LEARNING BY DOING: A CASE STUDY EXPLORING MENTOR TEACHERS' EXPERIENCE IN A TEACHER PREPARATION PROGRAM THROUGH THE LENS OF COMMUNITIES OF PRACTICE AND TRANSFORMATIVE LEARNING

by

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To my mother and my children,
they continue to be my most beautiful and disorientating experience.

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I have benefitted greatly from a variety of people who supported me on this transformative journey.

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Sara Marie Horne

PREFACE

I have been in education for over 20 years. Throughout this time, I have always chosen to work with the "underdog." I taught within inner city schools where poverty was a crisis, focused on Title I classes, and worked with students who had learning challenges. I have always believed that education was more than curriculum, tests, and memorization; rather, I believe teaching and learning are transformative.

Early in my career, I thought that supporting students with their learning was a way to build their confidence, self-esteem, and hopefully their quality of life. With this mindset, I pursued a Master of Education in reading. I loved the ideas of supporting and facilitating learning, especially how to read, to transform students. Reading has always been my way to escape life and expand who I am as a person. After my master's degree, I was motivated to pursue a doctoral degree in reading. I was excited to be able to dive in deep with the philosophy of reading.

After I started the philosophy of reading program, my career changed. I went from working with children to working with adults. In my new role as a teacher of teachers, I started doing research on how to teach adults. I read about teaching and learning theories, which led me to understand that there are types of learning: learning new skills and information, and then a much deeper level of learning that required a shift in a person's worldview. This new understanding of adult learning led me to think about the deep, life-changing type of learning that I was amidst. It now has a name: transformative learning.

What interested me the most about transformative learning was what Mezirow (1978) called a “disorientating dilemma.” Jack Mezirow, the original author of the transformative learning theory, defines disorientating dilemma as, an experience in a person’s life that shifts their worldview. Mezirow typically uses the word “dilemma” with disorientating (1978). However, I prefer “experience” as “dilemma” has a negative connotation.

A disorientating experience is anything that happens to you that shifts your worldview: it can be a positive experience or a challenging experience; what matters is that the experience is powerful enough to change the way you see the world. After that awareness, a person has a choice to embrace the state of disequilibrium, or they can choose to not consider the change of thinking the disorientating experience presents to them. It is a choice; I love that. If something in my life happens to me and it changes the way I see the world, I have the choice to either embrace it or stay living my life as it always has been.

Early in my doctoral studies, I began reading incessantly about transformative learning, not just works by Mezirow, but interpretations and discussions of transformative learning and its application to the world we live in. I further broke down Mezirow’s 10 steps of transformative learning into teachable ways of thinking and/or practical application. I believe the first step in the transformative learning process to be the most important: having a disorienting experience. In order to start the transformative learning process, one must be aware of having a disorienting experience.

During my doctoral studies I started practicing meditation and mindfulness. I wanted to know if there was a correlation between mindfulness, metacognition, and

transformative learning. In one of my courses, I designed a survey that demonstrated a relationship between mindfulness, metacognition, and the potential for or adoption of transformative learning. I became enthralled by considering ways to apply Mezirow's (1978) transformative learning theory in the world around us. How could it apply? Who does it apply to? How can I make this theory tangible and practical? I was energized by my utter belief in transformative learning. The study I created in that course sparked a fire inside me. The study showed that the correlation between:

- Transformative learning and metacognition is strong (.712)
- Mindfulness and transformative learning is moderate (.305)
- Mindfulness and metacognition is moderate (.271)

All of the relationships were significant, but the relationship between metacognition and transformative learning was more than three times as strong as that between mindfulness and transformative learning. The results of the survey encouraged me to keep wondering and exploring how to teach the transformative learning process and how it could be utilized in various contexts. One of the contexts in which I wanted to apply the transformative learning theory was my work as a Director of Training, Learning, and Coaching at a K-12 grade school.

As the Director of Training, Learning, and Coaching, my responsibilities include program development. For example, we run an instructional training/coaching program where we are building a training program for future trainers and coaches and building the training necessary for new teachers at our school. Throughout the year, and at the end of every school year, the mentors/trainers, trainees, and mentees collaboratively reflect on

our training and mentoring programs. Together, we hone, craft, and update our training/mentoring plans.

Thus, my research was also driven by my job. I wanted to better understand learning theories, including adult learning theories, that could enhance my ability to develop and support my programs and teachers. While reading research to support my job embedded question, I stumbled across the communities of practice learning theory (Lave & Wenger, 1991). When I thought about the learning and growth that my mentors and trainers experience via their roles, I began to wonder about the relationship between transformative learning and communities of practice. What personal and interpersonal conditions opened a trainer or mentor to learning and growing? What personal qualities did the interns and new teachers bring to their programs, and how was their learning supported (if at all) by their interactions with one another?

When it was time to start my dissertation, I knew I wanted it to be focused on transformative learning. Transformative learning is my passion and curiosity, and integral to my work as the director of teacher learning in my school. I was also intrigued by the communities of practice learning theory, as it explores the roles within our learning communities and the potential for intentional and unintentional learning. As a graduate assistant, I looked for an opportunity to study transformative learning in the context of my graduate assistant work, which happened to be supporting a committee who was redesigning teacher preparation programming for their university. As my dissertation will describe, I ultimately chose to examine transformative learning in the context of the mentor/liaison component of the secondary teacher education program.

ABSTRACT

A CASE STUDY EXPLORING MENTOR TEACHERS' EXPERIENCE THROUGH THE LENS OF COMMUNITIES OF PRACTICE AND TRANSFORMATIVE LEARNING

by

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Adviser: Cynthia Carver, Ph.D.

This study explores the learning theories communities of practice (Lave & Wenger, 1991) and transformative learning theory (Mezirow, 1978) in the context of mentor teaching. The landscape of teacher education preparation programs is shifting its focus to practice-based teacher education, with the inclusion of high-leverage teaching practices. This study delves into four mentor teachers' experiences. Through a case study approach, this work examines how a change in teacher education programs impacts the mentor teachers' experience. The learning theories, communities of practice, and transformative learning, were used as the lens with which to analyze the data. Monthly surveys, individual interviews, and a group interview were used as data instruments. The data demonstrated ways in which mentoring is a disorientating experience, as well as ways in which communities of practice and transformative learning work together to foster a transformative experience for mentor teachers.

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LIST OF ABBREVIATIONS

HLP	High-Leverage Teaching Practices
TL	Transformative Learning
CoP	Communities of Practice
CAEP	Council for the Accreditation of Educator Preparation
PBTE	Practice-Based Teacher Education
NEA	National Education Association
ELA	English Language Arts
LPP	Legitimate Peripheral Participation

CHAPTER ONE

INTRODUCTION

Teachers play a significant role in the lives of children. It is often said, "Teachers take a hand, open a door, and touch a heart." Some quotes go on to say that teaching is a calling; that a person feels that they are innately meant to be a teacher. However, "feeling" like you want to be a good teacher does not make you a good teacher. I believe that quality teaching is not just a natural gift one is born with. While there are dispositions that lend themselves to becoming a teacher, the act of teaching requires thoughtful, skilled, and ongoing training. According to the National Education Association (2010), close to 50% of new teachers leave the profession during their first five years of teaching. The National Education Association (2010) believes that retaining these teachers in our classrooms requires giving them adequate preparation, support, leadership, autonomy, and compensation that reflects their professional stature. One way teacher preparation programs are addressing the National Education Association's suggestions is by taking a closer look at their teacher education curriculum and teacher candidates' experience with that curriculum in authentic, school-based settings.

