

AN ACTION RESEARCH STUDY ON THE EFFECTS OF IMPACT TEAMS AS A FORM
OF PROFESSIONAL DEVELOPMENT AND THEIR INFLUENCE ON TEACHER SELF-
EFFICACY

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Dedication

This is dedicated to all educators who embrace a growth mindset, prioritize reflection, and adjust accordingly for the benefit of their students.

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Thank you to my family, friends, colleagues, and cohort members for their ongoing support throughout this journey. There were many people who stepped in where I could not, both personally and professionally, allowing me to pursue this degree. Thank you for cheering me on and pushing me forward.

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Abstract

Professional development (PD) plays a critical role in supporting teacher quality and retention, ultimately affecting student achievement. The pandemic has altered the traditional educational landscape for teachers, making effective PD essential. This qualitative study sought to explore an impact team model (ITM) of PD as an effective form of PD, its influence on teachers' self-efficacy relating to the four sources of self-efficacy and any instructional changes to their instructional practices after participating in the ITM PD. Findings indicated that honoring teacher time, collaboration, trust, positive feedback, and opportunities for self-reflection, contributed largely to the effectiveness of the ITM PD. The impact team PD provided a safe and trusting space for teachers to take risks and have discussions about instruction. The sessions yielded strong collegial relationships and increased collaboration outside of the PD sessions amongst the participants. In this study, all nine teachers reported shifts in instructional practices. Instructional practices involving classroom management and strategies to engage students have changed after experiencing this PD. Recommendations are offered based on the results of the study.

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CHAPTER 1

INTRODUCTION

Background

According to projections from the U.S. Bureau of Labor Statistics (2018), pre-pandemic data indicated that on average more than 270,000 teachers are expected to leave their occupation each year from 2016 to 2026. The U.S. Bureau of Labor Statistics also reported that number has significantly increased with the pandemic, with a staggering 300,000 educators leaving the profession between February and May 2022. In addition to the negative impact of the pandemic, public education remains under scrutiny, making the importance of retaining high quality educators a critical matter.

In March 2020, states implemented shutdowns in order to prevent the spread of COVID-19, an infectious disease caused by the SARS-CoV-2 virus. With the surge of COVID-19 in March 2020, and in attempts to contain the spread of the pandemic, countries responded with widespread closures of schools and businesses as part of social distancing policies, disrupting educational systems around the world (Van Lancker & Parolin, 2020). This initial shutdown and the following years continue to impact education across the United States and the world. Although decisions varied on the re-opening of schools, in person versus virtual learning and the requirement of masks and vaccinations, teachers were required to teach in a way they had never before. Educators had to pivot based on the changing nature of the virus and the mitigations that

were in constant flux. Although educators are no strangers to change, the expectations of them during this time of uncertainty were historical, making it difficult to do anything more than simply survive. Leask and Younie (2021) found that teachers had to transform their practice overnight, while at the same time, provide extra caring responsibilities for teachers with families. In addition, teachers worked in isolation with considerable uncertainty, as it was impossible to predict how many people would die and how quickly.

Isolation is not new territory for educators. COVID-19 only exacerbated this and other existing problems in our nation's schools and within our educational system as a whole. Research from more the 40 years ago tells a similar story to that of today. Teachers do not tend to observe one another's performance, share ideas, or work in collaborative ways; making teacher isolation widespread (Chandler, 1983; Zielinski & Hoy, 1983) School improvement research suggests that isolation among teachers should be avoided, and a collaborative culture must be established for a school to succeed (R. Goddard et al., 2015).

Initial reports in 2020 from the United Nations Educational, Scientific and Cultural Organization (UNESCO) suggested that, while the response of teachers in the first stages of the pandemic was described as heroic and praiseworthy, it affected them psychologically and professionally. In many instances, for example, teachers worked during school closures without adequate socio-emotional support. Many functioned in a climate of fear and anxiety around their own safety and that of their families while adapting to working from home. Teachers also had to figure out how to adjust curricula, their pedagogy and practice for online or other delivery, often without professional training or support (Leask & Younie, 2021). Due to the isolating nature of COVID-19, collaborative professional development (PD) was very difficult, and in most cases, non-existent.

In addition to isolation, change continues to be a constant theme in education, and teachers are increasingly challenged to keep abreast of innovation and new developments (Stronge, 2018), attempting to rebound from the influence of the pandemic, this theme of change has been more present than ever. By providing educators necessary support to adapt to a changing educational environment, PD has the potential to heighten self-efficacy, improve teacher quality and retention while ultimately improving student achievement. Researchers have argued that teacher quality is the most important school-related factor influencing student achievement (Darling-Hammond, 2000; Darling-Hammond et al., 2005; Rivkin et al., 2005).

Other researchers have found positive relationships between in-service teacher training and teachers' PD and student achievement (Angrist & Lavy, 2001). In Hattie's (2008) initial seminal meta-analytic synthesis, *Visible Learning*, he identified the effects of 138 influences on achievement using effect size calculations. Effect size is a way of quantifying the size of the difference between two groups (Coe, 2002). Considering that .40 effect size is about 1 year's growth in 1 years' time it is incumbent upon education leaders and teachers to pay attention to those influences that ensure at least 1 year's progress in 1 years' time for all students (Bloomberg & Pitchford, 2017). According to the most recent Corwin Visible Learning Meta-Analysis, revised in 2023, PD programs alone have yielded a .44 effect size. The Visible Learning research is recognized as the world's largest evidence base on what works best in schools to improve teaching and learning and the Visible Learning Meta^{X™} platform, powered by the Visible Learning research, is now the largest global online database of what works best in education (Hattie, 2023). The power of the Visible Learning research in action lies in helping educators understand, measure, and evaluate the impact that they can have on student growth and achievement. Educators who understand which practices and strategies have the greatest impact

on student achievement can make informed decisions based on evidence to maximize their time, energy, and resources.

In the early 1990s, the National Skills Development Corporation created standards for PD. In 2010, the organization became Learning Forward. Since 2010, there have been multiple iterations of the standards for professional learning. These Learning Forward Professional Learning Standards, most recently revised in 2022, draw on new evidence that supports the longstanding idea that there are multiple, interconnected aspects of professional learning that together positively affect teacher and student outcomes. The Learning Policy Institute found a positive link among professional learning, teaching practices, and student outcomes (Darling-Hammond et al., 2017). Research also suggests the importance of PD to create lasting change (Darling-Hammond et al., 2017). Job-embedded PD allows teachers to share best practices, compare theory to what happens in the classroom, discuss and implement new strategies, and then reflect on what works and what should be changed for future practice (Jordan & Kaplan, 2014). Effective PD has the potential to lead to increased teacher self-efficacy, ultimately leading to retaining high quality teachers, and increased student achievement.

Bandura (1993, 1997) stated that those with a high sense of personal efficacy will be individuals who experience increased cognitive functioning and view difficult tasks as challenges to be mastered instead of avoided. In today's educational climate, this focus on the importance of self-efficacy could have the ability to create resiliency in our workforce when we need it the most. Self-efficacy is an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1993). Self-efficacy beliefs influence thought patterns and emotions that enable goal-directed actions in situations where people believe they can exercise some control (Tschannen-Moran & McMaster, 2009).

To positively influence self-efficacy, planning PD around the four sources of self-efficacy is important. Bandura (1989, 2005) addressed important aspects of adult learning that include the influence of motivation and how it affects both individuals and groups and individuals' self-efficacy. Once teachers believe they have the skill set and qualities to take on the challenge of being an educator today, coupled with providing meaningful PD to support them, schools can begin to rebuild an even better system. Levels of efficacy are arguably just as important as the type of PD available to teachers. With an effect size of .92, self-efficacy is an important factor to be considered (Hattie, 2012). Providing a PD model that incorporates experiences that connect to the four sources of self-efficacy, has the potential to positively influence a teacher's sense of confidence in their abilities as an educator.

One model of PD is the Impact Team Model (ITM). Bloomberg and Pitchford (2017) describe impact teams as groups of educators that meet for the expressed purpose of learning together in service to all students. ITM is a strengths-based model in which the focus is to help teacher teams discover what works well in their school and build upon their existing strengths by creating an efficient structure for teacher teams to engage in collaborative inquiry. Collaborative inquiry is described as a structure in which teachers come together to systematically examine their educational practices. Teams work together to ask questions, develop theories of actions, determine action steps, and gather and analyze evidence to assess the impact of their actions (Marie, 2014). Within this model there are specific foci in the form of eight protocols. This action research study focused on the implementation of microteaching, one of the eight ITM protocols in an elementary school setting to determine its effectiveness as a form of PD, teacher perceptions of the influence of the four sources of self-efficacy, and teachers' perceptions regarding changes in their instructional practices.

The Visible Learning research is recognized as the world's largest evidence base on what works best in schools to improve teaching and learning and the Visible Learning Meta^{X™} platform, powered by the Visible Learning research, is now the largest global online database of what works best in education. The power of the Visible Learning research in action lies in helping educators understand, measure, and evaluate the impact that they can have on student growth and achievement. Educators who understand which practices and strategies have the greatest impact on student achievement can make informed decisions based on evidence to maximize their time, energy, and resources.

Statement of Action Research Problem

In the present study, I examined the implementation of the ITM as an intervention at Green Elementary School (pseudonym), one of five schools within Brown County Public Schools (pseudonym). I sought to provide insight for school leaders on the possible influence of this method of PD on teachers' perceptions of self-efficacy. School reforms around the world have historically placed student achievement at their core. Consequently, principals in their roles as schools' leaders and teachers who ultimately are responsible for instruction are expected to develop practices that lead to increased student performance (Glanz & Zepeda, 2016; Hess & Kelly, 2007). This has led to greater accountability for principals to focus on instructional leadership and for teachers to collaborate (Hallinger, 2005).

Impact teams can provide an opportunity for that professional collaboration. When teachers collaborate with other teachers who have high levels of self-efficacy, they tend to develop higher self-efficacy beliefs as well (Siciliano, 2016). Additionally, the study considered teacher perceptions of the ITM as an effective form of PD, the influence of the four sources of

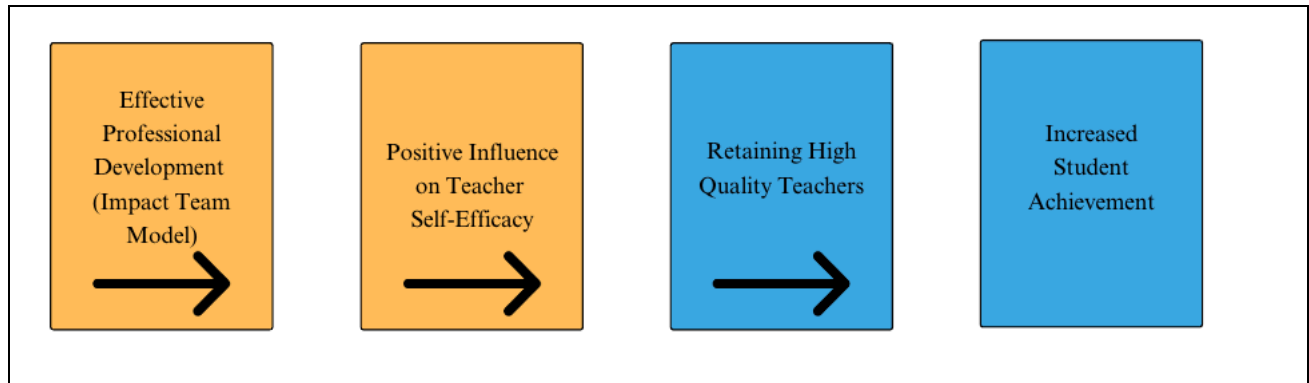
self-efficacy on teacher's sense of self-efficacy, and teachers' perceptions regarding changes in their instructional practices.

Conceptual Framework for Understanding the Problem

PD has been adopted as a policy solution to improving the number of highly qualified teachers as well as helping all students to achieve high academic standards (Colbert et al., 2008). PD has been a source of support for teachers for decades, however the PD being provided to many educators is often required by the state or district and lacks connection to what teachers really need. Experts in the field share the importance of addressing teachers' specific learning needs and promoting ownership for teachers to determine valuable content and learning approaches (Darling-Hammond et al., 2017; Farris, 2015; Vrasidas & Zembylas, 2004). Addressing teacher need can contribute to effective PD to support teachers. Figure 1 provides a model suggesting that effective PD using the ITM has the potential to positively influence teacher self-efficacy, ultimately leading to retaining high quality teachers and increased student achievement.

Figure 1

Conceptual Model for Impact of Effective Professional Development and Teacher Self-Efficacy



Note. This model shows that effective professional development can positively influence teacher self-efficacy, ultimately leading to retaining high quality teachers and increased student achievement. The orange highlighted portions of the model (Effective Professional Development and Increased Teacher Self-Efficacy) are the primary foci of the study.

Evidence Supporting the Existence of the Problem

Workshops of short duration are considered by educators as a waste of time and money, especially when they are conducted with no genuine follow-up or sustained support (Bayar, 2014; Guskey & Yoon, 2009). Most of the PD in Brown County occurs during pre-service week and a few professional learning days during the year. These trainings often had a one size fits all approach. The days allocated for professional learning are often taken away due to inclement weather or other calendar adjustments, making sustainable PD challenging in its current framework. Each year, a new initiative tends to be on the forefront of every pre-service week, making it difficult to create sustainable, job-embedded PD and meaningful connections from year to year.

This action research study intended to move away from resource trainings and provide a framework to support principals and district leaders, enabling them to plan meaningful, sustainable PD for their teachers. Impact teams are made up of a variety of school personnel.

Although a school principal or district leader can be part of the impact team, it is not required that they lead the work. In this action research study, one of the teacher members was the facilitator of each session, leading the group through the microteaching protocol.

Context of the Action Research Problem

In this study of PD in the form of impact teams at a small rural school in Virginia, I sought to provide insight for school leaders on teacher perceptions of the ITM as an effective form of PD, the influence of the four sources of self-efficacy on teacher's sense of self-efficacy, and teachers' perceptions regarding changes in their instructional practices. Prior to this cycle of action research, teachers were exposed to the ITM during the previous school year. During Cycle 1, the teacher facilitator provided activities to build trust amongst the team. An example of a scenario that was discussed at one of the ITM sessions was to think of a situation in which you felt such confidence and optimism that you believed anything was possible. Why was that belief so strong? What were the conditions that created those powerful feelings? Bloomfield and Pitchford (2017) call these mastery moments. In addition, the team learned about self-efficacy, collective efficacy, and the work of John Hattie. Partner teams visited each other's classrooms for the simple purpose of seeing a colleague teach, which many of them had not had the opportunity to do. Each partner group shared their experience with the team along with any instructional strategies they wanted to implement after observing their colleague.

All members of the team had engaged in a variety of PD over the years, including professional learning communities (PLCs). Due to the lack of a consistent PD plan from year to year and shifts away from the original purpose of a PLC, teachers questioned the efficacy of each initiative that was presented to them. Because of this hesitancy, when beginning the first cycle of the ITM PD, school leaders sought out volunteers to pilot the model.

Information Related to the Organization

Brown County Public Schools is a small rural district in Virginia. The school district is comprised of four facilities: three elementary schools and a secondary complex which includes a middle and high school. All five schools are fully accredited by the Virginia Department of Education. As of June 8, 2023, the enrollment at Brown County Public Schools was approximately 2600 students, 31.5% of whom qualify for free and reduced-price lunch. Current district membership is 0.5% American Indian, 1% Asian, 13.3% African American, 6.1% Multiracial, 0.2% Pacific Islander, and 78.9% White. This study was conducted at one of the three elementary schools. The enrollment at Green Elementary School is approximately 500 students, 27.3% of whom qualify for free and reduced-price lunch. Current student membership at Green Elementary School is 0.6% American Indian, 0.4% Asian, 10.3% African American, 5.8% Multiracial, 0.2% Pacific Islander, and 82.9% White.

PD. Brown County school principals have the autonomy to create and plan the PD for their individual buildings, with the help and support of district level leaders and coaches. The time allotted for this PD is embedded into the school calendar, designating pre-service week and certain days throughout the school year as a time to plan and engage in PD. Due to this autonomy, PLCs were implemented as a framework to support PD throughout the school year specifically at Green Elementary School. This framework quickly shifted away from the original purpose of collaboration and growth to accountability and fear for teachers, leaving staff with a negative association toward PD. The PLC time shifted to a sole focus on data for most staff, moving away from the original purpose which was an ongoing cycle of collaboration for the betterment of teachers and students.

Information Related to the Intended Stakeholders

Data from this study informed school leaders and district-level personnel on whether the ITM is an effective form of PD and if it should be replicated in other schools throughout the county. District-level participants were eager to investigate a new possibility for PD in the county, while determining if providing content specific support through the ITM was possible. An initial year-long cycle with the impact team took place before this current study. With new state requirements on the forefront, including the full implementation of the Virginia Literacy Act requirements beginning at the start of the 2024-2025 school year, district-level staff are looking to make connections between preferred PD frameworks and requirements from the Virginia Department of Education.

Participants in the study gained insight into their own self-efficacy, the influence of the four sources of self-efficacy on their own development, the impact of the PD and any changes in their instructional practices due to their participation in the ITM. Results from this study will be beneficial to teachers, administrators and central office personnel, by informing further plans for PD within the county.

