard et al. (2000) was used to measure the two dimensions of collective efficacy: group competence and task analysis. This 21-item survey measured the shared perceptions of teachers in a school and the efforts of the faculty as a whole. Questions are phrased, "Teachers in this school have what it takes to get children to learn" as opposed to "I have what it takes to get my students to learn." Participants rate their answers using a Likert-type scale from strongly disagree to strongly agree. This scale is considered a valid and reliable measure of collective efficacy (Goddard et al., 2000). Both of these scales will be given as a pre- and post-implementation measure to voluntary participants at Tar River Middle School.

I concluded phase 2 by administering an abbreviated version of the North Carolina Teacher Working Conditions Survey (NCTWC) one final time. The NCTWC is a survey administered every two years to teachers throughout North Carolina. This survey measures teaching and working conditions within each school and district for the purpose of ensuring that

educators are supported in an environment conducive for teaching and learning at the highest levels. Schools throughout the state utilize the NCTWC in their school improvement plans and to improve overall school culture (Academic Development Institute, 2023). The modified version I administered focused on areas related to this inquiry including professional learning and instructional practices. Results from the survey found in Appendix M included results from Spring 2022, Fall 2022 and Spring 2023.

During the third phase of the inquiry, I employed a non-biased, non-participant inquiry partner to conduct a structured focus group interview. The interview will follow a formal interview protocol and will follow a semi-structured format, allowing the interviewer to ask follow-up questions (Mertler, 2021). The purposeful sampling focus group consisted of the SIT members (Creswell, 2005; Mertler, 2021). The interviews were transcribed, coded, and analyzed to identify categories and themes within the data (Saldana, 2013). Initial coding was utilized to break down interview transcripts, field notes and artifacts to examine them for similarities and differences (Saldana, 2013). Finally, these quantitative and qualitative data points were triangulated by examining the evidence from the sources to verify the consistency of the findings to answer the guiding questions (Creswell & Creswell, 2018). As the scholarly practitioner, I chose to utilize a variety of methods of data collection strategies and data resources to enhance the validity of the research findings (Mertler, 2021). Table 3 outlines the type of instrumentation to meet the goals of the inquiry.

Inquiry Procedures

This action research inquiry seeks to determine the impact of professional learning cycles and targeted learning walks on collective teacher efficacy. I will follow a mixed-methods action

Table 3

Guiding Questions and Instruments Used

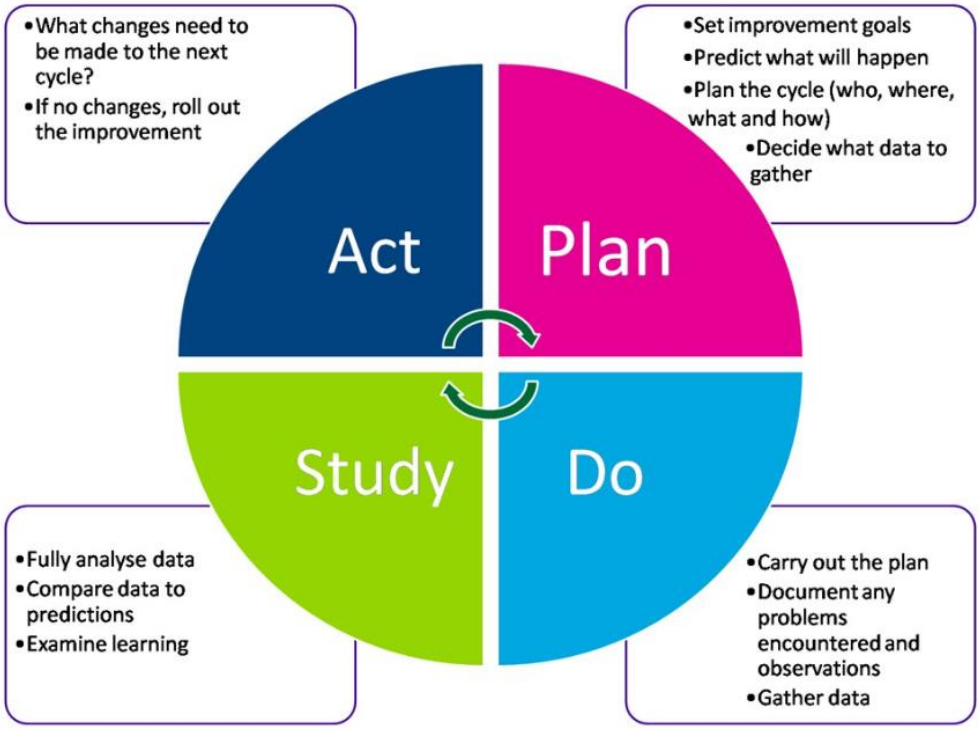
Guiding Question	Instrument	Number of Questions	Action Research Cycle (ARC)
1. How does the implementation of professional learning cycles impact efficacy at Tar River Middle School?	Teacher Efficacy Survey	33 questions	ARC 1
	Teacher Interviews	Open-ended questions	ARC 3
a. How does the implementation of professional learning cycles impact self-efficacy?	Teacher Efficacy Survey	12 questions	ARC 3
	Teacher Interviews	Open-ended questions	ARC 3
b. How does the implementation of professional learning cycles impact collective teacher efficacy at Tar River Middle School?	Teacher Interviews	Open-ended questions	ARC 3
	Collective Teacher Efficacy Survey	21 Questions	ARC 3
2. What are teachers' perceptions of the implementation of the professional learning cycle?	Teacher Interviews	Open-ended questions	ARC 3

research design utilizing three cycles of the Plan, Do, Study, Act (PDSA) model for continuous improvement (Langley et al., 2009; see Figure 15).

Action Research Cycle 1 was the planning and development phase utilizing qualitative and quantitative historical data. This served as the baseline data for the inquiry. This cycle also included the pilot study and the pre-implementation questionnaire and interviews. During Action Research Cycle 2, participants participated in a pre-implementation survey. Professional development on professional learning cycles and targeted learning walks was delivered to the staff prior to the start of the implementation of the learning cycle framework to establish a foundation and understanding among teachers. This framework is a cycle of continuous improvement that repeats every eight weeks. During Action Research Cycle 3, staff participated in post-surveys, interviews and focus groups. This action research cycle concluded with triangulation of the data and reporting of the findings of the inquiry.

Action Research Cycle 1

The first phase of research focused on studying existing data and trends, conducting a pilot study with participants at another school location, and developing a comprehensive plan for implementation at Tar River Middle School. Prior to implementation, I sought approval from the Southeast County Schools Superintendent to conduct this action research inquiry. I then applied and obtained approval from the Internal Review Board at East Carolina University. Once all approvals had been obtained, I began the action research inquiry. Figure 16 outlines the steps in timeline for Cycle 1 of the action research inquiry.



Note. (Langley et al., 2009).

Figure 15. Plan Do Study Act Model for improvement.

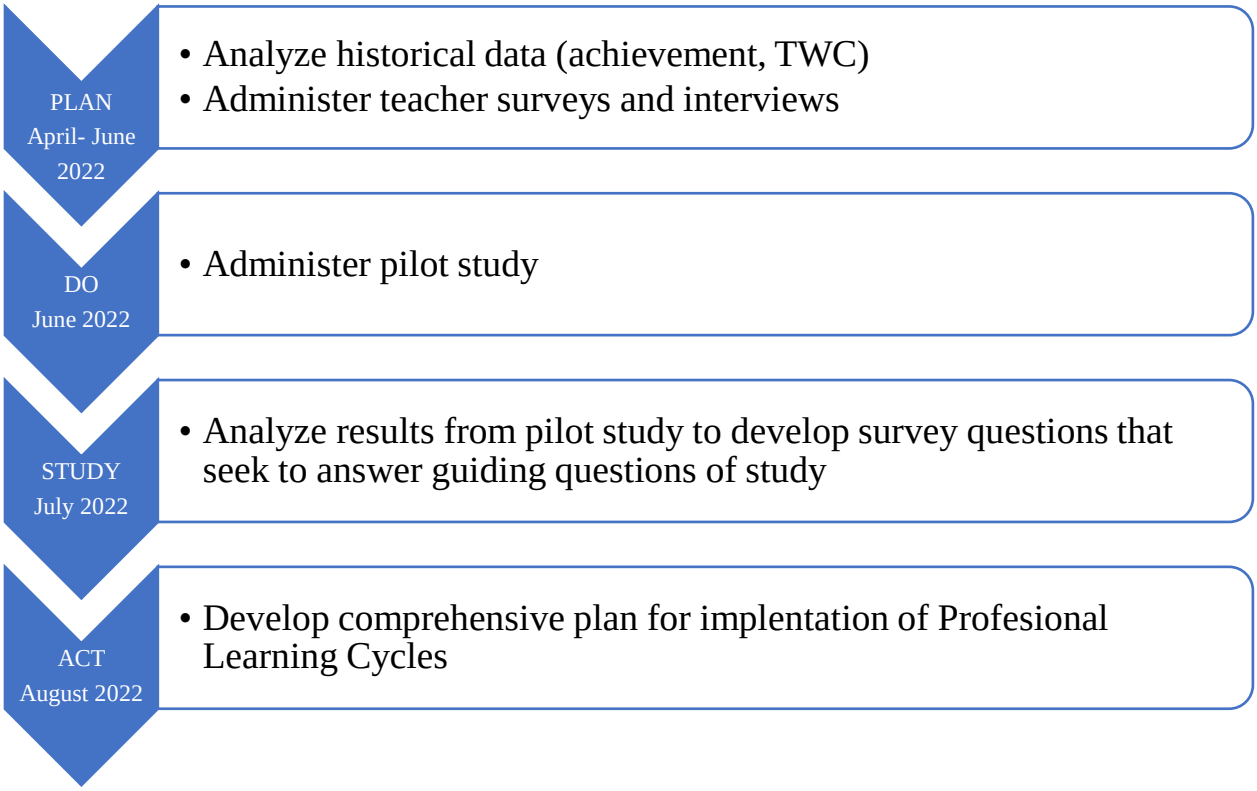


Figure 16. Action Research Cycle 1 timeline.

Action Research Cycle 1- Plan

In leading this inquiry, I began by analyzing historical quantitative data documented through NCDPI and the NC Report Cards. This gave me an understanding of the history of achievement and growth scores earned at the school. I also analyzed Teacher Working Conditions Surveys to find areas that the school fell below the district and state. My final stages of planning included conducting individual informal interviews to identify beliefs, norms, trends, understand the culture of the school and identify school norms. These interviews gave me a deeper understanding as to what story the data was telling. This qualitative data was just as significant, if not more than the quantitative data during the planning stages of this inquiry. As a new principal coming in, this was important to listen, build early trust, and to understand what is not necessarily documented in written form.

Action Research Cycle 1- Do

To ensure the survey questions administered to the participants were valid, reliable and answer the questions I sought to discover, I administered a pilot survey to my existing staff. These participants were also middle school teachers who had participated in professional learning cycles and learning walks during the 2021-2022 school year. They were informed that their participation was completely voluntary, and responses were only used to measure the validity of the questions, not for evaluation purposes. Volunteer participants were provided with survey questions which sought to analyze one's own self-efficacy and beliefs of collective teacher efficacy. I also conducted a voluntary focus group interview to determine if my question set was relevant in determining the impact of my inquiry and guiding research questions. This step gave me a great amount of insight and subsequently four of the ten initial interview questions were removed due to the lack of data and relevance it provided to the study.

Action Research Cycle 1- Study

I utilized my collaborative inquiry partners to study the results of the survey administered to the pilot group and determine which questions would be used, modified or discontinued in order to answer the questions my inquiry seeks.

Action Research Cycle 1- Act

In collaboration with my inquiry partner, I finalized a set of survey questions within the Qualtrics platform which was administered at the beginning of Phase 2. A comprehensive plan for the implementation of the inquiry was developed to share with all participants. The plan was developed based on data discovered during phase 1: historical achievement and growth data, beliefs, trends, and structures in place.

Action Research Cycle 2

During the second cycle of my action research inquiry, I administered a pre-implementation survey, facilitated the implementation of four 8-week professional learning cycles, established a structure for targeted learning walks, and provided professional development throughout. This phase of the inquiry took place from August 2022-June 2023 (see Figure 17). During this phase, I sought to discover changes in self-efficacy, changes in collective efficacy and teachers' perceptions of their colleagues, and components of the Professional Learning Cycle that teachers felt were most impactful.

Action Research Cycle 2- Plan

All teachers at Tar River Middle School were provided a detailed description and outline of my inquiry and all implications to understand the purpose and "why." It was important to me, as a new principal within the school and to the community, that I was completely transparent

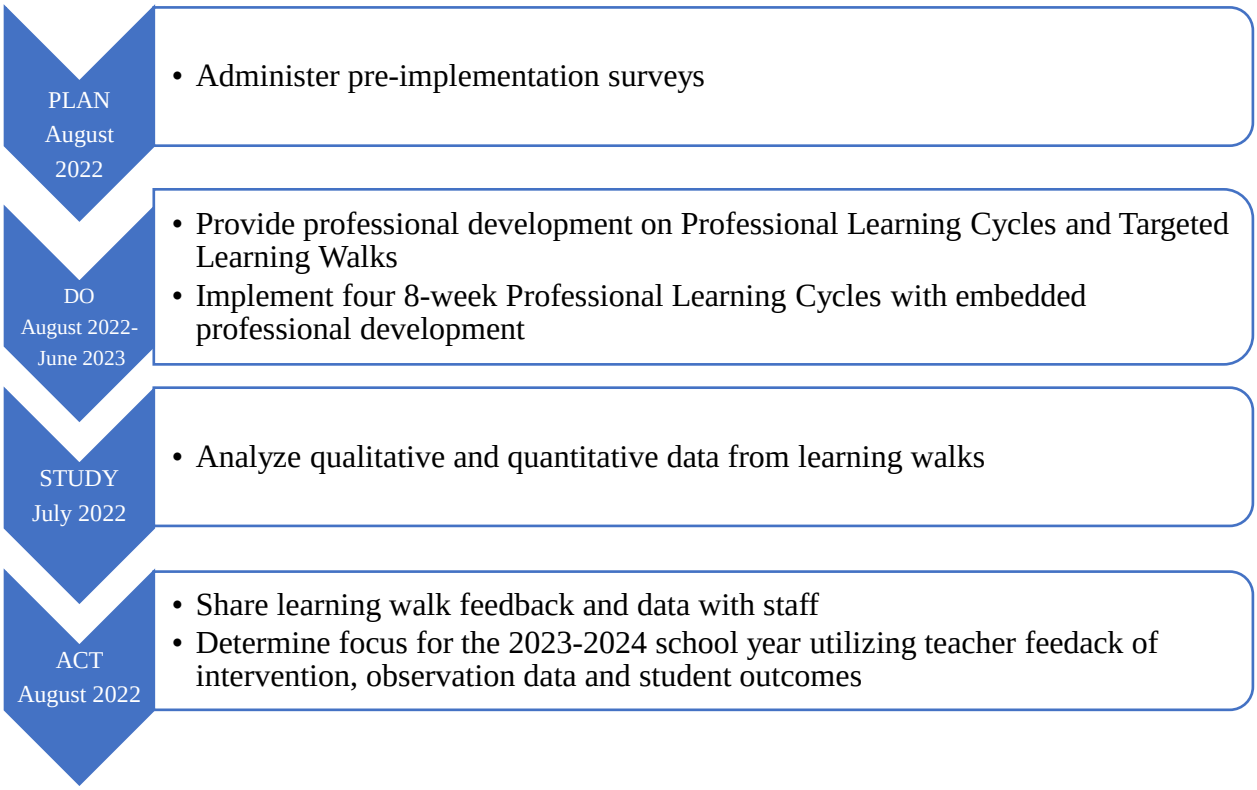


Figure 17. Action Research Cycle 2 timeline.

in my work to improve teacher and student outcomes. The staff then took a pre-implementation survey on self-efficacy and collective teacher efficacy on the Qualtrics platform.

Action Research Cycle 2- Do

During this phase, I collaborated with inquiry partners to provide on-site professional development on professional learning cycles and targeted learning walks. This phase had four subphases, as there were four professional learning cycles throughout the school year. These phases were dependent on real time data and were focused on meeting the instructional needs discovered through the learning walks after examining the data.

Action Research Cycle 2- Study

Quantitative and qualitative data was collected and analyzed using specific walkthrough forms, data collection tools and surveys in cooperation with my inquiry partners. Quantitative data from learning walk walkthrough data forms and surveys was reported as percentages. Qualitative data from teacher feedback and observation data was coded and identified as themes.

Action Research Cycle 2- Act

With cooperation from my inquiry partners, an overall findings report was prepared and shared with the staff utilizing the quantitative and qualitative data collected throughout the implementation of the professional learning cycles. This data was shared with staff members after the third professional learning cycle of the year in a culminating staff session involving all participants.

Action Research Cycle 3- Plan

As the scholarly practitioner leading this inquiry, I developed a plan to conduct post-implementation surveys on self-efficacy and collective teacher efficacy beliefs, and focus group interviews with SIT members. The surveys were be uploaded into the Qualtrics platform and

distributed electronically to all participants. An interview protocol was established, and questions were finalized to ensure they answered the guiding questions within the inquiry. I provided and collected participants' permission in the form of informed consent for their voluntary participation in the interview and to allow the use of a recording device. I assured all participants that the survey and focus group interview was voluntary and confidential and that their identity would be protected.

Action Research Cycle 3- Do

During this phase, post-surveys were administered and a focus group interviews was conducted. Figure 18 outlines a timeline of this final phase. Since I am the participant's direct supervisor, I will employ one non-staff, non-biased third-party inquiry partners to conduct the interview. Participants were given the opportunity to member check the accuracy of their responses following the interviews to ensure their ideas were presented accurately (Creswell & Creswell, 2018; Mertler, 2021). The third-party facilitator also served to attest to the credibility, dependability, transferability, and conformability of the data being collected (Mertler, 2019).

Action Research Cycle 3- Study

Third party facilitators will assist me in coding the interviews in an effort to find themes within the data. An inductive analysis of the transcripts was used to look for patterns, categories and themes from the qualitative data (Mertler, 2021). Pre- and post-surveys were reported using descriptive statistics using Qualtrics software. This mixed-methods action research design allows for numerous data points and perspectives to enhance the validity of the inquiry. These data points were then triangulated by examining the evidence from the sources to verify the consistency of the facts to answer the two guiding questions (Creswell & Creswell, 2018).

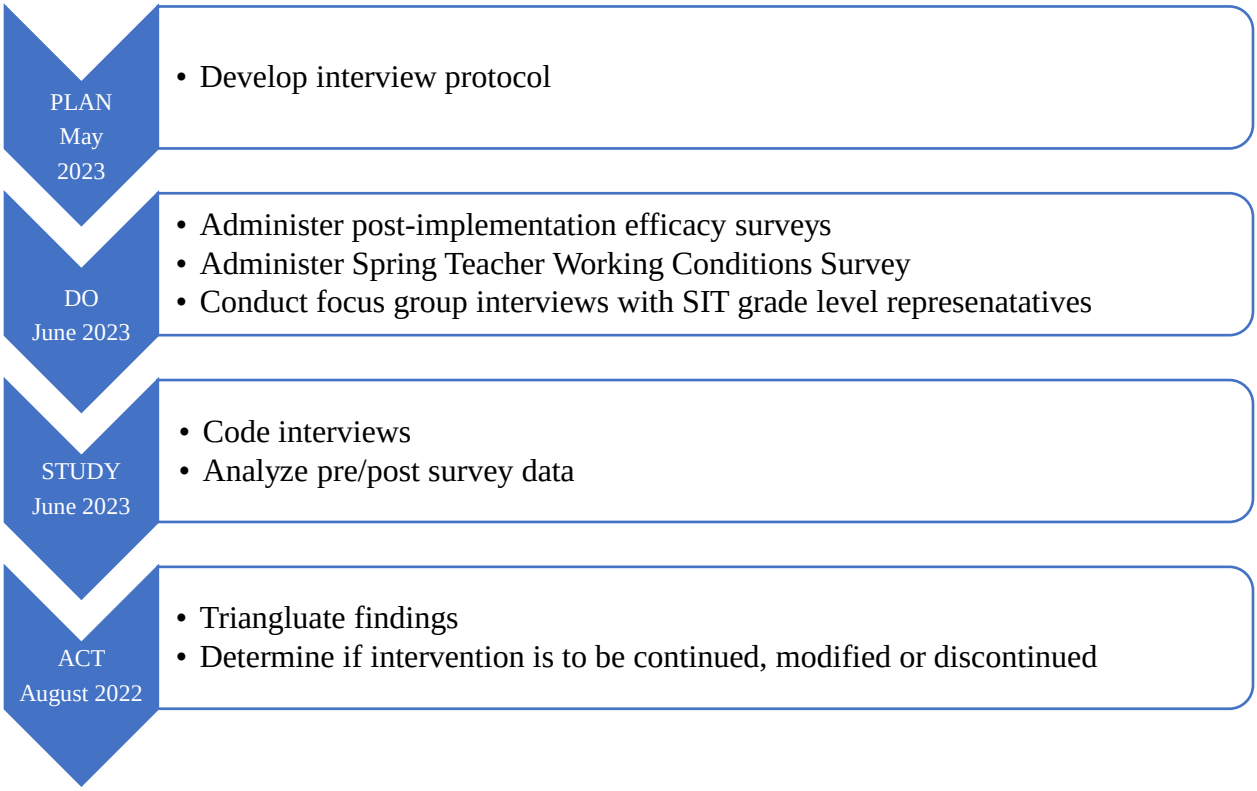


Figure 18. Action Research Cycle 3 timeline.

Action Research Cycle 3- Act

The final cycle culminated with the triangulation of the surveys and focus group data. I sought to discover if the self-efficacy and collective teacher efficacy increased after four 8-week cycles of professional learning. I analyzed the results to report the findings and determine whether or not the results were favorable and should be recommended for future school improvement efforts. Dependent on the outcome, the staff and inquiry partners were charged with deciding to continue, modify or discontinue the intervention.

Rigor of Inquiry Design

Throughout the action research inquiry, I utilized a mixed methods design to triangulate all findings. Triangulation relates "multiple sources of data to establish their trustworthiness or verify the consistency of the facts while trying to account for their inherent biases" (Mertler, 2019, p. 12). During the first cycle, I collected and analyzed quantitative historical working condition surveys and achievement data. This quantitative data was used as baseline achievement data and is the basis of the need for the intervention.

During phase 2 of the inquiry, a mix of quantitative and qualitative data was collected. Prior to implementation, I administered an efficacy survey to all participants to establish baseline data. Throughout the implementation, teachers participated in learning walks and documented observations on walkthrough forms. Teachers also participated in an abbreviated version of the Teacher Working Conditions Survey. This provided the inquiry with both quantitative and qualitative data.

In the final phase, post-implementation surveys were administered to collect quantitative data while focus groups were conducted to collect qualitative data. A pilot study with non-participants were administered to test interview questions prior to administering to inquiry

participants. Once these were found to be valid questions that answered the guiding questions of this inquiry, they were utilized with all participants to collect implementation data. All sources of data were triangulated to ensure the validity of the data (see Figure 19). Finally, Figure 20 shows a visual diagram of the mixed-methods concurrent triangulation strategy (Atif et al., 2013). According to Morse (2003) notation system for mixed methods strategies, the capitalization means that the priority is equal between the two approaches (Atif et al., 2013). I chose this approach because it can answer a broader range of research questions; integrating qualitative and quantitative approaches can overcome the weaknesses and utilize the strengths of each approach; applying the mixed-methods approach can improve insights into and understanding of the data, which might be missed when using a single approach; integrating qualitative and quantitative data can provide strong evidence for conclusions; and triangulating the data from different methods increases the validity of the results and the conclusions (Creswell & Creswell, 2018; Creswell & Plano Clark, 2007; Johnson & Onwuegbuzie, 2004).

Assumptions

For the purpose of this inquiry, it was assumed that teachers lacked appropriate instructional strategies to engage and grow their students. Due to the relatively low enrollment of the school, each teacher served as the only instructor in the grade and content area, therefore leaving them with no one to collaborate or plan with. As such, it was assumed that there is a culture of isolation with little to no collaboration or collective efficacy. It is also assumed that the steady decline in student growth and proficiency has been the result of the barriers due to the nature of the size of the school, isolated teachers with little intentional collaborative professional learning.

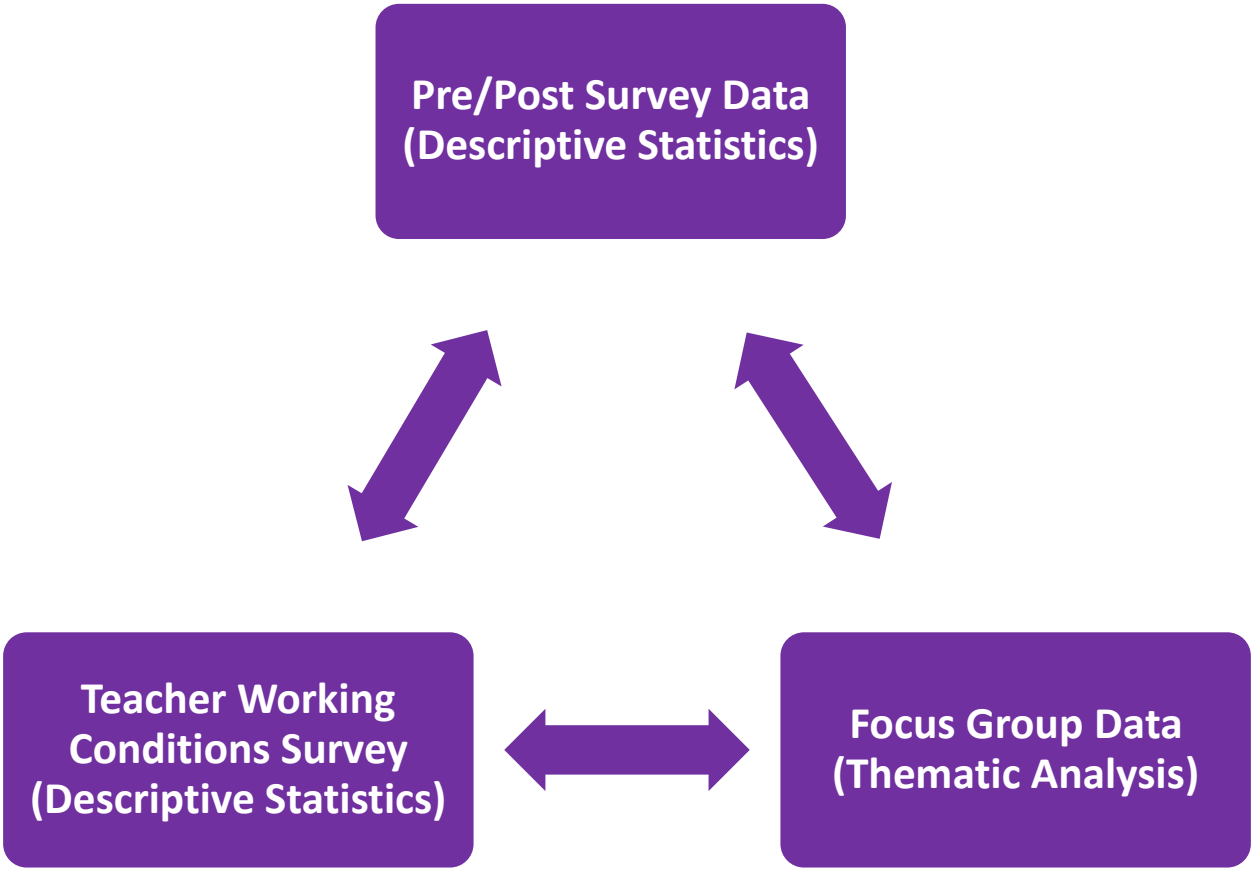
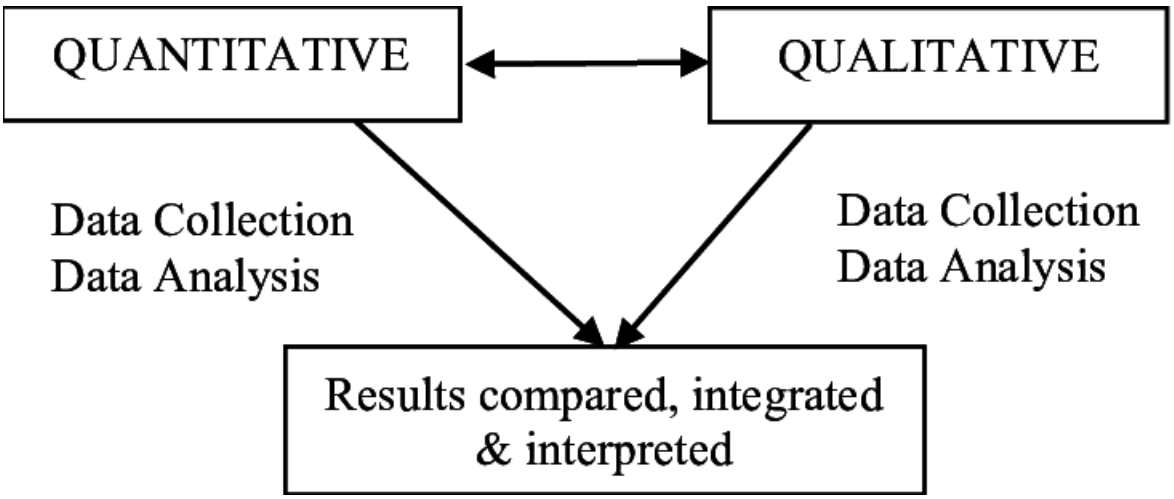


Figure 19. Triangulation of quantitative and qualitative implementation data.



Note. (Atif et al., 2013).

Figure 20. A visual diagram of the mixed-methods concurrent triangulation strategy.

It was assumed that teachers would be willing participants and participate in a framework to learn and grow as professionals. Without a minimal growth mindset, the inquiry may face resistance, which may negatively affect outcomes. Finally, it was assumed that with buy-in from the staff, a collective teacher efficacy would be established through the collaboration of this work.

Scope and Delimitations

The inquiry was designed to measure the impact of professional learning cycles on self-efficacy and overall collective teacher efficacy. All certified teachers at Tar River Middle School were engaged participants in the implementation of the learning cycles throughout the year. The teachers engaged in weekly professional learning communities (PLCs) to evaluate data, share instructional strategies, discuss professional reading, and analyze student work. These are all practices within the professional learning cycle. PLCs were facilitated by a coach, administrator or lead teacher who provided a safe, transparent environment where teachers were equipped with the support to ask questions, provide critical feedback and hold each other accountable for student learning. If the results of this inquiry are deemed favorable, it may be possible to replicate these practices in other schools; however, the results are authentic to this school due to the differences in staff, leadership, culture, experiences, and implementation.

Limitations

As the scholarly practitioner leading this inquiry, I was in my first year as principal at Tar River Middle School. Along with myself, both assistant principals are new to the school. This caused a fear that a lack of trust from the staff towards us as new administration would inhibit the progress and inhibit the inquiry which would impact the outcome. Additionally, there were eight new teachers on staff for the 2022-2023 school year. I was unsure as to the trust and

transparency they would provide each other with, which could ultimately inhibit collaboration, a critical element in the framework.

Role of the Scholarly Practitioner

As the scholarly practitioner leading this inquiry, I also served as the principal at Tar River Middle School. Prior to the start of the 2022-2023 school year, I conducted individual interviews to get a better understanding of the master schedule, leadership teams and roles, opportunities for leadership, current school culture, existing structures focused on teaching and learning, existing professional development and growth expectations, opportunities for collaboration as well as listen for trends and beliefs.