Teacher education programs vary, especially by state; however, most teacher education programs are four-to-five-year programs that culminate with a bachelor's degree. Additionally, many teacher education programs include required field experiences. Although these field or clinical experiences might be structured differently by each institution, the goal is the same: to provide insight into what it is like to be a real teacher, and ultimately, to "practice" being a teacher with children in schools. Typically,

teacher education programs involve a semester long culminating field experience (e.g., student teaching, internship) during which the intern teacher is given a mentor teacher to guide their development during this pivotal experience. The student teacher or intern is placed in the mentor teacher's classroom with the goal of gradually taking on full responsibility of the classroom before the semester ends.

Mentor teachers are typically veteran teachers. Ideally, they are teachers who are considered good at the teaching profession. Traditionally, their role in teacher education has been to provide an authentic context for interns to practice and explore teaching. During student teaching, interns explore the nuances of teaching, such as taking attendance, collecting class work, assessing and monitoring student growth, teaching methodology, and subject area content. Most mentor teachers mentor their interns based on their own student teaching experience, and what they have learned as a teacher throughout their years of teaching.

Just like teaching, mentoring is not intuitive. It requires support, practice, and training. Supporting mentor teachers is especially important when mentor teachers are being asked to guide interns in a type of teaching they may be unfamiliar with, such as specific teaching practices. I am wondering if and how the changes to teacher education programs impact the mentor teachers who work with teacher candidates. Through careful and intentional study, we have the potential to better understand the experience of the mentor teacher as a learner.

The secondary teacher education program used in this study provides an ideal context in which to explore the phenomenon of mentor learning because in this university's teacher preparation program, the mentor teacher is expected to take an active

role in modeling, supporting, and evaluating the student teachers' ability to deliver high-leverage teaching practices (Alter & Coggshall, 2009). High-leverage teaching practices are core teaching practices that have been identified by TeachingWorks (2016). High-leverage teaching practices will be further explained in Chapter Two. The research question guiding this study: How does being a mentor teacher in a practice-based teacher education program that focuses on high-leverage teaching practices impact the mentor teacher's teaching and learning?

Two learning theories were used to inform and guide this study. The first, transformative learning theory (Mezirow, 1978), is a learning theory centered on experiences adults have that lead them to challenge and change their existing perspectives. The second learning theory is communities of practice (Lave & Wenger, 1998). Communities of practice is a social learning theory that describes the process of learning through the negotiation of meaning between people who share the same desired outcome. Together, these two theories help provide an understanding of the potential growth a mentor teacher experiences through mentoring.

To frame the larger context of this study, it is helpful to understand teacher education programs' changing landscape. There are two growing trends in teacher education reform: practice-based teacher education (Ball & Forzani, 2009; Grossman & McDonald, 2008) and clinical practice (AACTE, 2018). Practice-based teacher education is a method of preparing teachers through a focus on the enactment of teaching practices rather than just the knowledge of teaching theory (Hurlbut & Dunlap, 2019). Clinical practice is when teacher candidates' work in authentic educational settings and engagement in the pedagogical work of the profession of teaching, closely integrated

with educator preparation course work and supported by a formal school-university partnership (Falco et al., 2020). The changes within these trends have potential implications for mentor teachers because mentor teachers will be supporting interns in a more intentional way, with specific curriculum expectations, such as high-leverage teaching practices.

Thus, this study sheds light on mentors' role in newly redesigned teacher preparation programs where candidates are not only spending more time in the field; they are also expected to engage in more deliberate teaching practice. The secondary teacher education program that served as the context for this study was recently redesigned to be more practice-based and include specific high-leverage teaching practices within the curriculum. To illustrate, the university program has implemented a multi-year curriculum that intentionally scaffolds candidate learning based on a set of five high-leverage teaching practices: explaining and modeling content; practices and strategies; tasks, texts, and learning goals; eliciting and interpreting individual student's thinking; formative assessment; and leading group discussion. TeachingWorks (2016), an organization that works to ensure that all students have skillful teachers who are committed to and able to support their growth, defines high-leverage teaching practices as the fundamentals of teaching:

> These practices, such as leading a group discussion, are universal to all teaching contexts and critical to helping students learn important content. They are "high-leverage teaching practices" not only because they matter to student learning, but because they are fundamental for advancing skills in teaching. (TeachingWorks, 2016)

To support candidate learning in the field, faculty in the secondary teacher education program have created support materials to help the field-based mentor teachers better understand the high-leverage teaching practices to effectively assess, coach, and support interns as they practice these high-leverage teaching practices in their field placements.

Traditionally, the goal of mentor teachers is to support an intern's first attempts at teaching in an authentic classroom. Through mentoring, mentor teachers play a significant role in the growth and development of an intern. Reinhardt (2017) stated the impact of mentoring in clinical placements is paramount for teacher candidate learning" (p. 7). The value of student teaching is well documented in the literature. Student teachers universally regard the practicum as the most important component of their initial preparation as teachers and the mentor teacher as critical to their success (Clarke, Triggs, & Neilson, 2014). With the trends in teacher education moving towards a more practice-based approach that focuses on high-leverage teaching practices, what about the mentor teachers? How did supporting their interns' use of high-leverage teaching practices impact the mentor's teaching and learning?

In the pages that follow, Chapter One will discuss the theories that drive this study: transformative learning (Mezirow, 1978) and communities of practice (Lave & Wenger, 1991). Chapter Two will focus on the changing landscape of teacher education programs, focusing on practice-based teacher education, as well as the specific components of practice-based teacher preparation: clinical practice, high-leverage teaching practices, and mentor teachers.

In Chapter Three, the methods and design of this qualitative case study are explained. Chapter Four summarizes the data gathered from interviews, surveys,

observations, and artifacts gathered from four mentor/intern teams in a single suburban high school. Finally, in Chapter Five the study's findings relate to the theoretical framework (transformative learning and communities of practice) and implications for the field are discussed.

Theoretical Framework

There are several learning theories found in the literature that try to explain the complex process of learning. To start my research, I asked myself, "What is learning?" To frame my use of the term learning in this study, I pulled from Illeris (2007) who stated, "learning can broadly be defined as any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or aging" (p. 3). This definition of learning connects specifically with transformative learning theory (Mezirow, 1978). Transformative learning will be explained in the following section, but I want to explain how this quote connects with this study. Transformative learning theory is composed of 10 stages, taking the learner from a disorientating experience to transformation, during which the learner's worldview is challenged. The learner embarks on a process to potentially change their world view to better serve their needs, hence transforming their behavior, which connects with "permanent capacity change" (Mezirow, 1978, p. 4).

Learning is a complicated process. According to Illeris (2007), "all learning implies the integration of two very different processes, namely an external interaction process between the learner and his or her social, cultural or material environment, and an internal psychological process of elaboration and acquisition" (p. 7). Thinking of learning as an interaction connects with the second learning theory used in this study,

communities of practice (Wenger, 1998). Wenger's understanding of learning was that learning is everywhere, all the time, and that it is localized in a social way, called communities of practices. We all belong to several communities of practice: at home, at work, at school, in our hobbies, etc. Communities of practice connects with Illeris' ideas on learning as an internal and external interaction. The next sections will dive deeper into each learning theory separately, and then close with further explanation of how together they drive this study's examination of the data.