Theoretical Framework

With this action research study, I aimed to provide an effective, sustainable, PD framework to support teachers through the ever-changing environment of education. All of the participants in this study examined perceptions of self-efficacy related to PD through the implementation of an impact team. Bandura (1977) stated individuals develop their self-efficacy beliefs by interpreting information from four main sources: mastery experiences, vicarious experiences, social persuasion, and emotional and physiological states.

The theory of self-efficacy refers to an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1977, 1986, 1997). Bandura (1997) suggested that teachers make judgments of their self-efficacy based on the verbal encouragement of important others such as colleagues, supervisors, and administrators (verbal persuasion); the success or failure of other teachers who serve as models (vicarious experiences); perceptions of past experiences of teaching (mastery experiences); and the level of emotional and physiological arousal experienced as they anticipate and practice teaching (Tschannen-Moran & McMaster, 2009). The study of impact teams focused on teachers' experiences and perceptions of the ITM PD related to the four sources of self-efficacy.

Action Research Questions

The purpose of this qualitative action research study was to examine the influence of this PD on teachers' experiences and perceptions related to the four sources of self-efficacy, uncover teachers' perceptions of the ITM as an effective form of PD and any changes in their instructional practices.

1. What are participants' perceptions of the ITM as an effective form of PD?
2. What are teachers' experiences and perceptions of the ITM PD related to the four sources of self-efficacy?
3. What are teachers' perceptions regarding changes in their instructional practices after participating in the ITM PD?

Action Research Model

The action research model involved identifying a problem of practice, selecting an intervention, collecting and interpreting data to determine outcomes, and deciding on next steps.

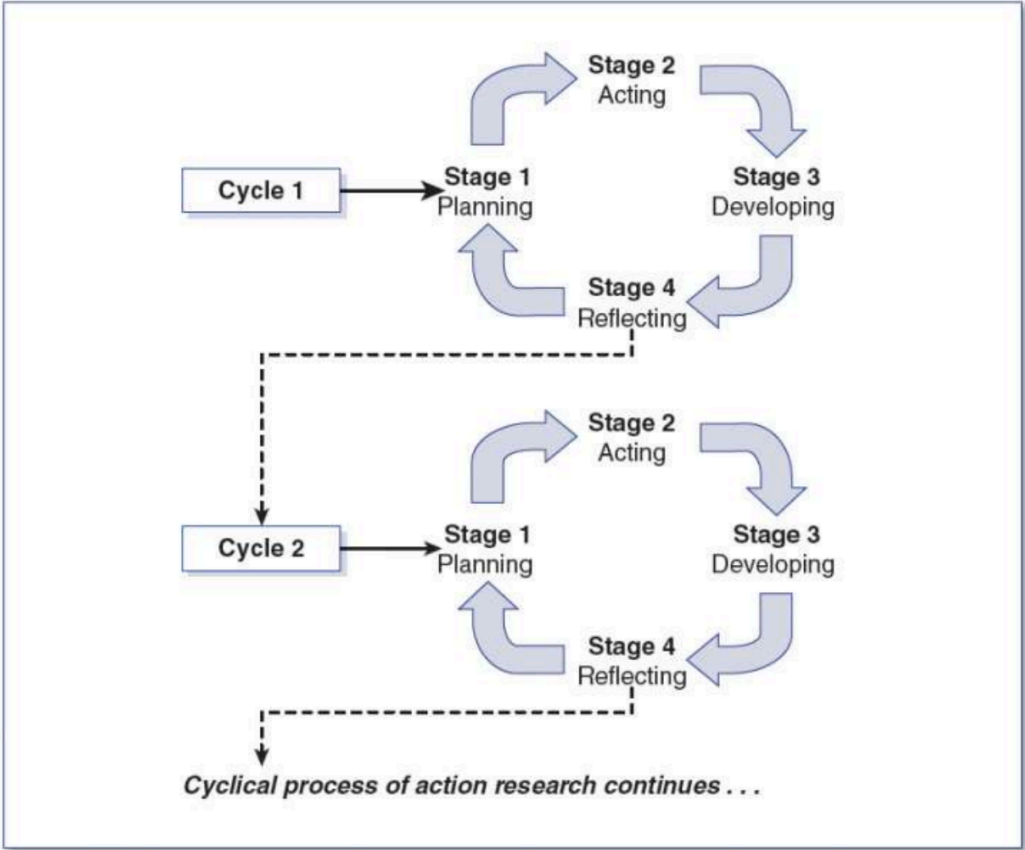
The cyclical nature of action research allows practitioners to continue to learn and grow, while making necessary changes along the way. Mertler's (2017) model consists of the following steps:

- planning for your action research acting on the plan
- developing an action plan for future cycles
- reflecting on the process

This study took place in Year 2 of implementation. During Cycle 1 the impact team spent the majority of the year collaborating and building trust by informally observing one another and identifying mastery moments in an effort to reflect and recover from ineffective PD plans in the form of unsuccessful PLCs that occurred in previous years. The outcome of this first cycle took inventory of teacher needs and informed the team's next steps. Teachers indicated that they were excited to engage in the protocols, and that laying the groundwork and building relationships in the first cycle created a positive environment for the PD initiative. The impact team began to plan what their ideal PD could look like, with the ITM as the foundation of the work. The feedback of the impact team indicated that microteaching, lesson study and evidence walks were the preferred protocols to try next. As stated previously, there are eight protocols in the ITM. After completion of Cycle 1, I determined to focus solely on the microteaching protocol. Doing this would allow for a deeper experience with each teacher preparing three microteaching sessions over the course of the PD instead of one. Figure 2 shows how the cycle of plan, act, develop and reflect continued while participants engaged in the microteaching protocol (Mertler, 2017).

Figure 2

The Ongoing, Cyclical Process of Action Research



Description of the Intervention

Bandura (1977) proposed five essential steps for learning to take place: observation, attention, retention, reproduction, and motivation. Through collaboration and the microteaching protocol, the work of the ITM aligned with these steps. The microteaching protocol provided teachers opportunities to observe other teachers through video, allowing participants to learn from others. In addition, teachers were fully present during these PD sessions allowing them to retain and reproduce their own microteaching videos throughout the PD. Lastly, the collaboration amongst the team motivated the participants to produce high quality work for the group to analyze. Bloomberg and Pitchford (2017) set out to tap into the structures that already exist in

nearly every school in America. The ITM is different, as it refocuses traditional PLCs by combining two existing practices:

1. The formative assessment process: A process that happens in the classroom and involves students in every aspect of their own assessment (Stiggins & Chappuis, 2006).
2. Collaborative inquiry: A process in which the teacher teams partner together to understand their impact on student learning and to scale up their expertise.

The formative assessment process will occur in later action research cycles. The primary focus of this study was to uncover the perceptions of teachers participating in the implementation of the collaborative inquiry process within the ITM. Although collaborative inquiry was part of the original concept of PLCs, the ITM uses eight purposeful protocols to guide collaborative inquiry. For the purposes of this study, the PD focused on microteaching, one of the eight ITM protocols.

The impact teams met frequently to understand their impact on student learning and to take collective action to make a difference for all learners. The team met for the express purpose of learning together in service to all students. The ITM created an efficient structure for teacher teams to engage in collaborative inquiry and used trained peer facilitators to guide their colleagues over time. The ITM was rooted in discussion, engagement amongst the team, and reflection. The planning of the PD integrated the four sources of self-efficacy within the microteaching protocol and collaborative inquiry portion of the ITM by providing opportunities for participants to practice a skill through microteaching, observe others successfully complete their microteaching and receive positive feedback while engaged in the protocol. All of this took place in a safe, positive environment. The microteaching experience incorporated the elements of

self-efficacy by allowing participants to videotape lessons providing a mastery experience for teachers, watching other teachers' videos provided a vicarious experience, and providing positive feedback allowed for both social and verbal persuasion and a positive emotional state to exist. Each video lasted 5-10 minutes, with the length of video increasing over the course of the PD. Teachers had autonomy to select the focus of their microteaching video. Some teachers stayed with the same subject throughout their videos, while others chose different foci for each video. Appendix A provides a microteaching plan detailing each PD session. Impact team meetings occurred on both half and full PD days, with the cycle of action research occurring for approximately 12 weeks. A shift was made to incorporate more full days as the team needed more time with the protocol.

Cycles of the Action Research

First Cycle. During the first cycle of action research, the impact team was created to determine needs, initiate collaboration, establish trust and set goals for future PD. The first cycle lasted one school year and was facilitated by one of the teacher participants. Due to change in focus of previous PLCs at Green Elementary School, the facilitator primarily focused on creating a safe environment for learning, making collaboration the focus. Specific protocols were introduced to the team for consideration to implement the following school year.

Second Cycle. The focus of this study took place in the second cycle of action research. Participants met on both half and full PD days and engaged in the microteaching protocol. Although the work of the ITM continued throughout the year, this study began in late October and concluded in early January.

Definitions of Terms

Collaborative Inquiry- A process in which the teacher teams partner together to understand their impact on student learning and to scale up their expertise (Bloomberg & Pitchford, 2017).

Evidence Walks- a form of instructional rounds that help teachers and leaders look closely at a specific and predetermined practice central to the formative assessment process (Bloomberg & Pitchford, 2017).

Impact team model (ITM) - a framework for PD that refocuses traditional PLCs by combining the formative assessment process and collaborative inquiry (Bloomberg & Pitchford, 2017).

Lesson study- a collaborative learning process in which teacher teams examine their process from the planning stage through teaching, observing, and critiquing (Bloomberg & Pitchford, 2017)

Mastery experiences- having successful experiences influence your perspective of your abilities (Bloomberg & Pitchford, 2017)

Microteaching- an organized practice teaching that provides an opportunity to try out small parts of the lesson and/or strategies specific to the formative assessment with one another without students present. The focus of the observations on the student's responses rather than the teacher's actions. Based on the evidence, the team revises the lesson (Bloomberg & Pitchford, 2017)

Positive emotional state- Bloomberg and Pitchford (2017) interpret positive emotional state as safety.

Professional development (PD)- An activity intended to train educators to improve student performance in schools (Desimone, 2009)

Professional learning community (PLC)- a group of teachers sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth promoting way (Mitchell & Sackney, 2000; Toole & Louis, 2002)

Self-efficacy- the teacher's confidence in their ability to promote student learning (W. Hoy, 2000)

Social and verbal persuasion- expressing faith in one's capabilities (Bandura, 1977)

Vicarious experiences- vicarious experiences are defined by Bloomberg and Pitchford (2017) as having models of success

CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this literature review is to synthesize extant literature on professional development (PD), self-efficacy, and professional learning communities (PLCs). This chapter addresses the history of PD, PLCs as a format to deliver teacher training, and how effective PD affects self-efficacy and student achievement.

PD

PD is any activity intended to train educators to improve student performance in schools (Desimone, 2009). Traditionally, this training has been done through a workshop model with examples like weekend long conferences and teacher in-service days. Effective PD requires considerable time, and that time must be well organized, carefully structured, purposefully directed, and focused on content or pedagogy or both (Birman et al., 2000; Garet et al., 2001; Guskey, 1999).

In 1994, Learning Forward developed the first standards for professional learning. In their most recent update in 2022, Learning Forward presents Standards for Professional Learning to describe the conditions, content, and processes for professional learning that leads to high-quality leading, teaching, and learning for students and educators (Learning Forward, 2022). To create high-quality professional learning that results in improved educator practices and improved student results, educators apply the 11 standards in concert. The three categories within the framework follow:

- Standards within the Rigorous Content for Each Learner frame describe the essential content of adult learning that leads to improved student outcomes.
- Standards within the Transformational Processes frame describe process elements of professional learning, explaining how educators learn in ways that sustain significant changes in their knowledge, skills, practices, and mindsets.
- Standards within the Conditions for Success frame describe aspects of the professional learning context, structures, and cultures that undergird high-quality professional learning.

Table 1 was created from the Learning Forward (2022) Standards for Professional Learning. It summarizes the standards while detailing the desired actions of educators during participation in PD.

Table 1*Standards for Professional Learning*

Category	Standard	Educator Action
Rigorous Content for Each Learner	Equity Practices	understand their students' historical, cultural, and societal contexts, embrace student assets through instruction, and foster relationships with students, families, and communities.
	Curriculum, Assessment & Instruction	prioritize high-quality curriculum and instructional materials for students, assess student learning, and understand curriculum and implement through instruction.
	Professional Expertise	apply standards and research to their work, develop the expertise essential to their roles, and prioritize coherence and alignment in their learning.
Transformational Processes	Equity Drivers	prioritize equity in professional learning practices, identify and address their own biases and beliefs, and collaborate with diverse colleagues.
	Evidence	create expectations and build capacity for use of evidence, leverage evidence, data, and research from multiple sources to plan educator learning, and measure and report the impact of professional learning.
	Learning Design	set relevant and contextualized learning goals, ground their work in research and theories about learning, and implement evidence-based learning designs.
	Implementation	understand and apply research on change management, engage in feedback processes, and implement and sustain professional learning.
Conditions for Success	Equity Foundations	establish expectations for equity, create structures to ensure equitable access to learning, and sustain a culture of support for all staff.
	Culture of Collaborative Inquiry	engage in continuous improvement, build collaboration skills and capacity, and share responsibility for improving learning for all students.
	Leadership	establish a compelling and inclusive vision for professional learning, sustain coherent support to build educator capacity, and advocate for professional learning by sharing the importance and evidence of impact of professional learning.
	Resources	allocate resources for professional learning, prioritize equity in their resource decisions, and monitor the use and impact of resource investments.

Types of PD

PD can be delivered in several ways. Workshops, coursework, seminars, trainings, and mentorship are just a few modalities for helping educators learn and grow in their profession. Overall, researchers have determined PD to occur in two different categories; traditional PD focusing on a training-based model and job-embedded PD promoting PLCs (Cavazos et al., 2018; Hanover Research 2012; Hargreaves & Fullan 2012; Owens et al., 2016; Pacchiano et al., 2016).

Several researchers have shown that the most effective PD proven to change teaching practices and improve student performance is collaborative, sustained, and job-embedded (Darling-Hammond et al., 2017). Desimone (2009) and Desimone and Stuckey (2014) have identified several key features in effective PD, including long-duration, collective participation, active learning, and coherence. To prioritize collaboration, sustainability, and embed learning while on the job, many school leaders began implementing PLCs to achieve this goal.

The History of PLCs

There is no universal definition of a PLC, but there is a consensus that one exists when a group of teachers is sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth promoting way (Mitchell & Sackney, 2000; Toole & Louis, 2002). The term *Professional Learning Community* first appeared in a text written by Rosenholtz (1989). He reported that teachers who felt supported in their own learning and classroom practice, both by their colleagues and their principal, were more committed to the teaching profession and were more effective than teachers who did not feel supported.

Blankstein et al. (2007) shares that the success of the PLC is determined by the degree to which its members commit to the goal of student learning and embrace their respective roles and

responsibilities. Unfortunately, the term PLC is often used incorrectly. DuFour (2007) stated that the term has been used to describe every imaginable combination of individuals with an interest in education, a grade-level teaching team, a school committee, a high school department, an entire school district, a state department of education, a national professional organization, and so on. In fact, the term has been used so ubiquitously that it is in danger of losing all meaning.

The process of professional learning must be viewed as ongoing, never complete. Hipp et al. (2008) supported this statement during their case study of two schools implementing PLCs, when they said, “it is striking that in neither school did staff express the notion that they had ‘arrived’ at a PLC; rather avidly, the staff continued to seek further insights as to how to continually improve” (p. 193).

Effective PD and Student Achievement

PLCs are one way to implement effective PD. Nearly a decade after the term *Professional Learning Community* appeared in educational literature, various researchers began to define the term differently. Hord (2005) determined five components of the PLC that identified work of the PLC, and its results, correlated with improved student learning:

1. Shared values and vision by the community, wherein individuals identify their own beliefs and purposes for which the school exists, leading to synthesis and agreed-upon common goals that they are committed to pursue for the benefit of students. Without values shared across the group, there can be no community. Carefully constructed learning for adults will produce better results for students.
2. Shared and supportive leadership, provided by the positional leaders of the school or organization and accompanied by structures and activities that enable staff members

to develop leadership capacity, leads to the increasing professionalism of the staff and their assessment of self-efficacy.

3. Collective learning, identified by the community and specifying what the community must learn and how they will go about learning it, is followed by application of the learning across the school, district, or organizational unit.
4. Supportive conditions, of which two kinds are required. The first is physical or structural, such as time for meeting, space for meeting, and other resources such as materials, information, and consultants so that the community can come together to do its learning and work. A second supportive condition is the human or relational feelings or perspectives that the participants have for each other, including respect and high regard for all members, and harmonious attitudes that support learning together.
5. Peers supporting peers in their improvement efforts, as when a host teacher invites another teacher to visit and observe him or her in a specified teaching activity, after which the visiting teacher provides feedback to the host teacher. This activity engages individuals in learning while observing others, which benefits the visiting teacher as well as the host teacher. In this way, not only do individuals improve, but the organization also increases in effectiveness through the learning of its members.

Studies comparing student achievement in schools that have implemented PLCs can be found as early as 1996. Louis et al. (1996) conducted a study that included elementary, middle and high schools implementing PLCs. In analyzing the achievement of students in 24 schools across the country, they identified a direct relationship between several factors. In PLC schools, the researchers observed more social support for student achievement in the classroom and

improved quality of classroom instruction. Additionally, those schools identified as strong professional communities had significantly higher levels of student achievement than other schools in the study.