Prior to beginning the action research inquiry, I completed the CITI program modules on research ethics and compliance and received approval from ECU's IRB. I informed all school personnel of the inquiry prior to the start of the school year. Participants were provided a detailed account of the inquiry's procedures, which include the implementation of professional learning cycles, data collection, pre- and post-surveys and interviews. The participants were notified that participation in the learning cycles were a required practice as this was the identified practice and professional development for school improvement; however, the surveys and interviews were strictly voluntary. Participants in surveys and interviews were provided informed consent forms and signed consent forms indicating their willingness to proceed.

Due to the nature of my role within the school and the positionality to the participants, I ensured that all surveys were anonymous and that there will be no penalties for their responses or for non-participation. I also recruited a non-staff, non-biased interviewer to help ensure the validity of the responses.

Summary

This chapter described in detail the mixed-methods action research design and methodology used to implement Professional Learning Cycles. A description of the three phases of inquiry were detailed as well as timelines for each phase. Also noted were the qualitative and quantitative methods for data collection, tools utilized, rigor, trustworthiness and ethical considerations. The action research design presented in this chapter serves as the basis for the subsequent chapter's data and analysis. In Chapter 4, the findings of this inquiry are reported through an analysis of the data collected.

CHAPTER 4: RESULTS

The focus of this inquiry was to determine if the implementation of professional learning cycles increased teacher self-efficacy and overall collective teacher efficacy in a rural middle school. The middle school where this inquiry took place was Tar River Middle School in Southeast County, North Carolina. With the historically high turnover of administration, teachers lacked a sense of efficacy regarding their own professional beliefs as well as beliefs in their colleagues. The high turnover resulted in inconsistent professional learning opportunities with little feedback or follow through. Implementation of the framework for professional learning cycles was intended to mitigate some of the concerns and misunderstandings the staff had regarding professional development and to provide a structure for continuous improvement that staff can utilize even as leadership continues to change.

Bandura's Cognitive Theory, Self-Efficacy Theory, and Collective Teacher Efficacy Theory helped to frame this inquiry, while the Professional Learning Cycle coined by Jeff Nelson and Amalia Cudeiro and the Collective Teacher Efficacy Cycle adapted from Jim Knight, Jenny Donohoo, and Peter DeWitt helped establish the Integrative Model of Professional Learning and Collective Teacher Efficacy Model which guided this inquiry. Teachers engaged in cycles of continuous improvement through school-based action research and onsite professional development with the intention of refining teaching practices, developing a culture of shared leadership and collective teacher efficacy.

The following questions help to guide the inquiry:

1. How does the implementation of professional learning cycles impact efficacy at Tar River Middle School?

    a. How does the implementation of professional learning cycles impact self-efficacy?
    b. How does the implementation of professional learning cycles impact collective teacher efficacy at Tar River Middle School?
2. What are teachers' perceptions of the implementation of the professional learning cycle?

This inquiry utilized an exploratory sequential mixed-methods action research design following multiple phases. The following phases took place over the course of one year:

1. Baseline data collection, planning, and development of the inquiry
2. Implementation of Professional Learning Cycles
3. Post-implementation surveys and focus group interviews

This chapter provides an analysis of the collected data and interpretation of the data within each phase of the inquiry. It begins with a summary of the phases of implementation. Next, data collection and an analysis of the data is presented. Demographics of the participants are detailed, followed by presentation of the results relative to the inquiry questions.

Implementation

During the first phase of this inquiry, I immersed myself in as much historical data as possible. I collected historical school-wide quantitative data and qualitative data such as student achievement data from the North Carolina Department of Public Instruction, student growth measures from the *Education Value-Added Assessment System* (EVAAS) and Teacher Working Conditions surveys (TWC). I determined that it was important to also conduct individual questionnaires and interviews with teachers as well, as this would be my first year in the school

and I really needed to find underlying or unspoken themes which speak to the culture of the school.

A pilot study was conducted at the end of the 2021-2022 school year with the school I was previously serving as principal to test the validity and feasibility of the survey and interview questions. This school had implemented the framework for professional learning cycles and volunteered to answer survey questions regarding the benefits to this framework on their own professional development, self-efficacy, and teacher efficacy.

Following the pilot study, I distributed individual questionnaires (Appendix D) to the staff at TRMS and met with each teacher as a follow-up. This meeting, held at the end of the school year, was not only to introduce myself and get to know the teachers, but to identify school-wide systems, trends, and beliefs.

The second phase of the inquiry began prior to the start of the 2022-2023 school year during a School Improvement Team (SIT) Summer Retreat to review collected data. The SIT team analyzed historical quantitative and qualitative data and determined that teachers and staff lacked a sense of efficacy, norms, and had a limited understanding of the benefits of professional development. The team discussed shared goals and created the first focus of practice for Cycle 1: Teacher Efficacy & School Culture (see Appendix J). TRMS SIT team developed a goal to create a shared identity by fostering relationships with all stakeholders to boost morale, maximize supports, and strengthen connections. The team decided the actions would include:

- Develop a new school Mission/Vision.
- Conduct a book study: *The Energy Bus* by Jon Gordon.
- Establish structured time for professional learning and collaboration each week.
- Establish a Parent Teacher Organization.

Prior to the start of the first learning cycle, I administered the Teachers' Sense of Efficacy Scale (see Appendix F) and Collective Efficacy Scale (see Appendix G) survey using a Likert-type scale to participants on a voluntary basis. Four 8-week cycles of professional learning (see Appendix H) took place throughout the year and served as sub-phases within the second phase of the action research cycle. Within these professional learning cycles, teachers collectively examined school-wide data to select appropriate instructional targets. Teachers were then immersed in a collective professional learning cycle framework intended to improve instructional practices. The four cycles throughout the year had an overarching focus on fostering a collective teacher efficacy among teachers and support staff. The cycles were as follows:

- Cycle 1: Teacher Efficacy- A teachers' belief in their own efforts and ability to determine their students' success (Hoy, 2000)

  Focus Question: Is there evidence the teacher is utilizing alternative strategies, collaborating with colleagues, and helping students see themselves as capable learners?

- Cycle 2: Bloom's Taxonomy Framework

  Focus Question: Do students have access to equitable academic discourse?

  Academic Discourse: every student has access to rigorous questions and peer discussions to synthesize understanding.

- Cycle 3: Bloom's Taxonomy Framework (continued)

  Focus Question: Do students have access to equitable academic discourse?

  Academic Discourse: every student has access to rigorous questions and peer discussions to synthesize understanding.

- Cycle 4: Bloom's Taxonomy Framework & Peer/Group Discourse

Focus Question: Does every student have access to rigorous questions tasks/assignments and peer discussions to enhance higher-order thinking skills and synthesize understanding?

- TRMS will increase student engagement by incorporating rigorous lessons and higher order questioning to maximize student achievement and accountability. Students will participate in peer discussions and academic discourse to enhance their understanding.
    - high expectations
    - appropriate standards taught
    - accountability measured for teachers and students
    - strategies readdressed using remediation and enrichment (tiered interventions)

Following the selection of the instructional target, teachers were provided professional reading and/or professional development to enhance the teacher's understanding of the focus of practice. Teachers were then provided with time for safe practice within the classroom setting to practice the new strategies. This was a time for teachers to experiment with a given strategy or practice in a low-risk environment without fear of formal evaluation.

Teachers then opened their classrooms for their peers to conduct learning walks following a structured protocol (see Appendix I) through the lens of the targeted instructional focus. Teachers and administrators provided specific feedback at this time through a structured walkthrough tool designed for each cycle. The walkthrough forms for Cycles 1 through 4 can be found in Appendix J (Cycle 1: Teacher Efficacy), K (Cycle 2 & 3: Bloom's Taxonomy Framework), and L (Bloom's Taxonomy Framework & Peer/Group Discourse). It is important to

note that these learning walks were not evaluative. The purpose of the targeted learning walks was to provide feedback to enhance the teacher's current practice, to enhance the observers' understanding of the strategy through personal reflection after observing others, and to enhance their own efficacy and leadership by providing opportunities to participate in establishing and monitoring school-wide powerful practices. Each cycle concluded with peer discussions and data talks. Teachers were given the opportunity to discuss successes and challenges as well as look at student work and student data. This process allowed teams to decide on how to adjust their practice and/or identify a new learning target.

At the end of the first cycle, I gave a condensed version of the Teacher Working Conditions with selected survey questions that were identified as particularly low in the Spring of 2022, as well as questions that align with instructional practices and supports. This survey served to help me understand how teachers were feeling about the professional learning cycle, if they understood the purpose, and if efficacy had increased thus far (see Appendix M).

Phase 3 of the inquiry consisted of the collection and analysis of the quantitative and qualitative data collected. The staff participated in post-surveys with identical questions provided at the beginning of the year and a spring follow-up of the Teacher Working Conditions (TWC) survey administered after the first professional learning cycle. I recruited a non-biased, non-participant third party inquiry partner to conduct a focus group interview with School Improvement Team (SIT) and teacher leaders within the school. The interview was coded to find common themes among the interview participants. I then triangulated these data points by examining the evidence from each source to verify the consistency of the findings to answer the three questions which guided me throughout this inquiry.

Data Collection

Throughout all three phases of this inquiry, both qualitative and quantitative data was gathered using several different instruments. Each instrument provided a separate set of results to be analyzed. Qualitative baseline data was gathered while conducting a pre-implementation questionnaire and interview with each staff member. Quantitative baseline data was gathered by collecting and analyzing historical Teacher Working Condition surveys. Data was also gathered using pre- and post-electronic surveys. The focus group interview concluded data collection for this inquiry. All focus group participants were asked to sign an informed consent document prior to the beginning of data collection. Participants were provided information on the purpose of the inquiry, risks and benefits, confidentiality, compensation, and voluntary consent. The triangulated convergence of the data collected from the numerous sources, including the perspectives from the various participants ensures validity within the findings (Creswell & Poth, 2018). The data collection tool and the alignment with the respected focus of practice guiding question it answers is outlined in the next section in order of each instrument. Table 4 provides an overview of the data collection instruments.

Data Analysis

From the inception of the inquiry, various qualitative and quantitative data sources were utilized for analysis. Qualitative data was analyzed during the initial staff questionnaires, interviews and pilot focus group interview. Examination and analysis of quantitative data sources included teacher working conditions surveys, pre-implementation and post-implementation self-efficacy and collective-efficacy surveys. To conclude the inquiry, a focus group interview was conducted to identify post-implementation themes across the organization.

Table 4

Data Collection Tool Alignment

Data Collection Instrument	Focus of Practice Guiding Question		
	#1a	#1b	#2
Teacher Working Conditions Survey • Pre-Implementation • Post-Implementation	X	X	X
Pre-Implementation Teacher Questionnaire	X	X	
Pre-Implementation Teacher Interview	X	X	
Pilot Study: Focus Group	X	X	X
Teachers' Sense of Efficacy Survey • Pre-Implementation • Post-Implementation	X		X
Collective Efficacy Survey • Pre-Implementation • Post-Implementation		X	X
Focus Group Interview	X	X	X

Teacher Working Conditions Survey

The North Carolina Teacher Working Conditions (TWC) Survey is administered every two years in North Carolina. This survey is an analysis of five sets of school conditions related to teacher outcomes: allocation of time in schools, the provision of professional development for teachers, the quality of leadership, the input of teacher into school decision-making, and the adequacy of school facilities and resources.

Spring 2022 TWC survey results were analyzed during initial baseline research of TRMS. The TWC survey results helped to identify a focus of study for the 2022-2023 school year. This data was analyzed twice after the initial baseline data was recorded, once in the fall of 2022 after the first professional learning cycle took place and at the conclusion of the fourth and final learning cycle that school year. Outcomes of the inquiry are favorable if the percentage of teachers in agreement with each statement increased. Providing pre- and post-implementation data, this collection instrument served as a source of quantitative data for the inquiry.

Teacher Baseline Questionnaire and Interviews

Teachers were sent an online questionnaire (see Appendix D) with questions about their family, role at TRMS, concerns they wanted to see addressed, their own strengths and areas of growth as an educator, and areas they would like to lead. Following the questionnaire, the administrative team met with each teacher individually to go further in depth about growth they would like to see as a school and individually. This questionnaire and interview provided qualitative data to the administration which helped identify themes surrounding school-wide beliefs, norms, trends, climate, culture, and identity. These responses were used as baseline data to identify changes in teacher perceptions at the conclusion of the inquiry.

When teachers were surveyed about what they would like the new administration to provide in the next school year, collectively, teachers responded with the following:

- more of a team environment
- organized approach
- improved teaching and the content to be relevant, intentional, and effective
- trust
- consistency
- continuity in leadership and in classrooms
- strong emphasis on academics

Pilot Study

In the pilot study, I utilized a purposeful participant focus group comprised of School Improvement Team members from the previous school I served as principal at and implemented the professional learning cycle framework in. This consisted of a teacher leader from each grade level in grades six through eight, an elective representative and an exceptional teacher representative.

I asked questions regarding the perceptions of teachers around the professional learning cycle framework, the impact it had on their own abilities effecting their own self efficacy as a teacher and their beliefs in their colleagues' abilities to successfully produce outcomes after planning and implementing a set of actions. I also asked questions about the impact of the professional learning cycle framework on student achievement. Questions relating to achievement were subsequently removed from the interview questions due to the other variables that may impact student achievement such as a new curriculum adoption, teacher vacancies and not aligning with the constructed inquiry questions.

Teachers' Sense of Efficacy Scale

The Teachers' Sense of Efficacy Scale (TSES) was administered to teachers pre- and post-inquiry implementation. The TSES survey is designed to help provide an understanding of teachers' beliefs in their own ability to bring about the outcomes that they hope to see. Respondents are asked to indicate their opinion on a twelve-item continuous Likert-type scale survey instrument, in which responses range from (1) "none at all" to (9) "a great deal." In their responses, teachers are asked to consider the combination of their current ability, resources, and opportunity to do the things asked about in their present position. The survey items are grouped into three moderately correlated factors: Efficacy in Student Engagement (items 2, 3, 4, 11), Efficacy in Instructional Practices/Strategies (items 5, 9, 10, 12), and Efficacy in Classroom Management (items 1, 6, 7, 8). The responses provided quantitative data and were used to identify a quantified increase or decrease in self-efficacy from pre-implementation to post-implementation.

Collective Efficacy Survey

Goddard et al. (2000) created the Collective Efficacy Scale (CES). The CES is a 21-item scale that measures teachers' collective efficacy using a six-point Likert-type scale with response ranges from (1) "strongly disagree" to (6) "strongly agree." Each item is identified as being directed at the assessment of either group competence (GC) or task analysis (TA). Group competence consists of teachers' judgments about the capabilities that colleagues bring to a given teaching situation. These judgments include inferences about the faculty's teaching methods, skills, training, and expertise. Task analysis (TA) refers to perceptions of the constraints and opportunities inherent in the task at hand. Task analysis also includes teachers' beliefs regarding

the abilities and motivations of students as well as the level of support provided by the students' home and the community.

To ensure validity and reliability, this survey is also designed with both positively (+) and negatively (-) worded statements. Goddard et. al (2002) explains that researchers (Guskey, 1982, 1987; Woolfolk & Hoy, 1990) examining teacher efficacy have cautioned that the wording of items may influence respondents and teachers may express different efficacy beliefs depending on whether the outcomes described are positive or negative. A graphic representation of this model appears in Table 5. The sample items below are examples of the wording within the four types of collective efficacy:

- Teachers in this school are well prepared to teach the subjects they are assigned to teach (GC+).
- Teachers here don't have the skills needed to produce meaningful student learning (GC-).
- The opportunities in this community help ensure that these students will learn (TA+).
- The lack of instructional materials and supplies in this school makes teaching very difficult (TA-).

The responses were analyzed by each item number and were used to identify a quantified increase or decrease in collective efficacy beliefs from pre-implementation to post-implementation.

Focus Group Interview

At the conclusion of the first year of the implementation of the professional learning cycles framework, a purposeful group of certified teacher leaders participated in a focus group interview led by a non-biased third-party interviewer. The purpose of the focus group was to gather qualitative data on teacher perceptions of the impact of the professional

Table 5

Collective Efficacy Scale Item Analysis

Number	Item	GC+	GC-	TA+	TA-
1	Teachers here are able to get through to the most difficult students.	X			
2	Teachers here are confident they will be able to motivate their students.	X			
3	If a child doesn't want to learn teachers here give up.		X		
4	Teachers here don't have the skills needed to produce meaningful student learning.		X		
5	If a child doesn't learn something the first time, teachers will try another way.	X			
6	Teachers here are skilled in various methods of teaching.	X			
7	Teachers here are well prepared to teach the subjects they are assigned to teach.	X			
8	Teachers here fail to reach some students because of poor teaching methods.		X		
9	Teachers here have what it takes to get the children to learn.	X			
10	The lack of instructional materials and supplies makes teaching very difficult.				X
11	Teachers here do not have the skills to deal with student disciplinary problems.		X		
12	Teachers here think there are some students that no one can reach.		X		
13	The quality of school facilities here really facilitates the teaching and learning process.			X	
14	The students here come in with so many advantages they are bound to learn.			X	
15	These students come to school ready to learn.			X	
16	Drug and alcohol abuse in the community make learning difficult for students here.				X
17	The opportunities in this community help ensure that these students will learn.			X	
18	Students here just aren't motivated to learn.				X
19	Learning is more difficult here because students are worried about their safety.				X
20	Teachers here need more training to know how to deal with these students.		X		
21	Teachers here really believe every child can learn.	X			

learning cycles. The interview questions also provided participants to answer open-ended questions regarding the impact the framework has had on their own self-efficacy as well as collective efficacy. Appendix N outlines the questions for the participants. Twelve teacher leaders participated with experience ranging from one to thirty-two years. The focus group was conducted using Zoom software. Each participant was provided with a number and notes were taken during the group interview with annotations on the transcription of the focus group recording. Data was then analyzed, organized, and coded allowing for the emergence of themes. This qualitative data was triangulated with other data sources to identify changes in teacher perceptions at the conclusion of the inquiry.

Validity of Results

Accurate representation of data is essential for any inquiry. To ensure validity in this inquiry, data was collected from various sources for triangulation (Mertler, 2019). Quantitative data was collected from Teacher Working Conditions surveys, Teacher Efficacy Surveys and Collective Efficacy surveys. Quantitative data was collected pre- and post-implementation and utilized to calculate and determine outcomes including changes in agreement level indicating a change in perception. The qualitative data was collected from open-ended responses and a staff focus group interview. Following the collection of the qualitative data, the responses were then read numerous times by the practitioner to organize, code, and interpret themes using the practices based on Figure 21 of Creswell's data analysis approach (2009).

Demographics

A total of twenty-seven certified teachers participated in the implementation of the professional learning cycles throughout the 2022-2023 school year. The teachers were all certified and consisted of five male and twenty-two female. Their years of experience ranged

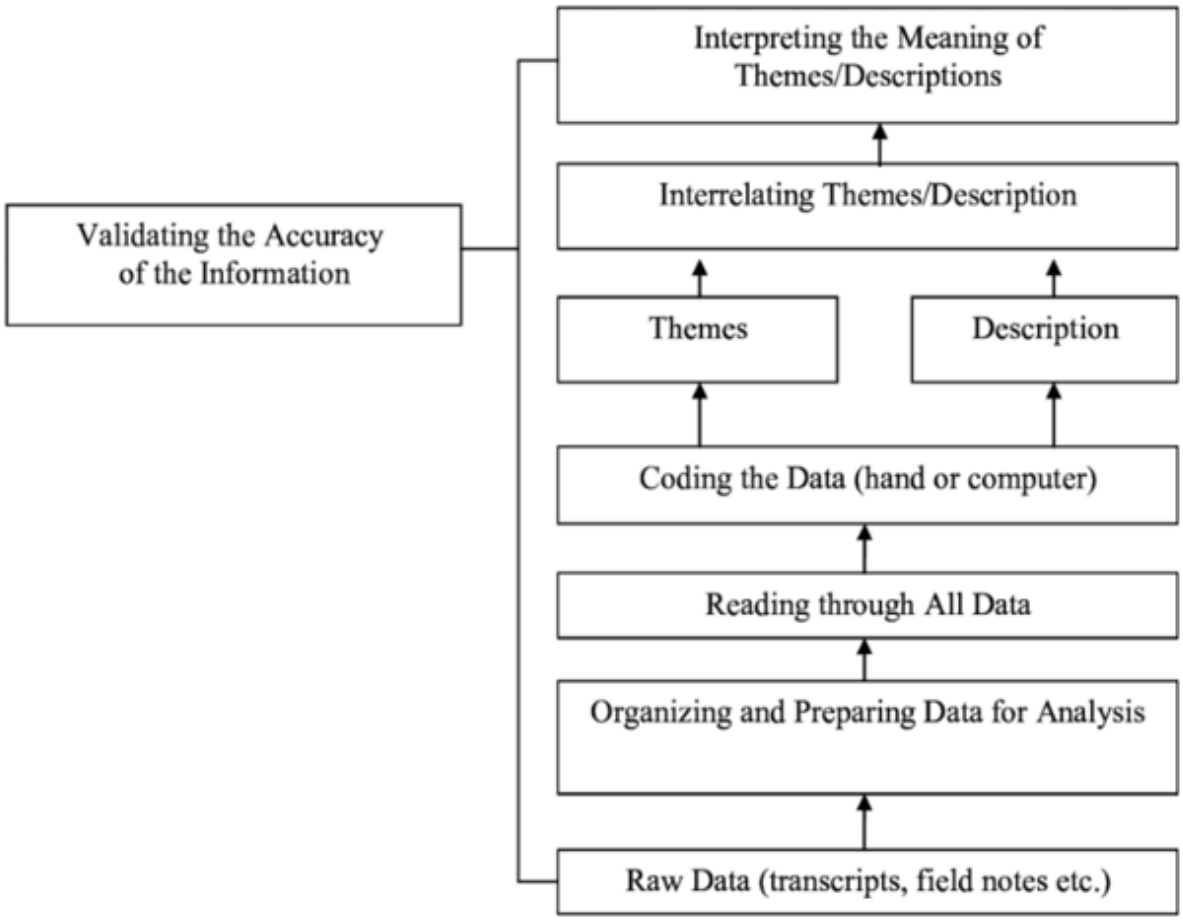


Figure 21. Creswell's data analysis of qualitative research. (Creswell, 2009, p. 185).

from less than one year to 36 years of experience. These participants made up the 5th grade, 6th grade, 7th grade, 8th grade, Elective, Exceptional and Support teams (see Figure 22).

Table 6 represents the demographics of the teachers who participated in the purposeful focus group interview at the conclusion of the inquiry. These twelve teacher leaders consisted of two male and 10 female certified teachers with experience ranging from two to thirty-two years.

Results

The results section is organized by the three focus of practice questions which guided this inquiry. Various data collection tools were utilized to gather data and examine the impact of the implementation of the professional learning cycle framework on self-efficacy and collective efficacy. Results gathered from each instrument are described throughout this section.

Guiding Question 1

The first question guiding this inquiry consists of an overarching question, *how does the implementation of professional learning cycles impact efficacy at Tar River Middle School?* This is followed by two separate sub questions referring to a teacher's sense of self efficacy and overall collective efficacy. The first subset of question one asked, *how does the implementation of professional learning cycles impact self-efficacy?* For the purpose of this inquiry, self-efficacy was quantitatively measured using pre- and post-TWC surveys, pre- and post-TSES survey data, and qualitatively in a structured, purposeful focus group interview. The impact of specific data collection tools for guiding question 1 is outlined below.

Teacher Working Conditions Survey

The spring 2022 TWC survey results were analyzed during the data collection phase of this inquiry. The data from this survey indicated a profound weakness in the areas of professional learning and instructional practices and supports. The agreement rate in these two sections of the

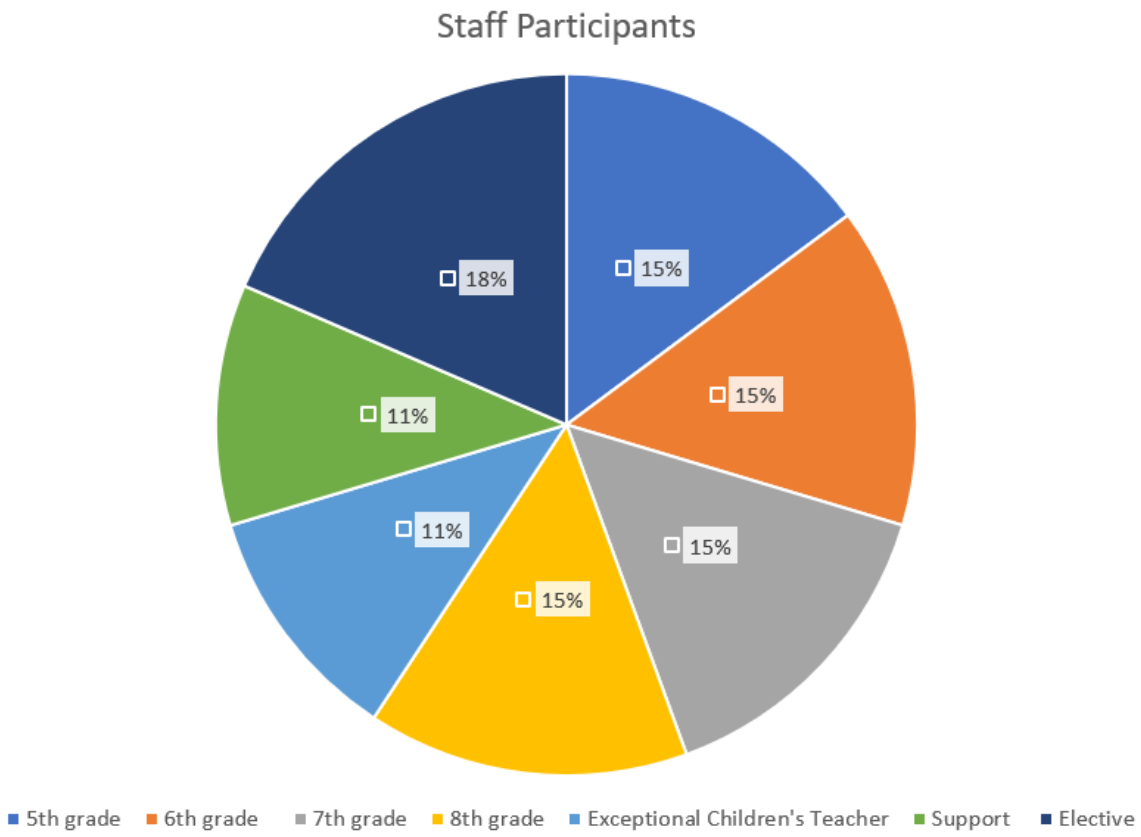


Figure 22. Staff participants per teaching area.

Table 6

Focus Group Participant Demographics

Participant #	Gender	Years of Experience
1	F	26
2	F	2
3	F	1
4	F	22
5	F	32
6	F	8
7	F	2
8	F	22
9	F	8
10	F	19
11	M	11
12	M	2

TWC surveys were significantly lower than other survey questions administered and subsequently were determined to be a focus for the 2022-2023 school year. Questions within these two sections were provided as follow up after the first and fourth professional learning cycle. Outcomes were measured by looking at the rate of change in agreement from the spring of 2022 to the spring of 2023 after a year of implementation of the framework.

Table 7 outlines the professional learning indicators surveyed during the 2022-2023 school year. Question 8.1c: "Professional development offerings are data driven" had the greatest increase among the statements measuring professional learning. According to the spring 2022 TWC survey, 45% of the TRMS staff indicated that they were in agreement with this statement. When the staff was provided a condensed version of the TWC survey in the fall of 2022 after the initial learning cycle, 95% of the staff surveyed were in agreement with this statement. After a final survey was provided in spring of 2023, the staff remained at 95% in agreement that professional development offerings are data driven. This indicates a 50% increase in one year. A total of ten statements were surveyed within the professional learning section of the TWC survey. All ten statements increased significantly from spring 2022 to spring 2023 ranging from a 23% increase to a 50% increase.

The second set of TWC survey questions that were identified as an area of concern were comprised of statements regarding instructional practices and supports found in Table 8. Question 9.1n: "Teachers have knowledge of the content covered and instructional methods used by other teachers at this school" recorded a 45% agreement rate in the spring of 2022. In the fall of 2022, this statement was measured at 90% agreement, and at 86% agreement in the spring of 2023. A total of eleven statements were surveyed within the instructional practices and supports section of the TWC survey. All eleven statements in this category increased in percent agreement

Table 7

North Carolina Teacher Working Conditions Survey: Professional Learning Opportunities

Indicators	Spring 2022	Fall 2022	Spring 2023
Q8.1c Professional development offerings are data driven.	45%	95%	95%
Q8.1d Professional learning opportunities are aligned with the school's improvement plan.	72%	100%	95%
Q8.1e Professional development is differentiated to meet the individual needs of teachers.	34%	NA	71%
Q8.1f Professional development deepens teachers' content knowledge.	79%	100%	91%
Q8.1h Teachers are encouraged to reflect on their own practice.	90%	100%	100%
Q8.1i In this school, follow up is provided from professional development.	48%	90%	86%
Q8.1j Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.	62%	100%	86%
Q8.1k Professional development is evaluated and results are communicated to teachers.	48%	NA	81%
Q8.1l Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs.	72%	95%	95%
Q8.1m Professional development enhances teachers’ abilities to improve student learning.	79%	NA	95%

Table 8

North Carolina Teacher Working Conditions Survey: Instructional Practices and Supports

Indicators	Spring 2022	Fall 2022	Spring 2023
Q9.1a Local assessment data are available in time to impact instructional practices.	72%	NA	100%
Q9.1c Teachers work in professional learning communities to develop and align instructional practices.	83%	NA	91%
Q9.1d Provided supports (i.e. instructional coaching, professional learning communities, etc.) translate to improvements in instructional practices by teachers.	72%	95%	100%
Q9.1e Teachers are encouraged to try new things to improve instruction.	90%	80%	100%
Q9.1f Teachers are encouraged to observe other teachers within their school/district.	66%	95%	95%
Q9.1h Teachers have autonomy to make decisions about instructional delivery (i.e. pacing, materials and pedagogy).	72%	60%	95%
Q9.1i Teachers believe almost every student has the potential to do well on assignments.	86%	70%	100%
Q9.1j Teachers believe what is taught will make a difference in students' lives.	83%	90%	100%
Q9.1l Teachers collaborate to achieve consistency on how student work is assessed.	72%	NA	81%
Q9.1n Teachers have knowledge of the content covered and instructional methods used by other teachers at this school.	45%	90%	86%
Q9.1p Teachers use assessment data to inform their instruction.	79%	NA	100%

from spring 2022 to spring 2023 ranging from an 8% increase to a 41% increase.

Teachers' Sense of Efficacy Scale

The Teachers' Sense of Efficacy Scale (TSES) was provided to teachers digitally pre- and post-inquiry implementation using the web-based software, Qualtrics. The TSES is a survey designed to help provide an understanding of teachers' beliefs in their own ability to bring about the outcomes that they hope to see. Respondents were asked to indicate their opinion on a twelve-item continuous Likert-type scale survey instrument, in which responses range from (1) "none at all" to (9) "a great deal." In their responses, respondents are asked to consider the combination of their current ability, resources, and opportunity to do the things asked about in their present position. The survey items are grouped into three moderately correlated factors: Efficacy in Student Engagement (items 2,3,4,11), Efficacy in Instructional Practices/Strategies (items 5,9,10,12), and Efficacy in Classroom Management (items 1,6,7,8).