Transformative Learning Theory

Transformative learning has been celebrated as the new andragogy and as the central adult learning theory of this era by some transformative learning theorists (Cranton & Taylor, 2012; Taylor, 2007). Transformative learning separates learning into "instrumental learning" and "transformative learning" (Mezirow & Taylor, 2009). Instrumental learning is the acquisition of skills and knowledge. By contrast, transformative learning is perspective transformation, a paradigm shift, whereby we critically examine our prior interpretations and assumptions to form new meaning (Mezirow, 1991, 1995, 1996). For example, during the mentoring experience, teachers learn how to complete the evaluation forms for their interns as an example of instrumental learning. A mentor teacher rethinking their approach to developing positive relationships with students because of how their intern connects with students is an example of transformative learning. Transformative learning shifts beliefs and perspectives, instrumental learning builds skills.

It is also important to note transformative learning is a reconstructivist approach to learning (Mezirow, 1991, 1995, 1996). Learners interpret and reinterpret their frames

of reference, therefore, making new meanings. A "meaning structure" is composed of predispositions which determine our expectations (Mezirow, 2003). We resist learning anything that does not fit neatly within our meaning structures. At those times, when we feel discomfort or disconnected from our old ways of perceiving and interpreting, we come to the first and critical step of the transformative process: a disorienting experience. At that time, we can either choose to explore the discomfort or continue with our old "meaning structures."

Transformative learning is a rational, metacognitive process of reassessing, and thinking critically (Illeris, 2009). Ultimately, transformative learning is a theory about changing behavior. Mezirow's transformative learning theory comprises ten phases a person works through starting with a "disorientating experience" and culminating in transformation (CITE). A disorienting experience serves as a trigger for reflection. The learner then traverses a process in which they critique assumptions to determine whether the belief, often acquired through childhood experiences, remains functional for them as adults. After critiquing one's assumptions, the learner moves into reflection. Most reflection takes place in the context of problem-solving: the content of the problem, the process of problem-solving, or the premise of the problem. As Mezirow (1991) explained, transformative learning "involves an enhanced level of awareness of the contexts of one's beliefs and feelings and a more critical understanding of how one's social relationships and culture have shaped one's beliefs and feelings" (p. 161). The most significant learning involves critical reflection of foundational assumptions about oneself and their worldview.

After critical reflection, the learner moves into the phase of critical discourse, which is when the learner shares their critical reflection and thoughts with another who can relate to their experience. At this point, communities of practice, which will be explained in the following section, provides the structure and opportunity for mentors to share their thinking. In this study, two sites of learning provide these opportunities for the mentors: discourse with mentor teams, and discourse between mentors and their interns. Finally, with more reflection and critical discourse, the learner explores change options and ways to make those changes. The learner creates a plan of implementation and then enacts their beliefs and understanding. After reflecting on the plan and modifying it as needed, the learner transforms their behavior to reflect their new beliefs and understanding.

Mezirow's (1978) transformative learning theory states that one is more likely to change their behavior when they have changed their beliefs and understanding. This study specifically focuses on the process of mentor teachers changing their beliefs and understanding regarding instruction. According to the transformative learning theory, a change in beliefs and understanding can lead to a change in behavior.

Table 1, below, outlines the ten phases of Mezirow's transformative learning theory described above, from a disorienting experience to transformation (1978). The first column lists the number of the phase, and the second column briefly describes the phase.

Table 1.
Mezirow's 10 Phases of Transformative Learning (1978)

Phase	Description of Defining Experience
1	A disorienting experience
2	Self-examination with feelings of guilt or shame
3	A critical assessment of epistemic, sociocultural, or psychic assumptions
4	Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change
5	Exploration of options for new roles, relationships, and actions
6	Planning a course of action
7	Acquisition of knowledge and skills for implementing one's plan
8	Provision trying of new roles
9	The building of competence and self-confidence in new roles and relationships
10	A reintegration into one's life based on conditions dictated by one's perspective

It is important to note that Mezirow's transformative learning theory breaks down transformative learning into ten steps. After a disorientating experience, the learner works through the ten steps, transferring new worldviews into actions and behavior.

Transformative Learning in Practice. Most of the research on transformative learning theory has been qualitative and retrospective (Taylor & Cranton, 2012). The practice of transformative learning does not always use all ten steps in Mezirow's process nor does it necessarily use the steps in order. The following examples, taken from working with adults, pulled one or two concepts from Mezirow's ten phases and focused their use of the transformative learning theory on those selected concepts.

One example showed how using one piece of the transformative learning process to generate a disorienting experience could lead to transformation. Schapiro (2003) focused on the discursive component of transformative learning and how to optimize dialogue to create transformative group work effectively. Marsick and Watkins (2003) focused on the reflection piece within transformative learning to create a model for how to use transformative learning for organizational change. Their work demonstrates how to use one piece of the transformative learning process to generate a disorienting experience.

Another example from literature discusses how to use transformative learning in a higher education context. Kasworm and Bowles (2012) explored the question, "Can we purposefully create effective transformative learning experiences in higher education?" Their work used transformative learning to create domains of key intervention strategies supporting transformative learning: development of self-reflection; strategies for critical reflection; supportive social environment; use of arts, literature, film, and drama as tools for transformative learning theory; holistic, affective, and spiritual process. Kasworm and Bowles turned the phases of transformative learning into skills (2012). For example, in Mezirow's transformative learning theory, he stated that self-reflection is critical (CITE). In their study, Kasworm and Bowles (2012) turned Mezirow's ideas into skills by teaching adult learners how to self-reflect. Teaching adult learners the skills necessary to experience the transformative learning process showed that awareness of the process and how to access the process can support the intentional design of transformative learning.

Mezirow (1990) suggested various techniques for assisting or prompting the transformation process, including reflective journaling, composing life histories,

metaphor analysis, and conceptual mapping. Building from Mezirow's work, Meyer (2008) used aspects of transformative learning theory in the development of LIFT, a program she developed for women transitioning to work after hardships. One of the program's components was to have the women involved journal about their lives, which allowed them to explore and reflect on their thoughts on their lives. Then, working through their reflections with a coach, the participants were more able to change the narrative, change their perspectives, and see where they could make positive changes in their lives (Meyer, 2009). This example is important because it shows how we can foster transformative learning intentionally through specific techniques that aid the transformative learning process.

Components of transformative learning can also be found in workplace education. Brookfield (2005) shared his experience as a workshop leader on critical thinking and critical theory at Teachers College in New York. Brookfield modeled critical reflection during his two-day workshop. At the end of the first day, Brookfield asked for specific feedback, and that night, he summarized it. The following day, he shared it with the group and explained how the feedback impacted his preparation for the day. In this example, Brookfield fostered transformative learning through modeling. As Brookfield stated, "the importance of modeling is always at the forefront of my mind. It has been a tenet of my teaching that before I ask any student to do something, I first show them how to do it" (as cited in Taylor, 2000, p. 182). Brookfield utilized the critical thinking and reflection aspects of transformative learning in his work with businesses.

With several examples of how to use transformative learning in a variety of contexts, this section showed how easily applicable transformative learning can be.

Although the principles of transformative learning have been applied in various contexts, the theory is not without its limitations and criticisms. The next section will speak to some of these criticisms.

Limitations and Criticisms of Transformative Learning Theory. As a learning theory, transformative learning theory has been examined and critiqued by multiple scholars. Newman (2012) criticized that transformative learning is simply learning, with "transformation" being another way of saying learning and vice versa. Newman believed all learning shifted perspective in some way. Newman's understanding of learning is different from Mezirow (1991), who distinguishes instrumental learning and transformative learning

Another critique of transformative learning theory is the failure to validate the theory, as noted by Taylor (2012). They pointed out a lack of substantive knowledge of the theory's impact on grades, test scores, and/or performance. Moreover, Taylor (2008) argued "despite all the rhetoric on promoting transformative learning in the adult education classroom, there is little research about its impact on learner outcomes" (p. 16). Similarly, the theory's lack of quantifiability was also critiqued by Cohen, Manion, and Morison (2000), who mentioned that "we can't precisely measure the transformative learning we have witnessed…" (p. 208). These criticisms are important to be aware of because it leaves the theory vulnerable to the subjectivities of researchers and research participants in determining whether a transformative learning experience has occurred.