Not all PD is equal. Teachers can see the purpose of PD programs as a way to stay connected with new professional knowledge and skills or teachers can aim to personally develop, by reflecting on their practices, values and personal goals. Professional learning and development programs can be seen as a specific case that aspire to satisfy both, the aim for teachers to learn something valuable for their profession and the aim to encourage teachers in their personal growth (Fullan & Hargreaves, 2016; Ostinelli & Crescentini, 2021). DuFour et al. (2005) advocated implementing collaborative activities in the form of PLCs stating that such collaborative communities “hold out immense, unprecedented hope for schools and the improvement of teaching” (p. 128).

Challenges of Creating and Sustaining Effective PLCs

The difficulty of creating and sustaining PLCs should not be underestimated. Stoll and Louis (2007) explained that so-called PLCs are increasingly turning into something else. Instead of being intelligently informed by evidence in deep and demanding cultures of trusted relationships that press for success, PLCs are turning into add-on teams that are driven by data in cultures of fear that demand instant results. Data-driven instruction ends up driving educators to distraction; away from the passion and enthusiasm for rich processes of teaching and learning in classrooms and enriched relationships with children, into a tunnel-vision focus on manipulating and improving test scores in literacy and mathematics by any quick fix available; more test preparation here, after-school classes there, concentrating on cells of children who fall just below the failure line. These approaches fail to influence teaching and learning, making the

implementation of the ITM critical to ensure the foundation of quality PLC remain intact.

According to Dufour et al. (2006), a lack of time and a lack of leadership support are among the factors that can cause a PLC to fall apart. Bloomberg and Pitchford (2017) stated that the implementation of the ITM can refocus schools to sustain all that is right with PLCs, by creating efficient and effective collaborative practices.

ITM Versus PLC

Bloomberg and Pitchford (2017) shared that while there are similarities, the ITM is significantly different from the current practice of most traditional PLCs implemented in schools nationally, making impact teams a viable option for sustained PD. In combination with collaborative inquiry, the implementation of the formative assessment portion of the ITM is the differing factor from traditional PLCs. The formative assessment portion of the ITM is not part of the current study. The purpose of the ITM is:

- To purposefully strengthen teacher self-efficacy
- To empower teachers to improve their practice
- To implement the formative assessment process with students being at the center
- To create intellectual capital
- To build agency
- To focus on progress not just achievement
- To operationalize the Visible Learning high-impact influences

Collaborative Inquiry

One critical factor that differentiates the ITM is the implementation of collaborative inquiry. For purposes of the ITM model, Bloomberg and Pitchford (2017) defined collaborative inquiry as a process in which teacher teams partner together to understand their impact on student learning and to scale up their expertise. The ITM uses eight purposeful protocols to guide collaborative inquiry. There are many models and cycles of the collaborative inquiry process. Each has similar themes and steps. Research has shown that professional collaboration activities might have a positive effect on student achievement (Dumay et al., 2013; Lee & Smith, 1996; Louis et al., 2010). Lara-Alecio et al. (2012) found that students whose teachers participated in collaborative activities, such as instruction strategies, scored higher in science and reading achievement than students whose teachers did not attend such PD activities. Y. L. Goddard et al. (2010) found a significant direct positive effect on student achievement in the subjects of mathematics and reading as well as an indirect effect of shared instructional leadership on student achievement when mediated through collaboration.

The importance of collaboration to enhance the PD experience cannot be overlooked. Teacher collaboration is increasingly viewed as an essential ingredient for improving teaching and learning around the world (Harris et al., 2017). Professional collaboration is predicated on the belief that teaching is a profession and that teachers have expertise, skills, and knowledge to drive their own professional learning and development (Campbell et al., 2017). The current generation of professional collaboration reflects five shifts in what is emphasized within collaborative practice (Hargreaves & O'Connor, 2018):

1. From focusing on narrow learning and achievement to embracing wider purposes of learning and human development.

2. From being confined to episodic meetings in specific times and places to becoming embedded into teachers' and administrators' everyday work practices.
3. From being imposed and managed by administrators and their purposes to being run by teachers in relation to issues identified by themselves.
4. From serving the purpose of accountability to serving the needs of students.
5. From "comfortable" cultures to constraining structures and then to integrated structures and cultures that promote challenging yet respectful conversations about improvement.

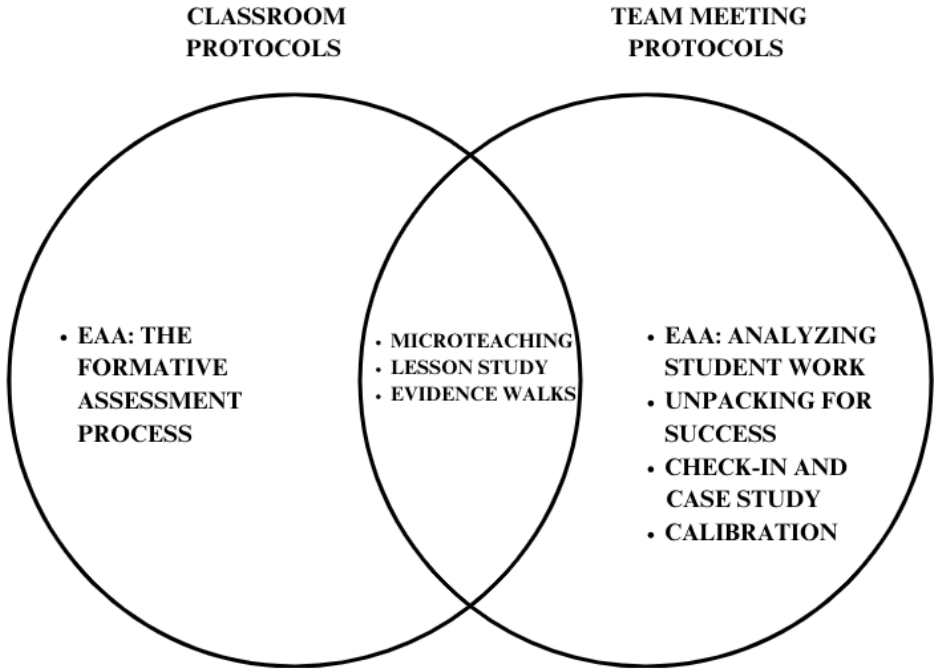
When there is frequent collaboration that is structured around inquiry protocols and student data and led by trained instructional leaders, teams are more likely to support improvements in student learning (Gallimore et al., 2009; Saunders et al., 2009).

ITM Protocols

The ITM protocols are categorized into the context in which they are used. They are separated into three categories: classroom protocols, team meeting protocols, and a combination of both. Figure 3 details each protocol and their category.

Figure 3

Impact Team Protocols



Note. EAA = Evidence, Analysis, Action

Formative Assessment Process. The Evidence, Analysis, Action (EAA) protocol is both a classroom protocol and a team meeting protocol. Formative assessment is a process not a product. It is not a strategy. Stiggins (2007) states that assessment for learning happens in the classroom and involves students in every aspect of their own assessment to build their confidence and maximize their achievement. The role of the student as partner in the assessment process differentiates formative assessment from most other types of assessment. Black and Wiliam (2010) describe formative assessment as all those activities undertaken by the teacher and by their students in assessing themselves, which provides information to be used as feedback

to modify the teaching and learning activities in which they are engaged. Such assessment becomes “formative assessment” when the evidence is actually used to adapt the teaching work to meet the needs of the student. National and international researchers have identified five core practices of quality assessment (Heritage, 2008):

1. A classroom culture in which students and teachers are partners in learning is crucial. A high degree of relational trust must be established for learning to flourish.
2. Learning goals and/or intentions and criteria for success are clearly identified and communicated to students.
3. Learning progressions clearly articulate the subgoals of the ultimate learning goal.
4. Students are provided with evidence-based feedback that is linked to the criteria for success.
5. Both self and peer assessment are important for providing students the opportunity to think metacognitively about their learning.

Unpacking for Success. This protocol is designed for the teacher to get to know the standards. It ensures that the team has a shared understanding about learning outcomes as well as aligned in their approach to teaching the standard(s). Using this protocol gives teams the necessary understanding to partner with students in the formative assessment process. It engages teams in the following:

- Researching the standard
- Defining the key concepts and skills
- Defining cognitive rigor for task development
- Agreeing on relevance and big ideas and/or essential understandings
- Determining key competencies, and

- Developing rubric-bound formative assessments

This protocol is designed different than other unpacking protocols since it puts emphasis on understanding learning progressions, relevant student protocols and/or performances, and support for developing learning intentions and success criteria for daily instruction.

Calibration. This protocol is designed to ensure that all members of the team are accurately scoring student work and that they are consistent in their scoring. In the formative assessment process student work is evaluated based on the success criteria developed in the Unpacking for Success protocol. Using student work samples from different levels, teachers anchor their understanding of progress through the calibration process.

Analyzing Student Work. Impact Teams use a three-step protocol (EAA) to analyze student work efficiently to take collective action. The focus is to understand their impact on learning. They collaborate to share their expertise, thereby strengthening collective teacher efficacy. Teams walk away with a detailed, clear, and practical plan grounded in strategies that get the highest effect regarding advancing in learning.

Check-In and Case Study. The purpose of this protocol is to ensure that teams monitor the implementation and effectiveness of the team's collective actions. During the learning cycle, the team frequently checks in with each other to share successes and challenges and make necessary course corrections. In this protocol each teacher chooses a student who is representative of a learning group and/or a demographic group. They use these students' work samples to make generalizations about teaching effectiveness by learning group.

Microteaching. Microteaching is an organized teaching practice that provides impact team members the opportunity to try out small parts of the lesson and/or strategies by videotaping each lesson and presenting it to the impact team members. Using the EAA protocol,

the team provides feedback and revises the lesson (Bloomberg & Pitchford, 2017). Hattie (2012), reports that microteaching has a .88 effect size, which is well above the .40 effect size indicator of about 1 year's growth in 1 years' time. In the most recent release from Visible Learning Research, microteaching is now reported to have 1.01 effect size.

All participants engaged in the collaborative inquiry portion of the ITM, with a focus on the microteaching protocol. The purpose of this study was to gauge levels of self-efficacy as well as the impact of the PD after each teacher presented a total of three microteaching videos for review.

Self-Efficacy

The concept of teacher self-efficacy was first discussed more than 35 years ago (Bandura, 1977; Bloomberg & Pitchford, 2017). Teacher self-efficacy is defined as the teacher's confidence in their ability to promote student learning (Bandura, 1993). Tschannen-Moran et al. (1998) found several positive influences stemming from efficacy beliefs. If teachers have a sense of self-efficacy, they

- Tend to exhibit greater levels of planning and organization, are more open to new ideas and are more willing to experiment with new methods to better meet the needs of their students,
- are more persistent and resilient when things do not go smoothly,
- are less critical of students when they make mistakes, and
- are less inclined to refer a difficult student to special education.

Research suggests that individual self-efficacy can have a positive impact on collective efficacy and student learning outcomes (R. Goddard, 2001; Tschannen-Moran et al., 1998). By implementing effective PD in the form of professional learning communities using the ITM

model, the focus is shifted to a more formative process, allowing participants to learn and grow in a safe space amongst their colleagues. There are four major sources that contribute to the development of self-efficacy beliefs: mastery experiences, vicarious experiences, social and verbal persuasion and positive emotional state (Bandura, 1977; Tschannen-Moran et al., 1998).

Sources of Self-Efficacy

Mastery Experiences. Mastery experiences are considered the most robust source of efficacy (Bandura, 1977; Tschannen-Moran & McMaster, 2009; Tschannen-Moran et al., 1998). Carefully supported opportunities to experience mastery are especially important during implementation of new strategies, during which teachers can experience declines in perceived efficacy. Giving teachers an opportunity to engage in role playing and microteaching experiences with specific feedback can have a more powerful impact on self-perceptions of teaching competence (Tschannen-Moran et al., 1998).

Vicarious Experiences. Bloomberg and Pitchford (2017) defined vicarious experiences as having models of success. When a model with whom the observer identifies performs well, the efficacy beliefs of the observer are most likely enhanced (R. D. Goddard et al., 2004). This research suggests that experiences such as peer observations and evidence walks could have the ability to enhance self-efficacy amongst teachers.

Social and Verbal Persuasion. Social and verbal persuasion alone may not be a powerful source of self-efficacy; however, in partnership with other sources of efficacy, it may provide teachers the encouragement necessary to expend effort toward realistic goals aimed at strengthening their teaching skills (Tschannen-Moran & McMaster, 2009). It is easier to sustain a sense of efficacy, especially in times of difficulty, if significant others express faith in one's capabilities than if they convey doubts (Bandura, 1997).

Positive Emotional State. Bloomberg and Pitchford (2017) interpret positive emotional state as safety. This feeling of safety can create a positive emotional state and a willingness to take risks and make and embrace mistakes as learning opportunities. When judging their own capabilities, people rely partly on information conveyed by physiological and emotional states (Bandura, 1997). Tschannen-Moran and Woolfolk Hoy (2007) discovered that contextual variables such as available resources, verbal persuasion in the form of collegial and community support, and mastery experiences contributed more to the self-efficacy beliefs of novice teachers than career teachers who had a wealth of mastery experiences on which to base their self-perceptions.

The ITM and Sources of Self-Efficacy

Mastery experiences, vicarious experiences, social and verbal persuasion and positive emotional state all specifically connect directly with the ITM. The alignment between the microteaching protocol and the four sources of self-efficacy are detailed in Table 2.

Table 2*Sources of Efficacy Related to the Microteaching Protocol*

Source of Efficacy	Microteaching Protocol	Supporting Literature
Mastery Experience	Teachers will videotape three lessons to be viewed by the impact team. Using the Evidence, Analysis, Action (EAA) protocol, participants will be given feedback on their lesson	Giving teachers an opportunity to engage in role playing and microteaching experiences with specific feedback can have a more powerful impact on self-perceptions of teaching competence (Tschannen-Moran et al., 1998).
Vicarious Experience	Teachers will view 27 microteaching videos over the course of the impact team PD sessions allowing them to see examples of success	When a model with whom the observer identifies performs well, the efficacy beliefs of the observer are most likely enhanced (R. Goddard et al., 2004).
Social and Verbal Persuasion	Feedback from peers will be positive and connected to the focus of the microteaching session determined by the teacher presenting	It is easier to sustain a sense of efficacy, especially in times of difficulty, if significant others express faith in one's capabilities than if they convey doubts (Bandura, 1997).
Positive Emotional State	Over numerous sessions, the team will work collaboratively to support one another in their microteaching efforts by providing feedback and support to one another	When teachers value each other's expertise, have a common purpose, share responsibility for their students, and jointly problem solve (Little, 1990), they are bound together in professional emotional geographies as well as moral ones (Hargreaves, 2001).

Note. PD = professional development.

Summary

Effective PD can lead to increased teacher self-efficacy, ultimately leading to high teacher quality, high teacher retention, and increased student achievement. When sources of efficacy are embedded into PD experiences, through mastery vicarious experiences, social and verbal persuasion and positive emotional state, efficacy beliefs have the potential be increased. To heighten those beliefs, the collaborative aspect of PD must be considered. Both teachers and students can benefit from collaboration. The ability to work together as professionals is key to making an impact on student achievement, as well as growing and retaining high quality teachers in the classroom. Consideration for the effective key features of PD vs. the type of PD is critical in creating meaningful experiences for teachers and staff

CHAPTER 3

METHODS

This action research study sought to provide information on the implementation of impact teams as an effective form of professional development (PD), teachers' experiences and perceptions of the Impact Team Model (ITM) of PD related to the four sources of self-efficacy, as well as teachers' perceptions regarding changes in their instructional practices after participating in the ITM of PD. Teachers engaged in collaborative inquiry, a process in which teacher teams partner together to understand their impact on student learning and to scale up their expertise. Marie (2014) describes collaborative inquiry as a structure in which teachers come together to systematically examine their educational practices. During the Evidence, Analysis, Action (EAA) protocol, the team worked together to ask questions, develop theories of action, determine action steps, and gather and analyze evidence to assess the impact of their actions. The ITM uses eight purposeful protocols to guide collaborative inquiry: formative assessment process, microteaching, lesson study, unpacking for success, calibration, analyzing student work, check-in and case study, and evidence walks. The protocols are separated into three categories: classroom protocols, team meeting protocols and a combination of both. For the purposes of this study, the PD focused on the ITM protocol of microteaching. Microteaching falls into the classroom protocol category. I addressed the following research questions:

1. What are participants' perceptions of the ITM as an effective form of PD?
2. What are teachers' experiences and perceptions of the ITM PD related to the four sources of self-efficacy?

3. What are teachers' perceptions regarding changes in their instructional practices after participating in the ITM PD?

Action Research Approach

Paradigm for the Action Research Study

The ultimate goal of this study was to be an example that could provide a context that enables diverse stakeholders to work collaboratively toward solutions to the significant problems that confront them (Stringer & Aragon, 2021). Action research supports this goal by presenting a continuous cycle of planning, acting, developing and reflecting. Participants engaged in microteaching, one of the eight purposeful protocols to guide collaborative inquiry. This engagement provided opportunities for participants to experience Bandura's four sources of self-efficacy: mastery experiences, vicarious experiences, social and verbal persuasion, and emotional arousal.