Fourteen teachers participated in the pre-survey and twelve participated in the post-survey. Two teachers who participated in the fall left prior to the end of the year, therefore were unable to participate in the spring administration of the survey. Due to the inconsistent number of participants, results were measured by percent of total participants for each response rather than total number of responses. Each question was graphed comparing pre-implementation and post-implementation survey results on a comparative bar graph. An increase of staff moving from (1) "none" to (9) "a great deal" indicates a positive trend and an increase in teacher self-efficacy. For analysis purposes, the Likert-type scale rating was analyzed combining three levels for three different levels of influence. Responses ranging from "none" to "very little" (1-3), "very little/some influence" to "some influence/quite a bit" (4-6), and "quite a bit" to "a great deal" (7-9). The percentage of participants with responses ranging from levels 7-9 in the pre-

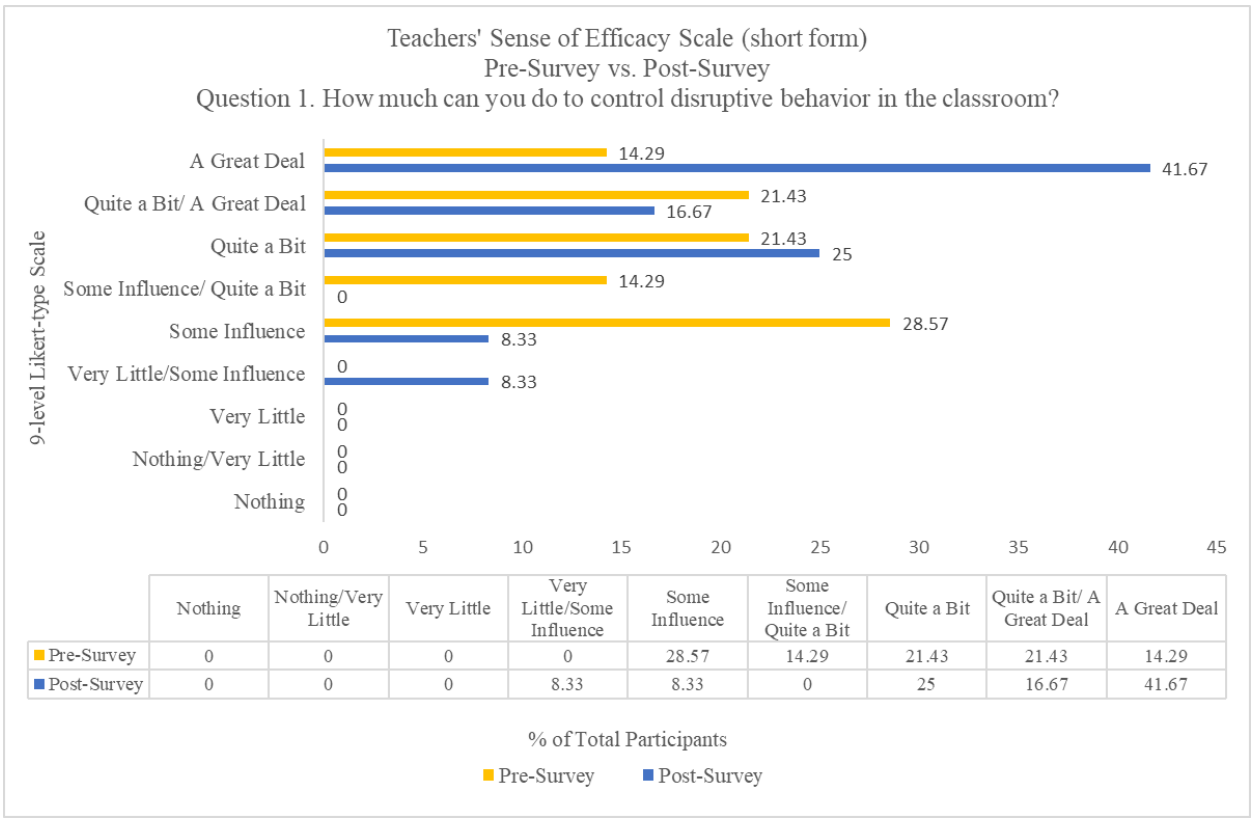
implementation survey was then subtracted from the percentage of participants with responses ranging from levels 7-9 in the post-implementation survey to quantify the percent change. A negative percentage indicated a decrease in self-efficacy, and a positive percentage indicated an increased level of self-efficacy. Questions one through twelve are analyzed and explained. Figures 23-34 provide graphic representations of the responses from the pre- and post-surveys.

Question 1 of the TSES (see Figure 23) asks, "How much can you do to control disruptive behavior in the classroom?" In the fall of 2022, 57.15% of the participants responded positively as either having quite a bit (7), quite a bit/a great deal (8) or a great deal (9) of influence in controlling disruptive behaviors. In the spring of 2023, this increased to 83.34% believing they have quite a bit (7), quite a bit/a great deal (8) or a great deal (9) of influence in controlling disruptive behaviors. This is a 26.19% increase in teachers' belief that they can control disruptive behavior in the classroom.

Figure 23 displays question 2, "How much can you do to motivate students who show low interest in schoolwork?" 35.71% of respondents answered positively in levels 7, 8, or 9. Post-implementation survey results increased 22.62%, with 58.33% of participants indicating a positive increase in their beliefs that they can motivate students.

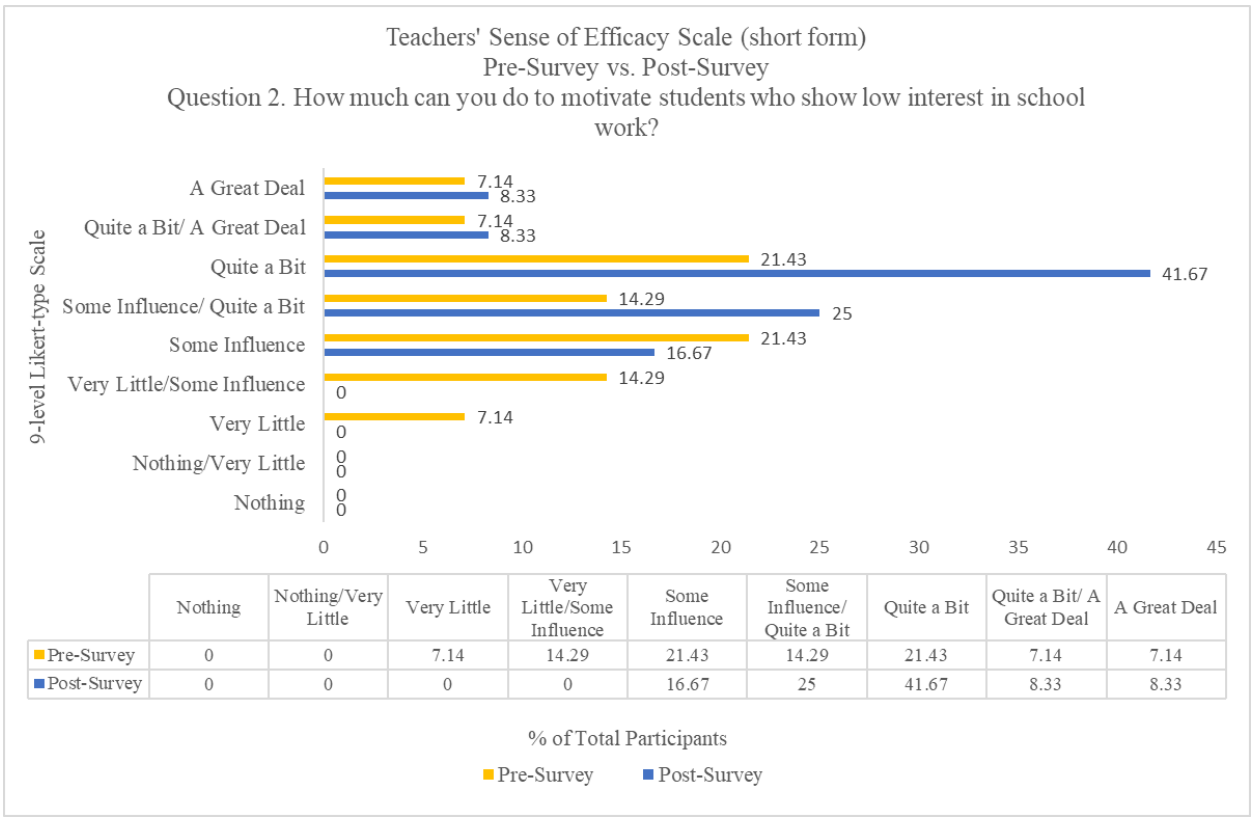
Question 3 displayed in Figure 24 asks, "How much can you do to get students to believe they can do well in school work?" 42.86% of the participants positively indicated that they believe that they can get students to believe they can do well in school work pre-implementation. In comparison, 83.33% believe they have this ability post-implementation. This indicates a 40.47% increase in teachers' belief levels.

Question 4 (see Figure 25) asks "How much can you do to help your students value learning?" Post-implementation survey results indicate 83.33% of participants believe they can



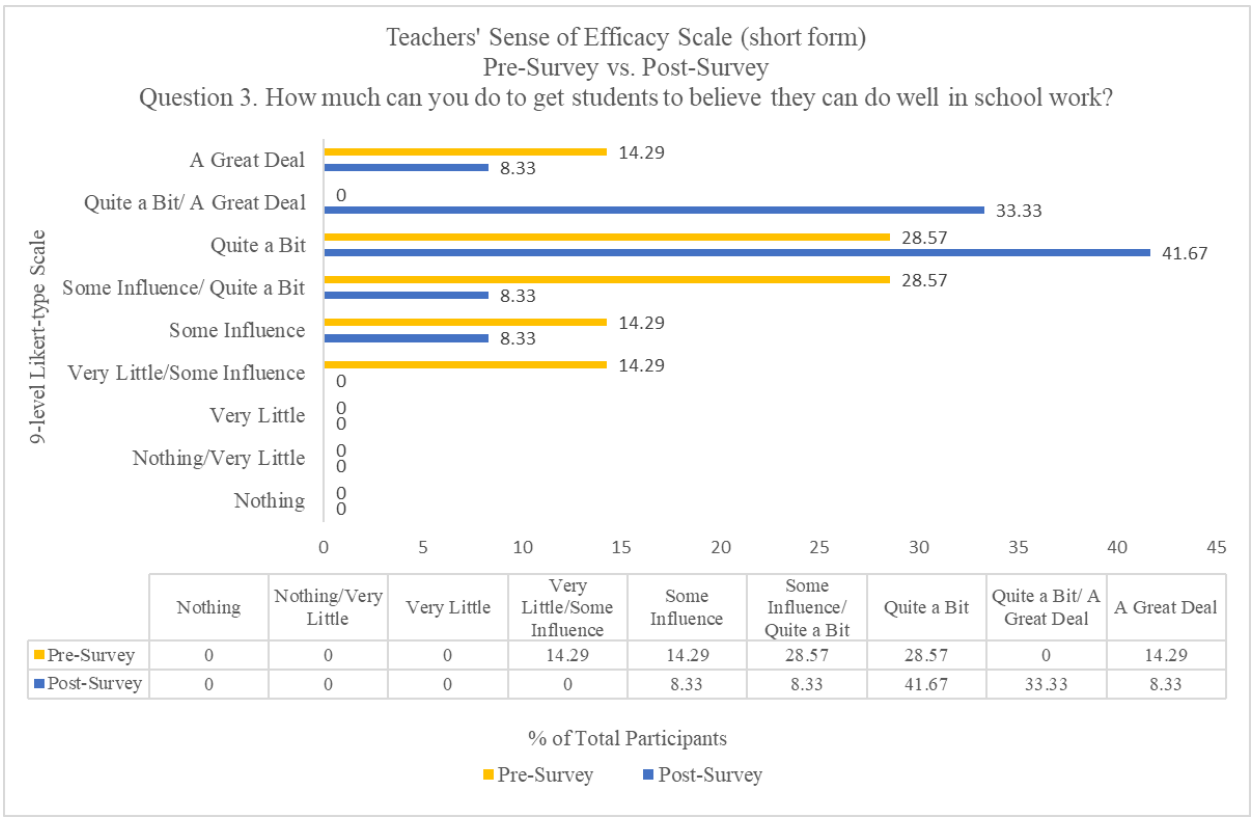
	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	0	0	0	28.57	14.29	21.43	21.43	14.29
Post-Survey	0	0	0	8.33	8.33	0	25	16.67	41.67

Figure 23. TSES Question 1 Responses.



	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	0	7.14	14.29	21.43	14.29	21.43	7.14	7.14
Post-Survey	0	0	0	0	16.67	25	41.67	8.33	8.33

Figure 24. TSES Question 2 Responses.



	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	0	0	14.29	14.29	28.57	28.57	0	14.29
Post-Survey	0	0	0	0	8.33	8.33	41.67	33.33	8.33

Figure 25. TSES Question 3 Responses.

help their students value learning compared to 35.71% pre-implementation. The difference in positive beliefs between pre- and post-implementation surveys is 47.62%.

Figure 26 displays question 4, “How much can you do to help your students value learning?” 35.71% of the total participants indicated a positive level of belief that they are capable of this statement. Post-implementation survey results indicate a 47.62% increase, with 83.33% of teachers responding that they believe that they are capable of calming a disruptive student.

Question 5 seen in Figure 27 asks, “To what extent can you craft good questions for your students?” Prior to the implementation of the professional learning cycles, 78.57% of survey participants indicated that they felt that they could craft good questions. Following the year-long implementation of professional learning cycles, 100% of the participants believed that they were capable of crafting good questions for students. This indicates a 21.43% increase in confidence from pre-implementation to post-implementation.

Question 6 (see Figure 28) asks, “How much can you do to get children to follow classroom rules?” Prior to implementation, 64.29% of the respondents answered they felt positively in their ability get children to follow the rules within the classroom. Post-implementation survey results reports that 75% of the respondents believe in their abilities, indicating a 10.71% increase.

Figure 29 displays question 7, “How much can you do to calm a student who is disruptive or noisy?” 57.14% of the total participants indicated a positive level of belief that they are capable of this statement. Post-implementation survey results indicate a 26.19% increase, with 83.33% of teachers responding that they believe that they are capable of calming a disruptive student.

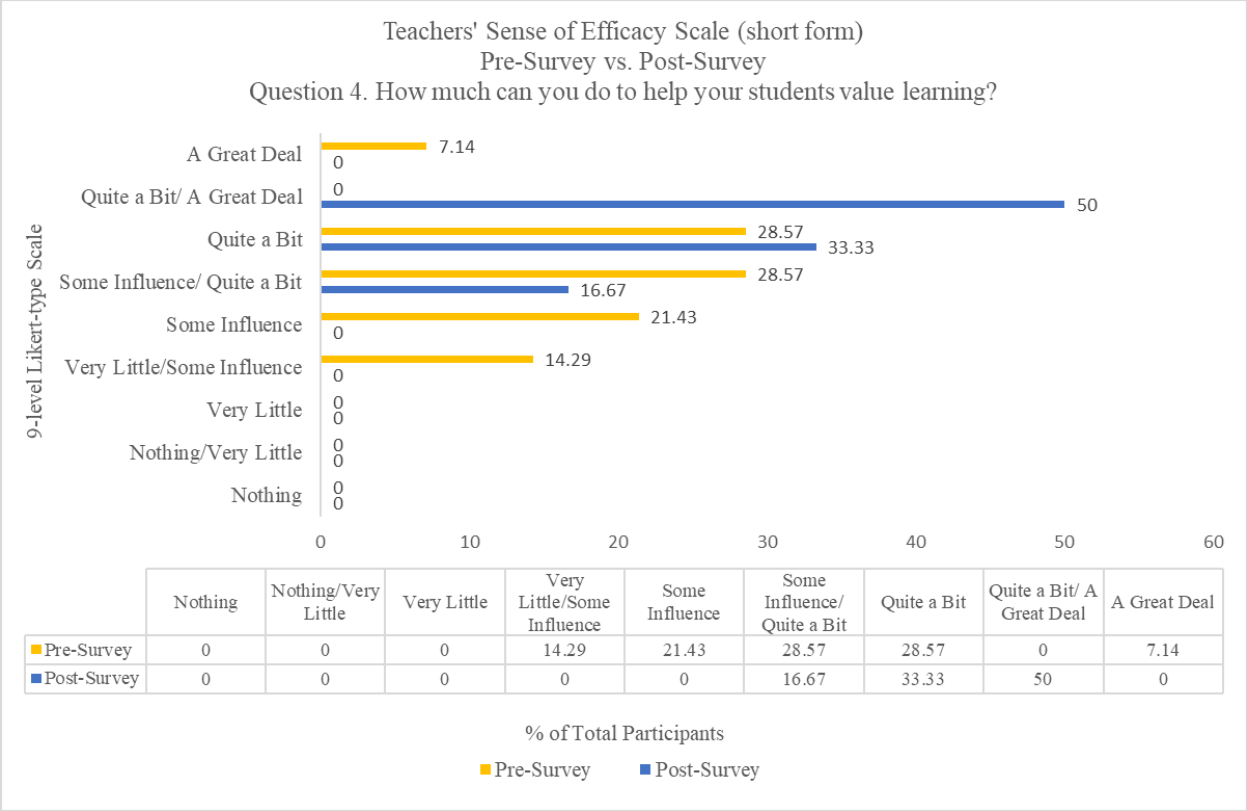
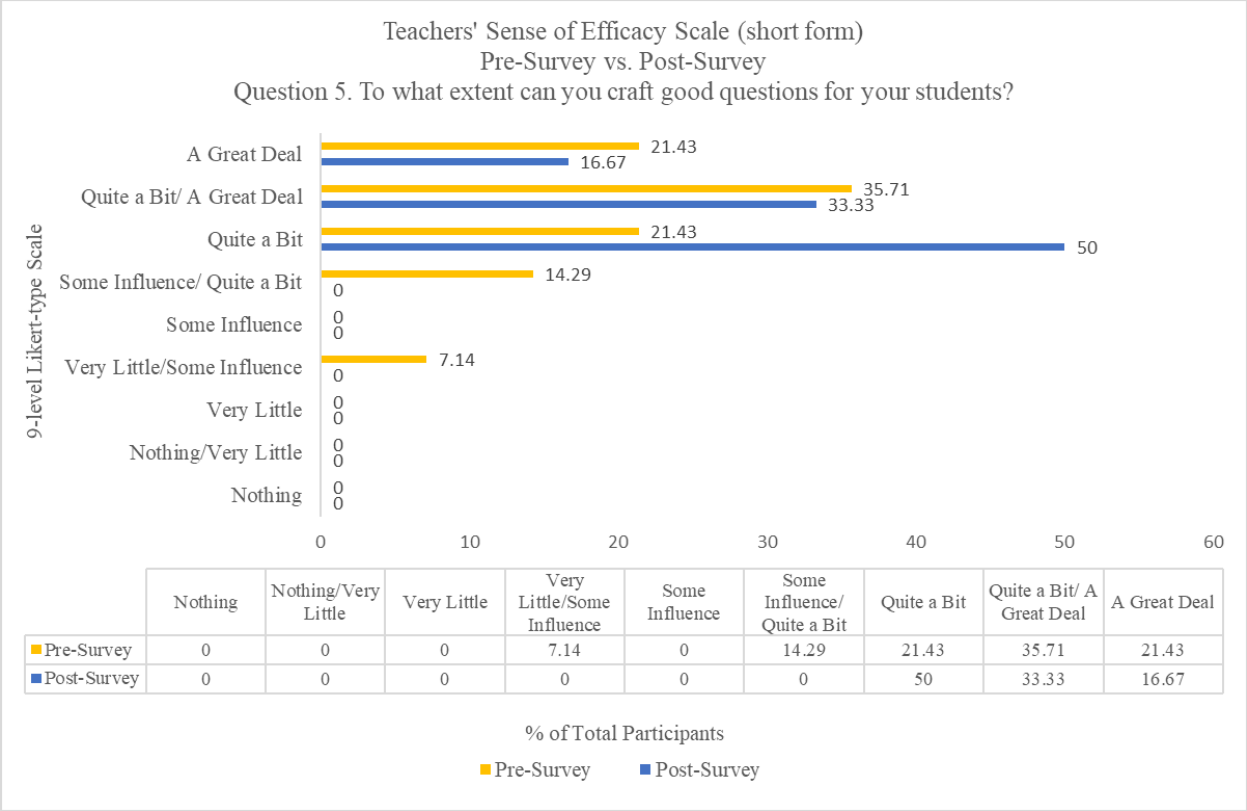
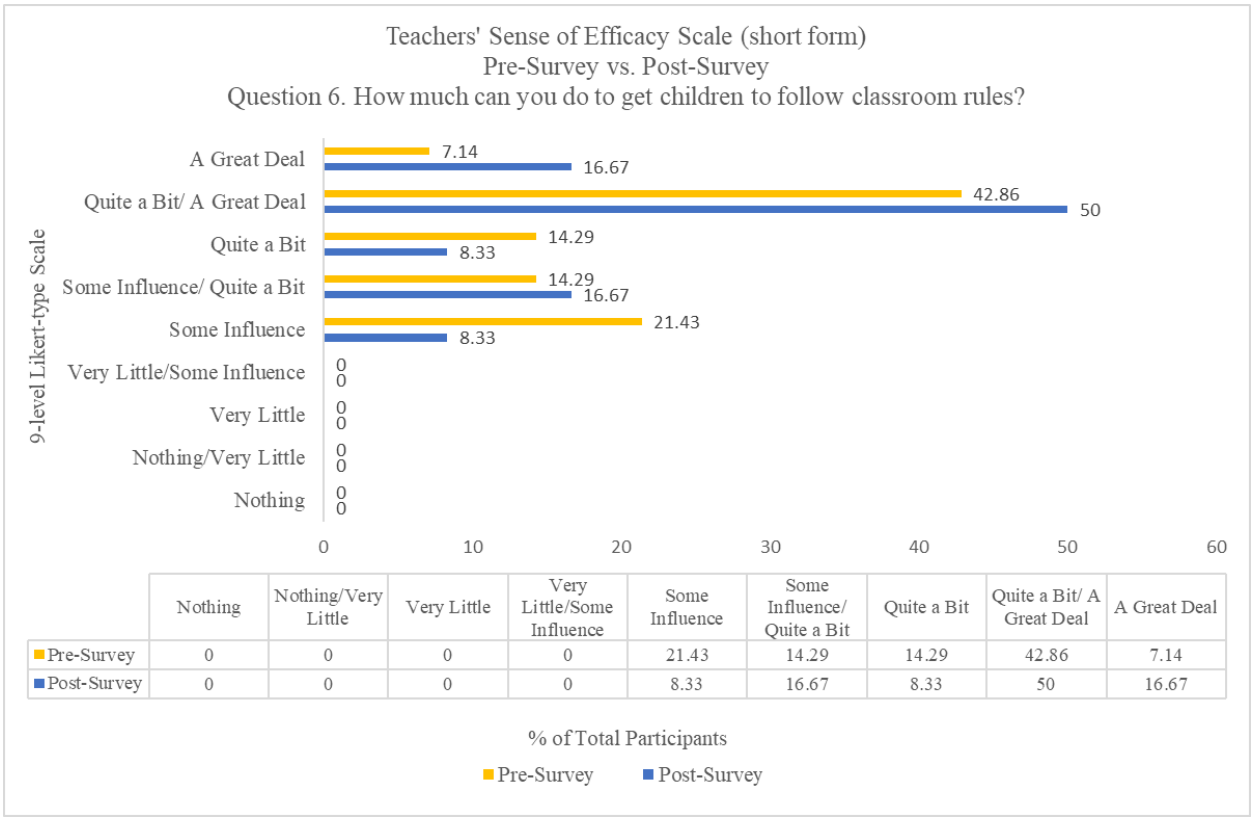


Figure 26. TSES Question 4 Responses.



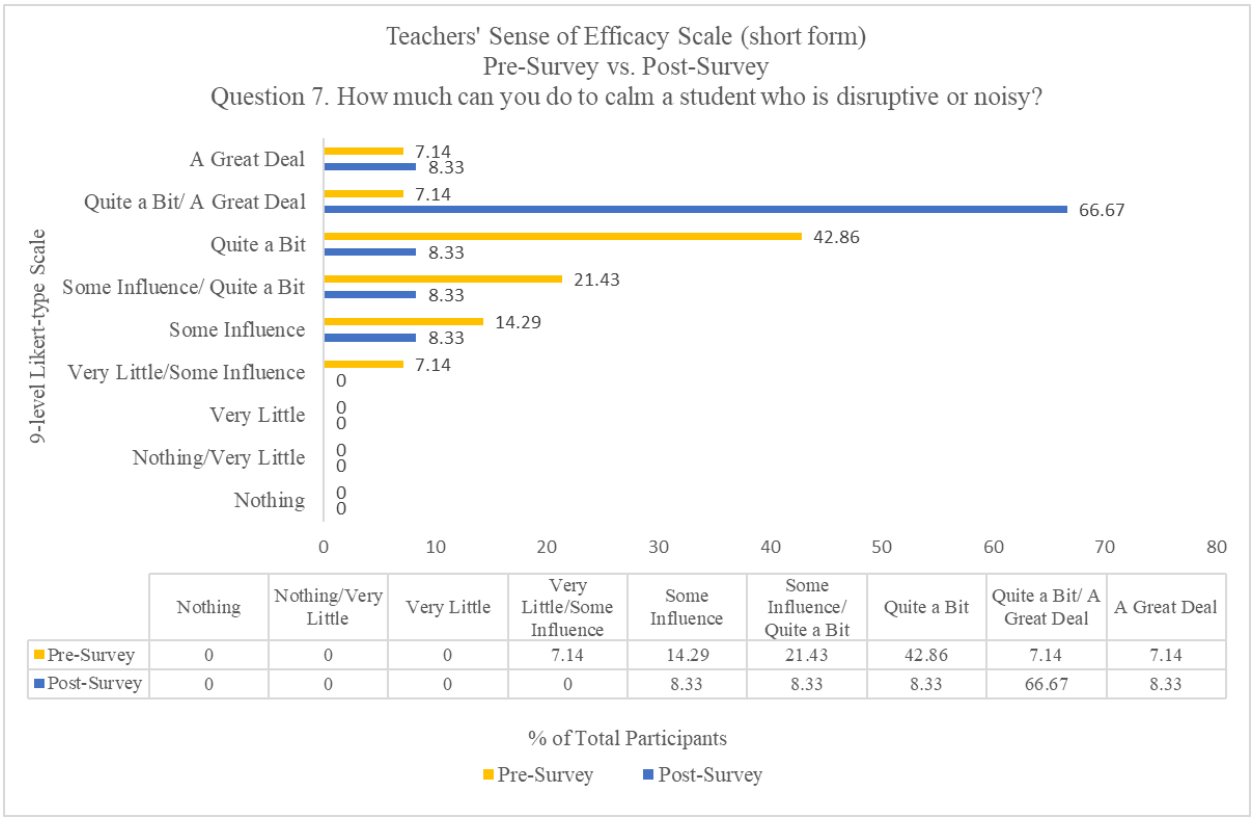
	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	0	0	7.14	0	14.29	21.43	35.71	21.43
Post-Survey	0	0	0	0	0	0	50	33.33	16.67

Figure 27. TSES Question 5 Responses.



	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	0	0	0	21.43	14.29	14.29	42.86	7.14
Post-Survey	0	0	0	0	8.33	16.67	8.33	50	16.67

Figure 28. TSES Question 6 Responses.



	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	0	0	7.14	14.29	21.43	42.86	7.14	7.14
Post-Survey	0	0	0	0	8.33	8.33	8.33	66.67	8.33

Figure 29. TSES Question 7 Responses.

Question 8 seen in Figure 30 asks, “How well can you establish a classroom management system with each group of students?” Pre-survey results recorded 64.29% of the respondents believe in their ability to create a classroom management system compared to post-implementation results indicating 91.67% of the teachers consider themselves to have this ability. Implementation of the professional learning cycle framework has resulted in a 27.38% increase in teachers’ beliefs in the area of classroom management.

Question 9 (see Figure 31) asks, “How much can you use a variety of assessment strategies?” Pre-implementation survey results reveal that prior to inquiry implementation, 85.71% of the survey participants believed they possessed the skills to use a variety of assessment strategies. With a 14.29% increase, 100% of the respondents indicated that they believe they are capable of this skill post-implementation.

Question 10 found in Figure 32 asks, “To what extent can you provide an alternative explanation or example when students are confused?” 78.58% of the participants recorded a positive belief in their skillsets in this area. In post-implementation results, 100% of the respondents expressed a belief that they are capable of providing alternative explanations or examples when students are confused. This is a 21.24% increase from pre-implementation to post-implementation.

Question 11 (see Figure 33) asks, “How much can you assist families in helping their children do well in school?” Pre-survey results found 42.86% of the respondents believe that they can assist their students’ families in helping them do well in school. Following the inquiry implementation, 66.66% of the participants believe that they have the ability to assist their students’ families, a 23.80% increase from pre-implementation.

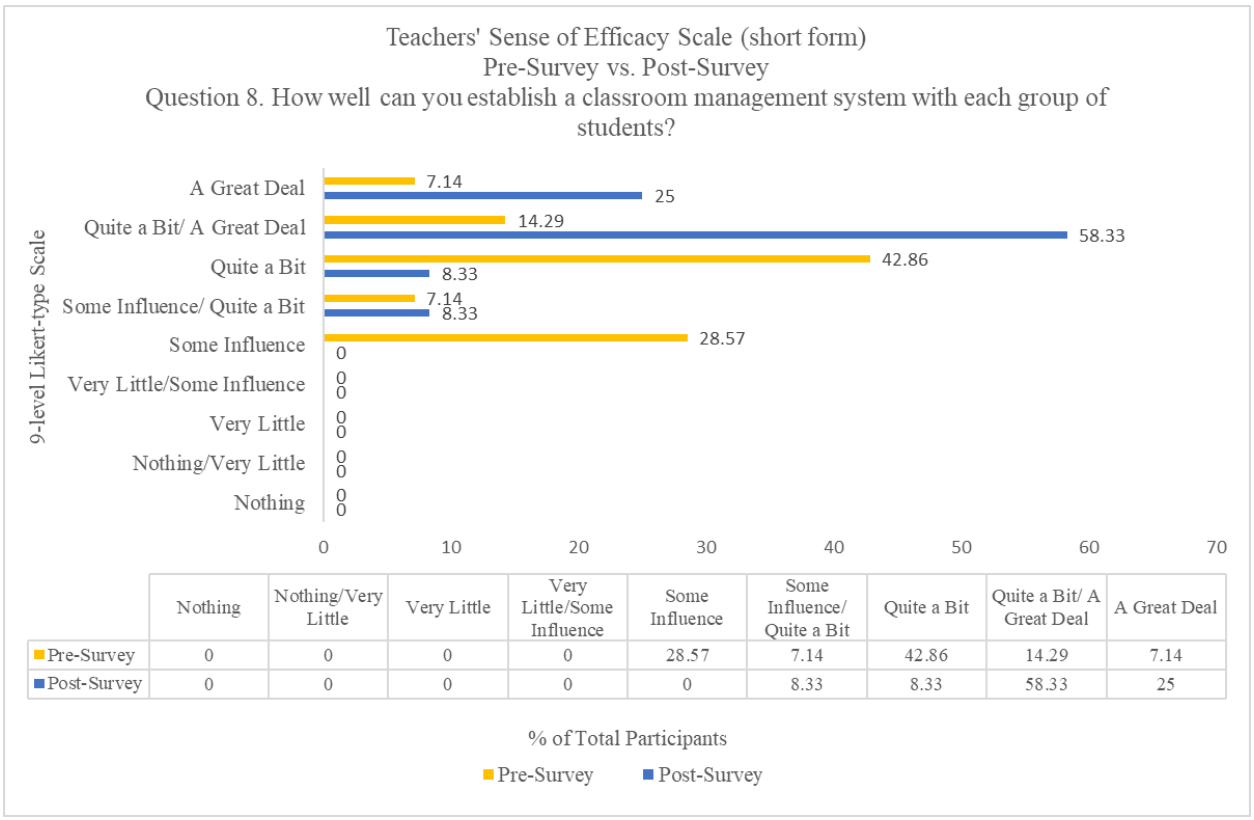


Figure 30. TSES Question 8 Responses.