Transformative Learning's Connection to this Study. The application of the transformative learning theory in this study focuses primarily on testing the claim that the mentoring experience is a disorientating experience for the mentor teacher. Based on that

claim, the study then uses the transformative learning theory to explain how transformative learning may or may not explain mentors' experience. This study does not intend to show change or transformation; rather, this study intends to illuminate the understanding that being a mentor teacher may be a disorientating experience and therefore, the act of being a mentor teacher opens the potential for transformation. This study provides a unique perspective in understanding mentoring through transformative learning, which will add to the literature for both transformative learning and mentoring.

Communities of practice, the other learning theory used in this study, will be discussed in the next session. After describing communities of practice, I will discuss how it supports the mentor teacher's potential for transformation through the mentoring experience.

Communities of Practice

The other theory used in this study, communities of practice, is a social learning theory. Three components are required to be a community of practice: a shared domain of interest (i.e., teaching and learning), the community (the people), and the practice (ways of doing) (CITE). Communities of practice centers around the influence and impact of the dynamic interplay between community members engaged in a joint enterprise and who share mutual engagement of a shared desired outcome (Wenger, 1998). Communities of practice focuses on the relationships within the community that enable the community members to learn from each other (Wenger, 1998). This kind of interaction develops over time (i.e., teachers within a school over an academic year, the mentor-mentee relationship across a semester).

Communities of practice, as stated by Lave and Wenger (1998) believe, is the way we learn the explicit and the implicit norms of the community and establish or create collective artifacts based on shared learning. Artifacts include language, tools, documents, images, symbols, well-defined roles, specified criteria, codified procedures, regulations, and contracts (Lave & Wenger, 1991). Regarding this study, some of the examples of norms and artifacts shared within the mentor teams are the university requirements that all the mentors follow, as well as the language they use to talk about the work they are doing with their interns, such as “high leverage teaching practices” which will be discussed in Chapter Two.

An important component of communities of practice is the idea of negotiating meaning. The negotiation of meaning is a productive process, but it is not constructing meaning from scratch. The idea of negotiating meaning draws upon the understanding that community members work together to define, hone, redefine, and even reconstruct the community’s practices. In this study on mentor teaching, a mentor teacher and an intern teacher have to work together to implement the specific teaching strategies required by the university’s curriculum.

Negotiating meaning in a community of practice requires participation. In communities of practice, participation is not something you can turn on or off, and participation is not necessarily collaboration—it involves all ways of interactions, including conflict. The dynamic interplay between members is what shapes experience, as well as shapes those communities. The ability (or inability) to shape the practice of our communities is an essential aspect of our experience of participation. Therefore, all members of the community must be empowered to actively participate. The community’s

longevity depends on the ebb and flow of the negotiation of meaning, between the newcomers into the community and the community's old-timers. The inclusion of new members (in a community of practice) can create a ripple of new opportunities. For example, in this study, the mentor teachers have years of experience to share with the interns, which is invaluable. Concurrently, the interns are coming into the internship with current information on specific teaching strategies that may potentially provide fresh perspectives, and new ideas in the classroom; even the questions interns ask may cause a disruption to what has always been done (in the classroom) and to consider the many ways in which teaching, learning, and classroom routines could be done.

Mutual engagement in the communities of practice starts with enabling engagement by allowing newcomers to be included in the negotiation of meaning. Accepting newcomers and old-timers as equals in their perspectives, and what they have to offer the community, allows them to engage in the negotiation of meaning. At the center of communities of practice, newcomers and old-timers interact, negotiate new meanings, and learn from each other. Mutual engagement in a shared practice can thus be an intricate process of constant fine-tuning between experience and competence. Communities of practice provides a context for the learning of newcomers and a context for new insights for the old-timers.

Applying Communities of Practice. The application of communities of practice has been studied in various workplaces. The studies below, in which communities of practices has been applied, fall into two categories: one in which communities of practice was observed, and the other as one in which communities of practice was implemented to support a specific problem within a company.

Communities of practice should not be romanticized as easily achievable, according to Nagy and Burch (2009). In their study, they examined the implementation of communities of practice in academic settings and found that, “communities of practice involve coordination, consultation, communication and cooperation, behaviors that are not easily achieved amongst a group that are trained to be critical thinkers and have been subjected to continuous autonomy incursions” (p. 16). Similarly, in a study by Blanton and Stylianou (2009), they found that before communities of practice can be a supportive endeavor, the culture of shared learning must be developed, namely within the old-timers. Thinking about how the personalities within an organization impact the effectiveness of a community of practice connects with this study because, as will be discussed in Chapter Four, the mentor teachers in this study were willing to be learners, which impacted the usefulness of shared learning during the mentoring process.

Communities of practice has been applied in the workplace to foster efficiency and productivity. In a study on communities of practice (Nicholls & Cargill, 2008), communities of practice were implemented to improve the processes within the organization, and therefore, the overall quality and efficiency of production. To ensure successful implementation of communities of practice in hierarchical bureaucracies, Duryan and Smyth (2019) found that it was essential for senior management to be part of the process of building communities of practice, as well as to hold employees accountable for actively participating in communities of practice. Applying communities of practice in a thoughtful, meaningful way is meant to improve quality and productivity. When thinking about applying communities of practice to the mentoring experience, the goal would be to enhance the overall shared learning experience for mentors, as well as

interns. In this study, one of the ways the university supported the use of communities of practice was through mentor teams.

Limitations and Criticisms of Communities of Practice. The research stated several limitations to the social learning theory, communities of practice. I will briefly touch on three different limitations found in the literature: time restraints, organizational hierarchy, and the ever-increasing virtual work world. Even with these limitations, researchers agreed that communities of practice are still important to consider when thinking about organizational design.

As a social learning theory relying heavily on relationships, communities of practice take time to develop. The demands of work are ever increasing, which takes time away from the communities of practice to grow (Kerno, 2008). Considering the spontaneous, informal nature of communities of practice, the availability of time for them to engage in activities and develop social interaction is necessary for them to be effective (Goncalves, 2019). Therefore, it is beneficial for senior management to provide the opportunities for communities of practice to meet regularly. Without the support and time provided by senior management, communities of practice are less likely to produce desired outcomes.

As discussed in the above section regarding organizational structure, the structure of most organizations is hierarchical in nature, which contradicts the informal, free-flowing structure of communities of practice. A top-down organizational structure affects lines of communications and relationships (Goncalves, 2019). Additionally, communities of practice are resistant to supervision and interference, but because they are self-managing and self-directed, their contribution to the organization may be uncertain. Per

Coakes and Clark (2006), "in this sense, the role that communities of practice can play in core business activities must always remain peripheral" (p. 332). Therefore, it is a delicate balance that senior management must provide support without being controlling of communities of practice.

Another limitation of communities of practice is the virtual work world. As a social learning theory, communities of practice rely on relationships and communication. With an increasing global economy, there has been a shift in the workplace to a more online workforce; there may be difficulty in creating, maintaining, and sustaining a sense of community (Coakes & Clark, 2006). Additionally, with the shift towards a more online workplace, there is a shift from working as a community to working as an individual (Coakes & Clark, 2006), which hinders the willingness to want to belong to a community of practice.