The constructivist paradigm best aligns with the approach of the present study, as the researcher aims to understand the participants experience and explore individual and group perspectives (Stringer & Aragon, 2021). Constructivists believe that individuals seek understanding of the world in which they live and work, allowing the researcher to make sense of the meanings others have about the world (Creswell & Creswell, 2018).

Description of the Action Research Intervention

The focus of this study was to uncover the perceptions of teachers participating in the implementation of the collaborative inquiry process within the ITM. Through efficient and effective collaborative practices, the ITM promotes a school culture in which teachers and students are partners in learning. The ITM uses eight purposeful protocols to guide collaborative

inquiry. For the purposes of this study, the PD focused on the microteaching protocol of the ITM.

Participants volunteered to be part of the initial ITM of PD. For Cycle 2, all participants gave informed consent to participate in this action research study. Collaborative inquiry occurred when the members of the impact team worked with one another within the EAA protocol and provided feedback to team members after each microteaching session. Collaborative inquiry is a cyclical process in constant development and privileges the construction of knowledge located and conducted by the educational agents themselves (Reason & Bradbury, 2008). Each participant engaged in microteaching three times over the course of the PD. Although the protocol was rigid in nature, there were opportunities to allow it to be more organic. An example of this was the lens for the evidence portion of the EAA protocol. Teachers determined the focus for what they wanted the team to look for while viewing their video. Appendix A details the four phases of the PD. The first meeting was held after school, viewing sample videos and practicing the use of the EAA template. The remaining five sessions were spent engaging in the EAA protocol while viewing teacher videos. Two sessions were half day PD sessions and the remaining three sessions were full day PD sessions. Table 3 details the timeline and frequency for completing the microteaching protocol over a 3-month period.

Table 3

Timeline for Completing the ITM Microteaching Protocol

ITM Protocol	Meeting Dates	Participant Action
Microteaching	October 30, 2023 Half day November 6, 2023 Half day November 13, 2023 Full day December 4, 2023 Full day December 18, 2023 Full day January 9, 2024	Impact team members videotaped small parts of their lessons and presented them to the impact team. Feedback was provided using the EAA protocol. Each teacher determined the lens for the evidence portion of the EAA protocol.

Note. ITM = impact team model; EAA = evidence, analysis, action

Collaborative inquiry is a cyclical process in constant development and privileges the construction of knowledge located and conducted by the educational agents themselves (Reason & Bradbury, 2008).

Microteaching. Bloomberg and Pitchford (2017) describe microteaching as organized practice teaching that provides impact team members the opportunity to try out small parts of lessons with one another without students present. The mini lessons were recorded prior to the Impact Team meetings based on a strategy or approach that the teacher wanted the team to observe. The team observed the video and provided feedback to the practice teacher. Each member of the team had an opportunity to provide feedback to the teacher being observed and then the team summarized what was learned after the session.

Role of the Researcher

As the principal in the school where this action research study took place, I have established relationships with the teachers and instructional coaches involved in this study. I work closely with the participants daily. I observe lessons regularly as well as provide feedback and evaluation to the staff. I abstained from both informal and formal observations of any of the impact team members during this cycle of action research. Due to my role, this additional

safeguard was put in place to assure protection of the participants. In addition, central office staff was instrumental in reviewing the interview, focus group and journal response questions. Once coding was completed, three educators not involved in the study reviewed the coding to check any biases that may have influenced the coding process. In addition, a teacher participant facilitated all of the PD sessions.

During the study, my role as the researcher was that of a co-participant. I kept a journal to ensure my biases were recognized and controlled and logged any emotional reactions to what I saw and heard after each microteaching session. In addition, I logged my interpretations of the data throughout the research process. Before the facilitator began each session, I reminded participants that their participation is non evaluative, the overall goal of the study, as well as my role within the study.

Participants

There were 12 participants in this study, nine of whom were instructional staff at the school and three of whom were central office staff. The impact team represented 38% of the overall instructional staff at Green Elementary School, all of whom gave informed consent to participate in this study. A description of impact teams, time commitment and overall goal of this PD were shared prior to making the commitment to participate. The study included nine teachers, a K-12 reading specialist, a K-12 math specialist, a director of technology, and me (the principal of the school), since I acted as a researcher and co-participant. These 12 participants constituted one impact team. District personnel served as the focus group at the conclusion of the PD sessions. In addition to our teacher facilitator, a few of the district personnel's videos were used during the initial EAA protocol practice sessions. Participants were ensured of their safety as district personnel do not evaluate teachers and serve as a support within the school to classroom

teachers. Although most of the participants teach across grade levels, the focus of the microteaching was not grade-level content specific, allowing them to function as a team. Table 4 provides an overview of the participant positions and years of experience.

Table 4

Participants

Grade/Position	Years' Experience
Kindergarten	4
1st	17
1st	11
2nd	20
3rd	19
4th	12
5th	17
Gifted Resource Teacher	22
Director of Technology	13
County Reading Specialist	17
County Math Specialist	19
Library Media Specialist	26

Data Sources

I used qualitative data sources in the form of semi-structured individual interviews, focus group meetings, and participant journals. The perceptions of the participants were brought to the forefront through the triangulation of these multiple data sources. Perceptions of self-efficacy and the perceptions of the ITM of PD were analyzed using a combination of inductive and deductive coding.

Teacher Individual Interviews

Semi-structured individual interviews were conducted to gather information about

teacher perceptions of self-efficacy, the overall perceptions of the ITM as an effective form of PD and whether there were any changes to instructional practices after participation in the PD. Each interview was recorded, reviewed and transcribed. Prior to the study, two instructional specialists and members of Brown County Public Schools' district leadership team reviewed questions. Revisions were made to the questions following their feedback. The interview protocol and questions can be found in Appendix B. A sample of the interview questions include: Was this PD experience different from other PDs you have participated in? Describe how it was different or similar. Have you seen growth in your teaching due to your participation in the ITM of PD? If yes, describe how you have grown. How confident are you in your teaching ability? Do you believe you have the ability to improve instruction in your classroom? A table of specifications can be found in Appendix C that details the alignment between the interview question and the study's research questions.

Focus Group With Support Personnel

A focus group is a simultaneous interview of people making up a small group (Mertler, 2017). Guiding questions were provided to the focus group participants, which occurred after the individual semi-structured interviews. Norms were reviewed with the group prior to the meeting, allowing for any questions or revisions to those norms. During this meeting, participants had the opportunity to discuss reflections from their PD experience. The focus group questions and a table of specifications that details the alignment between the focus group questions, and the study's research questions can be found in Appendix C and Appendix D.

Participant Journals

A digital participant journal was provided for teachers. The journal served two specific purposes. One was a place to record personal and private reflections, as they participate in the

PD. The second was a place to journal in response to specific questions after each microteaching session. Throughout this action research process participants were provided with specific journal questions. These questions along with a table of specifications detailing the alignment between the participant journal questions and the study's research questions, can be found in Appendix E and Appendix F. At end of each ITM meeting, participants were given time to reflect on the protocol they engaged with during the meeting. Sample prompts include: How was your experience with microteaching? Are there any aspects from the microteaching protocol that would support your classroom instruction? How do you feel after engaging in the microteaching protocol? Questions were adjusted based on the protocol of focus for the meeting. In addition to these questions, personal reflection was encouraged between meetings. There was a total of six journal entries from each participant in the study.

Data Collection

To answer the research questions, qualitative data was collected in the form of individual participant interviews, a focus group meeting and participant journals. With these three sources of qualitative data, triangulation can be achieved through the emergence of common themes across sources and perspectives (Creswell & Creswell, 2018). I developed the interview and focus group meeting protocol for asking questions and recording responses. After ITM members had participated in and engaged with the microteaching protocol, individual interviews and a focus group meeting were scheduled in January. Journal responses were reviewed at the conclusion of the action research cycle. Participants had the ability to opt out as needed. In addition to taking notes, the interviews and focus group meeting were recorded after obtaining permission from the participants.

Data Analysis

The data sources that were used in this action research study determined the effectiveness of the ITM intervention. The data in this study were analyzed following the sequential steps for qualitative analysis outlined by Creswell and Creswell (2018): organize and prepare the data for analysis, read or look at all the data, begin inductive coding of all of the data, generate a description and themes, and represent the description and themes. I then moved on to the first cycle of coding. Saldaña (2021) states that “no one, including himself, can claim final authority on the best way to code qualitative data” (p. 89). Recognizing that there isn’t a best way to code qualitative data and in an effort to keep an open mind during initial data collection, I began the first cycle coding method with In Vivo coding for the individual interviews, focus group meeting and participant journals to allow the researcher to stay grounded in the participants voice. I pilot-tested this coding choice to assess its possibilities and adjust accordingly. After transcribing the individual interviews and focus group meeting, the codes were organized in the order they appeared. When additional clarity was needed, I organized the In Vivo codes in alphabetical order followed by clustering the codes into categories. When there was further need to analyze the In Vivo codes, I recoded the existing data as necessary (Saldaña, 2021). Table 5 summarizes the action research study questions, data sources, and how data were analyzed.

Action Research Question 1

What are participants’ perceptions of the ITM as an effective form of PD? I analyzed the data from the individual semi-structured interviews, focus group meeting and participant journals to determine themes and patterns surrounding teachers’ perceptions of what parts of the ITM PD they found to be effective to their professional growth. The researcher then compared those findings to determine similarities and discrepancies. I interpreted the data using In Vivo coding,

finding themes to help determine whether microteaching is an effective form of PD for the participants. In addition, through these questions and interpretation of data, I was able determine whether the ITM model was an effective form of PD.

Action Research Question 2

What are teachers' experiences and perceptions of the ITM PD related to the four sources of self-efficacy? I analyzed the data from the individual semi-structured interviews and participant journals to determine themes and patterns relating to participants' experience with the four sources of self-efficacy by using In Vivo coding to determine emergent themes discovered in participant responses.

Action Research Question 3

What are teachers' perceptions regarding changes in their instructional practices after participating in the ITM PD? The research analyzed the data from the individual semi-structured interviews and journal responses to specific prompts related to any perceptions in changes to instructional practices.

Table 5*Action Research Questions, Data Sources and Data Analysis*

Evaluation Question	Data Sources	Data Analysis
What are participants' perceptions of the ITM as an effective form of PD?	Teacher Journals Individual Interviews with teacher Impact Team Members (9) Focus Group Meeting with support staff Impact Team Members (3)	Analysis of participant journals using In Vivo coding In Vivo coding of teacher individual interviews was used to find trends and themes of teachers' perceptions of the ITM as an effective form of PD In Vivo coding of focus group meeting was used to find trends and themes of support staff perceptions of the ITM as an effective form of PD
What are teachers' experiences and perceptions of the ITM PD related to the four sources of self-efficacy?	Teacher Journals Individual Interviews with teacher Impact Team Members (9)	Analysis of teacher journals using In Vivo coding In Vivo coding of teacher individual interviews was used to find trends and themes of teachers' experiences and perceptions of the PD related to the four sources of self-efficacy?
What are teachers' perceptions regarding changes in their instructional practices after participating in the ITM PD?	Teacher Journals Individual Interviews with teacher Impact Team Members (9)	Analysis of teacher journals using In Vivo coding Analysis of teacher journals using In Vivo coding In Vivo coding of individual interviews was used to find trends and themes of teachers' perceptions of changes to their instruction practices

Note. ITM = impact team model; PD = professional development

Delimitations, Limitations, Assumptions***Delimitations***

In this study, all participants were engaged in the collaborative inquiry portion of the ITM, focusing on one protocol determined by me: microteaching. I designed specific questions to support entries in the participant journals, as well as during the interviews and the focus group meeting. In addition, this study was limited to one elementary school and to the volunteers who participated in the ITM.

Limitations

A significant limitation to this study was my role as principal. Although I have built positive relationships with all involved in the study and participate in instructional conversations, my role as principal remains evaluative. Participants may not have felt comfortable in providing honest answers during interviews and focus groups questions. All participants were assured that their responses were kept confidential and had no bearing on their personnel evaluation.

Assumptions

The data sources used in this study assumed that participants were honest when responding to interview and focus groups questions. In addition, responses in participant journals were assumed to be truthful when reviewed.

Ethical Considerations

Ethical considerations were made and shared with the ITM participants in the study. Due to the interpretive nature of qualitative research, I was transparent by sharing past experiences and how those experiences shaped the interpretation of the data collected. I detailed how any sensitive ethical issues that arouse during the study, would be discussed and addressed. In addition, due to the personal nature of the responses, necessary steps were taken to ensure confidentiality.

Positionality

Due to my role as principal in the school of the study, researcher positionality was addressed. Acknowledgement of past perceptions of PD were critical to providing accurate recommendations to principals and school leaders in the district, and beginning with a fresh outlook was essential. Although my goal was to provide PD that was meaningful for all participants, ensuring accuracy of the data interpretation was critical so the recommendations of

this study can inform and improve future practices of PD in the school district. To deepen my analysis, I kept a journal detailing reflections and interpretations of the data throughout the research process.

Accuracy, Validity, and Reliability

Accuracy and validity were ensured using several of Creswell and Creswell (2018) validity strategies. These included triangulation of data, member checking, use of rich thick description, clarify the bias, present negative or discrepant information, prolonged time in the field, peer debriefing, and the use of external auditor. Specifically, I engaged in triangulation of data, clarify the bias, and ensured prolonged time in the field.

Triangulation. If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding validity of the study (Creswell & Creswell, 2018). Data from interviews, participant journals and a focus group meeting allowed for triangulation of data. I compared the data from the three sources and determine similarities.

Clarify the Bias. I included comments in my personal journal about how their interpretation of the findings was shaped by their background, such as gender, culture, history and socioeconomic origin (Creswell & Creswell, 2018). I created an open and honest narrative along with the study findings.

Time in the Field. Creswell and Creswell (2018) states that the researcher develops an in depth understanding of the phenomenon under study and can convey detail about the site and the people that lends credibility to the narrative account. I ensured participation in all aspects of the study by attending and acting as co-participant in the impact team study. In doing so, I had an

opportunity to build trust amongst participants, which increased honest responses during their participation in the study leading to more accurate and valid findings.

Institutional Review Board

Following the approval of the study proposal, this study was submitted for approval by the College of William & Mary's Institutional Review Board (IRB). The IRB training course was completed and a certificate for the Collaborative Institutional Training Initiative (CITI Program) was obtained in December 2022.

Changes to the Study

In late December one of the impact team participants resigned from the school division where this research study was taking place. This participant did not participate in the focus group or individual interviews. All journal responses from this participant were removed from the study. When initially determining the data sources that would be used, I planned to provide notebooks to each participant for their journal responses. Before beginning our microteaching sessions, I shifted to a digital journal format to collect individual responses, allowing for ease of collecting and transcribing the data.

CHAPTER 4

FINDINGS

The purpose of this qualitative study was to determine whether participation in the impact team model (ITM) of professional development (PD) influenced teacher self-efficacy, changed teacher instructional practices and whether the model itself is a viable structure for PD.

Participants engaged in multiple impact team PD sessions. After the initial meeting to introduce the microteaching protocol and expose participants to the use of the Evidence, Analyze and Action (EAA) template, through a combination of half and full-day meetings participants were able to engage in the microteaching protocol over a span of six sessions. Throughout these sessions, each teacher participant shared three instructional videos from their classroom. The impact team engaged in the EAA protocol while viewing each video. The team began with clarifying the evidence, followed by analyzing and naming strengths from the microteaching video and finally, taking action by summarizing what aspects of the lesson could be incorporated easily into other classrooms. Prior to sharing their videos, each teacher discussed the area on which they would like to receive feedback. In total, the team viewed and provided feedback on 27 instructional videos from nine teachers.

Findings in this chapter will include themes based on participants' perceptions of the ITM as an effective form of PD, the impact of the PD on teacher self-efficacy relating to the four sources of efficacy, as well as any changes to their instructional practices as a result of participation in the ITM. A focus group meeting, individual semi-structured interviews, and teacher journals were the data sources used to answer the three research questions. Teacher

participants engaged with a digital response journal at the end of each microteaching session. All responses were organized into a spreadsheet at the conclusion of the last microteaching session. The focus group meeting took place with the three non-teacher participants, while individual interviews occurred with the nine remaining teacher participants. The impact team was separated into a focus group and individual interviews because three of the 12 participants were district-level personnel. Initiating a separate focus group with the three district-level personnel, allowed for a collaborative discussion as they have a holistic view of PD within the county.

Action Research Question 1

What are participants' perceptions of the ITM as an effective form of PD?

All 12 participants felt the ITM was an effective model of PD. Three of the 12 participants shared their perceptions of the ITM in a focus group meeting. These three participants were the director of technology and the county's two PK-12 lead instructional coaches, while the other nine participants were teachers. The nine teachers shared their perceptions during the individual semi-structured interviews and digital journal entries that were completed at the end of each microteaching session. Findings from both the focus group, individual interviews and journal reviews indicated that participants perceived the ITM as an effective form of PD. Participants found the PD to be effective and purposeful.

Focus Group Meeting Regarding the Effectiveness of the ITM as a Form of PD

Responses from all three focus group participants indicated a need for a structure like the ITM county-wide. Providing examples of microteaching and practicing the EAA protocols were shared as important factors for success of future microteaching sessions. Many positive comments were shared regarding the effectiveness of the ITM as a form of PD.

- “I think any opportunity for people to learn from each other is huge.”

- “It was obvious that the team had a collective understanding that they're all in it together, and they're working hard, and they appreciate each other.”
- “Providing models of microteaching videos and walking through the process helped set the teachers up for success.”