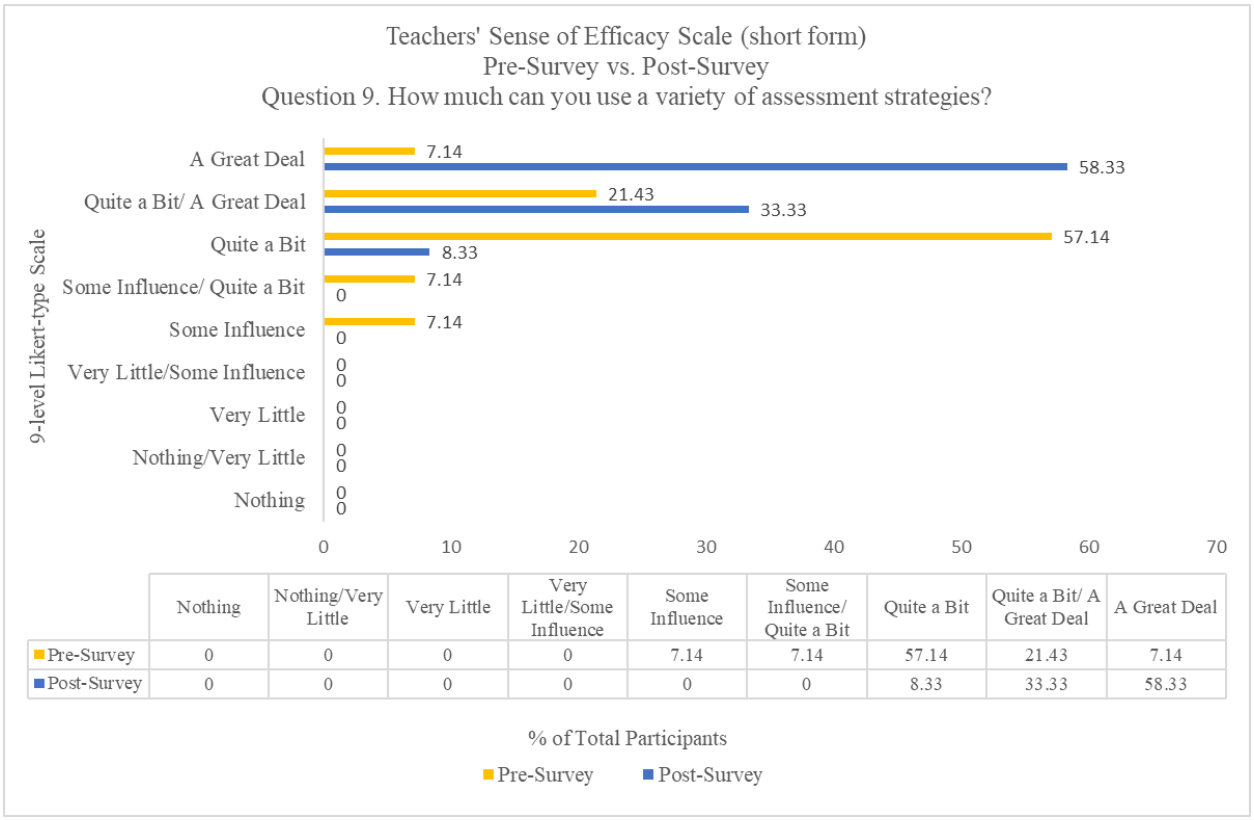


Figure 31. TSES Question 9 Responses.

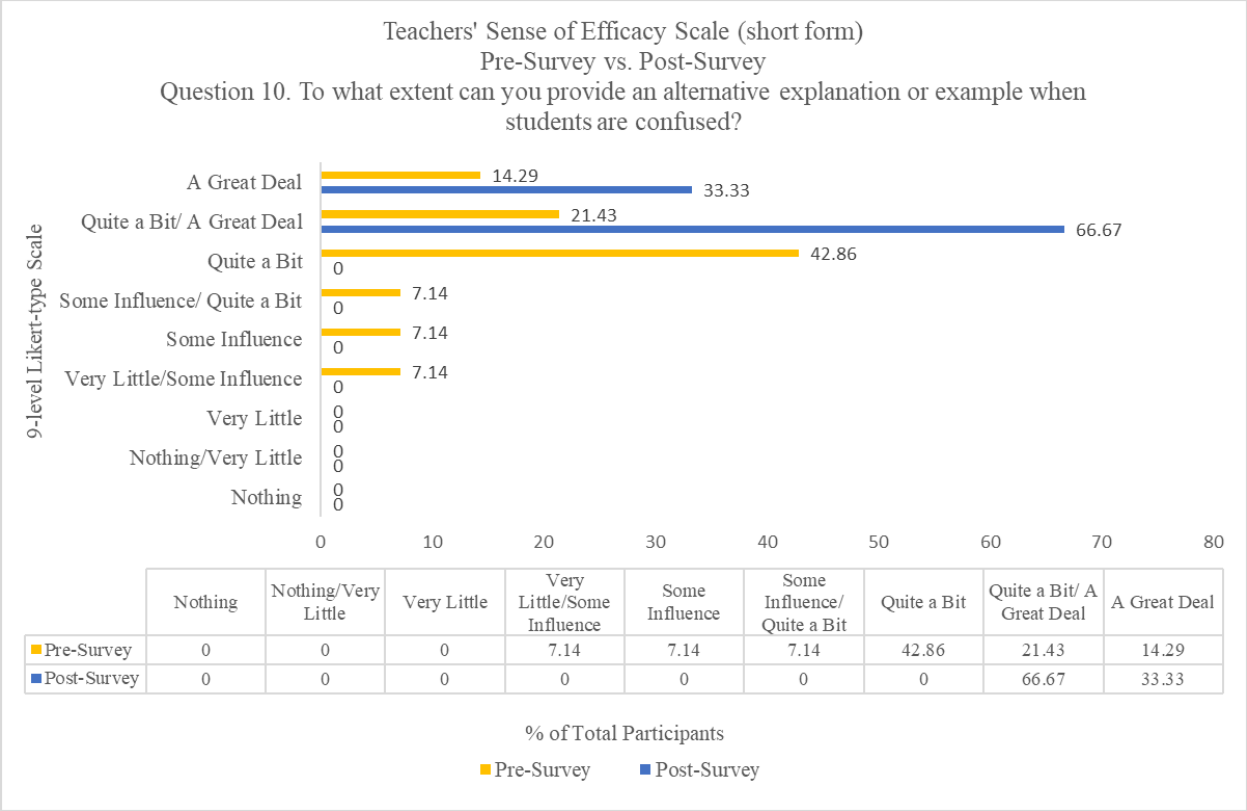
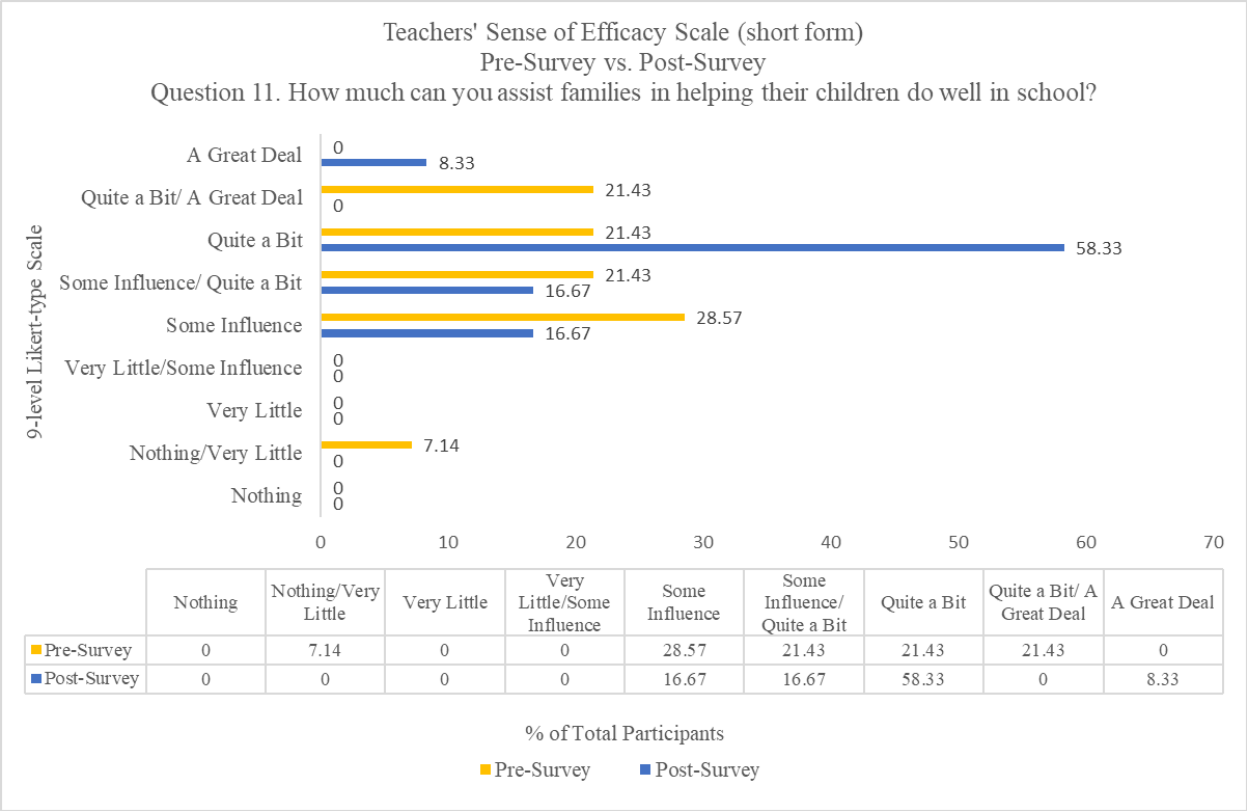


Figure 32. TSES Question 10 Responses.



	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	7.14	0	0	28.57	21.43	21.43	21.43	0
Post-Survey	0	0	0	0	16.67	16.67	58.33	0	8.33

Figure 33. TSES Question 11 Responses.

The last question in the TSES short form survey (see Figure 34) asks, “How well can you implement alternative strategies in your classroom?” Results from pre-implementation have indicated that 57.14% of the participants believe in their capability to implement alternative strategies in their classroom. After being immersed in four professional learning cycles throughout the year, 83.36% of the survey participants indicated they believe possess this skillset. This resulted in a 26.22% increase in beliefs from pre-implementation to post-implementation.

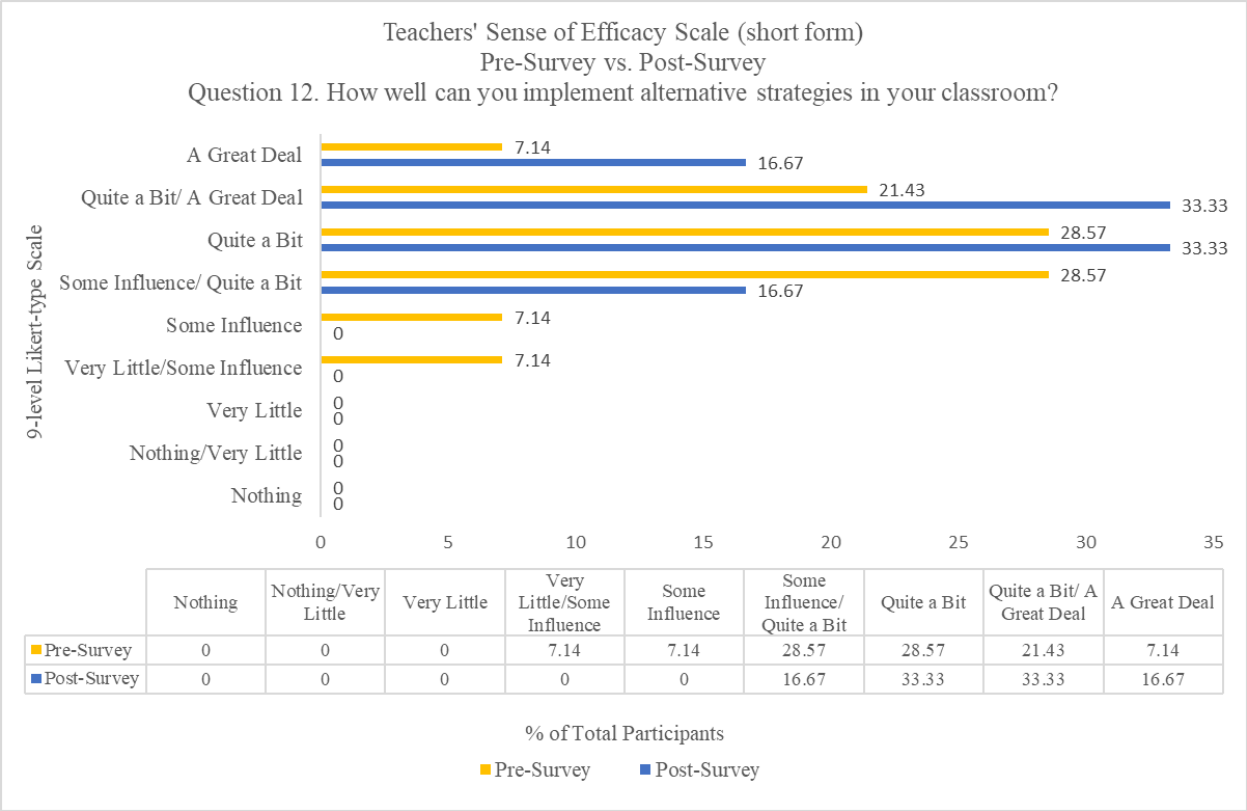
The administration of the TSES pre- and post-implementation surveys provided quantitative data that indicated an increase in teacher efficacy in all twelve survey questions. This data indicates that the implementation of the professional learning cycles had a positive outcome and was successful in increasing teacher self-efficacy.

Guiding Question 2

The second question guiding this inquiry refers to a teacher’s sense of collective efficacy. The question asks, *how does the implementation of professional learning cycles impact collective teacher efficacy at Tar River Middle School*? For the purpose of this inquiry, collective efficacy was quantitatively measured using pre- and post-TWC surveys, pre- and post-collective efficacy survey data, and qualitatively in a structured, purposeful focus group interview. The impact of specific data collection tools for guiding question 2 is outlined below.

Teacher Working Conditions Survey

As discussed in the previous section, two sections within the 2022 TWC survey were identified as areas of concern as a result of percent agreement rates lower than the district and state. Statements within the Instructional Practices and Supports section of the survey can be directly correlated to a teachers’ sense of collective efficacy. While all eleven statements in this



	Nothing	Nothing/Very Little	Very Little	Very Little/Some Influence	Some Influence	Some Influence/ Quite a Bit	Quite a Bit	Quite a Bit/ A Great Deal	A Great Deal
Pre-Survey	0	0	0	7.14	7.14	28.57	28.57	21.43	7.14
Post-Survey	0	0	0	0	0	16.67	33.33	33.33	16.67

Figure 34. TSES Question 12 Responses.

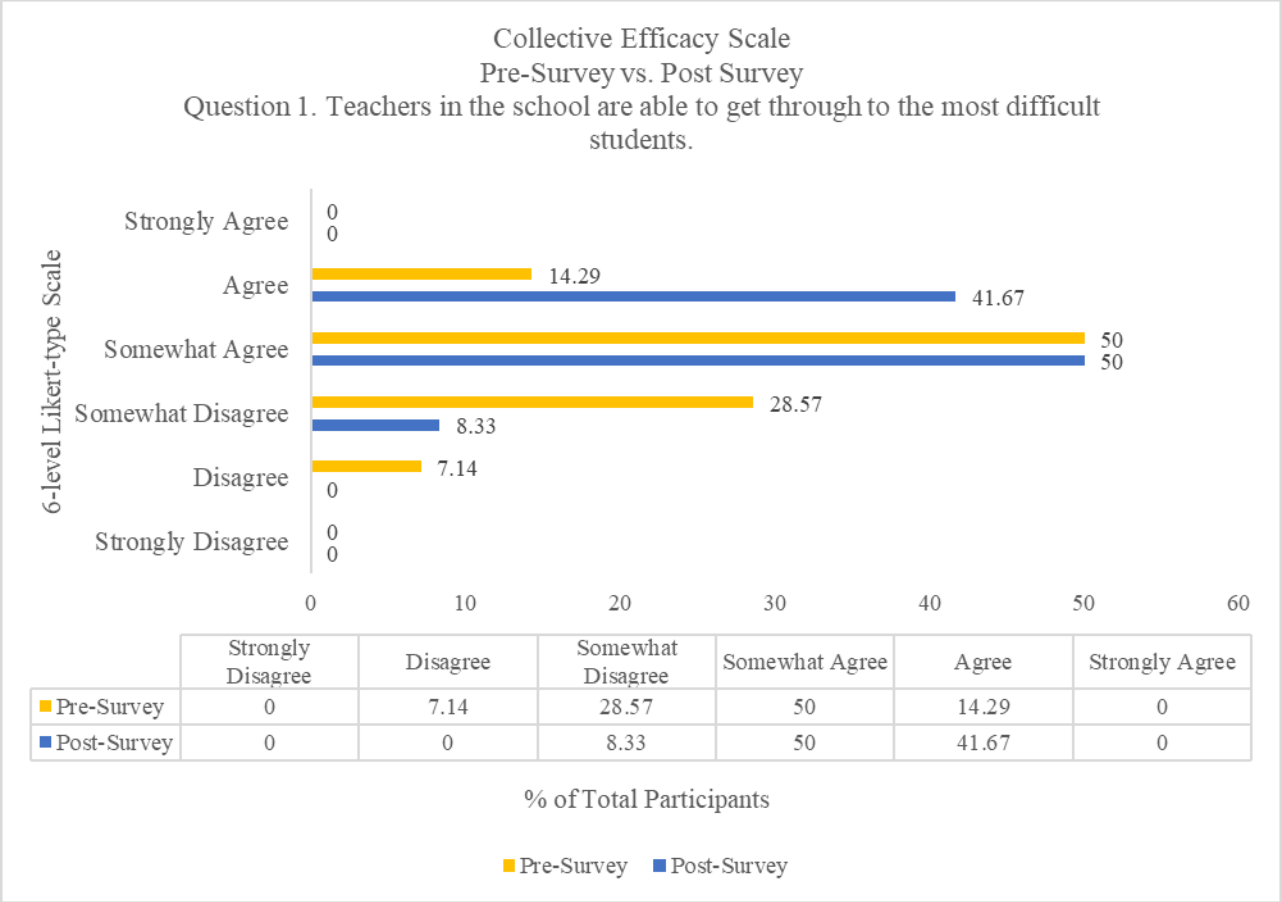
category surveyed increased in percent agreement from spring 2022 to spring 2023, it is important to individually identify the indicators correlating directly with collective efficacy.

Indicator 9.1d, “Provided supports (i.e. instructional coaching, professional learning communities, etc.) translate to improvements in instructional practices by teachers” recorded a 72% agreement rate in the spring of 2022. Following the implementation of the professional learning cycle framework, 100% of the respondents were in agreement with this statement. This data provides evidence that teachers believe that when the right supports are in place such as professional learning communities, teachers collectively benefit with improved instructional practices. Indicator 9.1c, “Teachers work in professional learning communities to develop and align instructional practices” was measured at an 83% agreement rate, which was in the higher range in the spring of 2022, but still below district and state agreement rates at 88.71% and 87.16% respectively. In the spring of 2023, TRMS staff were 91% in agreement with this indicator. This increase provides evidence that 91% of the staff believe the work in professional learning committees is meaningful and helps them develop and align their instructional practices. Indicator 9.1i, “Teachers believe almost every student has the potential to do well on assignments” increased from 86% to 100% in agreement rate while indicator 9.1j, “Teachers believe what is taught will make a difference in students' lives” increased from 83% to 100%. The increase in agreement between these two statements indicates that teachers believe in their students and can be inferred that teachers believe the work they are doing collectively will positively impact their students. This data from the TWC survey indicates that the implementation of the professional learning cycles had a positive outcome and was not only successful in increasing teacher self-efficacy, but it also increased collective efficacy.

Collective Efficacy Scale

The Collective Efficacy Scale was also provided to teachers pre- and post-inquiry implementation using the web-based software, Qualtrics. This scale considers a model with two dimensions of collective efficacy, group competence (GC) and task analysis (TA). This 21-item six level Likert-type scale measures teachers' collective efficacy. It is important to note when analyzing the survey results, ten of the items in this scale are reversed scored. That is, "1" is scored "6," "2" is scored "5," etc. For example, the item, "If a child doesn't want to learn teachers here give up," is scored in reverse. Thus, a strongly agree "6" would be scored "1," suggesting low efficacy. Reverse scored items are the following question numbers: 3, 4, 8, 10, 11, 12, 16, 18, 19, 20. Results for this survey will be organized according to the statement model (GC and TA) followed by how it was scored (typical or reverse). For analysis purposes, the Likert-type scale rating was analyzed combining two levels for three different levels of influence. Responses ranging from "strongly disagree" to "disagree" (1-2), "somewhat disagree" to "somewhat agree" (3-4), and "agree" to "strongly agree" (5-6). The percentage of participants with responses ranging from levels 5-6 in the pre-implementation survey was then subtracted from the percentage of participants with responses ranging from levels 5-6 in the post-implementation survey to quantify the percent change. A negative percentage indicated a decrease in collective efficacy, while a positive percentage indicated an increased level of collective efficacy. Figures 35-55 provide graphic representations of the responses from the pre- and post-surveys.

Questions 1 (Figure 35), 2 (Figure 36), 5 (Figure 37), 6 (Figure 38), 7 (Figure39), 9 (Figure 40) and 21 (Figure 41) are all positively worded survey items that analyze teachers' belief in their colleagues group competence (GC). The data indicates that all six positively worded GC questions reveal an increase in collective efficacy from the surveyed participants. Question 9, "Teachers have what it takes to get the children to learn" had the greatest increase



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	0	7.14	28.57	50	14.29	0
Post-Survey	0	0	8.33	50	41.67	0

Figure 35. Collective Efficacy Scale Question 1 Responses.

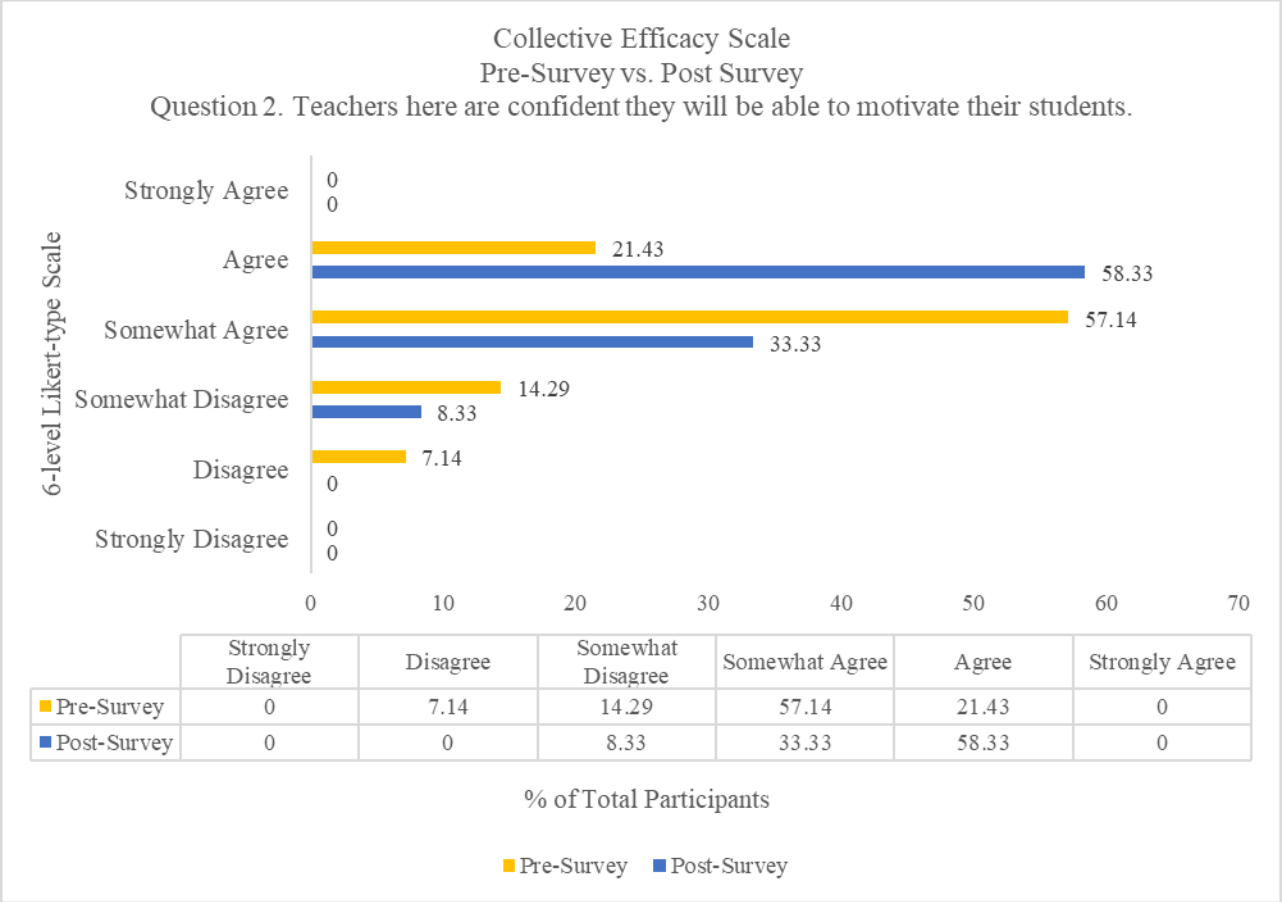


Figure 36. Collective Efficacy Scale Question 2 Responses.

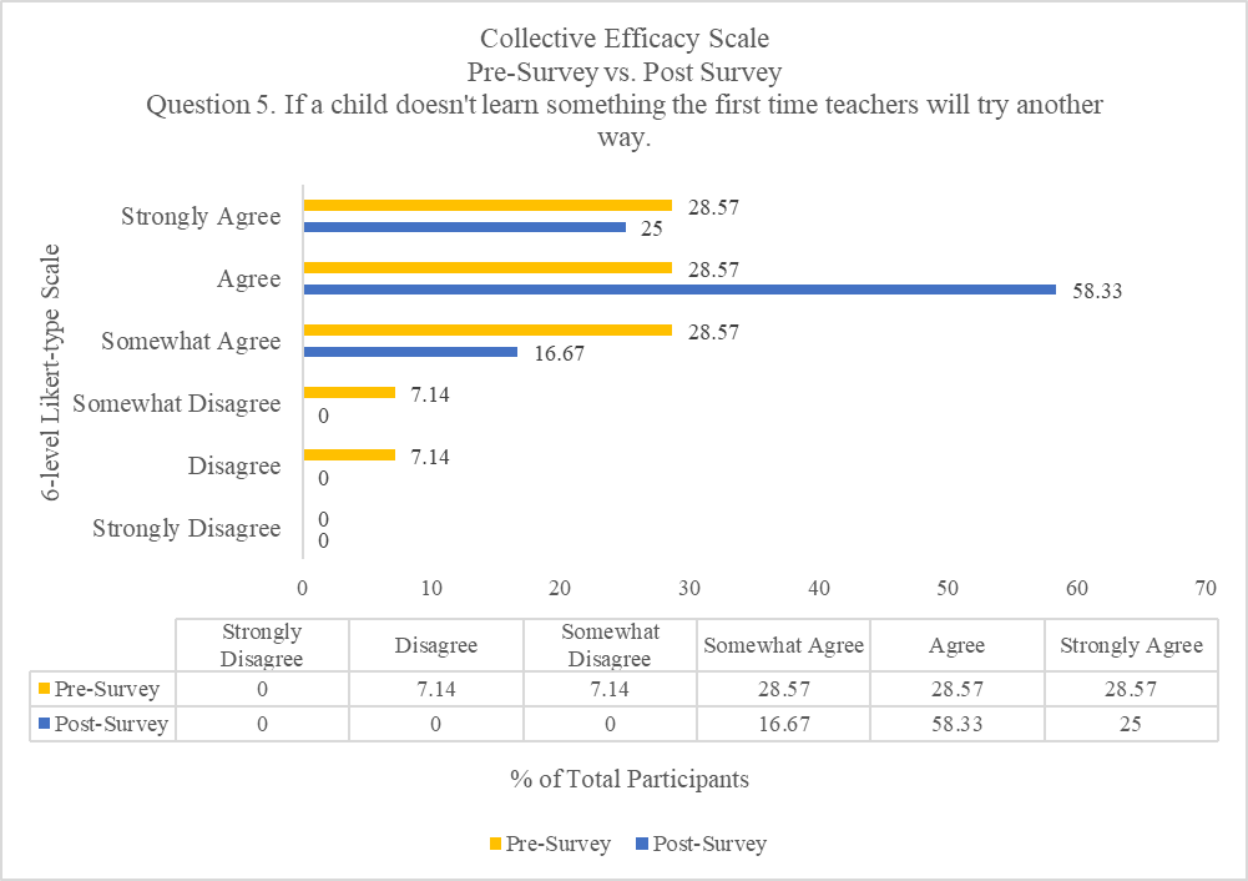


Figure 37. Collective Efficacy Scale Question 5 Responses.