These authors, even though presenting limitations and challenges of communities of practice, all agree that communities of practice remain an important structure to consider in viewing the developing, maintaining, and sustaining of organizations. Their reserve lies not in the importance of communities of practice, but rather the hesitation derived from a lack of knowledge on how to effectively implement communities of practice in an organization.

Communities of Practice and this Study. Communities of practice provide a way to explore the mentor-intern experience, where the mentors are the old-timers, and the interns are the newcomers. Most research focuses on what interns learn, while this study focuses on what the mentor potentially learns through the mentor teaching experience. For example, high-leverage teaching practices are relatively new in the field of education

(Ball & Forzani, 2009) and new to the university-based secondary teacher preparation program used in this study. Therefore, this study assumes that high-leverage teaching practices are new to the university's mentor teachers. The student teaching experience designates the intern as the learner. However, mentor teachers in this study are learners, too as the teacher preparation program requires mentor teachers to model, evaluate, and support interns in implementing high-leverage teaching practices, which is a new concept to mentor teachers. Mentors and interns as learners connect with Lave and Wenger's communities of practice because all participants in the community are learners and teachers. Communities of practice is a way of making sense of learning that occurs as mentors and interns interact to negotiate meaning, participate, and come to mutual understanding. In this study, communities of practice are used as a way to better understand the ways in which mentor teachers experience mentoring.

Applying Transformative Learning and Communities of Practice to Mentorship

In this section, I will demonstrate the similar concepts of communities of practice and transformative learning. Then, I will provide a concrete example of how communities of practice and transformative learning, when viewed together, can provide a useful perspective on the mentoring experience.

Mezirow's (1978) transformative learning theory starts with the understanding that, as adults, we all have a worldview that impacts the way we perceive and interpret the world around us. Similarly, Wenger (1991) stated, "I have argued that the perspectives we bring to our endeavors are important because they shape both what we perceive and what we do" (p. 73). The first step in Mezirow's transformative learning theory is having a disorienting experience, an event that calls one's understanding into

question. Wenger (1998) described powerful learning moments as volcanic eruptions. Mezirow and Wenger both shared the idea of a specific moment, a disorienting experience, or a "volcanic eruption", which can lead us toward transformative learning.

Both transformative learning and communities of practice articulate that transformative learning is a process that one must work through. Mezirow's transformative learning theory steps take the learner through critical discourse and self-reflection, much like Wenger's (1998) ideas that, learning is first and foremost the ability to negotiate new meanings. It involves our whole person in a dynamic interplay of participation and reification" (p. 9). Critical discourse, with oneself and others, is a necessary step towards transformation in both learning theories. As Wenger (1998) stated, "it is the learning, whatever form it takes, that changes who we are by changing our ability to participate, to belong, to negotiate meaning" (p. 12). Both theories support the idea that transformation requires a shift in thinking and understanding.

The next paragraphs will provide an example of how communities of practice and transformative learning theories work together in the context of mentoring. Additionally, the three required components of communities of practice: a shared domain of interest (i.e., teaching and learning), the community (the people), and the practice (ways of doing) will also be explained. The below paragraphs illustrate one way in which these components of communities of practice and transformative learning can work together.

A community of practice must have a domain (shared area of inquiry on key issues), which in this case is teaching and learning related to instructional technology. The mentor and the intern are both interested in the teaching profession, and they are embarking on a shared learning journey. Connecting their learning journey to

transformative learning theory, the mentor and intern participate in a potential disorienting experience during the student's teaching or internship semester. For example, imagine that the mentor teacher is uncomfortable with using technology in the classroom, but one of the university's requirements for the intern is to utilize technology effectively and appropriately in the classroom. The intern has grown up with technology and understands that technology is part of learning. Therefore, the intern sees the technology requirement as completely appropriate and easily attainable; however, the mentor teacher is uncomfortable with and cynical of technology in the classroom. In this situation, the intern is now leading the learning, which elicits discomfort within the intern, who has swapped roles with the mentor teacher. Under ideal circumstances, this discomfort leads to a shared negotiation of meaning and, hopefully, mutual understanding.

The second component of a community of practice is a community. In this case, the community is the mentor and intern pair. Together, mentor and intern are committed to a process of collective learning oriented towards achieving outcomes and improving practice. This commitment to shared learning creates a safe place where the mentor and intern can be critical, reflect, discuss, question, and explore new ways of teaching and learning. Sharing in the negotiation of meaning as a community is an important part of transformative learning. Continuing with the example above, where the mentor teacher was feeling uneasy about using technology in his classroom, this would be an opportunity for the mentor to explore his discomfort through critical reflection and critical discourse. The mentor could talk to the intern about their hesitation with using technology in the classroom and ask for help. In this way, teacher and learner roles are reversed, and both

the mentor and intern are teaching and learning together. Ideally, both the intern and mentor embrace the discomfort of learning and growing together, such that they are ready to act on their new way of thinking.

Another component of communities of practice is the actual practice where the mentor and intern can investigate key questions, problems, gaps and identify resources and expertise, sharpening their professional learning and development through exploring new resources, processes, and methods. The practice component of communities of practice provides a context for the transformative learning phases of exploration and acquisition of knowledge and skills to occur. Through practice, mentor teachers and interns have the potential to learn and reestablish ways of thinking about teaching and learning. Continuing with the example above, with both the mentor teacher and the intern embracing their shared learning, they can work together to practice new meaningful ways of incorporating technology in their teaching.

In the context of mentor teaching, communities of practice provide a structure for opportunities of growth through reflecting on practice, refining the implementation of instructional methods, and developing new resources. The practice component of communities of practice connects with transformative learning theory's phases of trying new roles and reintegration into one's life with their new perspective. In this example, mentor teachers may experience a new way of thinking about including technology in their teaching. In this study, communities of practice is a theory that provides a supportive context for the learning and growth specific to a mentor teacher's experience.

Table 2, below, shows how transformative learning and communities of practice work together to provide the conceptual framework for this study. The first column lists

the phases of the transformative learning theory, and the second column shows how communities of practice supports transformative learning in the context of mentoring. More specifically, the second column shows how communities of practice provides the structure and opportunities for the negotiation of meaning and the development of shared practice.

Table 2.
Connection between Communities of Practice and Transformative Learning

Transformative Learning Experience	Communities of Practice
A disorienting experience	Domain: Shared experience/interest - mentoring/student teaching experience
A self-examination A critical assessment assumptions Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change Exploration of options for new roles, relationships, and actions Planning a course of action Acquisition of knowledge & skills for implementing a plan	Community and Practice - mentors working with interns - mentors working with mentor teams
Trying of new roles The building of competence and self-confidence in new roles and relationships A reintegration into one's life based on conditions dictated by one's perspective (transformation)	Independent Practice - interns teaching in mentors teachers' classrooms - mentors modeling high-leverage teaching practices

It is important to note that the above table shows how communities of practice and transformative learning theory work together in the context of mentor teaching to support mentor learning. The transformative learning process starts with a disorientating experience (i.e., mentoring) and breaks down the steps necessary to work through the experience and arrive at transformation. The communities of practice learning theory provides a lens for viewing how mentor teachers might work through the phases of transformative learning theory. These learning theories will be used to discuss the results and interpretations of the data collected for the study in order to address the research question: How does mentoring interns in a clinically rich, practice-based secondary teacher education program impact mentor teacher's teaching and learning?