An analysis of the focus group interview yielded four themes related to the ITM as an effective form of PD and ways to improve the model for future implementation: a universal versus differentiated instructional focus for microteaching, critical versus positive feedback, expansion of the impact team to include more teachers as the work continues, and the importance of collaboration.

A Universal Versus Differentiated Instructional Focus

Each teacher participant determined the lens for their microteaching session. Many teachers asked the team to find evidence of classroom management strategies, while others asked for evidence of student engagement. Although this choice supported each individual teacher, two of three focus group participants shared that determining a universal instructional focus for microteaching could be beneficial. Those two participants noted having all of teachers select the same instructional strategy to focus on could create cohesion within the group and support the greater efforts of the county instructional team.

- “As an instructional coach, I would have really liked to see us focus on just one instructional strategy or method. My hope is we have set the stage to do so in future microteaching sessions now that the members of the impact team have experienced the protocol.”
- “My wheels are already turning for the adoption of our new curriculum. I am wondering how we can leverage microteaching and the impact team structure to

support teachers next year as we adopt and implement new math and reading curriculum. That could be our unified instructional focus.”

The third participant noted that it was appropriate to have variation and individualization due to the organic nature of the PD. The focus group participants indicated differing views on the evidence portion of the EAA protocol.

- “Part of individualization of this first attempt at microteaching was to allow for teachers to determine the lens for the evidence portion of the protocol. I would fear that if we picked something for them or determined the same focus for all, it could change the overall experience for the teachers.”
- “Eventually we could get there, but I think part of the reason everyone felt so strongly about this experience was because the model allowed for them to have ownership of their microteaching sessions.”

Overall, the focus group discussion proposed several possibilities for future microteaching sessions. Connections were made to the adoption of new curriculum and the ITM as a possible structure to support implementation.

Critical Versus Positive Feedback

One of three focus group participants felt peer-to-peer critical feedback was absent from the protocol. The other two participants disagreed, noting that having peer-to-peer critical feedback would shift the overall tone of the impact team. In addition, they shared that the EAA protocol allowed for feedback in a way that encouraged self-reflection, without adding the element of evaluation from a peer group.

- “The self-reflection that occurred from the teachers was evident from the first microteaching session to the last by the changes that occurred in each lesson that was

shared. I could see added effort and adjustments to areas for growth that were obvious when viewing the previous video.”

- “It was hard to watch and not give critical feedback. I wanted to get down to it and at times felt it was too positive. There were areas for growth that could have been shared during the protocol from those observing the microteaching sessions.”
- “Critical feedback from peers creates a very different atmosphere. I fear the experience could quickly turn negative. With coaches being in the sessions, we could take note of anything they see that needs to be addressed and do that on an individual basis during coaching sessions or grade level meetings.”
- “Having teachers tell teachers what they can do better makes me nervous. Their role is not to evaluate others, so this is something to be very careful with.”

The focus group discussion revealed conflicting views on whether to include critical feedback and whether focusing on the positive hindered supporting teachers in specific areas for growth. The discussion also highlighted whether it is appropriate to have teachers evaluating teachers and the fear that critical feedback would change the overall positive experience that occurred.

Expansion Within the District

The three focus group participants were passionate about moving the work of the impact team forward. As district-level personnel, they shared connections that could be made with current work and the efforts of the impact team. Specifically, the new Virginia state literacy requirements and the county’s Profile of a Graduate work were mentioned as considerations. All participants agreed that the ITM is a viable structure to support a variety of PD opportunities. The focus group participants described the benefits of adding more people to the PD and connecting new instructional shifts to the ITM.

- “It would be wonderful if we could have more people from each grade level on the impact team.”
- “We have so many instructional shifts coming next year, we could use the impact team model to support that work.”
- “We could complete more microteaching sessions or begin peer observations surrounding the new curriculum we adopt.”

All three participants are considering how the ITM can affect the county on a larger scale to increase collaboration and support upcoming instructional shifts.

Importance of Collaboration

Throughout the focus group discussion collaboration was mentioned as a positive element to the PD. Observation of others through the microteaching videos and a collaborative approach to temper isolation were noted.

- “Being able to observe other colleagues and work in a collaborative way, was huge for these teachers.”
- “Teachers often feel isolated, and this PD provided a collaborative approach that was still individualized to each participant.”
- “Staff rarely have time to see one another let alone collaborate. This PD was huge for that.”
- “I was impressed by the collaboration across grade levels. Teachers were pleasantly surprised by some of the commonalities in different classrooms, leading to wanting more collaboration with those teachers.”

The impact team was comprised of teachers from different grade levels, skill levels, years of experience and specialties. The focus group noted how the diversity of the group did not hinder

collaboration, but rather increased it. Table 6 provides the themes that emerged from data from the focus group meeting regarding Action Research Question 1.

Table 6

Focus Group Summary of Emerging Themes for Research Question 1

Themes	Data Sources	No. of Participants	%
Universal Instructional Focus	Focus Group Participants 1, 2	2/3	66%
Critical Feedback	Focus Group Participant 1	1/3	33%
Expansion Within the District	Focus Group Participants 1, 2, 3	3/3	100%
The Importance of Collaboration	Focus Group Participants 1, 2, 3	3/3	100%

Responses from Individual Interviews and Digital Journals on the Effectiveness of the ITM as a Form of PD. Findings indicated that the overall responses regarding the effectiveness of the ITM was positive. All teachers felt the ITM was a positive experience due to the opportunity to collaborate across grade levels and receiving positive feedback after each microteaching session that occurred during staff contract hours. All nine teachers reported a positive experience with the ITM. On a scale from 1 (*negative*) to 5 (*positive*), all journal responses were in the 4 and 5 range after each session. Several themes emerged in both the individual teacher interviews and journal responses.

Honoring Teacher Time. Six of the nine teachers shared in both the individual interviews and journal responses that having all of the PD sessions during contract hours increased the effectiveness, citing that their time was honored in a way it had never been before

when they have engaged in the PD. Teachers also noted that the work of the impact team was job-embedded, as time was given during the day to engage in the PD. Substitutes were provided for half and full day sessions to allow for ample time to engage in the microteaching protocol. Teachers included comments about the timeframe of the PD, saving time by videotaping, and the importance of having class coverage to honor their time.

- “The timeframe of the meetings were wonderful. They were all within contract hours, which made impact feel like part of what we do. It didn’t feel like one more thing, it felt like the most important thing.”
- “Videotaping our lessons saved so much time and was more comfortable than having a number of people in your classroom at once.”
- “We were given substitutes for our half day and day long sessions, which honored our time as professionals.”

Honoring teacher time by having the ITM sessions occur during school hours was reiterated throughout the interviews and journal responses of most of the teacher participants.

Benefits of Collaboration. Working collaboratively allowed participants to learn from one another and reflect on instructional practices. All nine participants acknowledged that the collaboration that occurred within the impact team strengthened the PD. Although each teacher asked the team to find evidence on a specific focus, the collaborative debriefing after each microteaching session enabled a sense of accomplishment and collective efficacy for both the teacher presenting their video and the team as a whole. Teachers described the benefits of collaboration and the lasting connections that resulted from that collaboration.

- “We learned from one another every single session. I don’t think I have ever been this engaged in any PD, as I was with impact team. I got excited for our sessions and looked forward to collaborating with the team.”
- “The opportunity to collaborate across grade levels was eye opening and extremely beneficial. There were more similarities than I realized.”
- “Collaborating with other educators both new and veteran was very beneficial. I especially liked that we could see vertical alignment from grade to grade.”
- “An unexpected surprise was the connections outside of impact time that occurred. I went to others, and they came to me for advice as well as setting up additional opportunities to collaborate instructionally.”

Collaborative inquiry was a foundational piece of the ITM. The responses in both the individual interviews and teacher journals yielded a positive reaction to working together and a desire to collaborate outside of the specific microteaching sessions.

Value and Tone of Feedback. This theme had the most varied views from the participants. There were differing opinions on whether more critical peer-to-peer feedback was needed. This theme occurred across the journal responses and individual interviews. Seven of nine participants indicated the analyzing portion of the EAA protocol allowed for self-reflection and self-critique, not needing specific recommendations from their peers. While they were open to positive feedback, a number of those participants indicated that allowing for recommendations from the impact team would diminish the comradery and collaboration within the team. One teacher participant indicated that more critical feedback was needed, while the remaining eight teachers felt that the positive feedback given during the protocol was appropriate and allowed for self-reflection. Overall, everyone felt that feedback was important but differed on whether it

should be critical or positive. Teachers described the impact of both critical and positive feedback during the process of microteaching.

- “A big part of why this is working is because it is a positive and uplifting experience. My peers are not my evaluator.”
- Every participant shared feedback, so everyone was actively engaged in the sessions, making them very effective for professional growth.”
- “I am my own worst critic. When I watched my videos I made a list of things I would do differently and then focused to make those changes both in my classroom and for my next microteaching session. I wanted to see if others saw what I saw for areas of improvement.”
- “I can't say enough about the process of microteaching. I've never been a part of a process like this. This is the first time I've been a part of providing peer-to-peer feedback. I learned a lot. It made me reflect on everything.”

Feedback was noted as an overall positive experience in both the individual interviews and teacher journals with strong opinions on whether critical peer to peer feedback was needed.

Importance of Trust. The frequency that the team met in both Cycle 1 and Cycle 2 created a trust between members of the team. One teacher noted, “Being together as a team created a safe environment to take risks and allow for the opportunity to grow in my teaching.” Trust was mentioned numerous times throughout all nine interviews. Another teacher referred to the team as a family, “We became a little impact family. I felt myself going to members of the impact team for advice outside of our time together. Without impact team, I likely wouldn't have interacted with some of these colleagues in this way.” The theme of trust continued throughout teacher journal responses.

- “Showing my video was very personal. After doing so, I trusted the process and the people that were part of it more and more.”
- “Trust was built amongst the members of the team at each session. Comments were thoughtful and positive, making me want to keep putting myself out there.”

The feeling of trust positively supported the microteaching process and helped increase collaboration and build relationships outside of the PD sessions amongst the participants.

Self-Reflection. This theme emerged as an influence on the effectiveness of the PD. Five of nine teachers felt that self-reflection was a byproduct of the individual interview conversations surrounding feedback. One teacher noted, “Normally, I don’t think about PD after it is completed. With impact team, I found myself wanting to be better each time and looking forward to our next session.” Another teacher shared that having an opportunity to watch themselves and others made them naturally self-reflect. “When you are watching yourself on video you become very critical of everything little thing you say and do.” The five teachers commented in both the individual interviews and journal responses that having another teacher point out an area for growth was not necessary, as the microteaching process itself lent an element of self-critique that was difficult to not recognize.

- “While I recognize that not everyone is reflective, for me, watching my video brought to light many things I wanted to change without hearing it from a peer.” (teacher interview)
- “I took notes during my video of things that stood out to me that needed to be fixed. Microteaching was like a big magnifying glass.” (teacher interview)
- “My hope would be that everyone is someone reflective. I am always journaling and this experience was no different. (journal response 11/4/23)

Table 7 describes the themes emerging from data collected from the individual interviews and journal responses regarding Action Research Question 1.

Table 7

Individual Interviews and Journal Responses Summary of Emerging Themes for Research Question 1

Themes	Data Source	<i>f</i>	%
Honoring Teacher Time	Interviews 1, 4-7, 9 Journals 1, 4-7, 9	6/9	66%
Benefits of Collaboration	Interviews 1-9 Journals 1-9	9/9	100%
Value and Tone of Feedback	Interviews 2-9 Journals 2-9	8/9	88%
Importance of Trust	Interviews 1-9 Journals 1-9	9/9	100%
Self-Reflection	Interviews 3-7, 9 Journals 3-7, 9	6/9	67%

Action Research Question 2

What are teachers’ experiences and perceptions of the ITM PD related to the four sources of self-efficacy?

Data related to the four sources of self-efficacy (mastery experiences, vicarious experiences, verbal persuasion, and positive emotional state) were gathered from teacher journal responses and individual interviews with each of the teacher participants. Findings indicate that seven of the nine teachers felt a sense of nervousness and unease at the start of the PD. Both watching themselves on video and having other staff members watch their teaching were noted

as reasons for their initial nerves. Over the course of the microteaching sessions, all seven of these teachers felt a positive influence in their ability to participate in microteaching. All nine teachers reported an overall improved confidence in their teaching by the end of the six sessions. This positive influence on their self-efficacy motivated the participants during the PD and in their classrooms.

Mastery Experiences

All nine teachers indicated that the mastery experience of microteaching allowed for them to learn about themselves and others on the team. Giving teachers an opportunity to engage in role playing and microteaching experiences with specific feedback can have a more powerful impact on self-perceptions of teaching competence (Tschannen-Moran et al., 1998). Teachers were given specific feedback related to the focus of the lesson. Through the EAA protocol, evidence was shared, each session was analyzed, and positive feedback was provided to guide next steps in the classroom. By taking on this new challenge of microteaching, teachers were able to feel successful, build confidence and make improvements between sessions after engaging in the mastery experience of microteaching. Three themes emerged related to mastery experiences: building confidence, improving over time and a growth mindset.

Building Confidence. Between sessions seven of nine teachers indicated an increase in confidence after participating in the microteaching protocol. They described the microteaching experience as a confidence builder.

- “Receiving feedback made me feel confident in my abilities as a teacher.”
- “Watching myself on video increased my confidence as an educator.”
- “This protocol definitely positively influences teachers’ beliefs in their own ability.”

- Being new to the school, I was very nervous the first time, but quickly felt calm after watching others and showing my first video to the team. I felt more confident each time.”
- “I have been teaching for over 25 years and I still get nervous when I present. I am not sure that will ever go away for me. However, for microteaching specifically, I felt less nerves and more confidence as we progressed through each session.”

Two of nine participants mentioned their confidence never wavered throughout the PD. One teacher mentioned in her interview, “Going through National Board Certificate Training, I wasn’t nervous to videotape myself as I have seen the benefits of doing so.” The other noted, “I already feel confident in my abilities as an educator, so throughout this process my confidence continued.”

Improving Over Time. Each microteaching session provided an opportunity for teacher participants to improve. Receiving feedback helped support adjustments to each lesson the teacher presented to the impact team.

- “After receiving feedback, I was able to make adjustments between sessions and get better in my microteaching.”
- “Each session, I took notes that I reviewed before making my next video. This helped me get better each time.”
- “Listening to everyone in the group share their thoughts about each video, created an opportunity for me to improve my own instructional delivery.”

Growth Mindset. All teacher participants mentioned the importance of a growth mindset. The importance of having a growth mindset allowed the participants to begin developing their own instructional expertise throughout the PD. The following terms were mentioned in both the

individual interviews and teacher journals: lifelong learning, getting better, always growing, embracing mistakes, and being vulnerable in order to grow.

- “I consider myself a growth-minded person, but watching yourself on video increases that critical lens ten-fold. I wanted to be better for myself and for the team each microteaching session.”
- “Even though I felt confident throughout all of the PD sessions, there is always room to grow and learn from others.”

The experience of microteaching was new for many of the members of the impact team.

However, their optimism toward engaging in this mastery experience allowed for them to learn and grow as educators, influencing their own self-efficacy.

Vicarious Experiences

Having a successful model, eight of nine teachers were able to see themselves through the vicarious experience of watching their teammates present their microteaching video. When a model with whom the observer identifies performs well, the efficacy beliefs of the observer are most likely enhanced (R. Goddard et al., 2004). This research suggests that experiences such as peer observations and evidence walks could have the ability to enhance self-efficacy amongst teachers. Microteaching provided a similar experience to peer observations by videotaping lessons and allowing for peers to provide feedback through the EAA protocol. An overall theme of validation emerged from teacher participants.

Eight of nine teachers mentioned that watching other peers’ microteaching videos provided validation for their own teaching ability. This validation increased confidence and a willingness to collaborate. One teacher noted that watching others did not notably impact them.

Teachers shared the importance of observing similarities in others and feeling reassured that they were on the right track.

- “When I was able to view a microteaching session and see similarities in teaching styles, it validated that I was doing great things in my classroom as well.”
- “Hearing what each teacher wanted their evidence focus validated that I was on the right track. The same things were important to many people on the team.”

It is rare that teachers can see one another teach. The collaborative nature of the ITM encouraged teachers. Watching their peers present their microteaching videos resulted in a sense of validation for many of the participants.

Social and Verbal Persuasion

When teachers progressed through their three microteaching opportunities, it was noted that the positive feedback and praise from others increased confidence and provided all nine teachers the desire to want to participate more. It is easier to sustain a sense of efficacy, especially in times of difficulty, if significant others express faith in one’s capabilities than if they convey doubts (Bandura, 1997). The positive comments shared during debriefing and on the microteaching note taking templates influenced teachers in a positive way, allowing them to revisit these encouraging messages while planning for the next session. Increased confidence and an increased desire to participate were two themes that emerged when participants were the recipients of social and verbal persuasion.

Increased Confidence. Teachers felt that the quality of the teachers on the impact team increased their confidence when receiving positive feedback, as well as well as any verbal affirmations in general.

- “There were some really amazing teachers on the impact team. Receiving positive feedback from them made me feel awesome.”
- “Being affirmed by others is something we need to do more of. If others think I am doing a great job, then I ultimately feel more confident.”
- “We had a diverse group all working together to be better educators. Hearing what others had to say about my teaching made me feel like I could do anything.”