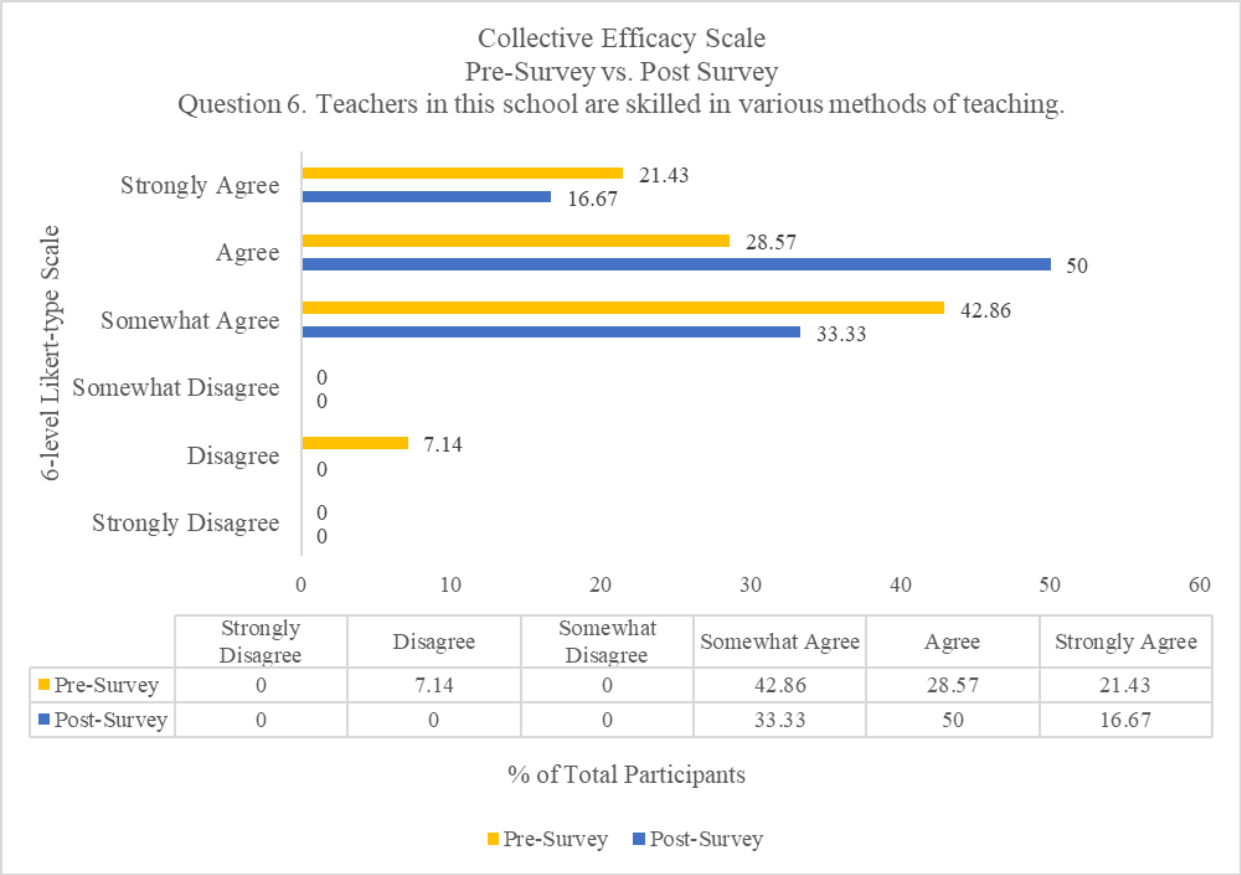
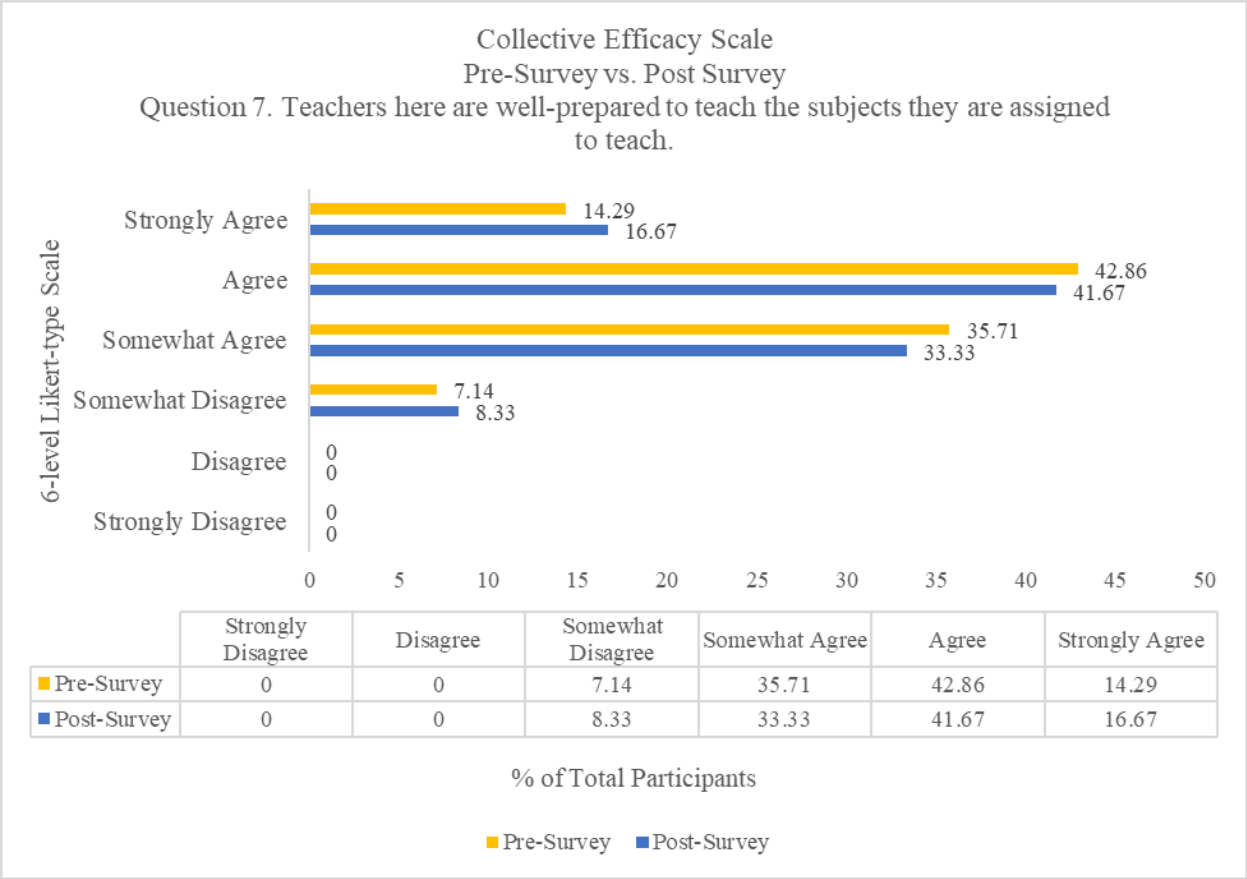


Figure 38. Collective Efficacy Scale Question 6 Responses.



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	0	0	7.14	35.71	42.86	14.29
Post-Survey	0	0	8.33	33.33	41.67	16.67

Figure 39. Collective Efficacy Scale Question 7 Responses.

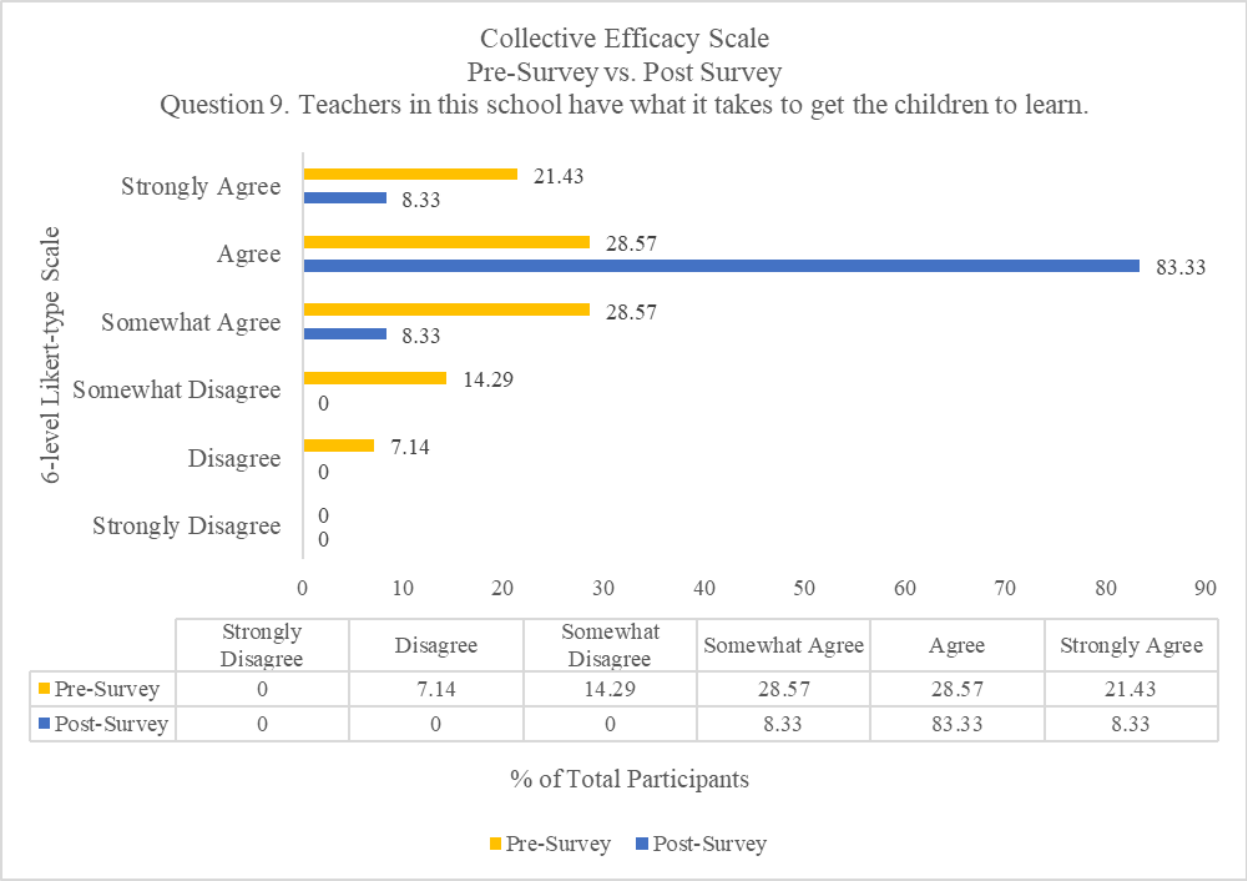
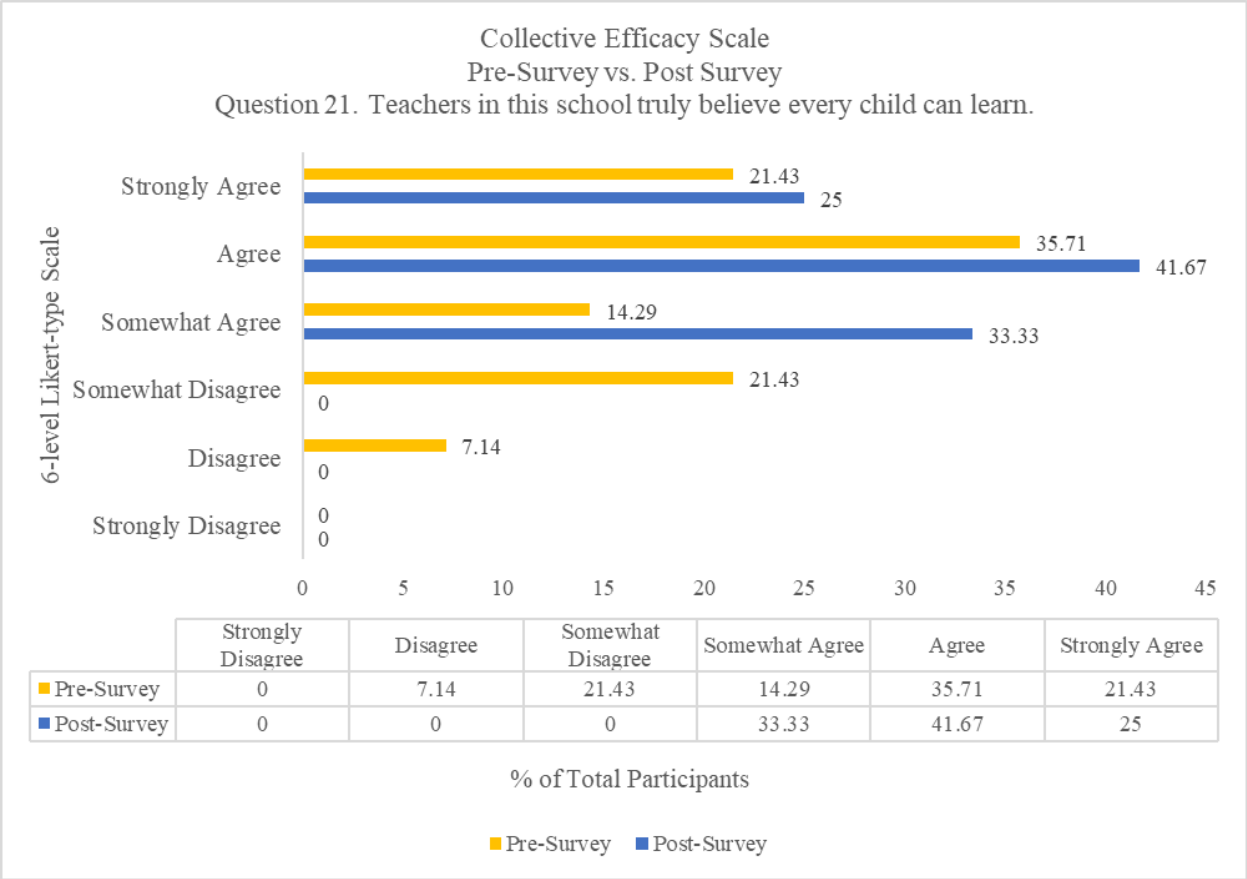


Figure 40. Collective Efficacy Scale Question 9 Responses.



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	0	7.14	21.43	14.29	35.71	21.43
Post-Survey	0	0	0	33.33	41.67	25

Figure 41. Collective Efficacy Scale Question 21 Responses.

from pre-implementation at a 50% agreement rate and post-implementation measuring at 91.66% in agreement, a 41.66% increase. Question 2, “Teachers here are confident they will be able to motivate their students” had a 27.38% increase; question 5, “If a child doesn't learn something the first time, teachers will try another way” had a 36.9% increase; question 6, “Teachers in this school are skilled in various methods of teaching” had a 16.67% increase; and the most insignificant increase in this section was question 7, “Teachers here are well prepared to teach the subjects they are assigned to teach” with a 1.19% increase from pre-survey to post-survey.

Questions 3 (Figure 42), 4 (Figure 43), 8 (Figure 44), 11 (Figure 45), 12 (Figure 46), and 20 (Figure 47) are all negatively worded survey items that analyze teachers’ belief in their colleagues group competence (GC). The negatively worded questions are reverse scored, therefore, a response of disagree or strongly disagree suggests the highest levels of efficacy. The data indicates that four of the six negatively worded GC questions reveal an increase in collective efficacy from the surveyed participants. Question 11, “Teachers in this school do not have the skills to deal with student disciplinary problems” had the greatest increase from pre-implementation at 28.57% in agreement and post-implementation measuring 75% in agreement, a 46.43% increase. Question 3, “If a child doesn't want to learn teachers here give up” had a 40.47% increase; question 4, “Teachers here don't have the skills needed to produce meaningful student learning” had a 27.38% increase; and question 12, “Teachers in this school think there are some students that no one can reach” the most insignificant increase in this section with a 1.2% increase. Questions 8, “Teachers here fail to reach some students because of poor teaching methods” and question 20, “Teachers here need more training to know how to deal with these students” indicated a decrease in collective efficacy with a -8.33% and -28.58% decline per the respondents respectively.

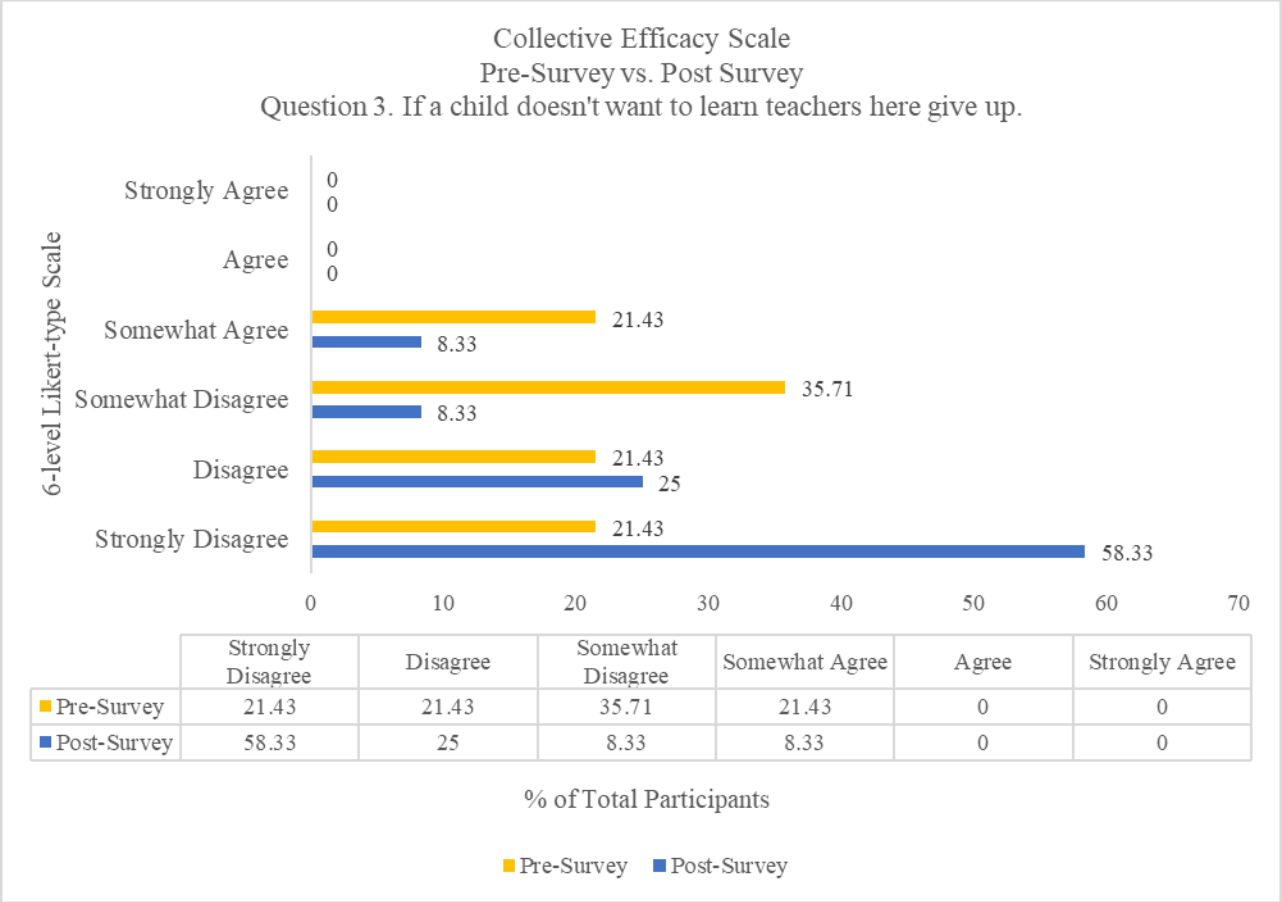
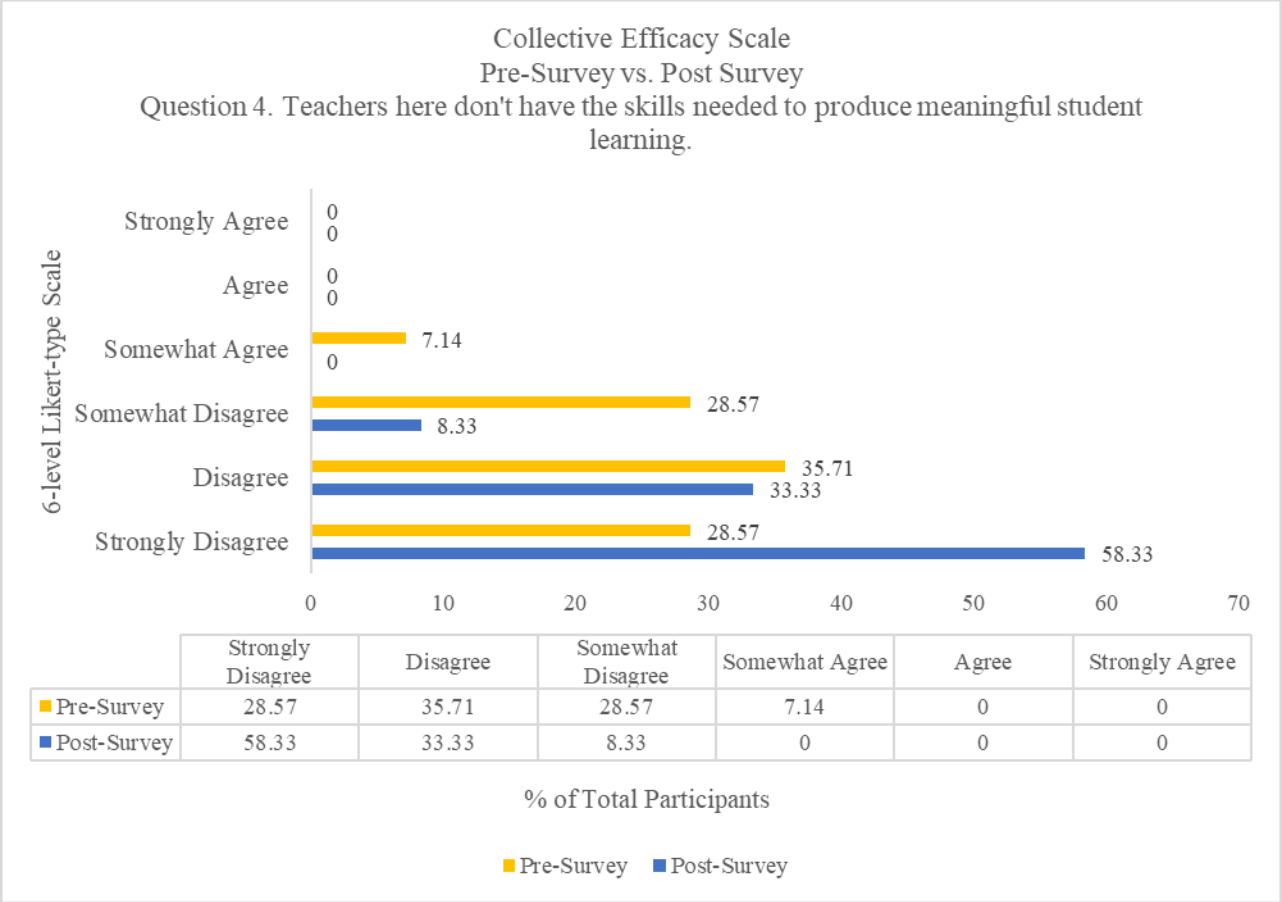


Figure 42. Collective Efficacy Scale Question 3 Responses.



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	28.57	35.71	28.57	7.14	0	0
Post-Survey	58.33	33.33	8.33	0	0	0

Figure 43. Collective Efficacy Scale Question 4 Responses.

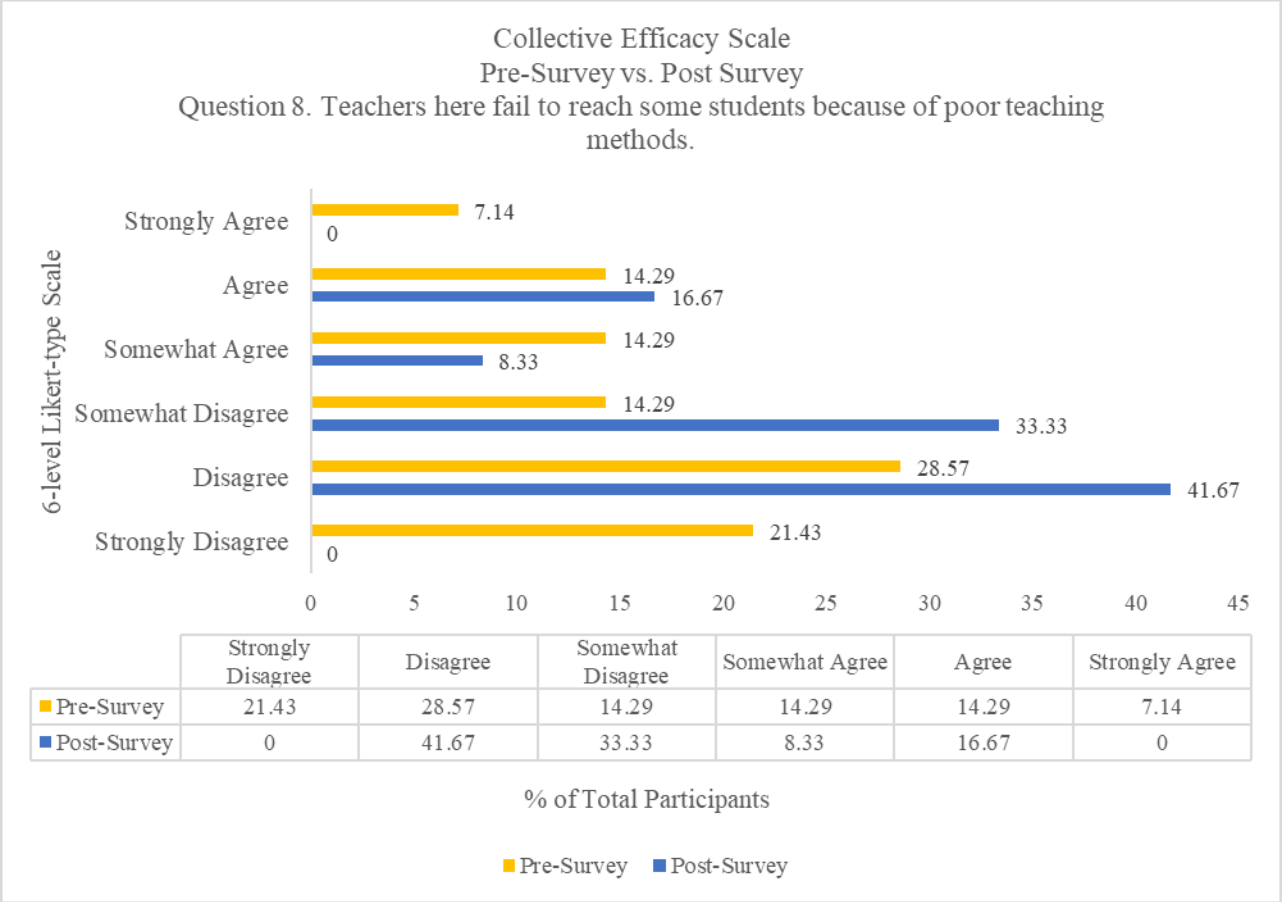


Figure 44. Collective Efficacy Scale Question 8 Responses.

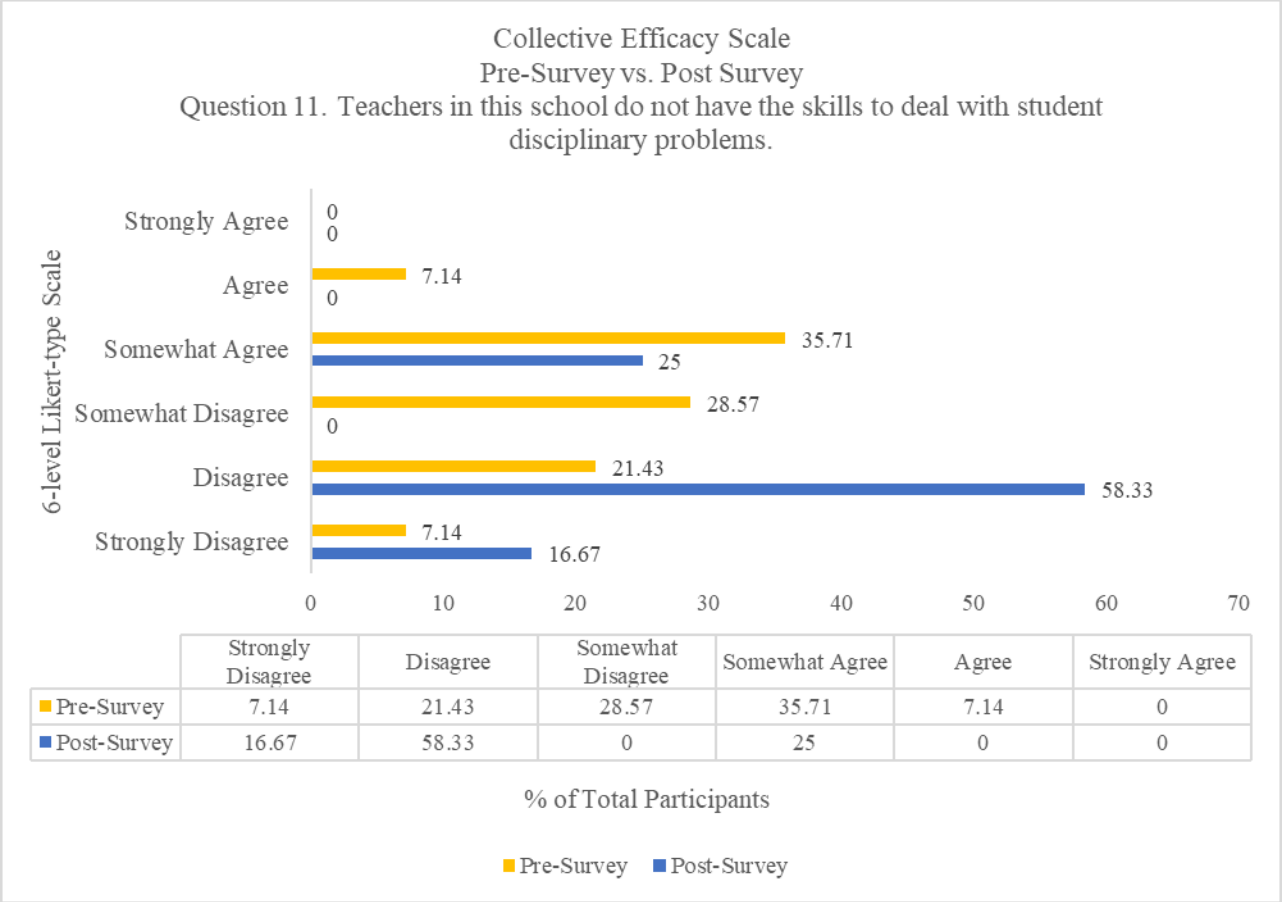


Figure 45. Collective Efficacy Scale Question 11 Responses.

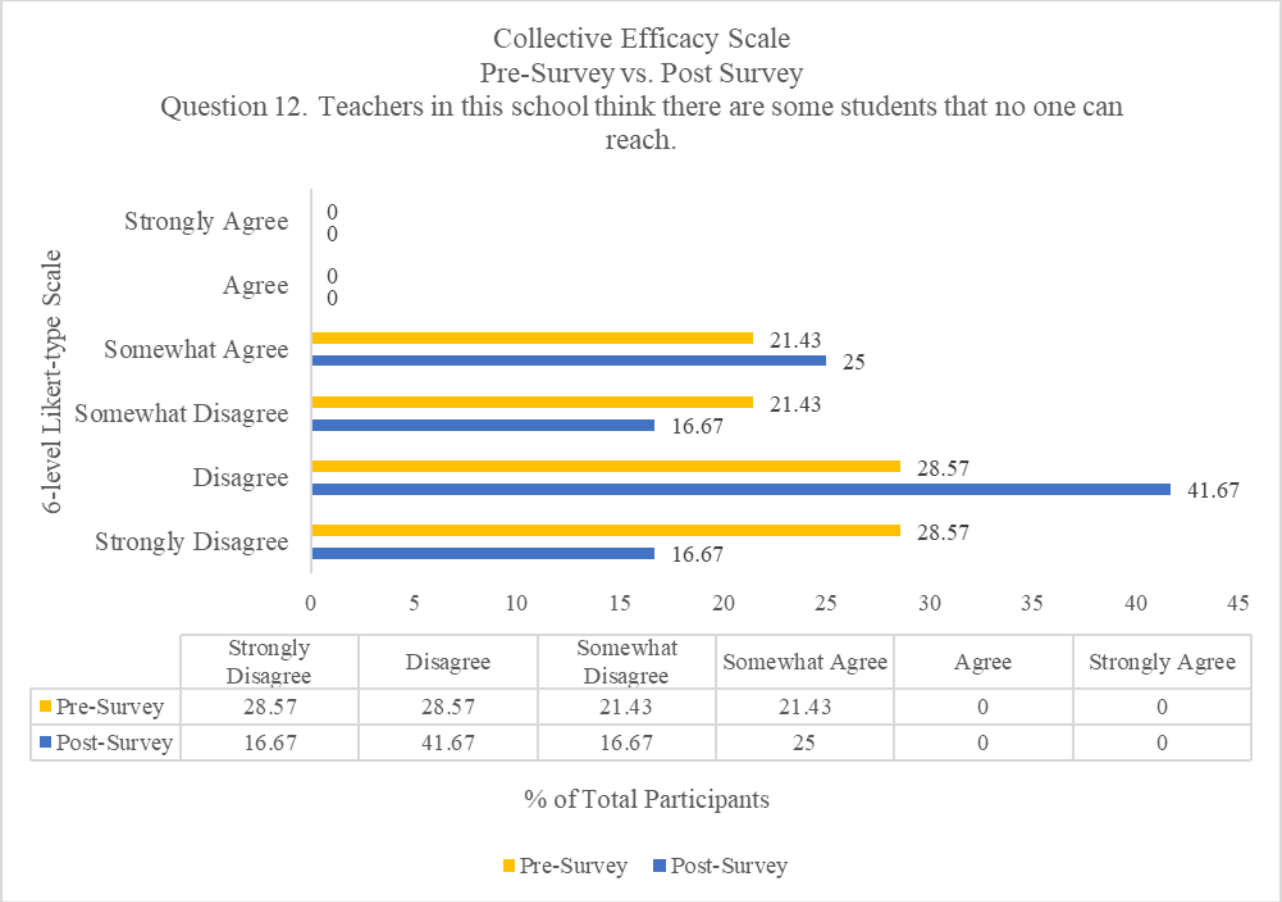


Figure 46. Collective Efficacy Scale Question 12 Responses.