Significance of the Study

This study aims to examine the impact mentoring has on mentors' teaching and learning. This study is pertinent as many teacher education programs are changing to become more clinically based, which puts greater emphasis on the role of field-based mentor teachers in such programs. The university program used in this study uses high-leverage teaching practices in a practice-based teacher education program. With the emphasis on high-leverage teaching practices in a practice-based teacher education program, the intern and the mentor teacher could potentially have a transformative experience.

If mentor teachers' teaching and learning are impacted because of the mentoring experience, we can argue for strategically using mentoring for veteran teachers' professional development. Universities can design secondary teacher education programs

to align with professional growth plans for mentors. School districts could sign up to work with universities to better connect with the student teaching experience and to provide ongoing professional development for their teachers. Potentially, universities and districts create programs that develop teachers into mentors. Participation in teacher education could be a course, a program, a way for teachers to continue their growth in a meaningful way (e.g. higher certification, a micro-credential). At this time, universities must seek placements with partnership schools. Connecting the mentoring experience with mentor teachers' professional growth may encourage school districts to connect with universities. This new connection could have endless potential for a meaningful partnership.

Currently, student teaching is designed for the growth and learning experience of the intern. If the mentoring experience was designed as way to provide learning and growth for mentor teachers as well, the relationship between schools and universities could become more reciprocal. The latest theories being taught in teacher education programs would be practiced and applied in real settings, honing the teacher education program to better understand the specific teaching strategies they are teaching their candidates. At the same time, mentor teachers would be bringing the latest teaching strategies and theories into schools, which would make the education field more adaptive and more fluid.

This study also explores how transformative learning theory and communities of practice work together during the mentoring experience. Transformative learning theory addresses the internal process of learning and communities of practice addresses the external part of learning. The shared negotiation of meaning around issues of teaching

and learning, accomplished through interactions between the mentors and their interns, and within the mentor team, provides opportunities for reflection, discussion, implementation, and ultimately learning. This sheds light on the mentor teacher's experience and encourages us to ask how we can use transformative learning and communities of practice within the mentoring process.

CHAPTER TWO

LITERATURE REVIEW

This chapter will provide the background for this study's research question regarding how the focus on high-leverage teaching practices within teacher education programs impacts the mentor teachers' teaching and learning. I will discuss the changing landscape of teacher education and its current trend, practice-based teacher education. After an explanation of practice-based teacher education, I will discuss specific components of practice-based teacher education that apply to this study: clinical practice, high-leverage teaching practices, and mentor teachers.

The Road to Practice-Based Teacher Education

Throughout much of the 19th century, most teachers and parents believed that learning was a passive activity, and teachers spent most of their time lecturing, monitoring students as they read textbooks, completing assignments, and conducting group recitations (Cuban, 1993; Finkelstein, 1989). Many Americans held the belief that teaching required little in the way of special preparation or knowledge and were reluctant to provide significant resources toward schooling or teacher training (Forzani, 2014).

At that time, a body of educators started Normal Schools, made early attempts at educating student teachers (Forzani, 2014). There was no formal body of knowledge about teaching during this period. Still, teacher educators drew on their own teaching experiences and their classroom observations to identify critical skills for intern teachers, including lecturing, conducting recitations, and keeping order in the schoolhouse. During the 1850s, some programs codified the specific teaching skills they wanted their teacher

candidates to master (Forzani, 2014).The teacher education program at that time included observations, rubrics, student teaching evaluation forms, and formal debriefings after practice teaching sessions centered on those skills (Forzani, 2014)Student teachers were evaluated in categories such as power to control, power to interest, skill in preparation of lesson, skill in questioning, skill in illustrating and explaining, judgment in assigning lessons, voice, manner in the classroom, and care of blackboard (Ogren, 2005). These Normal Schools were the start of teacher preparation programs.

A skills-orientated approach intensified in the later decades of the 19th century, with such methods as "object teaching" and "Herbartianism" (Ogren, 2005). Object teachers presented objects such as books, balls, and pottery to their students; asked a series of rapid-fire questions about them; waited for answers; and then made what they intended to be an informative statement about them. The rules and formulas that characterized the approach were teachable and thus appealing to teacher educators. Herbartians believed that learners must actively develop understanding of subject-matter and argued that it was a waste of time for teachers to begin instruction with a direct explanation of a particular topic or problem (Ogren, 2005). Instead, they recommended that teachers use what they termed the "five formal steps" of instruction: "preparation" (directing students' attention to past experiences), "synthesis" (presenting new subject-matter, possibly through a textbook but preferably through conversation and questioning), "comparison and abstraction" (the separation of essential ideas in the subject from non-essential ones), "definition" (a clear explanation by the teacher), and finally, "practical application" (Ogren, 2005). Object teaching and Herbartianism were specific ways of teaching that could be observed, evaluated, and coached.

In the 1920s, the Commonwealth Study (Charles & Waples, 1929) collected data from several thousand teachers seeking to increase the accuracy of the teacher education curriculum by obtaining a more exact knowledge of teachers' activities. They assembled a comprehensive list of 1,001 activities (Charles & Waples, 1929). The intent was to have these activities and the 83 traits identified (e.g., foresight and magnetism) form the basis of the teacher education curriculum (Zeichner, 2012). Although this study did not impact teacher education in the United States at that time, in the 1960s the United States would conduct more studies on teacher effectiveness.

During the 1960s, the rising cost of public education coincided with a mounting dissatisfaction by those concerned with the educational status of the economically disadvantaged racial and ethnic minorities (Clark, 1965). The result was a demand for teacher accountability by local education agencies, which generated a demand for accountability by teacher training institutions (Semmel & Semmel, 1976). Research on effective teaching, conducted by scholars at Stanford University, was used to form a detailed approach to teacher training, generally referred to as competency-based teacher education (Howsam & Houston, 1972).

Proponents of competency-based teacher education aspired to structure teacher education around a set of precise learning objectives or "competencies" (Howsam & Houston, 1972). Students were generally required to demonstrate competence at target skills before they were permitted to move to the next module or graduate from a program (MacLeod, 1987). Underlying competency-based teacher education was a belief that teaching was a learnable practice that consisted of specific skills and techniques, best mastered by observing specific elements of the work, practicing those elements in

controlled settings, receiving feedback, and analyzing one's work, and then trying again, perhaps in a more complicated teaching situation (Peterson, 1973). Competency-based teacher education continued throughout the 1960-70s.

Moving into the 1980s and beyond, problem-based learning became the focus. The development and growth of problem-based learning significantly shifted teacher education (Higgs, 2012). The main pedagogical features of problem-based learning are that learners are given the opportunity to investigate a problem and then are given the space and tools needed to solve the problem. Students learn how to problem-solve, as well as address a problem they would like to explore. The idea is that through the process of solving the problem, students will be able to transfer their problem-solving skills to other situations. In the 1990s, problem-based learning developed into work-based learning partnerships (Higgs, 2012).

Since the emergence of problem-based learning, there have been other educational trends that have influenced higher education, such as: the experiential turn (fuller engagements with the whole person), the reflective turn (recognizing that complex experiences requires reflection), the competency turn (focus is on what students can do, not just what they know), and the practice turn (practicing skills as a way of learning them) (Higgs, 2012). These movements in teacher education demonstrate a shift from competency-based teacher education's focus on outcome towards a focus more on reflective practice. The above movements in teacher education have had an impact on the field, leading towards the current trend in teacher education: practice-based teacher education.