While the makeup of the impact team varied in years of experience and grade levels taught, an overall theme of confidence building emerged in both journal responses and individual interviews. Teachers shared that this was primarily from receiving affirmations from others they viewed as strong educators.

Increased Desire to Participate. Teachers shared that they looked forward to impact team meetings. Hearing positive feedback during the PD, left them feeling eager to participate in future sessions. The note taking template was mentioned by a few of the participants as a positive reminder of past sessions resulting in a desire to continue the work.

- “It was beneficial that each teacher was able to collect the microteaching note taking templates after each session. This provided an opportunity for me to revisit comments as I planned my next microteaching session.”
- “The note taking template helped organize everyone’s feedback guiding me, as I recorded my next lesson.”
- “Hearing positive praise from colleagues made me want to be there. It also made me want to try my very best resulting in a video I was proud to show my team.”

Teachers indicated that participation in each session that included positive feedback and affirmations only increased their confidence and desire to participate in the ITM.

Positive Emotional State

When judging their own capabilities, people rely partly on information conveyed by physiological and emotional states (Bandura, 1997). All of the teacher interviews and journal responses revealed an overwhelming positive response to the microteaching sessions. Bloomberg and Pitchford (2017) interpret positive emotional state as safety. This feeling of safety can create a positive emotional state and a willingness to take risks and make and embrace mistakes as learning opportunities. Even those who were nervous during the initial stages found the impact team experience to be a positive one. Coding both the individual interviews and teacher journals, seven of nine teachers reported being very nervous for their first microteaching session. After the initial experience, their nerves diminished. Individual interviews indicated a feeling of optimism amongst the group. A renewed excitement for teaching and the importance of a safe environment for learning were two themes that emerged related to positive emotional state.

Renewed Excitement for Teaching. It was noted by all participants that the first videos were very short, while the videos in the second and third sessions were longer. Teachers wanted to show more to their peers, indicating an excitement and comfort level within the group.

Teachers commented about their renewed excitement for teaching.

- “Even on days that I was tired, I looked forward to being with the impact team. I always left each session feeling uplifted and excited about teaching.”
- “Since COVID, I feel like I have lost my spark. This experience got me excited about teaching again.”
- “I love teaching and I have been doing it for a long time. Being with a group of educators that wanted to learn and grow from one another got me excited to keep doing the important work.”

- “I am very close to retirement. Especially after COVID, I have thought about leaving the profession each year. Being part of the impact team was something that I looked forward to and is a big part of my happiness here at school.”

Teachers noted that impact team provided an experience that was uplifting, exciting and provided happiness in the workplace. A few teachers noted even mentioned this opportunity is extending the time they remain in the classroom.

Safe Environment for Learning. During individual interviews, more than half of the impact team mentioned the importance of Cycle 1 where the team focused on trust and team building, allowing Cycle 2 to reap the benefits of that work. The team approached the second cycle with an open mindset.

- “Most of us were together last year, building relationships which helped in the overall feeling that what we were doing felt good.”
- “I never felt judged. I felt like part of a team that was all together to make themselves better for our students.
- “Even as a new teacher to our county, I felt support from everyone in the room.”

Being able to collaborate in a career field that by nature can be isolating, highlighted how important teamwork can be. Collaboration within the ITM supported relationships, encouraged a renewed excitement for teaching and created a safe environment to learn. Seven of nine participants specifically mentioned that this PD felt safe and comfortable from the start, allowing them to feel a sense of comfort with the work. Journal responses indicated the importance of positive praise and support from coworkers.

- “Hearing positive comments about my teaching validated my work.”

- “I have been teaching for a long time. I forgot how much of an impact hearing positive things about my teaching could influence me. It was very validating at a time where being a teacher is harder than ever.”
- “We don’t typically get praise from coworkers, because we are all doing our own thing during the day. That was an unexpected positive result from this experience.”

In summary, the nine teacher participants reported that their self-efficacy was affected in a positive way in relation to mastery experiences, vicarious experiences, social and verbal persuasion and positive emotional state.

- “I didn’t know how greatly this experience would impact me. The validation I received was huge for me. Seeing other staff successfully complete their microteaching sessions, made me know that I could too.”
- “I didn’t know what microteaching was before impact team, but I can honestly say that it has made me look at my teaching differently and feel confident in my abilities.”
- “Receiving encouragement from my teammates was a gamechanger for me. I feel energized to continue this very difficult work we are called to do.”

An increase in confidence and capability as a teacher was noted after participation in each microteaching session. A feeling of validation was a consistent theme in the journal responses. In addition, watching others complete their microteaching increased confidence in their ability to be successful with the same activity. An overall feeling of positivity came from the teacher interviews and journal responses, indicating that the ability to collaborate, the trust that was built and the supportive feedback from teammates were reasons for this overall positive experience.

There were specific journal questions relating to each of the four sources of self-efficacy that

were asked after every microteaching session. Teacher interview responses based on experiences and perceptions of the ITM were connected to the four sources of self-efficacy during the coding process. Table 8 describes the themes emerging from specific teacher journal questions and teacher interviews regarding Action Research Question 2.

Table 8

Teachers Experiences and Perceptions of the ITM Related to the Four Sources of Self-Efficacy

Source of Efficacy	Emergent Themes	Journal Questions	Teacher Perceptions	%	Data Source
Mastery Experiences	Building Confidence, Improving Over Time and Growth Mindset	After participating in today's microteaching, do you feel more confident and capable in your ability as a teacher?	9/9 Felt increased confidence 9/9 Felt validation	100	Interviews Journal Responses
Vicarious Experiences	Validation for Teaching Ability	Did observing other members of the Impact Team successfully complete their microteaching, make you feel that you too, possess the capabilities to master comparable activities to succeed?	8/9 indicated a positive shift in confidence with microteaching and a desire for more feedback and more opportunities for microteaching in the future	90	Interviews Journal Responses
Social and Verbal Persuasion	Increased Confidence and Increased Desire to Participate	Did giving and receiving verbal encouragement from others during the microteaching protocol (EAA) process, increase your belief in your ability as a teacher?	9//9 indicated that receiving feedback increased their ability as a teacher	100	Interviews Journal Responses
Positive Emotional State	Renewed Excitement for Teaching and Safe Environment for Learning	Do you feel that the impact team provides both collegial and community support enabling a willingness to take risks, and make and embrace mistakes as learning opportunities?	9/9 mentioned collaboration, teamwork, trust and support for reasons why they responded yes	100	Interviews Journal Responses

Note. ITM = impact team model

Action Research Question 3

What are teachers' perceptions regarding changes in their instructional practices after participating in the ITM PD?

Responses From Digital Journals and Individual Interviews Regarding Teachers' Perceptions to Their Instructional Practice

Findings indicated that changes to instructional practices occurred in adjustments to engaging in self-reflection, using different classroom management strategies, and focusing on student engagement when planning. Since the focus of each microteaching was teacher determined, there was not a universal instructional focus to the EAA protocol. Participants' comments focused primarily on the importance of self-reflection and looking inward to make changes to how they approach their classroom as a whole. The following theme emerged based on the responses from the digital journals and individual interviews.

Self-Reflection. When asked about changes to instructional practices, many of the teachers interpreted that question to relate to specific instructional curriculum. When discussing that instructional practices can include how the teacher delivers the curriculum to the class, responses shifted. Focusing on the how versus the what yielded six of the nine teachers to indicate in both their individual interviews and journal responses that their instructional practices have changed after experiencing this PD.

- “It really was a beneficial experience. I think probably the best thing that came from it was just being able to see other teachers in action, see their different teaching styles, and how they were able to reach their kids. I could then learn from them to improve my own instructional practice.”

- “I learned a ton. I was really focused on what I could take away from each viewing. After every single video I have implemented something new in my classroom.”
- “I did so much internal reflecting while watching my own videos and other teammates’ videos.”

Watching their own videos as well as those of their teammates, resulted in increased self-reflection for all nine teacher participants and improvement of instructional practices like classroom management and strategies to engage students for six of those nine teachers.

Classroom Management Strategies. Classroom management emerged as one of the instructional practices that was impacted by participating in the microteaching sessions. Management strategies were identified while engaging in the microteaching videos and were often the teachers’ chosen focus of the evidence portion of the microteaching protocol. Six of the nine teachers indicated a shift in classroom management strategies after participating in the ITM of PD. Increased wait time and call and repeat exercises were examples of classroom management strategies shared by teachers.

- “It has been great seeing other teachers' management of small groups and partner teams. I will definitely adopt some of their structures when using partner teams in my classroom.”
- “I was able to take away some tips and tricks to make my classroom run more smoothly.”
- “I include more time for student discussion during my instruction and I have incorporated different management strategies that I learned from my colleagues.”

Teacher participants were able to see the positive impact of certain classroom management strategies during the microteaching sessions. This urged them to try these strategies in their own classrooms.

Strategies to Engage Students. Teachers indicated engagement as an important factor when planning lessons. Throughout the 27 instructional videos that were viewed, student engagement was the focus of the EAA protocol for 17 of the videos, making engagement a top priority for the teachers participating in the ITM.

- “I learned how allowing students time for collaboration and communication in the classroom heightened my students’ engagement in the lesson.”
- “Watching students take ownership of their own learning even in the younger grades was wonderful to see. I was able to take some engagement strategies from other teachers and try them in my own classroom.”
- “Observing students think critically to solve a problem reminded me that productive struggle is a sign of student engagement. This is something I need to allow my students to do more of. By watching my colleague’s lesson, I have ideas of how to make this happen in my classroom.”
- “I learned that the type of feedback I provide to my students can heighten their engagement levels during the lesson.”

Many teachers were left questioning what engagement means in the classroom. From feedback to critical thinking, new ways to engage students emerged from the ITM. Increased student collaboration and intentional opportunities for student discussion were examples of engagement strategies shared by teachers. Table 9 describes the themes emerging from specific teacher journal questions and teacher interviews regarding Action Research Question 3.

Table 9*Individual Interviews and Journal Responses Summary of Emerging Themes for Research**Question 3*

Emerging Theme	Data Sources	Participant <i>f</i>	%
Self-Reflection	Interviews 2, 3, 5, 7-9 Journals 2, 3, 5, 7-9	6/9	66%
Classroom Management Strategies	Interviews 1-9 Journals 1-9	9/9	100%
Strategies to Engage Students	Interviews 1-9 Journals 1-9	9/9	100%

Overall Summary of Findings

The ITM PD experience for the three district-level participants and the nine teacher participants was positive. The structure of the ITM model was deemed sustainable as it provided a structure to work within. While the focus of this action research study was microteaching, many of the participants shared how further PD follow the ITM process and its various protocols. An overall sentiment that there is so much more to be done, led to a discussion surrounding expansion and next steps. Both teacher and support personnel were steadfast in the desire to continue the work of the impact team.

Collaboration, trust, reflection, time consideration and positive feedback contributed largely to the effectiveness of the ITM PD. Teachers noted each of the four sources of self-efficacy as important in their ability to participate in and learn from the ITM. A renewed sense of confidence was evident throughout the group after the participation in the ITM. In addition, there was an eagerness for more collaboration amongst colleagues. While instructional changes regarding classroom management and student engagement were noted for only six of the nine

teacher participants, self-reflection was a re-occurring theme for all nine teachers indicating that all participants are reflecting on their practices.

CHAPTER 5

RECOMMENDATIONS

The purpose of this action research study was to uncover teacher's experiences and perceptions of the Impact Team Model (ITM) of professional development (PD) as it relates to the four sources of self-efficacy as well as determine whether the ITM was an effective form of PD. In addition, teachers were asked if participation in the ITM yielded any changes in their instructional practices. Data were collected by reviewing teacher journals and responses in the focus group interview with district-level participants and individual interviews with teacher participants. This chapter provides a summary of the findings organized by research question, followed by conclusions and related recommendations from the findings of the study.

Summary of Major Findings

Action Research Question 1

What are participants' perceptions of the ITM as an effective form of PD?

Findings indicated that honoring teacher time, collaboration, trust, positive feedback, and opportunities for self-reflection, contributed largely to the effectiveness of the ITM PD. Collaborative inquiry was the main focus of the impact team PD. (Bloomberg & Pitchford, 2017) define collaborative inquiry as a process in which teacher teams partner together to understand their impact on student learning and to scale up their expertise. Teachers reported that the ITM model supported this collaboration by creating a team of educators who worked together on a regular basis to improve their instruction. In addition, this time together resulted in additional collaboration outside of the PD sessions. Findings indicated that teachers want to collaborate

with other teachers. The importance of collaboration to enhance the PD experience cannot be overlooked. Teacher collaboration is increasingly viewed as an essential ingredient for improving teaching and learning around the world (Harris et al., 2017). Professional collaboration is predicated on the belief that teaching is a profession and that teachers have expertise, skills, and knowledge to drive their own professional learning and development (Campbell et al., 2017). In this particular study, collaboration heighten the PD experience and was illuminated as one of those most important factors for successful PD.

In addition to the collaborative nature of the ITM, the microteaching protocol was a positive experience for the participants. Microteaching allowed teacher expertise, knowledge and skills to come to the forefront during each of the PD sessions. Teachers found that creating and watching instructional videos together as a team built trust amongst the group. Tschannen-Moran (2020) observed that trust is increasingly recognized by scholars and practitioners alike as a vital element of high-functioning schools. Schools that cultivate high-trust environments are in a better position to accomplish the challenging task of educating a diverse group of students in a changing world. Hord (2005) shared two types of supportive conditions required for successful PD. The first is physical or structural, such as time for meeting, space for meeting, and other resources such as materials, information, and consultants so that the community can come together to do its learning and work. Honoring teacher time was a factor in the effectiveness of the ITM. A second supportive condition is the human or relational feelings or perspectives that the participants have for each other, including respect and high regard for all members, and harmonious attitudes that support learning together. These are all elements that contributed to a positive PD experience for teachers.

Action Research Question 2

What are teachers' experiences and perceptions of the ITM PD related to the four sources of self-efficacy?

Bandura's self-efficacy theory of achievement motivation points out that the self-efficacy or perception of competence of an individual determines the strength of his or her behavioral motivation in the achievement situation (Bandura, 1997). Mastery experiences, vicarious experiences, social and verbal persuasion and positive emotional state are the four sources of efficacy. All nine teachers shared that in some way their self-efficacy was positively impacted as a result of being a part of the ITM of PD, thus impacting their motivation to continue the work.

The impact team's eight protocols provide numerous forms of PD. The microteaching protocol within the ITM incorporated experiences for all four sources of efficacy. Giving teachers an opportunity to engage in role playing and microteaching experiences with specific feedback can have a powerful impact on self-perceptions of teaching competence (Tschannen-Moran et al., 1998).

Participants described the mastery experience of microteaching as a confidence builder. Data from the journal responses and responses to individual interview questions indicated that each teacher felt more confident and capable in their ability as a teacher after each microteaching experience. Bandura (1993) defined teacher self-efficacy as the teacher's confidence in their ability to promote student learning. By providing a mastery experience that positively influences self-efficacy and is focused on instruction, student learning has the potential to increase. Teachers reported that engaging in microteaching increased their confidence, encouraged a growth mindset, and allowed for improvement over time.

Teachers engaged in a vicarious experience within the ITM by observing others complete their microteaching. All teachers felt that observing other members of the impact team successfully complete their microteaching, made them feel that they too possess the capabilities to master comparable activities to succeed. When a model with whom the observer identifies performs well, the efficacy beliefs of the observer are most likely enhanced (R. Goddard et al., 2004). Having these models of success during the microteaching protocol increased the efficacy of the teacher participants and heightened validation of their teaching ability.

Social and verbal persuasion was experienced by each teacher giving and receiving verbal encouragement during the microteaching protocol (EAA) process. Research suggests it is easier to sustain a sense of efficacy, especially in times of difficulty, if significant others express faith in one's capabilities than if they convey doubts (Bandura, 1997). By providing and receiving positive feedback, their confidence increased. At the end of each session teachers collected the microteaching note taking template from each participant so they could look back at the encouraging comments before planning their next microteaching session increasing their desire to participate in the PD.

The impact team PD provided a safe and trusting space for teachers to take risks and have discussions about instruction. The sessions yielded strong collegial relationships and increased collaboration outside of the PD sessions amongst the participants. When teachers value each other's expertise, have a common purpose, share responsibility for their students, and jointly problem solve (Little, 1990), they are bound together in professional emotional geographies as well as moral ones (Hargreaves, 2001). A positive emotional state was achieved by all, as this PD provided both collegial and community support within a safe environment for learning resulting in a renewed excitement for teaching.

Action Research Question 3

What are teachers' perceptions regarding changes in their instructional practices after participating in the ITM PD?

Research has shown that professional collaboration activities might have a positive effect on student achievement (Dumay et al., 2013; Lee & Smith, 1996; Louis et al., 2010). While my study did not focus specifically on student achievement, DuFour et al. (2005) advocated implementing collaborative activities in the form of professional learning communities, stating that such collaborative communities “hold out immense, unprecedented hope for schools and the improvement of teaching” (p. 128). Having highly qualified teachers has the potential to yield positive student outcomes. Regardless of what we call the PD, findings indicated that collaboration is key for the improvement of teaching and changed in instructional practices.