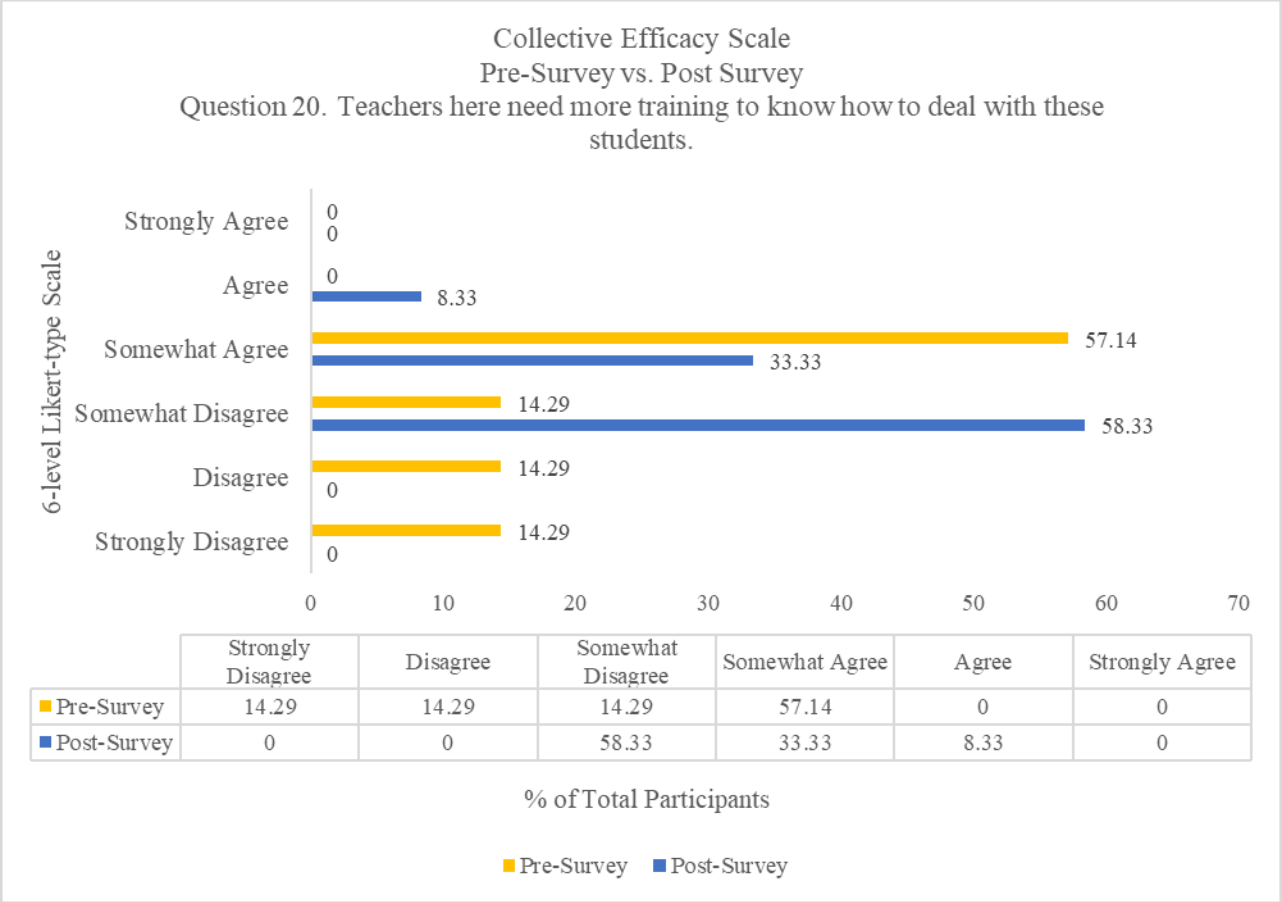
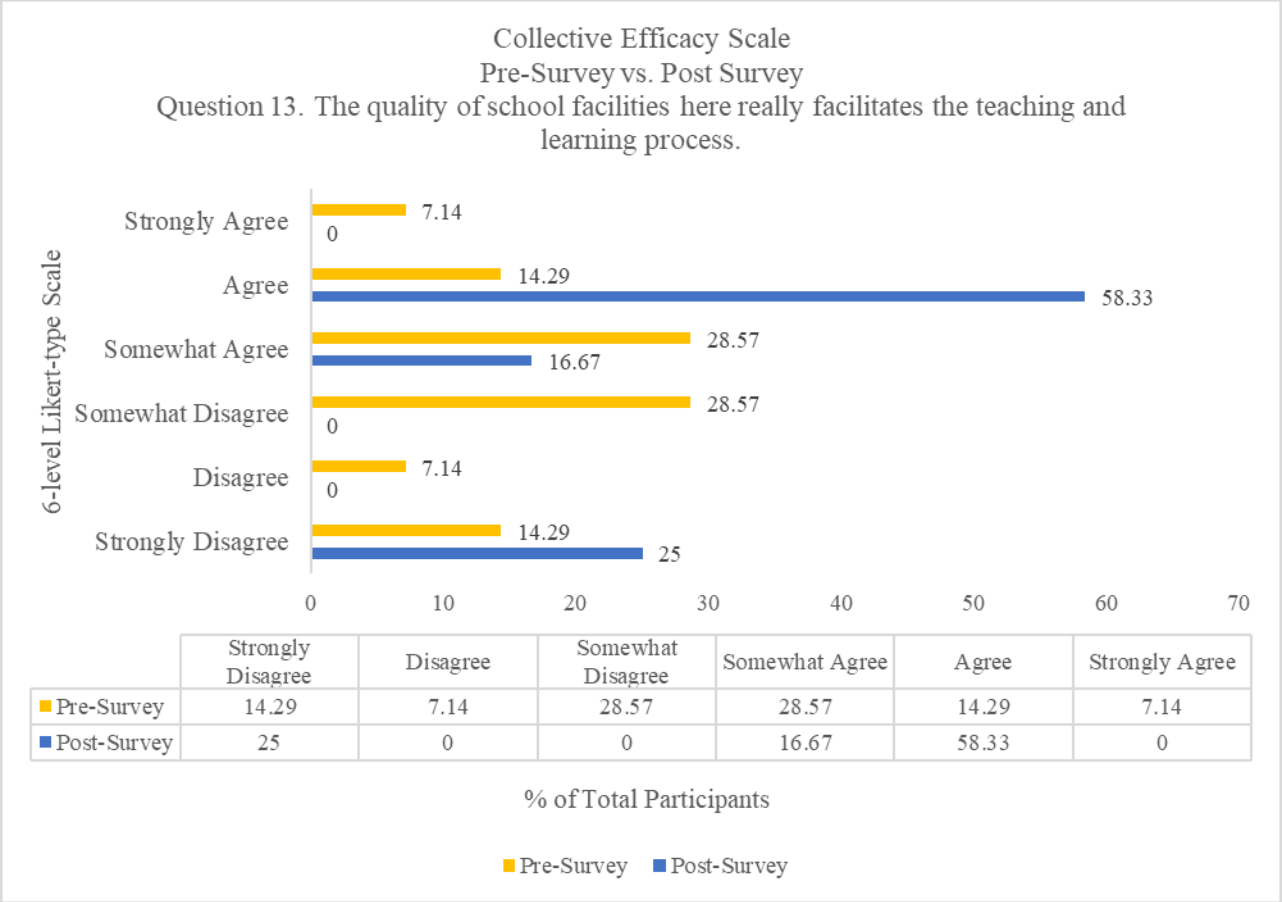


Figure 47. Collective Efficacy Scale Question 20 Responses.

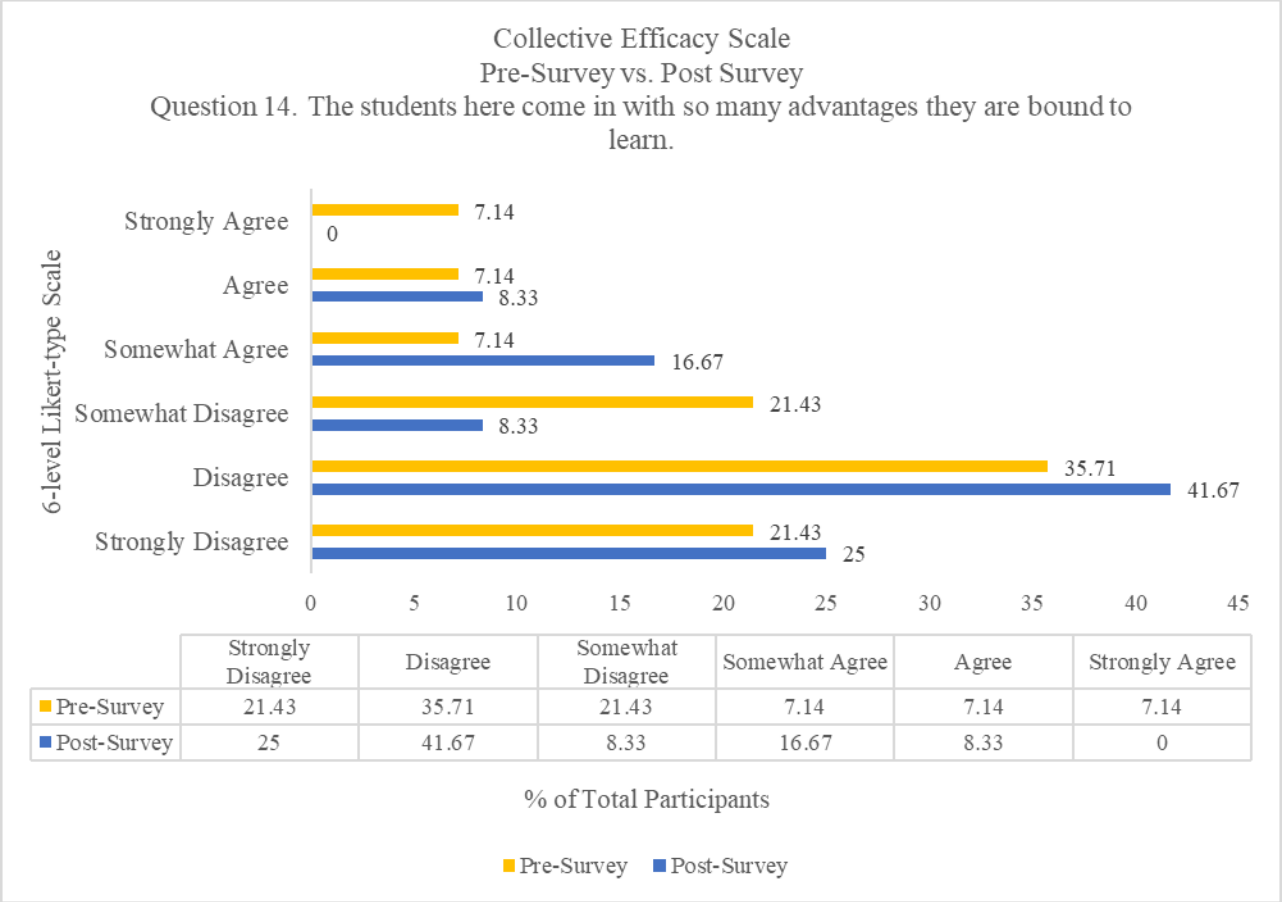
Questions 13 (Figure 48), 14 (Figure 49), 15 (Figure 50), 17 (Figure 51) are all positively worded task analysis (TA) survey items that measure one's perceptions of the constraints and opportunities inherent in the task at hand. It also measures the perceptions of the abilities and motivations of students and the beliefs about the level of support provided by the students' home and community (Goddard, 2002). The results following the post-implementation survey indicate that three of the four positively worded TA questions reveal an increase in collective efficacy from the surveyed participants. Question 13, "The quality of school facilities here really facilitates the teaching and learning process" had the greatest increase from pre-implementation at a 21.43% agreement rate and post-implementation measuring at 58.33% in agreement, a 36.9% increase. Question 15, "These students come to school ready to learn" had a 16.67% increase; and question 17, "The opportunities in this community help ensure that these students will learn" had a 2.38% increase. Question 14, "The students here come in with so many advantages they are bound to learn" recorded a decline in efficacy with a - a 5.95% decrease from pre-survey to post-survey.

The final section of the Collective Efficacy Survey measured negatively worded task analysis (TA) survey items. As with negatively worded GC questions, these responses are reverse scored, therefore, a response of disagree or strongly disagree suggests the highest levels of efficacy. Data indicates that Question 10 (Figure 52), "The lack of instructional materials and supplies makes teaching very difficult" had the greatest increase from pre-implementation at 28.57% in agreement and post-implementation measuring 66.66% in agreement, a 38.09% increase. Question 18 (Figure 53), "Students here just aren't motivated to learn" slightly increased in efficacy with a 2.38% increase in participant agreement. Questions 16 (Figure 54), "Drug and alcohol abuse in the community make learning difficult for students here" and question 19 (Figure 55), "Teachers here need more training to know how to deal with these students" indicated a



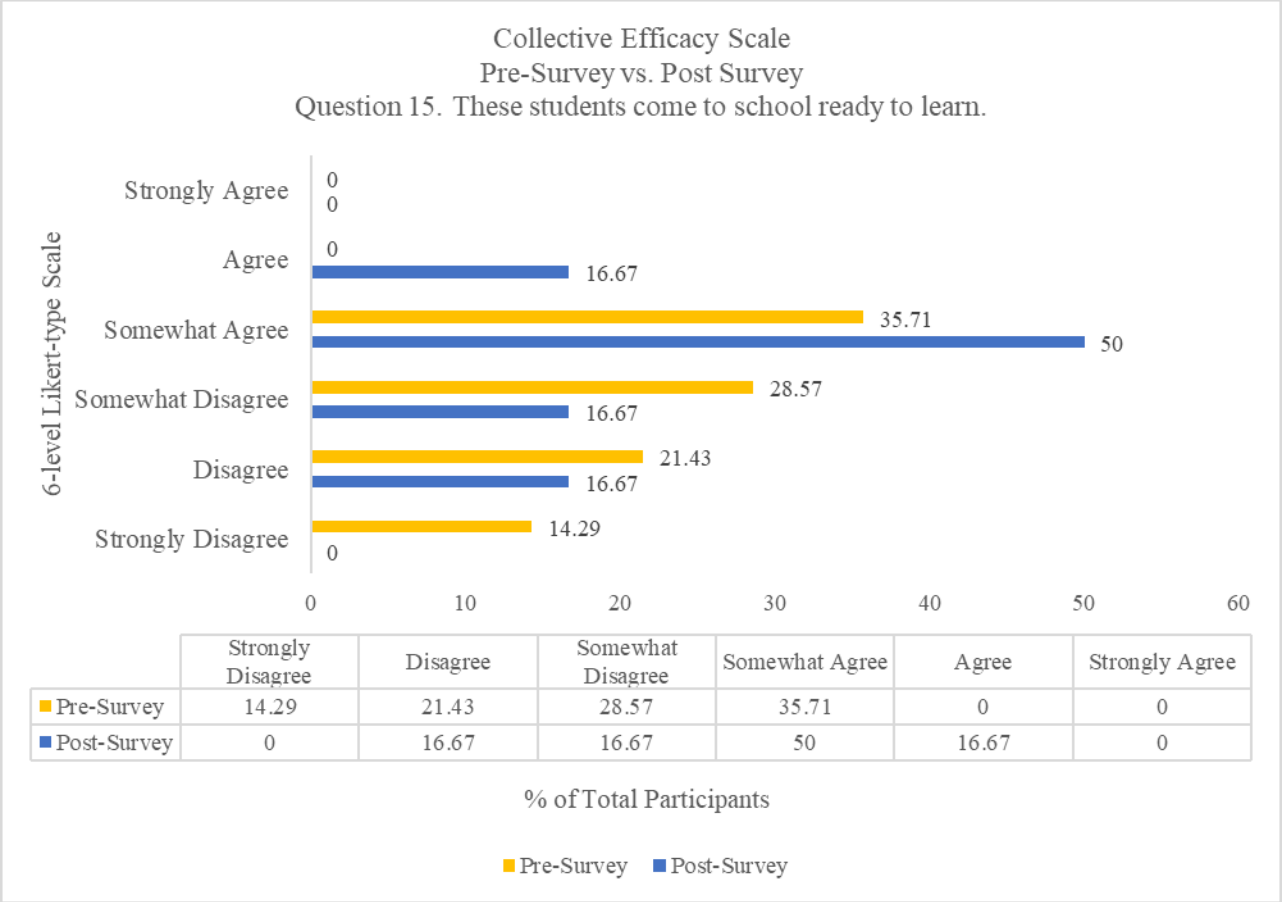
	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	14.29	7.14	28.57	28.57	14.29	7.14
Post-Survey	25	0	0	16.67	58.33	0

Figure 48. Collective Efficacy Scale Question 13 Responses.



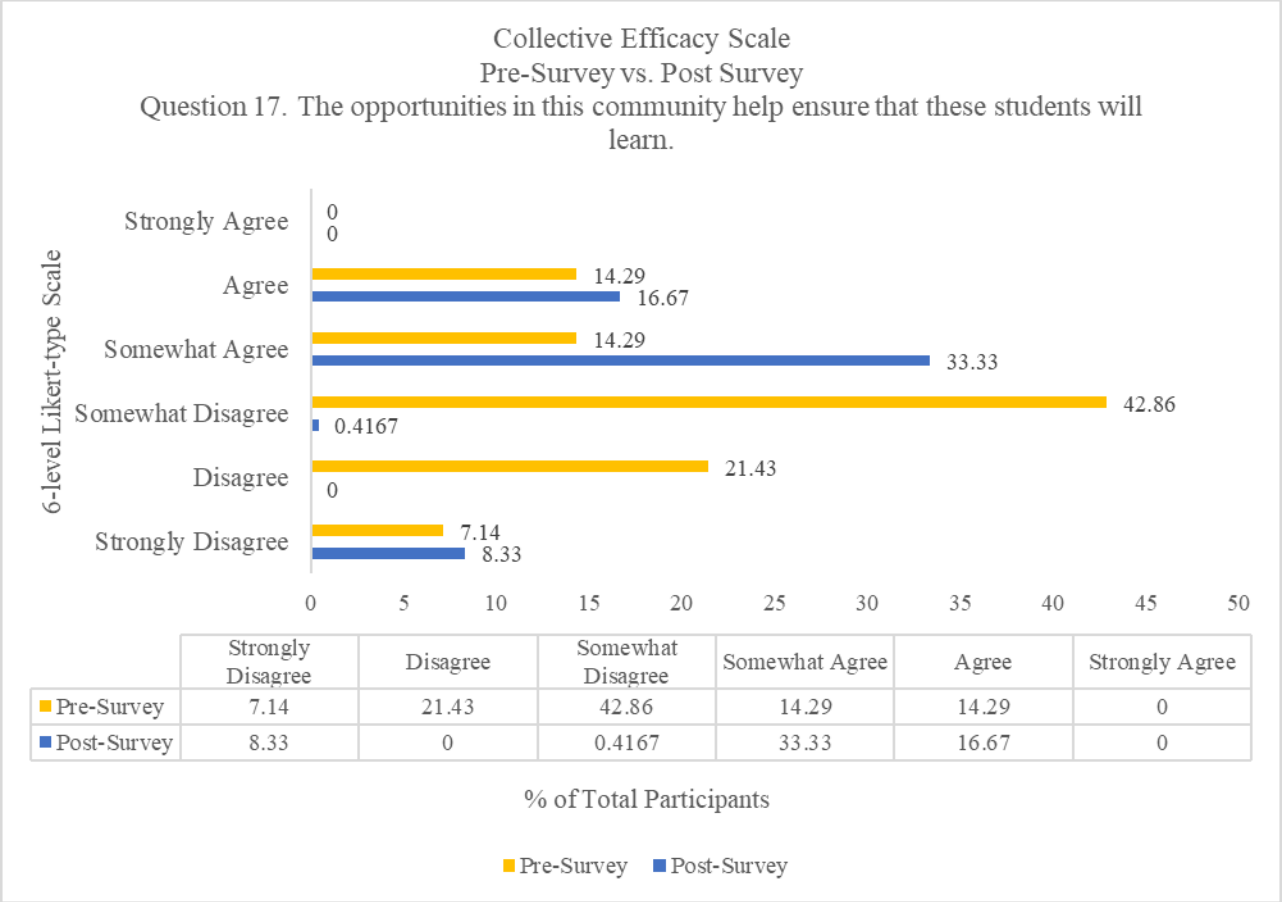
	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	21.43	35.71	21.43	7.14	7.14	7.14
Post-Survey	25	41.67	8.33	16.67	8.33	0

Figure 49. Collective Efficacy Scale Question 14 Responses.



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	14.29	21.43	28.57	35.71	0	0
Post-Survey	0	16.67	16.67	50	16.67	0

Figure 50. Collective Efficacy Scale Question 15 Responses.



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	7.14	21.43	42.86	14.29	14.29	0
Post-Survey	8.33	0	0.4167	33.33	16.67	0

Figure 51. Collective Efficacy Scale Question 17 Responses.

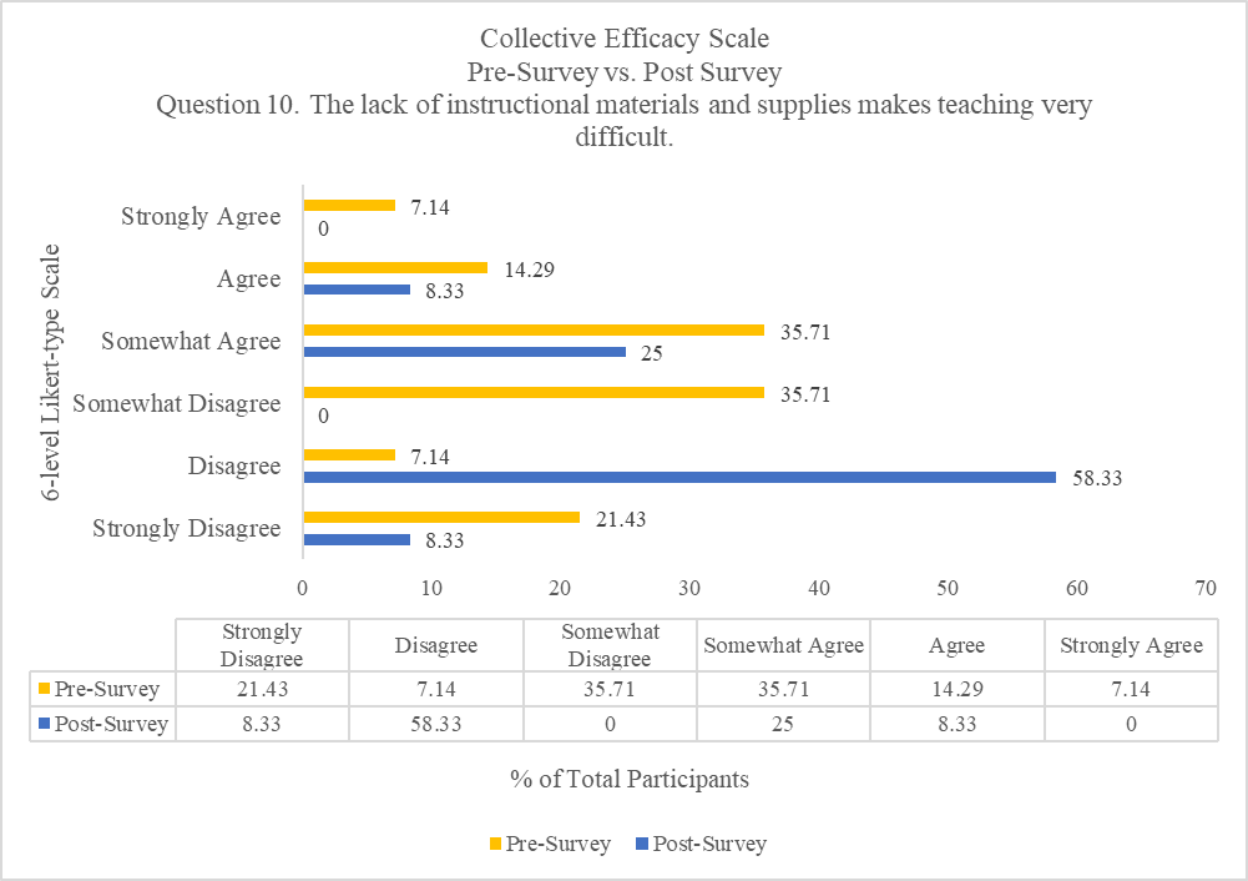


Figure 52. Collective Efficacy Scale Question 10 Responses.

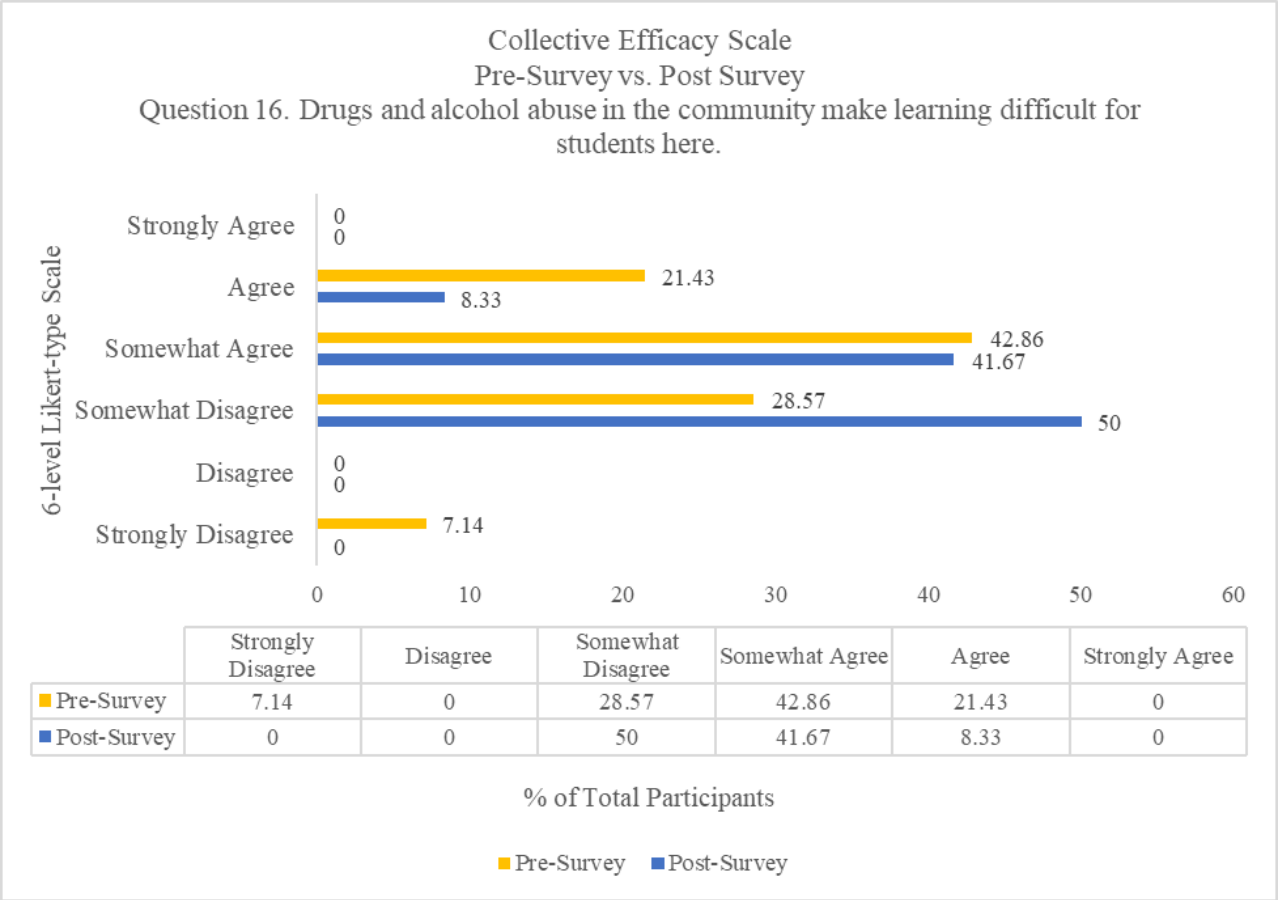
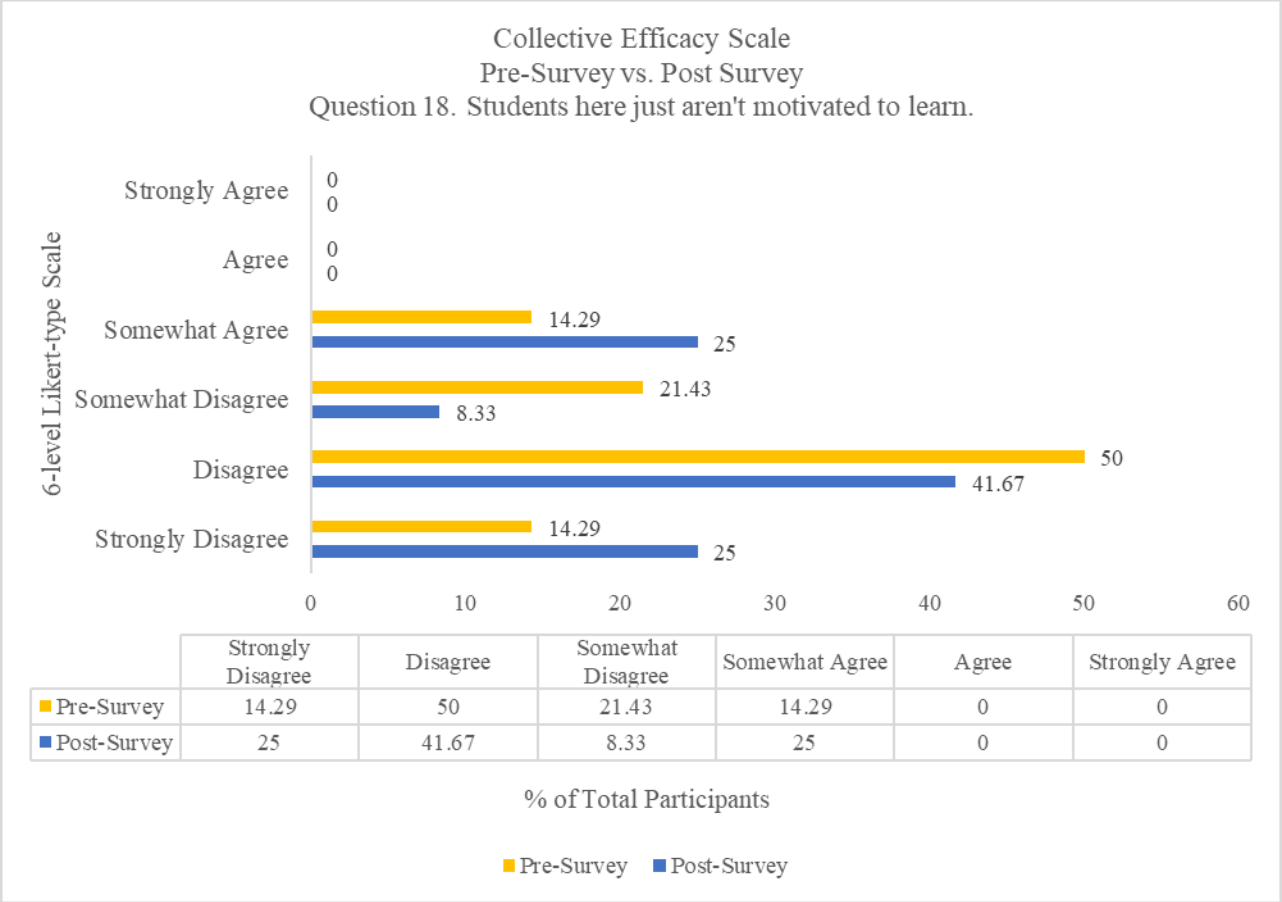
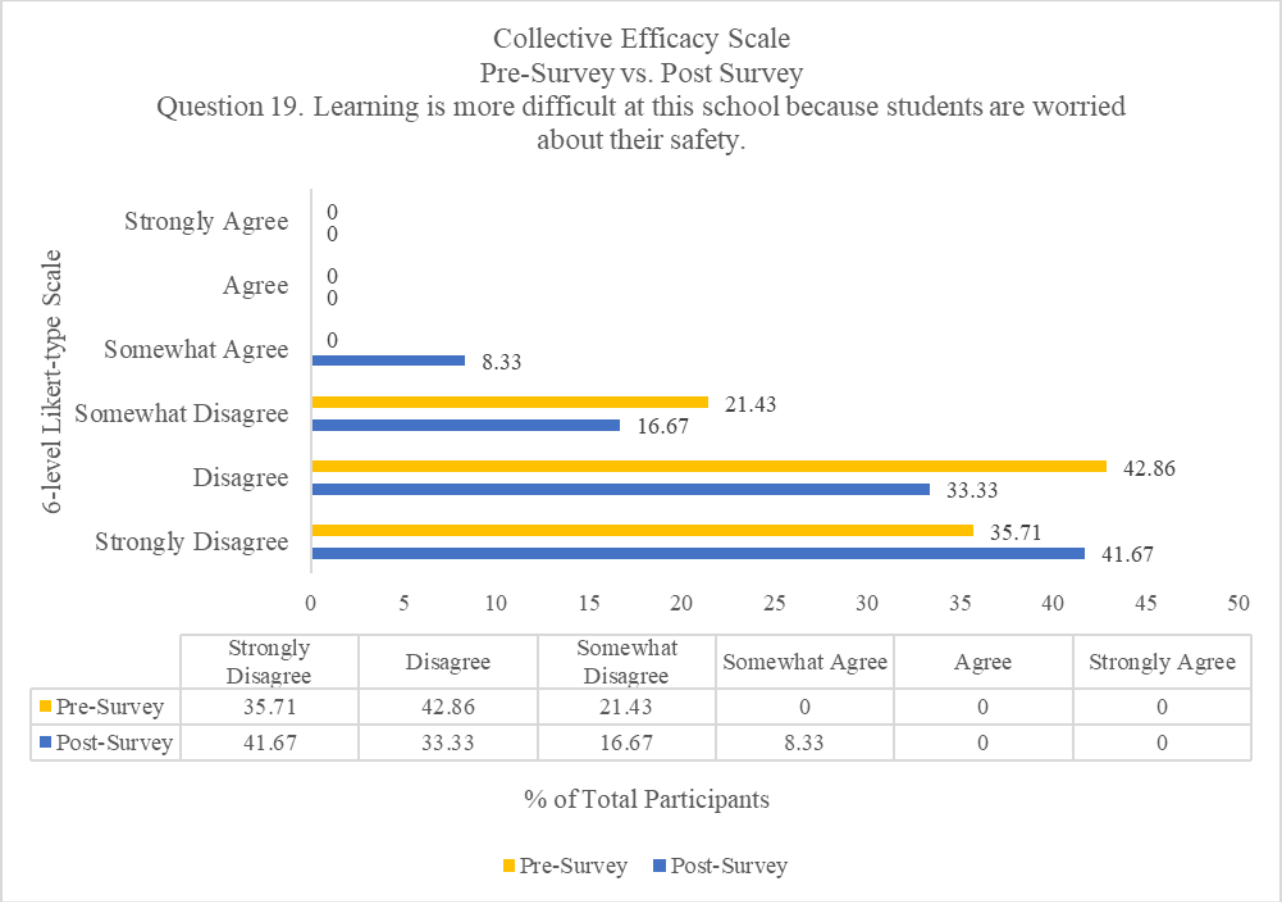


Figure 53. Collective Efficacy Scale Question 16 Responses.