When Schatski wrote *The Practice Turn in Contemporary Theory* (2011) the author claimed that teacher education programming front-loaded their students with theory. According to Freeman (1993), there are many problems with programs that front-load their students. One of the issues is that when teacher candidates in front-loading programs reach their final year of the preparation program, they enter student teaching in K–12 schools with little to no practice in the art of teaching. There is no room for practice in the front-loaded teacher education model when teacher candidates are put in charge of a class. With the research on the importance of practice, teacher education programs not only embraced work experience of all kinds, but there was an expectation that students would engage in practice-based experiences (Boud, 2012).

Practice-Based Teacher Education

Practice-based teacher education is a relatively new idea in teacher education. Practice-based teacher education is a method of preparing teachers through a focus on the enactment of teaching practices rather than focusing solely on the knowledge of teaching theory (Hurlbut & Dunlap, 2019). The main idea within practice-based teacher education, is that teacher education focuses on preparing teacher candidates "to do teaching" (Ball, 2009) in real-time and in authentic contexts. Practice-based teacher education has been referred to as practice-based, practice-focused, or practice-centered teacher education (Ball & Cohen, 1999). Proponents of the practice-based approach have maintained that no amount of "teaching about teaching" can replace the enactment of teaching. Teachers, like other clinical practice professionals, must learn to transfer knowledge gained through theoretical work into skilled practice (Grossman, 2005). Those in support of practice-based teacher education believe that teaching is more than a personality, or a disposition.

Effective teaching requires techniques and skills, which you lean through authentic practice.

Criticisms of Practice-Based Teacher Education

There has been some criticism regarding practice-based teacher education. One of the problems with practice-based teacher education, according to Zeichner (2012), is that the education field lacks a comprehensive articulation of a shared vision of the dispositions, knowledge, and skills that individuals need to begin teaching. There are several ways to develop teacher education programs, for example, two common strands are: teaching practices connected with a specific school subject and connecting teaching practices to classroom management. Within the two strands of teacher preparation, there are several frameworks used to evaluate teachers, such as Danielson (2007) and Marzano (2007). Zeichner (2012) questioned, if the teaching field cannot agree on definitions, descriptions, and activities of enactment for a teaching standard, then how can universities design a comprehensive and evidence-based teacher education program that includes meaningful practice?

Another significant concern of a practice-based teacher education system is the potential lack of teacher inquiry (Zeichner, 2012). Cynics of practice-based teacher education fear the dehumanizing of teaching into techniques and forgetting the pieces of teaching that cannot be carbon-copied, like getting to know your students and the cultural context your school is set in (Butin, 2005). Heibert and Morris (2012) argued the belief that teaching requires so many spontaneous decisions, that creating predictable instructional routines would not be useful. Rather than focusing on specific strategies and skills, they argue that student teachers need to explore pedagogical reasoning.

The Need to Rethink Practice-Based Teacher Education

As reported by Carver-Thomas (2016), there is an increased teaching demand due to both the lack of qualified teachers entering the classroom and the subsequent number of teachers leaving the classroom. Additionally, Ingersoll and Perda (2010) estimated that between 40% and 50% of new teachers leave within the first five years of entry into teaching. The same report suggested that the attrition rate of first-year teachers has increased by about one-third in the past two decades (Ingersoll & Perda, 2010). These results indicate that the instability of novice teachers has been increasing in recent years and makes clear the need to rethink the way we support preservice teacher preparation and teacher induction thereafter.

The new ways of thinking about teacher preparation, the turn to practice, and the studies regarding teacher retention, discussed above, have led to scrutiny of teacher education programs. University-based teacher education programs have been criticized for overvaluing the knowledge of teaching at the cost of the ability to effectively implement teaching practices, therefore failing to prepare teacher candidates for the classroom's complex realities (Grossman, 2018). To address the gap between knowledge and the use of knowledge, the field is turning back to a practice-based teacher education model with a specific emphasis on core practices (Grossman, 2018; Zeichner, 2012).

In the following sections, I will discuss components within practice-based teacher education that directly connect to this study's research question: the roles of clinical practice, high-leverage teaching practices, and mentor teachers.

Clinical Practice

Calls for teacher education reform have repeatedly encouraged teacher education programs to revisit or examine content knowledge, pedagogical practices, and processes of learning to teach in authentic contexts (Bullough, 2014; Cochran-Smith, 2015). For example, the Council for the Accreditation of Educator Preparation (CAEP) made strong calls for teacher education programs to be "fully grounded in clinical practice and interwoven with academic content and professional courses" (2018, p. 72). Darling-Hammond (2006) found that extensive and intensely supervised clinical work integrated with course work using pedagogies that link theory and practice was an important part of the teacher education programs studied. Finally, in 2018, the American Association of Colleges for Teacher Education reported that clinical practice is central to high-quality teacher preparation (2018). The report also stated that pedagogy is the science of teaching and pedagogical training is essential in clinical practice (2018).

Clinical practice has been called many things in teacher education, such as: field work, student teaching, and internship. Clinical practice is when teacher candidates' work in authentic educational settings and engage in the pedagogical work of the profession of teaching. During clinical practice, teacher candidates are closely integrated with educator preparation course work and supported by a formal school-university partnership (Falco, 2020). According to Pomerance and Walsh (2020), 71% of traditional university-based teacher education programs include clinical practice that are providing sufficient observations by their supervisor. After a systematic review of the literature, the National Comprehensive Center for Teacher Quality (2009) identified five characteristics of clinical practice: (1) centrality of clients; (2) knowledge demands; (3) use of evidence

and judgment in practice; (4) community and standards of practice; (5) education for clinical practice. In their report, they argue that teaching should be thought of as a "clinical practice profession because it has elements of both craft and a profession, requiring skilled practice and a significant conceptual base" (Pomernace & Walsh, 2020, p. 10). Clinical practice is understood to be the most valuable part of teacher training.

Clinical practice is important in this study because the context of the mentoring experience is set in a teacher education program that includes substantial clinical practice. Moreover, the mentors in this study are closely connected with their interns' teacher education program. One of the ways clinical practice is unique in this study is that embedded in the teacher education program are high-leverage teaching practices, which will be discussed below.

High Leverage Teaching Practices

With an emphasis on teacher preparation programs in clinical practice in a practice-based model, the focus of teacher education has been on identifying and specifying teaching practices essential for intern teachers to effectively implement (Grossman, 2009). Breaking down teaching into specific teaching practices comes from an understanding that quality teaching is not just a natural gift that one is born with, but rather the act of teaching requires thoughtful, skilled training (Ball & Forzani, 2010). Ball and Forzani (2011) state that to improve young people's educational outcomes, intern teachers must be supplied with skilled instructional practice that includes both content understanding and high-leverage practices. The main take away from their work is that teaching is composed of skills that can be broken down into small, teachable, learnable chunks.

Over the past decade, a group of faculty and doctoral students at the University of Michigan have engaged in the design and development of a set of high leverage or core teaching practices (see https://www.teachingworks.org/). This group, known as TeachingWorks (2016), has proposed a set of 19 core instructional practices that beginning teachers should be able to enact on their first day as a full-time teacher, such as: explaining and modeling content; implementing norms and routines for discourse; setting learning goals; selecting and designing assessments; and leading a discussion. This set of practices, called high-leverage or core teaching practices, defines an ambitious set of instructional outcomes for teacher education. The goal of designing and developing these high-leverage teaching practices is that they become the content of teacher education that can be rehearsed and practiced (Ball & Cohen, 1999; Grossman & McDonald, 2008).

High-leverage teaching practices are important in this study because the university's teacher preparation curriculum used in this study focuses on high-leverage teaching practices. Since incorporating high-leverage or core teaching practices into a teacher education program may impact the mentor teacher's experience, this study seeks to examine the mentor teacher's experience. The role of mentor teachers in practice-based teacher education programs is discussed below.