In this study, shifts in instructional practices were reported by all nine teachers. They indicated that the instructional practices involving classroom management and strategies to engage students have changed after experiencing this PD. In addition, going through each microteaching sessions allowed for self-reflection and critique, as well as an increased awareness when watching themselves and others in terms of instructional strategies. Allowing each teacher to determine the lens for observation during their microteaching sessions was beneficial in many ways, but two of three focus group members felt not having a universal instructional focus impeded the work of any type of instructional shift. A possible reason for the relatively small shift in instructional practice could be the length of the action research. Perhaps the timeframe for this study was not enough, but it was a start toward a long-term PD plan. According to a 2005 report by Fixsen et al., the consensus among systems researchers is that it takes 2-4 years for a new initiative to be fully implemented and operational across a school or district. Further action

research cycles could include selecting one instructional focus for the team over a span of multiple years.

Overall, data collected in this study yielded important findings and conclusions from the implementation of the ITM PD. Although there are certain forms of PD that are more impactful than others, there is more than one way to engage in PD. The Learning Forward Standards for PD describe the conditions, content, and processes for professional learning that leads to high-quality teaching and learning for students and educators (Learning Forward, 2022). Four of the Learning Forward standards directly correlate with the ITM PD. Professional Expertise, Evidence, Implementation, and Culture of Collaborative Inquiry are four of the standards that are embedded within the ITM. When teachers engaged in PD that aligned with the Learning Forward Standards for PD, findings did indicate that participants did perceive the ITM as an effective form of PD.

Although these standards are supporting, one must recognize that effective PD must have a variety of features. The data collected in the study indicated a need for PD opportunities to connect with the four sources of self-efficacy, as well as be collaborative in nature. At the end of the day, the name of the PD does not determine whether it will be effective, but rather the nuts and bolts of the structure.

Implications for Policy, Practice, and Leadership

Teachers want to create meaningful experiences for their students that result in academic growth. PD is a key factor in supporting teachers. The conceptual framework of this action research study suggested that effective PD could lead to a positive influence on teacher self-efficacy, ultimately leading to retaining high quality teachers, and increased student achievement. Although effective PD and teacher self-efficacy was the focus of this study,

participant comments brought to light the importance of self-reflection leading to instructional changes, that would ultimately support student learning. It is essential that school leaders provide meaningful, job-embedded PD for their staff that honors teacher time and builds trust amongst the participants, and provides opportunities for collaboration, self-reflection and positive feedback. In addition, leaders must be willing to foster an environment that allows teachers to engage in opportunities where they have a hand in decision making and opportunities to lead. With the pipeline of educators dwindling, high quality teachers are needed. Effective PD could be the catalyst that increases teacher quality and retains educators in this ever changing landscape of education. PD practice and policy should focus on a structure that allows for job-embedded PD that includes effective key features from the Learning Forward Standards.

The findings from this action research study, relevant literature related to the findings, and the Learning Forward Standards for PD provide a roadmap for effective and sustainable PD. Table 10 describes the correlation between the study findings and recommendations to the Learning Forward Standards for PD and supporting literature.

Table 10*Study Recommendations*

Finding	Related Recommendations	Supporting Literature
Collaboration is a key driver in the overall effectiveness of the PD	Provide collaborative PD opportunities for teachers	Gallimore et al. (2009); Saunders et al. (2009); Bloomberg & Pitchford (2017); Harris et al. (2017); Campbell et al. (2017); Hargreaves & O'Connor (2018); Learning Forward (2022)
Time is an important factor to consider when planning sustainable PD	PD should take place during teacher contract hours Create both short and long term plans for PD implementation	Guskey (1999); Birman et al. (2000); Garet et al. (2001); Darling-Hammond et al. (2017); Learning Forward (2022)
Confidence in teaching abilities can be increased when educators are exposed to the four sources of self-efficacy	Provide PD experiences like microteaching that allow participants to engage in the four sources of self-efficacy	Bandura (1977); Woolfolk Hoy (2000); Goddard et al. (2004); Tschannen-Moran & McMaster (2009); Hattie (2012); Bloomberg & Pitchford (2017); Learning Forward (2022)
Positive feedback can increase self-reflection impacting instructional practices	Encourage opportunities for feedback within PD experiences	Learning Forward (2022)

Note. PD = professional development

Recommendation 1

Provide collaborative PD opportunities for teachers. Teacher collaboration is increasingly viewed as an essential ingredient for improving teaching and learning around the world (Harris et al., 2017). Professional collaboration is predicated on the belief that teaching is a profession and that teachers have expertise, skills, and knowledge to drive their own professional learning and development (Campbell et al., 2017). Teachers want to work together.

Collaboration in PD is an important, yet difficult component to consider. It is critical that collaboration not be mistaken for a one size fits all approach, but rather considered when determining the structure of the PD. The Learning Forward (2022) Standard of Culture of

Collaborative Inquiry is described as educators engaging in continuous improvement, building

collaboration skills and capacity, and sharing responsibility for improving learning for all students. The ITM provided the opportunity for its participants to view 27 different microteaching videos. The team worked together to improve their craft by providing feedback to one another using the EAA protocol at each PD session.

Bloomberg and Pitchford (2017) define collaborative inquiry as a process in which teacher teams partner together to understand their impact on student learning and to scale up their expertise. The work of the impact team was rooted in collaboration, yet individualized in the focus of each teacher microteaching session. Although a specific structure was followed, each teacher determined the lens of the EAA protocol when presenting their video. The collaborative inquiry portion of the ITM allowed for processing of information and discussion amongst the team. Furthermore, collaboration continued outside the ITM sessions. The collegial relationships that were built created trust within the team, increasing collaborative efforts within and across grade level teams even after the conclusion of the ITM PD.

Recommendation 2

Create a short- and long-term plan for implementation, focusing on the time commitment of the participants. Teachers appreciate when their time is honored. Providing job-embedded PD with minimal extra time outside of contract hours supported the overall impact of the PD on its participants. In an effort to continue the positive experience of the ITM, in the short term, we will continue with the microteaching protocol during the first semester, focusing on our recently adopted curriculum. This work will then be followed by the implementation of the evidence walk protocol with a continued focus on our new curriculum. Continuing to use the ITM structure in different ways will support the overall sustainability of this PD. Several researchers have shown that the most effective PD proven to change teaching practices and improve student performance

is collaborative, sustained, and job-embedded (Darling-Hammond et al., 2017). All participants shared how much they appreciated that their time was considered and that the PD was job-embedded. The Learning Forward Standard of Implementation describes having educators understand and apply research on change management, engage in feedback processes, and implement and sustain professional learning (Learning Forward, 2022). Responses from participants indicated that in order for PD to be sustainable, having job-embedded PD within contractual hours was essential.

In addition, there is a long-term plan developing for the continuation and expansion of the ITM. The ideal size of an impact team is 8-10 participants. Although expansion is desired, keeping teams small, was important to the existing participants. We plan to create multiple impact teams throughout the school led by our early adopters on the existing impact team to continue this effective PD. Several key features in effective PD identified by researchers include long-duration, collective participation, active learning, and coherence (Desimone, 2009; Desimone & Stuckey, 2014). Effective PD requires considerable time, and that time must be well organized, carefully structured, purposefully directed, and focused on content or pedagogy or both (Birman et al., 2000; Garet et al., 2001; Guskey, 1999).

Recommendation 3

Create PD that allows connection to the four sources of self-efficacy. The Learning Forward (2022) Standard of Professional Expertise occurs when educators apply standards and research to their work, develop the expertise essential to their roles, and prioritize coherence and alignment to their learning. The collaborative inquiry portion of the ITM allowed for each participant to share their professional expertise with the impact team by videotaping three lessons and work together to improve instructional practices.

Although mastery experiences and vicarious experiences are often most impactful on teacher self-efficacy, social and verbal persuasion along with a positive emotional state cannot be discounted. During the ITM PD, the combination of all four sources of efficacy positively influenced the overall experience for the teachers.

Recommendation 4

Encourage opportunities for feedback within PD experiences. The Learning Forward (2022) standard of evidence falls within the category of Transformational Processes. Educators create expectations and build capacity for use of evidence, leverage evidence, data, and research from multiple sources to plan educator learning, and measure and report the impact of professional learning. The EAA protocol within microteaching uses the evidence from each teacher's microteaching video to collect data on the focus of the observation and leverage that feedback to inform next steps in the classroom. Each teacher determined the lens for the observation and asked for specific feedback during the protocol.

Feedback encouraged follow through during the microteaching sessions. Study findings provided evidence that teachers were influenced by the feedback that they received or did not receive. Although there was differing opinions on whether critical feedback should be given peer to peer, all participants agreed that positive feedback supported the overall PD experience. The EAA protocol, provided these guidelines for how feedback would be given during each microteaching session and aligns directly with the evidence standard from the Learning Forward (2022) Standards. A viable strategy for supporting and improving instructional practices is to provide feedback to teachers (Colvin et al., 2009). In addition, leaders should be creating an environment that gives teachers a sense of agency along with voice and choice. These elements are critical to building capacity amongst staff. Moving forward, the role of the focus group

members will likely dissolve, as teachers will lead multiple smaller impact teams through the EAA protocol.

Recommendations for Future Research

The ITM of PD focuses on eight purposeful protocols. For this action research study, one of those eight was implemented. Recommendations for future research include consideration of additional cycles to include expansion of the remaining protocols. With eight purposeful protocols, future cycles of action research are needed within each of the protocols. Future cycles within the microteaching protocol itself could be beneficial before moving into additional protocols. The ITM as a whole is a multi-year PD.

In addition to a second cycle of microteaching followed by expansion into other protocols, involving additional educators should be considered. Teachers valued the collaborative nature of the PD as well as the elements of the microteaching protocol itself. The ITM PD was a positive experience for the participants indicating that expanding the team to allow for more participants is recommended.

Reflections

At the conclusion of the study, teachers continued to ask when the next cycle of action research would begin. They are hopeful to continue with microteaching tied to our new curriculum, as well as begin some of the other protocols within the ITM. In addition, they want to make a plan to expand the ITM to more teachers. How this will happen is still undecided.

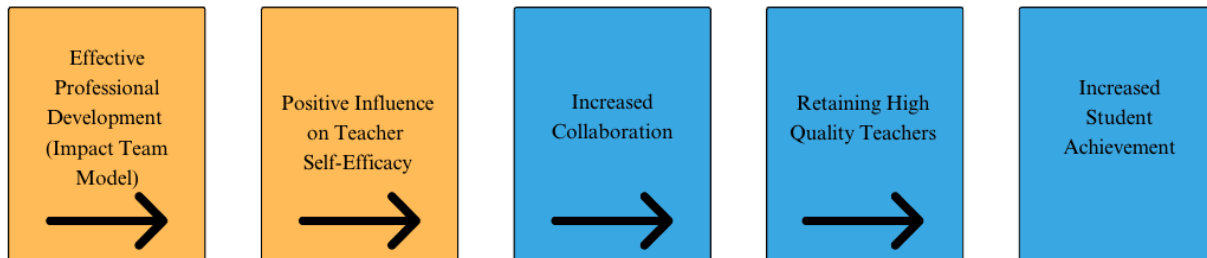
As the researcher and practitioner, I was very pleased with the results of this study. I assumed the teachers would have more critical feedback of the model, but the majority of what they shared in the interviews and journal responses was positive. The importance of collaboration was a thread throughout all conversations and responses, which I believe truly

affected the self-efficacy of each teacher. Instructional practices are being reflected upon and new strategies are being attempted. Without this purposeful collaboration, I do not think the results of the study would have been the same. This is why I have adjusted my initial conceptual framework to highlight collaboration as an important factor at the conclusion of this study.

Figure 4 provides an updated model suggesting that effective PD using the ITM has the potential to not only positively influence teacher self-efficacy, but also increase collaboration, ultimately leading to retaining high quality teachers and increased student achievement.

Figure 4

Updated Conceptual Model for Impact of Effective Professional Development and Teacher Self-Efficacy



Note. This model shows that effective professional development can positively influence teacher self-efficacy, increasing collaboration, ultimately leading to retaining high quality teachers and increased student achievement. The orange highlighted portions of the model (Effective Professional Development and Increased Teacher Efficacy) are the primary foci of the study.

Conclusion

Although retention of high quality teachers and student achievement were not measured in this study, a natural connection can be made between the two. With the teacher pipeline dwindling, it is more critical than ever to create environments where teachers can grow and

thrive as professionals (U.S. Bureau of Labor Statistics, 2018). Leaders must foster environments that include effective PD that focus on the Learning Forward Standards and strategies that connect to the four sources of efficacy. The PD must take place in a safe environment that provides opportunities to build confidence and trust through collaboration, increase a growth mindset, and provide validation for the participants, ultimately leading to a renewed excitement for teaching. This connection is essential to positively influence the self-efficacy of the participants. Once self-efficacy increases, motivation is impacted and more collaboration is desired as teachers have increased confidence to share ideas and strategies with other teachers, leading to a collectively high quality work force that can ultimately increase student achievement.

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APPENDIX A

ITM Professional Development in Microteaching

The impact team model will be implemented beginning October 30 with members of the impact team, consisting of nine teachers and three district staff. The professional development will occur in four phases:

Phase I (October 30) – Learning about Microteaching and Using the Evidence, Analysis, and Action (EAA) protocol. In this phase, all participants learn about microteaching, review examples of microteaching from the teacher facilitator and district personnel, and practice observation and feedback using the EAA protocol. After this phase, teachers try microteaching in their classrooms and videotape the microteaching lesson before moving into Phase II of the ITM process.

Phase II (November 6 and 13) – Using Microteaching in the Classroom and Collaborative Inquiry through Video Viewing and Feedback Using the Evidence, Analysis, and Action protocol. During each of these sessions, microteaching of four-five teachers or support staff will be viewed and observation and feedback provided using the EAA protocol. By the end of the November 13 session, nine teachers will have engaged in the protocol. Then, the teachers and support staff will engage in a second round of microteaching to videotape before the beginning of Phase III.

Phase III (December 4 and 18) – Continued Microteaching in the Classroom and Collaborative Inquiry through Video Viewing and Feedback using the EAA protocol. The nine teachers will videotape a second microteaching lesson. These two days are half-day professional development days. During these two days the videos of all nine teachers will be observed and feedback

provided using the EAA protocol. Then the teachers will engage in a third round of microteaching to videotape before Phase IV.

Phase IV (January 9) – A final Microteaching in the Classroom and Collaborative Inquiry through Video Viewing and Feedback using the EAA protocol. The nine teachers and support staff will videotape a third microteaching lesson. The videos of all ten teachers and support staff will be observed and feedback provided using the EAA protocol.

Summary of Impact Team Professional Development

Microteaching

Dates	Professional Development Description
October 30 th	Introduction to microteaching template and use of EAA template. View sample videos from teacher facilitator and district personnel
November 6 th & 13 th	At each session, (4-5) teachers on the impact team will share a video of microteaching and the team will use the EAA to provide feedback. This will allow each teacher and support staff one time to engage in the protocol
December 4 th & 18 th	At each session, (4-5) teachers will provide a video of microteaching and the Impact Team will use the EAA protocol to provide feedback to provide a second time to engage with the protocol
January 9 th	All nine teachers will provide a video of microteaching and the Impact Team will use the EAA protocol to provide feedback to provide a third and final time to engage with the protocol during cycle 2 of the action research study

MICROTEACHING PLAN

October 30th

Goals & Objectives (Why)	Participant Action Steps (How/What)	Participants (Who)	Length of PD Session
<p>To introduce participants to the ITM microteaching protocol</p>	<p>1. Participants will observe examples of microteaching lessons. These videos will be a combination of web-based examples as well as examples from one of the participants of the study</p> <p>2. A team discussion will take place surrounding the lessons and the team will determine a lens for observation when participants engage in their own microteaching experience? (What does each participant want the observers to look for? What is their instructional focus this year? What is the teacher doing? What are the students doing?)</p> <p>3. The microteaching protocol of EAA (Evidence, Analysis, Action) and note taking template will be shared with participants allowing them to preview the</p>	<p>All participants (12) of the ITM</p>	<p>Meeting will last 60-90 minutes</p>

	<p>tool they will use in future PD sessions.</p> <p>4.Participants will be shown a “how to” create a microteaching lesson video, allowing them to prepare their lesson to be viewed by the team</p> <p>5.Participants will be provided time to reflect on the October 23rd PD session</p>		
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MICROTEACHING PLAN

November 6th and November 13th

(HALF PD DAYS)

Goals & Objectives (Why)	Participant Action Steps (What)	Participants (Who)	Length of PD Session
<p>To observe microteaching lessons and engage in the ITM's microteaching protocol by using EAA (Evidence, Analysis, Action)</p>	<ol style="list-style-type: none"> 1. A brief review of the microteaching protocol of EAA (Evidence, Analysis, Action) and note taking template will take place 2. Participants will observe a microteaching lesson with an observation focus determined by the teacher being observed. 3. The team will use the microteaching note template while observing the recording of the participant's microteaching 4. The team will engage in the microteaching protocol of EAA (Evidence, Analysis, Action) after viewing the recording of the participant's microteaching 5. All participants will be provided time to reflect on the 	<p>Teachers (4-5) will be presenting their microteaching lesson to the team. These pre-recorded lessons will last 5-10 minutes</p> <p>All participants of the ITM will be observing three microteaching lessons</p>	<p>The microteaching protocol will last approximately 45 minutes per teacher including the 5-10 minute viewing of the previously recorded lesson</p>

	November 6 th and November 13 th PD sessions in their participant journals at the conclusion of the PD session		
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MICROTEACHING PLAN