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	14.29	50	21.43	14.29	0	0
Post-Survey	25	41.67	8.33	25	0	0

Figure 54. Collective Efficacy Scale Question 18 Responses.



	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Pre-Survey	35.71	42.86	21.43	0	0	0
Post-Survey	41.67	33.33	16.67	8.33	0	0

Figure 55. Collective Efficacy Scale Question 19 Responses.

decrease in collective efficacy with a -7.14% and -3.57% decline respectively, per the participating respondents.

The intent of the professional learning cycle framework was to increase collective efficacy. These results, indicate an overall successful implementation which has yielded positive outcomes. While some of the questions showed a decline from pre- to post-implementation, the majority of the survey questions indicated favorable results with an increase in collective efficacy.

Guiding Question 3

The final question guiding this inquiry seeks to understand teacher perceptions of the implementation of the professional learning cycle. The professional learning cycle refers to the 8-week Integrative Model for Professional Learning and Fostering Efficacy designed for the purpose of this inquiry. This framework was adapted from the Framework for Powerful Results, Professional Learning Cycles (Nelsen & Cudeiro, 2009) and A Collective Efficacy Cycle (Donohoo, 2013; Knight, 2007), (DeWitt 2018). The intent of this framework was to increase feelings of self-efficacy and collective efficacy. A focus group interview consisting of twelve teacher leaders concluded the final data collection for this inquiry to answer this guiding question. Interview transcripts were reviewed, coded, and analyzed for patterns and themes according to the teachers' responses.

Focus Group Interview

Participants were asked six culminating questions during the focus group interview (see Appendix N). I organized my codes into three columns: raw data consisting of the interview transcript, preliminary codes, and a final code (Saldana, 2013). I pre-coded the transcript by circling significant words, phrases and quotes which represented "codable moments" worthy of

attention (Boyatzis, 1998). Participants were asked questions in relation to the professional learning cycle. Specifically, the questions required the participants to describe their experience with the learning cycle, describe how they felt it impacted themselves and their team, and how it contributed to feelings of efficacy. Themes emerged in the form of feelings, beliefs and emotions around the topic. Because the theoretical framework of this inquiry is grounded in Bandura's cognitive theories which study human behavior and the influences that affect them, these initial themes seemed appropriate and aligned with the inquiry.

With the development of these themes, I moved forward utilizing Saldana's (2013) Emotion Codes. This type of coding identifies the emotions recalled and/or experienced by the participant and explores intrapersonal and interpersonal participant experiences and actions. Because emotions are a universal human experience, acknowledging them in research provides deep insight into the participants' perspectives, worldviews, and life conditions (Saldana, 2013).

The interview transcript identified recurring words and phrases such as share, safe, positive, open, involved and encouraged (see Figure 56). Other recurring words and phrases included problem solving, intentional, goal-driven, expectations and consistent. When applied in context, the dialogue among the participants fell into two theoretical constructs: *Culture of Collaboration* and *Culture of Continuous Improvement.*

Culture of Collaboration

Throughout the focus group interview, participants described the implementation of the professional learning cycles as having a positive impact in numerous areas. Participants explained that with the implementation of the professional learning cycle framework, they feel the culture is "safe" for open communication, collaboration and experimenting with new instructional strategies. This has led to active engagement, idea-sharing, and mutual support

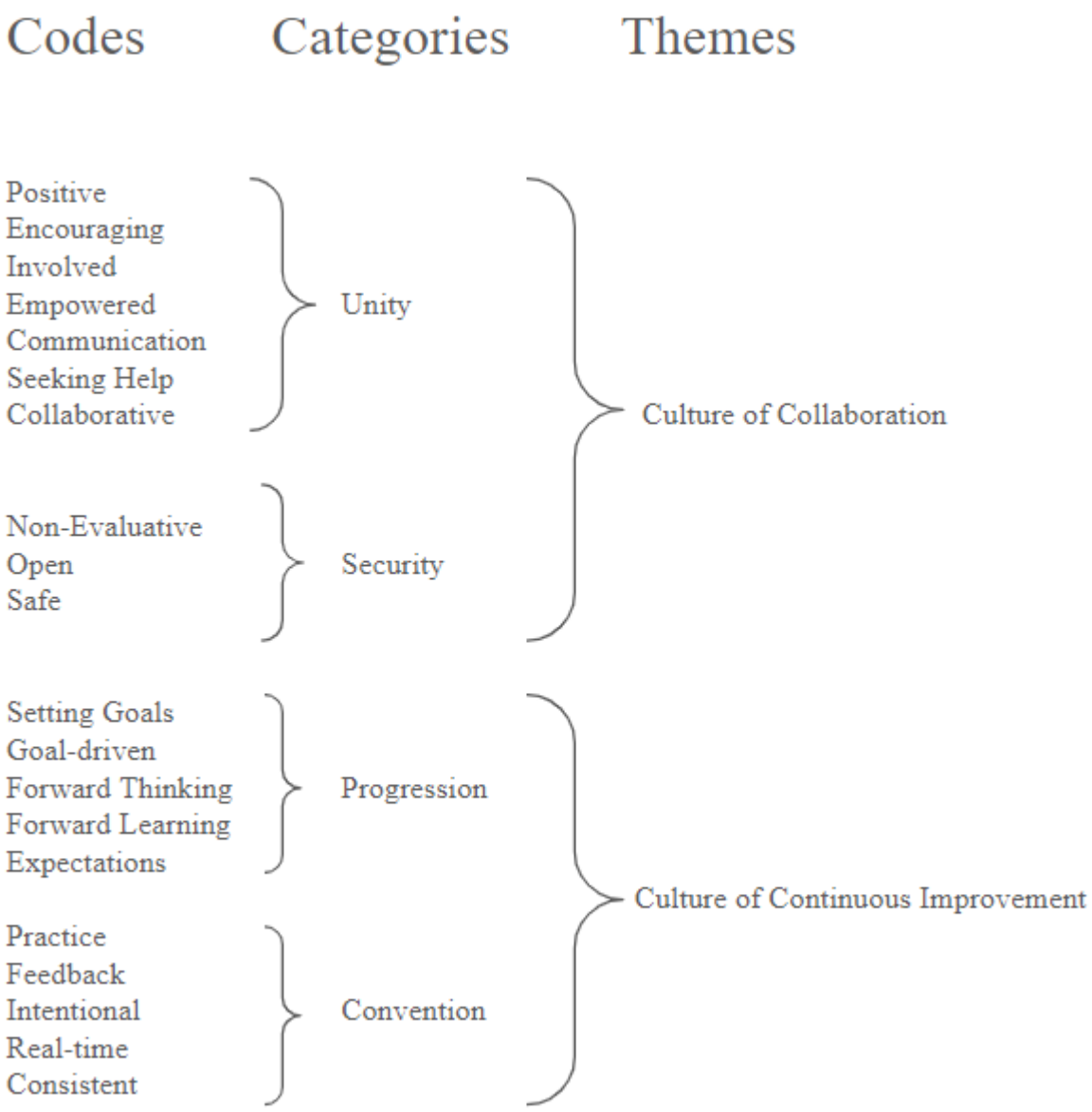


Figure 56. Emerging codes, categories, and themes of inquiry.

among colleagues. When describing what element of the professional learning cycle impacted their own development, Participant #6 described her experiences with learning walks, “Learning walks have helped a lot, just having the safe environment to practice what we've been working on, you know, to be able to give it a try because it’s not something that I would necessarily do. It’s helped me get out of my shell a little bit and try new things.” Participant # 12 replied to the comment about learning walks, “I like being able to pull from all of the positive aspects of all the other teachers and to use them in the classroom, that has been huge for me.” Also responding to the impact of the professional learning cycles, Participant #1 shares, “Having a collaborative attitude and the learning walks has made it so that you want to do better. For me it's going into another math classroom and seeing what they're doing that's effective and then being able to go back to the instructional coach and ask for assistance on how you implement that. Or talking to that teacher that you went to see and so therefore that makes it less threatening to do it (observe and ask for help) the next time.”

Culture of Continuous Improvement

The second theoretical construct that emerged from the focus group interview was a *Culture of Continuous Improvement.* This theme emerged as participants described professional learning in the building, how the professional learning cycles were utilized throughout the year and what additional professional development is needed. Continuous improvement, as it relates to teaching, is a mindset that embraces the idea that there is always room for enhancement and refinement in processes, practices, and outcomes. Participant #3 responds to what she believes has impacted her own development throughout this process, “I actually think it's taking ownership of your teaching. (learning walks) give you the opportunity to go in and see the good, the bad and the ugly for everybody. That helps you grow and brings your attention to things that

you maybe are doing well or things you aren't." Participant #5 shares, "There's a desire to do well this year, I mean you can see it in everybody that everybody's trying harder with the desire to be successful and master their skill."

Continuous improvement involves a proactive approach to identifying inefficiencies and actively implementing changes to optimize performance. It fosters an environment where feedback is valued, mistakes are viewed as opportunities to learn, and achievements are celebrated as milestones on the journey toward excellence. This culture not only prioritizes individual growth but also promotes collective advancement, as teams collaboratively work towards higher standards and improved outcomes. This culture is evidenced in participant responses throughout the interview. Participant #5 explains why she believes collective efficacy has increased. "I think the increase in collective efficacy has come from the learning walks. It is where we see other successful things happening and we see other teachers being successful and we try those strategies in our own classrooms. That has a collective impact on us." The interview concluded with an open-ended question asking what additional professional development is needed to help their team better understand and implement the professional learning cycles. Participant #10 replied with a question about how to ensure there is continuous learning after the cycle has ended.

> I think one thing one question that I would have is when we complete the professional learning cycles that we go through for the year, how does that practice of continuous improvement continue to build for that skill? I mean learning never stops; how do we continue to build on the things that we've already learned as well as when we get new staff?

This question led to further exploration and discussion into how to embed these practices so that it is not just a focus for 8 weeks, but it is continually revisited. This is discussed in more detail in the Recommendations section in Chapter 5.

The participants positive remarks within the interview focused on improvement, accountability, problem-solving, seeking help, and trying new things. This mindset provides explicit insight into the teachers' perceptions of the implementation of the professional learning cycles. The data indicates a positive outcome and supports future utilization of professional learning cycles.

Summary

The results from the mixed methods, action research inquiry supported the implementation of the professional learning cycle framework as evidenced by the increase in self-efficacy and collective efficacy measured by the data instruments utilized in this inquiry. This chapter provided a detailed description of the inquiry implementation, data analysis and concluded with quantitative and qualitative results of the inquiry. The final chapter, Chapter 5, will summarize this inquiry, elaborate on the results of the literature, address implications for the findings, and provide recommendations moving forward.

CHAPTER 5: SUMMARY, CONCLUSIONS, & RECOMMENDATIONS

This inquiry aimed to equip teachers in a rural middle school undergoing transformation with the skills for action research and onsite professional development, fostering shared leadership and collective teacher efficacy. Guiding theories included Social Cognitive Theory, Self-Efficacy Theory, and Collective Teacher Efficacy theory, important for understanding human behavior and influences. Conceptual frameworks guided the implementation of professional learning cycles, with research-based frameworks showing positive impacts on student achievement and professional growth. Understanding theories of human behavior in conjunction with research-based learning cycles formed the basis of the inquiry.

The inquiry followed a mixed-methods action research design, including three phases to determine the implications of the inquiry. Utilizing the supporting research, staff identified weaknesses within instructional practices and implemented learning cycles to enhance teacher and student outcomes. Professional development was ongoing throughout each cycle and involved all stakeholders, aiming to nurture teacher leadership and collective efficacy. Teachers with high collective efficacy are motivated to persist until successful. Thus, the inquiry focused on implementing professional learning cycles to improve teaching strategies, establish collective teacher efficacy, and enhance student outcomes. This findings of this inquiry not only support the many researchers who have studied collective teacher efficacy, but it also provides a framework that will help establish this efficacious culture.

Summary of the Findings

The implementation of the framework indicated overall positive outcomes for teachers as well as school culture. The inquiry began with the introduction of the framework of professional learning cycles and targeted classroom learning walks. These learning walks helped teachers

collectively identify areas of improvement. This once intimidating and untested practice of peer observations quickly turned into a school norm. Doors opened and conversations became transparent about how to grow themselves and each other. They found that the professional development that was strategically prepared for each cycle was relevant to their own growth and the growth of the school. The findings from this inquiry align with the research of Donohoo (2018) who found that collective teacher efficacy results in teachers having a stronger focus on academics, holding higher expectations of students, taking greater risks with pedagogical strategies, and being more receptive to new ideas. The findings from this inquiry indicate that the implementation of the framework for professional learning cycles positively impacted collective teacher efficacy. While student achievement was a major factor in the context and reason for this inquiry, it was not implicated within the guiding questions due to the number of variables that may impact student achievement scores within the course of a year. However, End of Grade (EOG) scores at TRMS showed a 2% increase in Math scores, 7% increase in Reading scores, and 13% increase in Science scores, with an overall achievement score increasing from 48.4% to 54.4% from the previous year. This increase in achievement would align with Hattie's (2015, 2016, 2017) and Donohoo's (2017) research indicating the strong influence collective teacher efficacy has on student achievement.

Interpretation of the Findings

The findings from this inquiry were intended to be used to identify resources strategies and supports necessary to improve collective teacher efficacy. This inquiry examined the literature surrounding adult learning, efficacy and professional development. The inquiry was designed to align Bandura's Social Cognitive Theory (1986), Self-Efficacy Theory (1977), and Collective Teacher Efficacy Theory (1997) with that of Shirley Hord's (1997, 2004) ideology of

the conditions and characteristics of effective PLCs. The findings from this inquiry support much of the existent research literature and aid in identifying recommendations for future practice and inquiry.

Focus of practice guiding question 1 sought to determine how the implementation of professional learning cycles impacted self- efficacy. Self-efficacy is hypothesized to affect effort, expenditure and persistence (Bandura, 1982). Individuals assess their own sense of self-efficacy through their own experiences and influences. The four sources of influence are: Mastery Experiences; Emotional Arousal; Vicarious Learning; and Social Persuasion (Bandura, 1977). The implementation of professional learning cycles required teachers to engage as a team with a collective goal. Through this framework, teachers were provided Vicarious Learning opportunities which is observing others similar to oneself to complete a task. Emotional Arousal, one's emotional state which influences how they feel about their own abilities was experienced when they were personally observed by peers. They experienced Social Persuasion following the debriefing of learning walks, which is when one can be persuaded to believe they have the skills they need to succeed. And above all, teachers at TRMS engaged in various Mastery Experiences throughout each learning cycle when they were challenged to implement new instructional strategies. Bandura (1997) states, "Mastery experiences are the most influential source of efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to succeed. Success builds a robust belief in one's personal efficacy" (p. 80). Providing this structure of professional learning directly coincides with an increase in all twelve questions on the TSES, confirming that these experiences do impact one's self-efficacy.

The second part of guiding question 1 sought to determine the impact that professional learning cycles had on collective teacher efficacy. Bandura (1997) introduced the concept of

collective efficacy as a group's shared belief in its ability to organize and execute the courses of action required for a given task. This theory, based on Bandura's (1986) social-cognitive theory, collective teacher efficacy finds that a strong sense of shared group capability establishes a cultural norm for success that can encourage group members to work toward desired ends and is directly reflected in student achievement. CTE influences how educators feel, think, and behave; therefore, it is a significant contributor to the school's culture (Donohoo et al., 2018).

Prior to the start of implementation, a low sense of efficacy was reported within the Teacher Working Conditions Survey as well as the Collective Efficacy Survey. Participants reported a greater sense of efficacy throughout both of the surveys post-implementation, with many indicators scoring at 100% agreement rates in the Teacher Working Conditions Survey. Findings after implementation indicate that teachers are not only willing to engage in professional learning, but they deem it a necessity for professional growth.

The final guiding question sought to discover teachers' perceptions of the implementation of the professional learning cycle. The professional learning cycle, a framework coined by Jeff Nelsen and Amalia Cudeiro (2009) is often described as a culture shift in professional learning. The inquiry merged this framework with the literature surrounding professional development and professional learning cycles. Professional development is a process that requires intentional, ongoing, and systemic presentation of information (Guskey, 2003). Other characteristics for effective professional learning include: incorporating active learning, content focused, collaborative, supported by coaching, and personalized by teacher needs and interests in order to have a more significant opportunity to improve teacher learning and student achievement (Blank & de las Alas, 2009; Cochran-Smith & Lytle, 1999; Darling-Hammond, 1997, 1999; Joyce & Showers, 1982; Showers et al., 1987; Wei et al., 2009). Essentially, the components of effective

professional development which include theory, demonstration, practice and feedback, and coaching (Showers et al., 1987) were all weaved into the idea of the framework implemented in this inquiry.

The implementation of the framework, specifically the learning walks, proved to be a successful strategy and positive influence towards their own efficacy and collective beliefs. Teachers shared that their time observing classrooms gave them an opportunity to learn from the successful strategies of peers, as well as reflect on their own practice. The teachers shared that this practice fostered a culture of accountability that raised the bar for themselves and others. Other themes that emerged from the interviews revealed that teachers value a culture that is consistent with collaboration and improvement. The findings from this inquiry indicated that the structured framework for professional learning positively impacted teachers personally and professionally.

Limitations of the Inquiry

Research studies, regardless of their nature or discipline, often face various limitations that can impact the validity, reliability, and generalizability of their findings. Several limitations existed in this inquiry. The first limitation was the size of the staff. With only 27 certified teachers, this small sampling limits the generalizability of the inquiry. This may also limit who is represented in the inquiry. Non-representative samples can introduce bias, as the results may not accurately reflect the broader population.

I felt another limitation to this inquiry was the reliability of the CES measurement tool. In analyzing the data, some of the only questions that did not score a higher level of participant agreement were identified as negatively worded questions. These questions, which required the

respondent to read the question carefully due to the inconsistent verbiage, seemed to not align with the results indicated across the rest of the inquiry.

The final limitation with likely the greatest impact on the inquiry was my role as the lead researcher as well as the building administrator. This inquiry took place during my first year in the school, therefore trust was not well established prior to implementation. The school was designated as low-performing according to the state accountability model, therefore teachers inherently feared for their career status. As their administrator implementing this new structure of professional learning, it is possible that teachers' participation was disingenuous, and they may have answered favorably with fear of a confidentiality breach.

Implications of the Findings for Practice

In this inquiry, I sought to determine the impact of professional learning cycles on collective efficacy, as well as the resources, strategies and supports necessary to improve CTE. I designed this inquiry through the lens of a teacher. Too often, professional development is overly generalized and may not even align with the culture, needs or goals of the teacher. According to the North Carolina Teacher Working Conditions, "Professional Learning" has historically been the lowest scoring element when surveyed across the state. This data also aligns with our historical district and school data. According to researchers Dana & Yendol-Hoppey (2008), professional development is one of the most powerful ways to change teacher practice and increase student achievement. This inquiry considered the literature encompassing professional development, professional learning communities, efficacy, and the frameworks that weave these theories together. Within this inquiry, teachers were engaged in authentic professional learning experiences that were relevant to their own instructional practices and students. Typically, the greatest complaint is that professional development is not differentiated to meet the individual

needs of the teacher. Prior to implementation, this indicator only had a 34% agreement rate as a school. Post-implementation, respondents were 71% in agreement. While this still remains the lowest scoring indicator on the TWCS and indicates a need for continuous efforts, this does reveal a 37% increase after one year of implementing professional learning cycles. This increase can be attributed to the continuous framework for professional learning that aligns with the work within their own school.

This cycle of professional learning reflects a systematic and thoughtful approach to improving teaching practices. By continuously collecting and analyzing data, observing classroom activities, and receiving feedback, educators can identify areas for growth. The intentional design of professional development activities then addresses these identified needs, creating a dynamic and responsive learning environment for teachers. This approach supports ongoing improvement, fosters a culture of collaboration, and ultimately enhances the quality of instruction in the educational setting. The positive impact on perceptions implies that the framework has successfully addressed the needs and expectations of those involved in professional learning. By keeping professional learning as a top priority, school leaders affirm the ongoing significance of investing in the growth, skills, and knowledge development of educators. This commitment recognizes that professional development is not a one-time event but an ongoing process that contributes to the long-term success of both educators and students.

The focus of this inquiry began with the purpose of increasing collective efficacy among a small staff in an underachieving, rural school in North Carolina. During the time this inquiry took place, media outlets across the United States surged with messages such as, “Teacher shortages continue to plague US: 86% of public schools struggle to hire educators,” (NCES, 2023). As the inquiry took shape, I realized that the implications of a successful inquiry may not

only positively impact teacher efficacy and achievement, but it could also decelerate teacher attrition rates which have left an unprecedented amount of classroom vacancies across the country. This chapter will outline the design of this inquiry that led to an increase in teacher efficacy, and a greater culture of collective teacher efficacy through a framework of professional learning cycles, a model for authentic continuous professional learning and improvement.

Implications of the Findings for Equity

Collective teacher efficacy is often defined as a "collective self-perception that teachers in a school can make an educational difference to their pupils over and above the educational impact of their homes and communities" (Tschannen-Moran & Barr, 2004, p. 3). Eells (2011) also found that increasing teachers' collective efficacy beliefs can be the key to closing the achievement gap in our most impoverished communities. This research is extremely valuable when determining what factors produce the greatest outcomes within a specific population. The results from this inquiry implicate that the implementation of professional learning cycles contributed to an overall improved collective efficacy, which in turn may lead to more equitable educational outcomes. Within the context of this inquiry, these implications could potentially narrow the achievement gaps that exist among students from a rural area with low socioeconomic backgrounds.

Low-performing schools located in high-poverty areas often have the greatest teacher turnover rates. This is generally the result of the misconceptions in how to reach specific student groups. Equity in the context of this inquiry ensured that teachers considered the unique challenges and needs within the immediate school environment and tailored the professional learning strategies to address the specific circumstances and resources available within the setting. This also helps in ensuring that teachers from all backgrounds and demographics have

equal access to and benefit from professional development opportunities. Equity considerations should extend to the allocation of resources for professional learning. It is critical that all educators, regardless of the school's performance or location, have access to the necessary resources to participate in and benefit from ongoing professional learning. By intentionally considering the unique needs of the teachers and students within the framework for professional learning, the research inquiry has the potential to not only improve collective efficacy but also contribute to a more inclusive and equitable learning environment for all.

Recommendations for Practice

Collective teacher efficacy is associated with teachers' productive behaviors, greater job satisfaction, reduced stress, and increased student performance (Donohoo, 2018). Previous research also indicates that there is a significant relationship between collective teacher efficacy and job satisfaction of teachers (Klassen et al., 2010). In light of the positive impact that the framework of professional learning cycles had on increasing collective efficacy, the findings from this inquiry suggest that an established and intentional focus on professional learning should remain at the forefront of leaders seeking overall school improvement. The educators in this inquiry found the greatest impact from building collaboration with each other. Facilitating opportunities for peer collaboration within and across subject areas not only allows for personal growth, but it also concurrently builds the group beliefs that all are capable of achieving a collective goal. The engagement within the professional learning communities fosters a culture of collaboration where educators feel comfortable sharing successes and challenges and creates structured opportunities for collaborative planning, observation, and reflection. It also encourages teachers to share best practices, engage in collaborative lesson planning, and provides mutual support which all lead to an enhanced collective efficacy.

Recommendations for Future Study

This inquiry was designed to discover the impact of professional learning on collective efficacy. While the implications of the inquiry found that the implementation of the professional learning cycle framework did have a favorable outcome in the context of increasing self and collective efficacy, the results also indicated a greater desire for more individualized and specific professional learning. Future research could refine the constructs of the professional learning communities specific to smaller groups of teachers. This inquiry involved the entire group of educators working towards one specific goal each cycle. A future study could group teachers either by areas of need, content, or experience (specifically beginning teachers). As Scherff (2018) described, professional learning is best designed when it is interactive, customized to teachers' needs and engages teachers to practice what they are learning in their own contexts.

Another future study could further explore the impact of collective efficacy on student achievement. While the variables associated to student achievement remain unpredictable, it would be compelling data to determine if teachers perceived the impact of the framework for professional learning was a causal factor of their students' achievements.

Conclusions

While teachers continue to try to close student achievements gaps, they are faced with various barriers within the educational setting. We continue to feel the effects that COVID 19 had on students' education, student instructional and emotional needs continue to change within society, and we are faced with unprecedented teacher vacancies, leaving many with increased responsibilities. This inquiry examined a practice that could address the determined individual needs based on teacher and student data in a given school, which provided real-time, authentic strategies to improve their instructional practice. This experience not only provided opportunity

for the growth of the educator, but it also grew the group as a whole, leading to an increased sense of collective efficacy.

Efficacy results in increased satisfaction and is the result of intentional planning, collaboration, support, and shared responsibility. The impact of efficacy is multifaceted and extends across various domains. It influences how individuals approach challenges, interact with others, and contributes to personal and collective well-being within organizations. Cultivating and sustaining a culture that has systems in place that foster a sense of efficacy can lead to positive outcomes favorable for teachers and students.

Scholarly Practitioner Reflections on Leadership

This inquiry has taught me more about myself as a leader than any other practice in seventeen years in education. As a classroom teacher, I felt completely in control of my classroom environment, and I was the deciding factor and influence in the classroom. In leadership, I learned quickly that I was only a factor in the culture and climate in the school, and that adults learn and respond very differently than children. I have always had a niche in developing a positive culture in schools, but I struggled to translate that when it came to an instructional level. As the instructional leader in the building, I felt it was my responsibility to be the deciding agent as to what teachers needed to improve in their classrooms. In my previous years in leadership, we did have professional learning communities in place as well as professional development, however, I decided what was discussed and delivered within these meetings. Looking back

This inquiry led me to think, act and engage differently. I was forced (and I say that with all sincerity as a recovering elementary teacher) to give up control and allow teachers to find their voice, discover their own strengths, and reflect on their areas of growth. This shift,

however, came with positive outcomes, even in my first few months in the building. Prior to the implementation of this inquiry, I assumed that trust would be a limitation within the inquiry. I learned that I was quickly building trust through a structured and democratic system. Teachers felt empowered as they were the deciding factors in their own professional learning. I simply shared the cycle, explained the theory behind each element of the cycle, and teachers took the lead. The sense of autonomy and empowerment that began to embed in the teachers led to a greater level of investment. Teachers are lifetime learners, I just needed to provide them with a structured arena to learn in, and they quickly led each other.

In a time when the nation is faced with teacher shortages, especially in rural areas, allowing teachers to feel respected as professionals when they walk in the building is critical. This inquiry allowed teachers to not only felt respected by their building leaders, but they grew a respect amongst each other. They analyzed their own data, decided on their own instructional goals, monitored each other's progress, and built a sense of efficacy and community. I now understand that the greatest responsibility lying before me as a leader is not to make all the best decisions, but rather to build a platform that allows teachers the courage and confidence to make these decisions on their own, as the teacher they once envisioned they would be.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office **252-744-2914** · Fax **252-744-2284** ·
rede.ecu.edu/umcirb/

Notification of Exempt Certification

From: Social/Behavioral IRB
To: Kelly Makepeace
CC: Travis Lewis
Date: 5/17/2023
Re: UMCIRB 23-000972
Examining the Implementation of Professional Learning Cycles on Collective Efficacy

I am pleased to inform you that your research submission has been certified as exempt on 5/16/2023. This study is eligible for Exempt Certification under category # 1B/2B.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document	Description
Focus Group Questions.docx(0.01)	Interview/Focus Group Scripts/Questions
Participant Informed Consent Form.docx(0.02)	Consent Forms
School Transformation: Examining the Implementation of Professional Learning Cycles to Increase Collective Efficacy in a Rural Middle School in North Carolina(0.01)	Study Protocol or Grant Application
Survey and Interview Script for Participation(0.01)	Recruitment Documents/Scripts
Surveys and Questionnaires(0.01)	Surveys and Questionnaires

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: DISTRICT RESEARCH APPROVAL

Beaufort County Schools

Dr. Matthew F. Cheeseman, Superintendent
321 Smaw Road
Washington, North Carolina 27889
252-946-6593
www.beaufort.k12.nc.us

April 26, 2023

Dear Institutional Review Board:

The purpose of this letter is to inform you that I give Mrs. Kelly Makepeace permission to conduct the research titled "School Transformation: Examining the Implementation of Professional Learning Cycles to Increase Collective Efficacy in Rural Middle in North Carolina" at Chocowinity Middle School (CMS), Beaufort County Schools. This letter also serves as assurance that CMS complies with requirements of the Family Educational Rights and Privacy Act (FERPA) and the Protection of Pupil Rights Amendment (PPRA) and will ensure that these requirements are followed in the conduct of this research. The research will be conducted with oversight from Dr. Travis Lewis, East Carolina University and Dr. Matthew Cheeseman, Superintendent. The research shall be conducted with all confidentiality requirements outlined in Beaufort County Board of Education policy 4700 Student Records and policy 4705/7825 Confidentiality of Personal Identifying Information as attached for reference. Please feel free to contact me directly should you have questions.

Sincerely,

Matthew F. Cheeseman, Ed.D.
Superintendent

APPENDIX C: PARTICIPANT INFORMED CONSENT FORM

Informed Consent Form for TRMS Staff

Kelly Makepeace

East Carolina University

Title of Research Study: SCHOOL TRANSFORMATION: EXAMINING THE IMPLEMENTATION OF PROFESSIONAL LEARNING CYCLES TO INCREASE COLLECTIVE TEACHER EFFICACY IN A RURAL MIDDLE SCHOOL IN NORTH CAROLINA

Introduction:
I am a doctoral student in the College of Education at East Carolina University pursuing my EdD in Educational Leadership. My dissertation is a focus of practice in which I identify a need in the building and create a plan to address the need.

Purpose of the Research:
This focus of practice project is the implementation of a professional learning framework to increase levels of collaboration among the staff, teacher empowerment, and an overall efficacy among educators with the school.

Types of Intervention:
This intervention involves four 8-week cycles of professional learning focused on a targeted instructional strategy. Professional learning will take place in weekly grade level meetings, at staff meetings, and other designated professional development opportunities as desired.

Participant Selection:
Participation in the learning cycles is required as a member of the TRMS staff. Participation in the surveys and interviews will be open to any staff member at TRMS.

Voluntary Participation:
Participation in surveys and interviews is completely voluntary. Choosing to participate or declining participation will have no impact on your job.

Procedures:
This study aligns with the instructional focus and strategic plan at TRMS. As a member of the TRMS staff, you are asked to do the following:

- Attend weekly grade level PLCs
- Collaborate with colleagues, coaches, and administration in the participation of professional development activities
- Participate in four learning cycles
- Participate in four targeted learning walks
- Provide feedback to participating staff

- Maintain confidentiality of team discussions

Duration:
Participation of my study will span about 34 weeks. This includes four 8-week cycles as well as concluding surveys and interviews.

Risks:
There are no risks associated with participation in this study

Benefits:
Your participation in this study is likely to help develop a culture of continuous improvement at TRMS. An environment with a focus on professional learning will likely result in increased teacher morale, efficacy and ultimately student achievement.

Reimbursements:
There are no financial reimbursements in return for participation in this study.

Confidentiality:
Confidentiality will be maintained at all times. I will not share any information about you. All survey responses will be anonymous, and interviewees will be protected with pseudonyms provided by the interviewer. The school and the district will also be assigned pseudonyms to protect the identity and confidentiality of participants involved.

Sharing the Results:
The results of the study will be shared with all staff at TRMS once all data has been collected and analyzed. The results from this study will also be shared with East Carolina University. The results could possibly be shared through publications and conferences.

Right to Refuse or Withdraw:
You have the right to refuse participation in any survey or interview. You will have the opportunity to review the data gathered from the interview in which you participate.

Who to Contact:
This proposal has been reviewed by the East Carolina University Institutional Review Board (IRB). This is a committee whose task is to make sure research participants are protected from harm. If you have questions about this study, or about the East Carolina University IRB, please contact Dr. Travis Lewis at lewistr16@ecu.edu.

Part II: Certificate of Consent

I have read the information above, and I have had opportunities to ask questions and my questions have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Printed Name of Participant_____

Signature of Participant _____

Date _____/_____/_____

APPENDIX D: TEACHER QUESTIONNAIRE

1. Tell me about yourself, your family, friends, pets- whoever supports you in your life.
2. Tell me about your role here at TRMS
3. What are two things you love about TRMS?
4. Is there a need or concern that you would like to see addressed at TRMS?
5. What is one of your strengths as an educator and what makes you proud of the work you do?
6. What is an area of growth you would like us to support you in?
7. How do you maintain personal growth?
8. Is there an area you would like to lead next year?
9. What do you hope I can bring to TRMS this year and in the future?
10. Is there anything else you would like me to know or to think about going into summer and the next school year?

APPENDIX E: PILOT STUDY FOCUS GROUP INTERVIEW

1. How would you describe professional learning in the building?

2. Describe the implementation of professional learning cycles and how they were utilized this year? What focus of practice or instructional strategies were addressed?

3. How effectively do you feel your teams are able to identify areas of need and implement a learning cycle for improvement? What contributes to this?

4. How was efficacy impacted this year? What would you contribute to an increase or decrease in collective efficacy?

5. How are professional development and student achievement interrelated, if at all?

6. What do you believe impacts student achievement in your building?

7. How are professional development and student achievement interrelated, if at all?

8. What do you believe contributes to teachers' self-efficacy? Collective efficacy?

9. What elements within the professional learning cycle, if any, do you believe impacted your own development? If so, how? Please describe or provide an experience.

10. What additional professional development is needed to help your team better understand and implement the professional learning cycle?

APPENDIX F: TEACHERS' SENSE OF EFFICACY SURVEY

Teachers' Sense of Efficacy Scale[1] (short form)

	Teacher Beliefs	How much can you do?								
	Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing		Very Little		Some Influence		Quite A Bit		A Great Deal
1.	How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.	How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4.	How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5.	To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.	How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8.	How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.	How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10.	To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11.	How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

APPENDIX G: COLLECTIVE EFFICACY SCALE

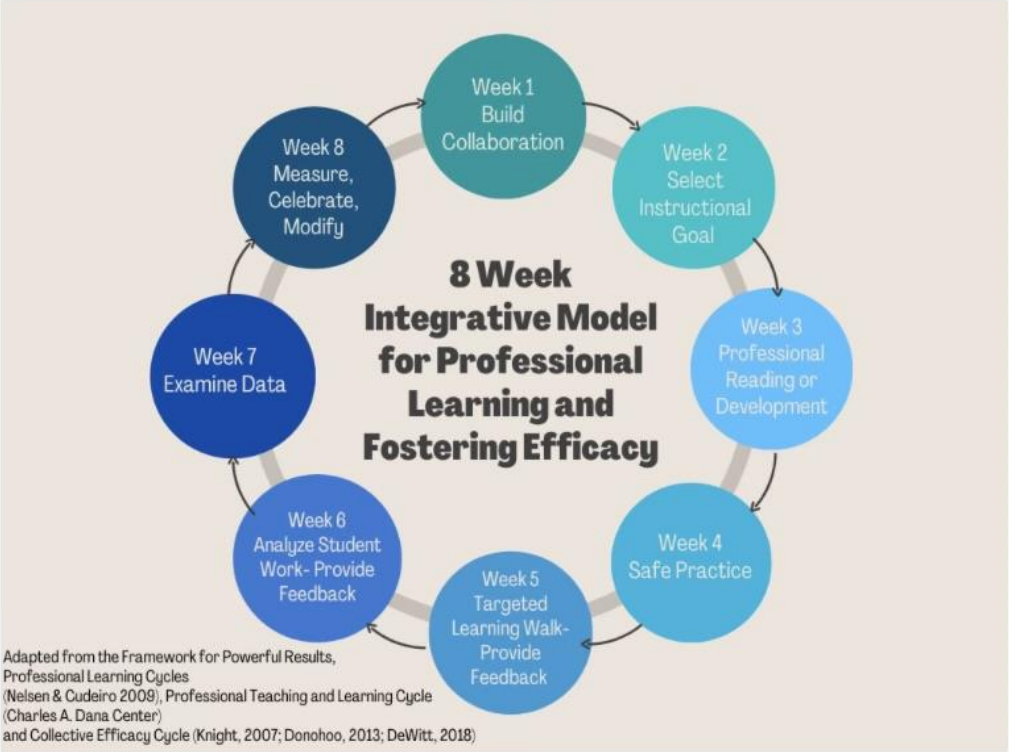
CE-Scale

DIRECTIONS:
Indicate your level of agreement with each of the following statements from STRONGLY DISAGREE (1) to STRONGLY AGREE (6).

	Strongly Disagree					Strongly Agree
1. Teachers in the school are able to get through to the most difficult students……	1	2	3	4	5	6
2. Teachers here are confident they will be able to motivate their students……..…	1	2	3	4	5	6
3. If a child doesn't want to learn teachers here give up……..	1	2	3	4	5	6
4. Teachers here don't have the skills needed to produce meaningful student learning ..	1	2	3	4	5	6
5. If a child doesn't learn something the first time teachers will try another way……	1	2	3	4	5	6
6. Teachers in this school are skilled in various methods of teaching……	1	2	3	4	5	6
7. Teachers here are well-prepared to teach the subjects they are assigned to teach…....1	2	3	4	5	6	
8. Teachers here fail to reach some students because of poor teaching methods……	1	2	3	4	5	6
9. Teachers in this school have what it takes to get the children to learn……..	1	2	3	4	5	6
10. The lack of instructional materials and supplies makes teaching very difficult..…...	1	2	3	4	5	6
11. Teachers in this school do not have the skills to deal with student disciplinary problems……	1	2	3	4	5	6
12. Teachers in this school think there are some students that no one can reach…..……1	2	3	4	5	6	
13. The quality of school facilities here really facilitates the teaching and learning process..……	1	2	3	4	5	6
14. The students here come in with so many advantages they are bound to learn……1	2	3	4	5	6	
15. These students come to school ready to learn……..1	2	3	4	5	6	
16. Drugs and alcohol abuse in the community make learning difficult for students here. ……..	1	2	3	4	5	6
17. The opportunities in this community help ensure that these students will learn……	1	2	3	4	5	6
18. Students here just aren't motivated to learn……....1	2	3	4	5	6	
19. Learning is more difficult at this school because students are worried about their safety……..1	2	3	4	5	6	
20. Teachers here need more training to know how to deal with these students……..1	2	3	4	5	6	
21. Teachers in this school truly believe every child can learn……..……..……1	2	3	4	5	6	

APPENDIX H: TRMS PROFESSIONAL LEARNING CYCLE PLAN

Tar River Middle School Professional Learning Cycle Plan 2022-2023



2022-2023 Continuous Improvement (Professional Learning Cycles)
Instructional Focus: Collective Teacher Efficacy

Goal: Implementation of Professional Learning Communities and Collaboration to Increase Intentional Instructional Practices.
CMS will collaborate with stakeholders to participate in professional development and professional learning communities to:

- Reflect on instructional practices
- Analyze data
- Unpack standards
- Implement rigorous research-based strategies for individualized teaching and learning.
- Schedule
    - Mondays-Grade Level Check-in (weekly plan)
    - Tuesday-Sci/SS
    - Wednesday-Reading
    - Thursday-Math

Cycle 1: Teacher Efficacy & School Culture

CMS will develop a shared identity by fostering relationships with all stakeholders to boost morale, maximize supports, and strengthen connections.

- New Mission/Vision
- Increase teacher/student morale and empowerment
- Increase school climate with positivity
- Implementation of Professional Learning Communities and Collaboration to Increase Intentional Instructional Practices (A2.04 and C2.01). CMS will collaborate with stakeholders to participate in professional development and professional learning communities to:
    - Reflect on instructional practices
    - Analyze data/Unpack standards
    - Implement rigorous research-based strategies for individualized teaching and learning.
    - Schedule
        - Mondays-Grade Level Check-in (weekly plan)
        - Tuesday-Sci/SS
        - Wednesday-Reading
        - Thursday-Math
- Book Study: The Energy Bus by Jon Gordon

Cycle 1: Teacher Efficacy- A teachers' belief in their own efforts and ability to determine their students' success (Hoy, 2000) ***Focus Question:*** *Is there evidence the teacher is utilizing alternative strategies, collaborating with colleagues, and helping students see themselves as capable learners?*	
Week 1: Aug 29-Sept. 2	1st Week of School
Week 2: Sept. 5-9	**Learn Effective Practice** Read Forward-Chapter 6 The Energy Bus Introduction Sept. 6 Staff Meeting
Week 3: Sept. 12-16	**Professional Reading & Safe Practice** **Read Chapters 7-12** Sept. 12 Grade Level-Padlet Big Question Lesson 2 (Foreword-Ch.6)
Week 4: Sept. 19-23	**Professional Reading & Safe Practice** **Read Chapters 13-18** Sept.19 Grade Level-Padlet Big Question Lesson 3 (Ch.7-12)
Week 5: Sept. 26-30	**Professional Reading & Safe Practice** **Read Chapters 19-25** Sept. 26 Grade Level-Padlet Big Question Lesson 4 (Ch.13-18)
Week 6: Oct. 3-7	**Professional Reading & Observations/Feedback** **Read Chapters 26-30** Oct. 3 Grade Level-Padlet Big Question Lesson 5 (Ch.19-25) SIT/Leadership Team Observations/Feedback Oct. 6 Schedule
Week 7: Oct 10-14	**Professional Reading & Safe Practice** **Read Chapters 31-34** Oct 10 Grade Level-Padlet Big Question Lesson 6 (Ch.26-30)

Week 8: Oct. 17-21	**Professional Reading & Staff Learning Walks** Oct 17 Grade Level- Padlet Big Question Lesson 7 (Ch.31-34) Oct 19 PD with Vicki Hamill, 3:00-4:00 p.m. Oct 20 TAC Learning Walks
Week 9: Oct. 24-28	**Monitor, Measure, Modify**

Cycle 2 & 3: Bloom's Taxonomy Framework

Focus Question: Do students have access to equitable academic discourse?

Academic Discourse: every student has access to rigorous questions and peer discussions to synthesize understanding.

Cycle 2: Bloom's Taxonomy Framework ***Focus Question:*** *Do students have access to equitable academic discourse?* *Academic Discourse: every student has access to rigorous questions and peer discussions to synthesize understanding.*	
Week 1: Oct 31-Nov 4	**Professional Development/Reading** Nov 1: Southside Summit with Gerry Brooks, 8:00-2:00
Week 2: Nov 7-11	**Professional Development** Nov 8 Learning Walks Round 3 Nov 9-11 RCA PD (Round 1)
Week 3: Nov 14-18	**Professional Development** Bloom's Taxonomy Nov 14 PD with Vicki Hamill (grade level)
Week 4: Nov 21-25	**Safe Practice**
Week 5: Nov 28-Dec 2	**Safe Practice**
Week 6: Dec 5-9	**Professional Development/Reading** 10 Tips for Creating a Student Led Classroom.docx Six Ways to Add Rigor by Deepening Thinking.docx Revised Blooms Stems and Activities.pdf Dec 7-9 RCA PD (Round 2)
Week 7: Dec 12-16	**Safe Practice**
Dec 19-23	Break
Dec 26-30	Break
Week 8: Jan 2-6	**Targeted Learning Walks (Provide Feedback)** Jan 5
Week 9: Jan 9-13	**Analyze Student Work (Provide Feedback)** **Examine Data**
Week 10: Jan 16-20	**Measure, Celebrate, Modify**

	Continue Cycle for another round- teachers just getting used to utilizing higher order functions

Cycle 3: Bloom's Taxonomy Framework ***Focus Question:*** *Do students have access to equitable academic discourse?* *Academic Discourse: every student has access to rigorous questions and peer discussions to synthesize understanding.*	
Week 1: Jan 23-27	**Professional Development/Reading** Nov 1: Southside Summit with Gerry Brooks, 8:00-2:00
Week 2: Jan 30-3	**Professional Development** Nov 8 Learning Walks Round 3 Nov 9-11 RCA PD (Round 1)
Week 3: Feb 6-10	**Professional Development** Bloom's Taxonomy Nov 14 PD with Vicki Hamill (grade level)
Week 4: Feb 13-17	**Safe Practice**
Week 5: Feb 20-24	**Safe Practice**
Week 6: Feb 27- March 3	**Professional Development/Reading** 10 Tips for Creating a Student Led Classroom.docx Six Ways to Add Rigor by Deepening Thinking.docx Revised Blooms Stems and Activities.pdf Dec 7-9 RCA PD (Round 2)
Week 7: March 6- March 10	**Targeted Learning Walks (Provide Feedback)** Jan 5
Week 8: March 13- March 17	**Analyze Student Work (Provide Feedback)** **Examine Data**
Week 7: March 20- March 24	**Measure, Celebrate, Modify** **Build Collaboration/Select Instructional Goal (Cycle 3)**

Cycle 4: Bloom's Taxonomy Framework & Peer/Group Discourse (B3.03)
Focus Question: Does every student have access to rigorous questions tasks/assignments and peer discussions to enhance higher-order thinking skills and synthesize understanding?
CMS will increase student engagement by incorporating rigorous lessons and higher order questioning to maximize student achievement and accountability. Students will participate in peer discussions and academic discourse to enhance their understanding.

- High expectations
- Appropriate standards taught
- Accountability measured for teachers and students
- Strategies readdressed using remediation and enrichment (tiered interventions)

Cycle 4: Bloom's Taxonomy Framework & Peer/Group Discourse ***Focus Question:*** *Does every student have access to rigorous questions tasks/assignments and peer discussions to enhance higher-order thinking skills and synthesize understanding?*	
Week 1: April 3-7	**Build Collaboration/Select Instructional Goal (Input)** Review Data from Survey Staff Meeting April 3, PD Resources
Week 2: April 10-14	**BREAK**
Week 3: April 17-21	Reporting Out in Academic Language 2 Per Sheet https://ditchthattextbook.com/discussion/ ELA- https://lindsayannlearning.com/teaching-strategies-small-group-discussions/ Math - 7 Math Small-Group Instructional Strategies Math - 7 Strategies for Differentiated Math Instruction Math - Getting Into Math: Facilitating Small-Group Student Discourse Group Roles
Week 4: April 24-28	**Safe Practice**
Week 5: May 1-5	**Targeted Learning Walks**
Week 6: May 8-12	**Targeted Learning Walks**
Week 7: May 15-19	**Examine Data**
Week 8: May 22-26	**Analyze Student Work (Provide Feedback)**
Week 9: May 29-June 2	**Measure, Celebrate, Modify**

APPENDIX I: TARGETED LEARNING WALK PROTOCOL

1. Focus question will be used as the lens for the walkthrough.

   Examples: *Are the instructional tasks expected of students aligned with the standards?

   *Are students actively engaged in higher level thinking?

   *Are students reflecting on their own learning and assessing their progress?

   *Does the culture expect college and career readiness for all students?

2. With the focus question in mind, visit classrooms and make observations of what the students and teachers are doing. Use the walkthrough tool to note what you are observing.

3. Each classroom visit will be approximately 15-20 minutes in length.

4. Following each classroom visit, the walkthrough team will meet in the hall and discuss what evidence/data they collected around the focus question. This is not a time to begin to analyze what was observed, but simply to state what was observed. Using a round robin format, each team member will share what they heard, saw, or noticed. (5-10 min)

5. After the classroom visits, the team meets to debrief and analyze the walkthroughs. (15 min)

   a. Data will be quantified among groups and shared with the team.

   b. What trends can we identify among the data?

   c. Where did we see the best evidence and what were the possible causal conditions?

   d. Where did we see the least evidence and what were the possible causal conditions?

   e. What are the implications for the work with this faculty, based on today's walkthrough?

APPENDIX J: TARGETED LEARNING WALK TEMPLATE CYCLE 1

Focus Question: Is there evidence the teacher is utilizing alternative strategies, collaborating with colleagues, and helping students see themselves as capable learners?
Is there evidence of collaboration and norms throughout the building?

- *Is there evidence the teacher is utilizing alternative strategies?*
- *Is there evidence of collaboration between colleagues?*
- *Is there evidence teachers are helping students see themselves as capable learners?*

Teacher/Grade/Subject: _____ Date/Start Time/End Time: _____	**CMS Classroom Walkthrough Checklist**	
Focus on Instruction	**Focus on Learner**	**Focus on Classroom Environment**
Identify instructional practices observed. Choose all that apply. ❑ Facilitating- (ex. Student Led Learning) ❑ Discussion ❑ Hands-On Experience ❑ Learning Centers/Stations ❑ Modeling ❑ Presentation- (Teacher Led Instruction) ❑ Providing Directions/Instructions ❑ Teacher Directed Q&A ❑ Assessing/Progress Monitoring ❑ Interactive Instruction ❑ Cooperative Learning ❑ Activating Strategy- connecting to prior knowledge ❑ Differentiation ❑ Other: _____	**Identify student engagement/learning activities observed. Choose all that apply.** ❑ Listening ❑ Reading ❑ Writing/Drawing ❑ Creating ❑ Relevant Dialogue ❑ Working with Hands on Materials (ex. Manipulative, labs) ❑ Using other Technology Resources ❑ Problem Based Learning Activities ❑ Other: _____	**Identify evidence of a positive environment. Choose all that apply.** **Classroom Appearance:** ❑ Organized, Neat, & Uncluttered ❑ Focus Question/Essential Question is Displayed ❑ Standards-Based Student Work is Displayed ❑ Other Visuals Support Learning ❑ Other: _____ _____
Identify Instructional Delivery Method. ❑ Whole Group ❑ Asking & Responding to Questions ❑ Listening & Note Taking ❑ Participating in Discussion ❑ Participating in Guided Practice ❑ Small Group or Paired ❑ Students Encourage One Another ❑ Collaboratively Producing a Product ❑ Collaboratively Problem-Solving ❑ Presenting ❑ Individual ❑ Independently Producing a Product ❑ Independently Solving a Problem ❑ Independent Practice/Application ❑ Presenting ❑ Writing Activities ❑ Silent Reading	**Identify instructional materials used during the lesson. Choose all that apply.** ❑ Computer Software/Online Curriculum ❑ Content-Specific Manipulatives ❑ iPads, Laptops, Chromebooks ❑ Document Camera ❑ Lab/Activity Sheet ❑ Whiteboards ❑ Published Print Materials ❑ Real-World Objects ❑ Calculators ❑ Student-Centered Materials ❑ Textbook ❑ Video ❑ Website ❑ Worksheets ❑ Other: _____ _____	**Classroom Management:** ❑ Safe & Orderly Environment ❑ Routines & Procedures are Evident ❑ Evidence that Students Understand Behavioral Expectations ❑ Evidence that Students Share Responsibility for Effective Operations ❑ Positive Behavior is Reinforced ❑ Negative Behavior is Addressed Through Redirecting ❑ Teacher Circulates Throughout the Classroom ❑ Teacher Manages/Monitors Many Activities Simultaneously ❑ Teacher Managers Proactively & Calmly ❑ Teacher Displays Energy & Enthusiasm ❑ Time is Used Effectively & Efficiently ❑ Other: _____ _____
Identify formative assessment strategies observed: Choose all that apply. ❑ Question and Answer ❑ Short Test/Quiz ❑ Homework Exercises ❑ iReady ❑ Assignments ❑ Projects ❑ Written Questions ❑ Simulations ❑ Games ❑ Conferences ❑ Journals ❑ Individual Whiteboards ❑ Other: _____	**Check all that apply.** ❑ Recalling Information (Remembering) ❑ Explaining Ideas or Concepts (Understanding) ❑ Using Information in Another Familiar Situation (Applying) ❑ Breaking Information into Parts (Analyzing) ❑ Justifying a Decision or Course of Action (Evaluating) ❑ Generating New Ideas, Products, or Ways of Viewing Things (Creating) ❑ Other: _____ _____	**Classroom Culture:** ❑ Respectful, Positive Student-Teacher Relationships are Evident ❑ Students Demonstrate Mutual Respect ❑ Students are Comfortable Sharing Ideas, Questions, Concerns, or Needs ❑ Evidence of Celebrating Student Success/Student work posted ❑ Evidence of Developing Leadership Skills ❑ Other: _____ _____

APPENDIX K: TARGETED LEARNING WALK TEMPLATE CYCLE 2 & 3

CMS Walkthrough Rubric: Bloom's Taxonomy Framework (Cycle 2 & 3)

Teacher:_____ Class:_____

Focus Question: *Do students have access to equitable academic discourse?* *Academic Discourse: every student has access to rigorous questions and peer discussions to synthesize understanding.*			
Component 1: The teacher and students engage in relevant and meaningful conversation about the content. *(Check the column that most appropriately represents what you see)*			
A	**B**	**C**	**D**
Students have **no** relevant conversations about content.	**Some** students engage in relevant. conversation about content with the **teacher doing most of the talking and questioning**	**Most** students participate in relevant conversations about the content with the teacher doing **some talking.**	**Almost** all students participate in relevant conversations with the teacher **doing little talking**.
Are students engaged and tracking teachers during the lesson? *How did the teacher engage or encourage students to discuss concepts they are learning?*			
Component 2: The teacher creates lessons and/or assignments that build student interest and curiosity. *Observer will quietly ask at least **two** students about their current interest in the task, assignment, or lesson: for example, "**on a scale of 1-5**, how interested are you about this task/assignment/lesson" Ratings of 4 or 5 is considered high interest.*			
A (1)	**B (2)**	**C (3)**	**D (4-5)**
None of the students questioned self reported that they are highly interested in the assignment,	**Few** students questioned self reported that they are highly interested in the assignment, task, or lesson.	**Most** of the students questioned self reported that they are highly interested in the assignment, task, or lesson.	**All** students questioned self-reported that they are highly interested in the assignment, task, or lesson.

task, or lesson.			
Record Student Quotes:			
Component 3. The teacher uses a variety of question stems following the Bloom's Taxonomy Framework to promote peer discussions to synthesize understanding throughout a lesson.			
A	B	**C**	**D**
Recall is the highest level of questioning asked within the lesson.	**Understanding** is the highest level of questioning asked within the lesson.	**Drawing conclusions and/or application** of concepts are the highest levels of questioning asked within the lesson.	**Creating a new product or evaluating** another product based on key concepts are the highest levels of questioning asked within the lesson.
Record Specific Question Stems used by the Teacher:			
Component 4: The students use higher order thinking and problem-solving skills on tasks or assignments. *Note: This component is only for what students are doing during the lesson, not what the teacher is doing or verbal questions.*			
A	**B**	**C**	**D**
Recall is the highest level of thinking used for an assignment or task.	**Understanding** is the highest level of thinking used for an assignment or task.	**Drawing conclusions and/or application** of concepts are the highest levels of thinking used for an assignment or task.	**Creating a new product or evaluating** another product based on key concepts are the highest levels of thinking used for an assignment or task.
What is the task students are completing? What do they need to produce to demonstrate learning? (Observers are encouraged to take pictures of assignments for data collection)			

Additional Feedback/Comments:

APPENDIX L: TARGETED LEARNING WALK TEMPLATE CYCLE 4

CMS Walkthrough Rubric: Revised Bloom's Taxonomy Framework (Cycle 4)

Teacher :_____ Class:_____

Component 1. The teacher uses a variety of question stems following the Bloom's Taxonomy Framework to promote peer discussions to synthesize understanding throughout a lesson.			
A	B	**C**	**D**
Recall is the highest level of questioning asked within the lesson.	**Understanding** is the highest level of questioning asked within the lesson.	**Drawing conclusions and/or application** of concepts are the highest levels of questioning asked within the lesson.	**Creating a new product or evaluating** another product based on key concepts are the highest levels of questioning asked within the lesson.
Record Specific Question Stems used by the Teacher:			
Component 2: The students use higher order thinking and problem-solving skills on tasks or assignments. *Note: This component is only for what students are doing during the lesson, not what the teacher is doing or verbal questions.*			
A	**B**	**C**	**D**
Recall is the highest level of thinking used for an assignment or task.	**Understanding** is the highest level of thinking used for an assignment or task.	**Drawing conclusions and/or application** of concepts are the highest levels of thinking used for an assignment or task.	**Creating a new product or evaluating** another product based on key concepts are the highest levels of thinking used for an assignment or task.
What is the task students are completing? What do they need to produce to demonstrate learning? (Observers are encouraged to take pictures of assignments for data collection)			

APPENDIX M: ABBREVIATED TEACHER WORKING CONDITIONS SURVEY

TRMS 2022-2023 Teacher Working Conditions Surveys

Professional Learning Opportunities			
Indicators	**Spring 2022**	**Fall 2022**	**Spring 2023**
Q8.1c Professional development offerings are data driven.	45%	95%	95%
Q8.1d Professional learning opportunities are aligned with the school's improvement plan.	72%	100%	95%
Q8.1e Professional development is differentiated to meet the individual needs of teachers.	34%		71%
Q8.1f Professional development deepens teachers' content knowledge.	79%	100%	91%
Q8.1h Teachers are encouraged to reflect on their own practice.	90%	100%	100%
Q8.1i In this school, follow up is provided from professional development.	48%	90%	86%
Q8.1j Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.	62%	100%	86%
Q8.1k Professional development is evaluated and results are communicated to teachers.	48%		81%
Q8.1l Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs.	72%	95%	95%
Q8.1m Professional development enhances teachers’ abilities to improve student learning.	79%		95%

Instructional Practices and Supports			
Indicators	**Spring 2022**	**Fall 2022**	**Spring 2023**
Q9.1a Local assessment data are available in time to impact instructional practices.	72%		100%
Q9.1c Teachers work in professional learning communities to develop and align instructional practices.	83%		91%
Q9.1d Provided supports (i.e. instructional coaching, professional learning communities, etc.) translate to improvements in instructional practices by teachers.	72%	95%	100%
Q9.1e Teachers are encouraged to try new things to improve instruction.	90%	80%	100%
Q9.1f Teachers are encouraged to observe other teachers within their school/district.	66%	95%	95%
Q9.1h Teachers have autonomy to make decisions about instructional delivery (i.e. pacing, materials and pedagogy).	72%	60%	95%
Q9.1i Teachers believe almost every student has the potential to do well on assignments.	86%	70%	100%
Q9.1j Teachers believe what is taught will make a difference in students' lives.	83%	90%	100%
Q9.1l Teachers collaborate to achieve consistency on how student work is assessed.	72%		81%
Q9.1n Teachers have knowledge of the content covered and instructional methods used by other teachers at this school.	45%	90%	86%
Q9.1p Teachers use assessment data to inform their instruction.	79%		100%

APPENDIX N: POST-IMPLEMENTATION INTERVIEW QUESTIONS

1. How would you describe professional learning in the building?

2. Describe the implementation of professional learning cycles and how they were utilized this year? What focus of practice or instructional strategies were addressed?

3. How effectively do you feel your teams are able to identify areas of need and implement a learning cycle for improvement? What contributes to this?

4. How was efficacy impacted this year? What would you contribute to an increase or decrease in collective efficacy?

5. What elements within the professional learning cycle, if any, do you believe impacted your own development? If so, how? Please describe or provide an experience.

6. What additional professional development is needed to help your team better understand and implement the professional learning cycle?