December 4th and December 18th

(FULL PD DAYS)

Goals & Objectives (Why)	Participant Action Steps (What)	Participants (Who)	Length of PD Session
<p>To allow all teacher participants to engage in preparing a second microteaching lesson for the team to observe</p> <p>To observe microteaching lessons and engage in the ITM's microteaching protocol by using EAA (Evidence, Analysis, Action)</p>	<p>1. A brief review of the microteaching protocol of EAA (Evidence, Analysis, Action) and note taking template will take place</p> <p>2.Participants will observe a microteaching lesson with an observation focus determined by the teacher being observed.</p> <p>3.The team will use the microteaching note template while observing the recording of the participant's microteaching</p> <p>4.The team will engage in the microteaching protocol of EAA (Evidence, Analysis, Action) after viewing the recording of the participant's microteaching</p> <p>5.All participants will be provided time to reflect on the</p>	<p>Teachers (4-5) will be presenting their microteaching lesson to the team. These pre-recorded lessons will last 5-10 minutes</p> <p>All participants of the ITM will be observing three microteaching lessons</p>	<p>The microteaching protocol will last approximately 45 minutes per teacher including the 5-10 minute viewing of the previously recorded lesson</p> <p>4 hours on each of the December 4th and December 18th PD days (approx. 8:00am-3:00pm)</p>

	November 4 th and December 18th PD sessions in their participant journals at the conclusion of the PD session		
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MICROTEACHING PLAN

January 9th

(FULL PD DAY)

Goals & Objectives (Why)	Participant Action Steps (What)	Participants (Who)	Length of PD Session
<p>To allow all teacher participants to engage in preparing a second microteaching lesson for the team to observe</p> <p>To observe microteaching lessons and engage in the ITM's microteaching protocol by using EAA (Evidence, Analysis, Action)</p>	<ol style="list-style-type: none"> 1. A brief review of the microteaching protocol of EAA (Evidence, Analysis, Action) and note taking template will take place 2. Participants will observe a microteaching lesson with an observation focus determined by the teacher being observed. 3. The team will use the microteaching note template while observing the recording of the participant's microteaching 4. The team will engage in the microteaching protocol of EAA (Evidence, Analysis, Action) after viewing the recording of the participant's microteaching 5. All participants will be provided time to reflect on the January 	<p>Teachers (9) will be presenting a microteaching lesson to the team</p> <p>All participants of the ITM will be observing the microteaching lessons</p>	<p>The microteaching protocol will last approximately 45 minutes per teacher including the 5-10 minute viewing of the previously recorded lesson</p> <p>The professional development will last a full day (approx. 8:00am-3:00pm)</p>

	8 th PD session in their participant journals at the conclusion of the PD session		
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APPENDIX B

INTERVIEW PROTOCOL

Interview, Focus Group and Journal Consent Form

I, _____, agree to participate in a research study regarding my experiences with the impact team professional development occurring at Green Elementary School. This qualitative study seeks to explore an impact team model professional development as an effective form of professional development and its effects on teachers' self-efficacy. The purpose of this study is to inform stakeholders who make decisions about professional development and to gain teachers' perspectives on the knowledge and skills acquired as a result of the participating in the impact team model professional development.

As a participant, I understand that my participation in the study is purposeful and voluntary. All participants within the impact team professional development will have the opportunity to voluntarily participate in one (1) semi structured interview, one (1) structured focus group meeting and share their reflections by journaling on six (6) opportunities at each impact team meeting.

I understand that the interviewer has been trained in the research of human subjects, my responses will be confidential, and that my name will not be associated with any results of this study. I understand that the data will be collected using an audio recording device and then transcribed for analysis. Information from the audio recording and transcription will be safeguarded so my identity will never be disclosed.) My true identity will not be associated with the research findings.

I understand that there is no known risk or discomfort directly involved with this research and that I am free to withdraw my consent and discontinue participation at any time. I agree that should I choose to withdraw my consent and discontinue participation in the study that I will notify I listed below, in writing. A decision not to participate in the study or to withdraw from the study will not affect my relationship with the researcher, the College of William and Mary generally or the School of Education, specifically.

If I have any questions or problems that may arise as a result of my participation in the study, I understand that I should contact Melissa Reams, the researcher at 804-916-9484 or mtreams@wm.edu, Dr. Leslie Grant, dissertation chair at lwgran@wm.edu or Dr. Tom Ward, chair of EDIRC, at 757-221-2358 or EDIRC-L@wm.edu.

My signature below signifies that I am at least 18 years of age, that I have received a copy of this consent form, and that I consent to participate in this research study.

Signature of Participant

Date

Signature of Researcher

Date

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON (December 20, 2023 AND EXPIRES ON December 20, 2025.

SEMI STRUCTURED INTERVIEW QUESTIONS

The individual interviews will last between 15 minutes to 45 minutes. I will record basic information including: time, date, where the interview took place and the names of the interviewer and interviewee. The process will be open-ended, allowing for follow up questions. Responses will be recorded and all questions will be printed for the participants to guide the conversation. Confidentiality procedures will be explained and any questions regarding confidentiality will be answered. All participants will have given consent prior to the start of the interview. Questions have been adapted from McSweeney, Jennifer, "Teacher Perceptions of Professional Development Practices and Their Influence on Self-Efficacy: An Action Research Study" (2019). *Dissertations, Theses, and Masters Projects*. William & Mary. Paper 1582641581. <http://dx.doi.org/10.21220/m2-9wve-cc75>

1. The Impact Team Model focuses on collaborative inquiry. During this semester, our team worked together to examine our educational practices through the microteaching protocol. Overall, what went well and not so well with the Impact Team Model (ITM)? (RQ1)
2. You will recall that the PD focused on the microteaching protocol specifically. In the first phase of the PD, we:

- Learned about microteaching and using the evidence, analysis, and action protocol
 - Reviewed examples of microteaching
 - Practiced observing and giving feedback using the EAA protocol.
- What were your perceptions of the effectiveness of the first phase of the PD? (RQ1)
 - To what degree did this first phase influence your belief in your ability to implement the microteaching protocol? In what ways? (RQ2)
 - How influential was first learning about the microteaching protocol and the evidence, analysis, and action protocol? In what ways?
 - How influential was reviewing examples of microteaching? In what ways?
 - How influential was practicing observing and providing feedback? In what ways?
3. In Phase II of the PD, we began to use microteaching in the classroom and engaged in collaborative inquiry through viewing one another's videos and providing feedback using the EAA protocol.
- What were your perceptions of the effectiveness of the second phase of the PD? (RQ1)
 - To what degree did this second phase influence your belief in your ability to implement the microteaching protocol? In what ways? (RQ2)
 - How influential was first implementing microteaching to your classroom? In what ways?

- How influential was giving and receiving feedback based on the videos?
In what ways?
4. In the next phases, we continued using microteaching in the classroom and giving and receiving feedback via the EAA protocol. By the end, each teacher engaged in three rounds of the process.
- What were your perceptions of the effectiveness of these phases of the PD? (RQ1)
 - To what degree did these phases influence your belief in your ability to implement the microteaching protocol? In what ways? (RQ2)
 - How influential was continuing to implement microteaching to your classroom? In what ways?
 - How influential was giving and receiving feedback based on the videos?
In what ways?
5. The ITM protocol is based on collaborative inquiry, a process in which the teacher teams partner together to understand their impact on student learning and scale up their expertise. What were your perceptions of collaborating with your colleagues in this PD?
- What was effective or what was not effective? (RQ1)
 - To what degree did collaborating with your colleagues affect your implementation of microteaching and your belief in your ability to implement microteaching? (RQ2)
6. What do you do differently in your classroom, if anything at all, now that you have experienced the Impact Team Model with a focus on microteaching? (RQ3)

7. Have you changed any specific instructional practices after participation in the ITM? In what ways? (RQ3)
8. Have you implemented any new instructional practices since participation in the ITM? Please describe any new practices. (RQ3)
9. Overall, what changes would you recommend in continuing to use the Impact Team Model of professional development? (RQ1)

APPENDIX C

TABLE OF SPECIFICATIONS INTERVIEWS AND FOCUS GROUP QUESTIONS

Action Research Question	Interview Question	Focus Group Question
<p>1. What are participants' perceptions of the Impact Team Model as an effective form of professional development?</p>	<p>1. The Impact Team Model focuses on collaborative inquiry. During this semester, our team worked together to examine our educational practices through the microteaching protocol. Overall, what went well and not so well with the Impact Team Model (ITM)?</p> <p>2. What were your perceptions of the effectiveness of the first phase of the PD? How effective was first learning about the microteaching protocol and the evidence, analysis, and action protocol? In what ways? How effective was reviewing examples of microteaching? In what ways? How effective was practicing observing and providing feedback? In what ways? What went well? What recommendations would you have for any changes?</p> <p>3. What were your perceptions of the effectiveness of the second phase of the PD? How effective was viewing one another's videos? In what ways? How effective was providing feedback to one another using the EAA protocol? In what ways? What went well? What recommendations would you have for any changes?</p>	<p>1. The Impact Team Model focuses on collaborative inquiry. During this semester, our team worked together to examine our educational practices through the microteaching protocol. Overall, what went well and not so well with the Impact Team Model (ITM)?</p> <p>2. What were your perceptions of the effectiveness of the first phase of the PD?</p> <p>3. What were your perceptions of the effectiveness of the second phase of the PD?</p> <p>4. What were your perceptions of the effectiveness of the third phase of the PD?</p> <p>5. To what degree is the Impact Team Model a sustainable model of PD? What contributes to or detracts from sustainability over time?</p> <p>6. What were the overall benefits of the ITM model?</p> <p>7. What were the overall challenges?</p> <p>8. What are your recommendations for future professional development?</p>

	<p>4. What were your perceptions of the effectiveness of the final phases of the PD? How effective was viewing one another's videos the second and third time? In what ways? How effective was providing feedback on videos the second and third time? In what ways? What went well? What recommendations would you have for any changes?</p> <p>5. The ITM protocol is based on collaborative inquiry, a process in which the teacher teams partner together to understand their impact on student learning and scale up their expertise. What were your perceptions of collaborating with your colleagues in this PD? What was effective or what was not effective?</p> <p>6. Overall, what changes would you recommend in continuing to use the Impact Team Model of professional development?</p>	
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<p>2. What are teachers' experiences and perceptions of the Impact Team Model professional development related to the four sources of self-efficacy?</p>	<p>7. What are your current beliefs of your abilities as teachers?</p> <p>8. How do you feel about your abilities as a teacher after this PD?</p> <p>9. Did working collaboratively with colleagues, support a positive or negative experience?</p> <p>10. How did the experience of watching others colleagues present their microteaching make you feel?</p>	
<p>3. What are teachers' perceptions of changes to their instructional practices after participating in the Impact Team Model professional development?</p>	<p>11. How did this professional development impact your classroom instruction?</p> <p>10. What do you do differently in your classroom now that you have experienced the Impact Team Model PD?</p> <p>11. What specific instructional practices have you changed in your classroom after participation in the ITM?</p> <p>12. Have you implemented any new instructional practices since participation in the ITM?</p>	

APPENDIX D

FOCUS GROUP PROTOCOL

The focus group meeting will last approximately 2 hours. The meeting will be recorded and transcribed. During the introduction of the meeting, expectations of confidentiality will be discussed, I will explain the purpose of the study and the structure of the focus group meeting. Including probes in the meeting will allow the duration of the meeting to be extended as needed. At the end of the meeting, the researcher will thank the participants and answer any questions that the participants may have in addition to sharing that the results of the study will be available to all participants when completed. Questions have been adapted from McSweeney, Jennifer, "Teacher Perceptions of Professional Development Practices and Their Influence on Self-Efficacy: An Action Research Study" (2019). *Dissertations, Theses, and Masters Projects*. William & Mary. Paper 1582641581.<http://dx.doi.org/10.21220/m2-9wve-cc75>

Focus Group Questions:

1. The Impact Team Model focuses on collaborative inquiry. During this semester, our team worked together to examine our educational practices through the microteaching protocol. Overall, what went well and not so well with the Impact Team Model (ITM)? (RQ1)
2. You will recall that the PD focused on the microteaching protocol specifically. In the first phase of the PD, we:
 - Learned about microteaching and using the evidence, analysis, and action protocol
 - Reviewed examples of microteaching

- Practiced observing and giving feedback using the EAA protocol.
 - What were your perceptions of the effectiveness of the first phase of the PD?
 - How effective was first learning about the microteaching protocol and the evidence, analysis, and action protocol? In what ways?
 - How effective was reviewing examples of microteaching? In what ways?
 - How effective was practicing observing and providing feedback? In what ways?
 - What went well? What recommendations would you have for any changes?
3. In Phase II of the PD, we began to use microteaching in the classroom and engaged in collaborative inquiry through viewing one another's videos and providing feedback using the EAA protocol.
- What were your perceptions of the effectiveness of the second phase of the PD?
 - How effective was viewing one another's videos? In what ways?
 - How effective was providing feedback to one another using the EAA protocol? In what ways?
 - What went well? What recommendations would you have for any changes?
4. In the next phases, we continued using microteaching in the classroom and giving and receiving feedback via the EAA protocol. By the end, each teacher engaged in three rounds of the process.
- What were your perceptions of the effectiveness of these phases of the PD?
 - How effective was viewing one another's videos the second and third time? In what ways?

- How effective was providing feedback on videos the second and third time? In what ways?
 - What went well? What recommendations would you have for any changes?
- 5. The ITM protocol is based on collaborative inquiry, a process in which teacher teams partner together to understand their impact on student learning and to scale up their expertise. What were your perceptions of the effectiveness collaboration that occurred in the professional development?
- 6. To what degree is the Impact Team Model a sustainable model of PD? What contributes to or detracts from sustainability over time?
- 7. What were the overall benefits of the ITM model? What were the overall challenges?
- 8. What are your recommendations for future professional development?

APPENDIX E

JOURNAL QUESTIONS

After each ITM meeting, participants will be asked to respond to individual questions, reflecting on the experience with each protocol during each meeting. The ITM PD sessions will produce 6 journal responses from each teacher participant.

Journal Response Questions:

1. How do you feel after participating in the microteaching protocol?
2. On a scale from 1 (negative) to 5 (positive) how would you rate your experience with today's microteaching session?
3. After participating in today's microteaching, do you feel more confident and capable in your ability as a teacher? Please describe why or why not.
4. Did observing other members of the Impact Team successfully complete their microteaching, make you feel that you too, possess the capabilities to master comparable activities to succeed?
5. Do you feel that the impact team provides both collegial and community support enabling a willingness to take risks, and make and embrace mistakes as learning opportunities?
6. Did giving and receiving verbal encouragement from others during the microteaching protocol (EAA) process, increase your belief in your ability as a teacher?
7. Are there any aspects from the microteaching protocol that you would support your classroom instruction?

APPENDIX F

TABLE OF SPECIFICATIONS JOURNAL RESPONSE QUESTIONS

Action Research Question	Journal Response Question
<p>1. What are teachers' perceptions of the Impact Team Model as an effective form of professional development?</p>	<p>1. How do you feel after participating in the microteaching protocol?</p> <p>2. On a scale from 1 (negative) to 5 (positive) how would you rate your experience with today's microteaching session?</p>
<p>2. What are teachers' experiences and perceptions of the Impact Team Model professional development related to the four sources of self-efficacy?</p>	<p>3. After participating in today's microteaching, do you feel more confident and capable in your ability as a teacher? Please describe why or why not.</p> <p>4. Did observing other members of the Impact Team successfully complete their microteaching, make you feel that you too, possess the capabilities to master comparable activities to succeed?</p> <p>5. Do you feel that the impact team provides both collegial and community support enabling a willingness to take risks, and make and embrace mistakes as learning opportunities?</p> <p>6. Did giving and receiving verbal encouragement from others during the microteaching protocol (EAA) process, increase your belief in your ability as a teacher?</p>
<p>3. What are teachers' perceptions of changes to their instructional practices after participating in the Impact Team Model professional development?</p>	<p>7. Are there any aspects from the microteaching protocol that you would support your classroom instruction?</p>

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Educational Background

Ed.D. William & Mary, Williamsburg, VA
Educational Policy, Planning, and Leadership (August 2024)

M.A.Ed. Virginia Commonwealth University, Richmond, VA
Educational Leadership (2010)
Endorsement, K-12 Administration (2010)

B.S. University of Massachusetts, Amherst, MA
Major: Communication (2003)

Professional Experience

Principal, Randolph Elementary
Goochland County Public School, Crozier, VA (2020-Present)

Principal, Greenfield Elementary
Chesterfield County Public Schools, Richmond, VA (2016-2020)

Associate Principal, Holladay Elementary
Henrico County Public Schools, Richmond, VA (2014-2016)

Associate Principal, Gayton Elementary
Henrico County Public Schools, Richmond, VA (2012-2014)

Math Teacher in Residence, Gayton Elementary School
Henrico County Public Schools Richmond, VA (2010-2012)

First Grade Teacher, Gayton Elementary School
Henrico County Public Schools, Richmond, VA (2006-2010)

Fourth Grade Teacher, Gayton Elementary School Henrico County Public Schools, Richmond, VA (2004-2006)

Professional Organizations and Awards

Member of NAESP 2016-present
Member of VAESP 2016-present
NAESP National Principal Mentor 2021-present
R.E.B. Distinguished Leadership Award 2020