Mentor Teachers' Role

There is no shortage of literature on the impact of field placements in education programs for interns. Reinhardt (2017) stated "the impact of mentoring in clinical placements is paramount for teacher candidate learning" (p. 36). The impact mentor teachers have on their interns is powerful and well-documented.

The recent and growing literature on mentoring has shown that student teachers emulate their mentor teachers, which increases the need to have high-quality mentor teachers. Hawkey's (1998) study indicated that the mentor's style impacts the thinking of the intern teacher. Additionally, mentor teachers base their work with student teachers on assumptions and personal experiences. Ronfeldt's (2018) study suggested that intern teachers assigned to classrooms with highly rated educators are more likely to be effective in their early years of teaching. Furthermore, the study also showed a close relationship between a teacher's classroom practices and mentoring practices. Classroom teachers who engage with their students in instruction that is focused on principles of experiential learning, who are themselves thoughtfully adaptive in their teaching, and who take an appreciative/scaffolding stance toward their students' learning are more able to adapt these practices to the mentoring and coaching of intern teachers (Hoffman, 2015). The literature supports the importance of mentor teachers in teacher education programs, and because of their importance, it is critical that mentor teachers are considered high quality educators.

In a teacher education program that is clinically rich, teacher candidates learn about teaching methods. Teacher candidates have opportunities to plan, rehearse, implement, and reflect on lessons utilizing these methods and techniques (Ball, 2009; Grossman & McDonald, 2008; Zeichner, 2017). Teacher educators and mentor teachers create a space in which to provide coaching as teacher candidates enact practices either within the university classroom or in the field site (Lampert, 2013; McDonald, 2013). This interactive space facilitates an exchange designed to develop the teacher candidate's ability to negotiate contingencies in real-time interaction, in a low-risk environment

(Ghousseini, 2009; Grossman, 2009). Zeichner (2017) defined practice-based teacher education as a "systematic focus on developing teacher candidates' ability to successfully enact high-leverage practices" (p. 43). Important to this teacher education model is the role of the mentor teacher. Mentors provide instructional coaching focused on singular practices. Competent enactment of such practices lays the foundation for beginning teachers to develop into highly effective professionals (Teacher Education Initiative Curriculum Group, 2008).

High-leverage teaching practices are not new to good teaching. Still, they are new in how they are articulated, documented, and emphasized, specifically in the secondary teacher education program used in this study. Embedding high leverage teaching practices into teacher education programs and requiring mentors to work with interns on implementing them, is a shift in mentor teaching. This study intends to explore and examine how being a mentor teacher in a practice-based teacher education program that focuses on high-leverage teaching practices impacts the mentor teacher's teaching and learning.

Mentors as Learners

In a recent review of mentoring, authors found significant evidence from multiple studies suggesting that mentoring experiences can lead to the re-examination of a mentor teacher's practices and beliefs (Hoffman, 2015). To illustrate, Bullough (2002) claimed that mentor teachers "found value in having intern teachers in the classroom and reported gaining from the experience" (p. 77). The mentors in Bullough's study reported that the intern teachers brought fresh ideas toward improving their classroom practice. The mentor teachers were open to the intern teachers' suggestions and were willing to adjust

their lesson plans based on the ideas presented by their interns. Mentoring gave mentors the opportunity to see new ways of teaching, as well as reexamine old ways of teaching. Similarly, it was found that mentor teachers enjoyed trying out teaching strategies modeled by their intern teachers (Kroeger, 2009). Furthermore, the mentor teachers felt that the experience of mentoring helped them to "reevaluate their professional identity" and re-energize their teaching (Kroeger, 2009, p. 340). Mentor teachers reported feeling they evolved in their teaching through observing practices modeled by their intern teachers (Glenn, 2006). One mentor teacher reported, "the most rewarding aspects of the mentoring experience have been the professional knowledge (e.g., lesson plans, workshop model) the intern teacher has imparted" (Glenn, 2006, p. 93). The literature shows that mentoring is professional development for the mentor teacher, as mentoring gives mentors the opportunities to see new ways of teaching and reexamine old ways of teaching.

This study seeks to explore how mentors are impacted through the mentoring experience, especially in a clinically rich, practice-based teacher education program. Considering mentors as learners is important to this study because it connects the two learning theories. Believing mentors to be learners supports the idea that mentors can learn from their interns, and that mentors can learn from other mentors. Thinking of the mentors as learners, we then suppose that they have the potential to have a disorienting experience through mentoring.

Chapter Summary

Teacher education continues to evolve, addressing the needs and research of the time. The current research on teacher preparation emphasizes a need for teacher

preparation programs to include clinical practice within a practice-based model. TeachingWorks (2016) has created a list of 19 specific high-leverage or core teaching practices. Some universities are opting to redesign their teacher preparation programs to include high-leverage teaching practices in a clinically rich, practice-based model. The specific components of practice-based teacher education that connect with this study are: clinical practice, high-leverage teaching practices, and the role of mentors in teacher education programs.

Along with the evolution of practice-based teacher education, the role of the mentor teacher continues to adapt to fit the needs of teacher education programs. Although there is plenty of research on the importance of mentor teachers in teacher education programs, there is very little research on the mentor teachers' experience. Although several studies speak to mentors as learners, it would be helpful to better understand the mentors' experience and the potential learning that takes place throughout the mentoring experience.

When thinking about the education field, it would behoove the field of education to consider systemic professional development through mentoring. Learning more about the mentor experience might lead us to a new way of designing a learning experience for both the mentor teacher and the student intern.

CHAPTER THREE

METHODS

As explained in previous chapters, this study applies the theories of transformative learning (Mezirow, 1978) and communities of practice (Lave & Wenger, 1991) to the mentor teacher experience. Transformative learning theory has been studied in various contexts, such as businesses and apprenticeships (Taylor, 2007; Stuckey, 2013; Taylor, 2012). However, there is very little information on transformative learning applied to the role of the mentor teacher in a teacher preparation program. Many studies regarding the student teaching experience in teacher education programs focus on the intern's experience, often described as transformative (Taylor, 2007; Stuckey, 2013; Taylor, 2012). However, what about the mentor teacher? Do they experience a disorienting experience that may lead to transformation? This study uses the lens of transformative learning theory and communities of practice to better understand the mentor teachers' experience.

As discussed in Chapter Two, the growing trends in teacher education- practice-based teacher education, high-leverage teaching practices, and clinical practice- have implications for mentor teachers. This study sheds light on the role of mentors in a newly redesigned teacher preparation program where interns are not only spending more time in the field, they are also expected to engage in more deliberate practice. Universities requiring more deliberate practice from the interns potentially impacts the role of the mentor teacher through a more robust mentoring program that may include more connection with the university, feedback, coaching, intentional self-reflection, and more

model teaching. My study focuses on how these potential changes to mentor teachers' roles impacts their teaching and learning.

Research Design

A case study is an approach to research that focuses on a particular phenomenon, in which the researcher gathers details and information to better understand the phenomena. Gibbert (2008) stated that case studies act as tools for generating and testing theory to provide the strategic management field with ground-breaking insights. Yin (1981) argued that although case studies can be used for exploratory purposes, the approach also may be used for either descriptive or explanatory purposes as well (p. 98). A case study can be a useful way to approach a problem of practice because it allows the researcher to zoom into the phenomenon (Yin, 1981). The focus of this study was a new, unknown context: a newly reformed secondary teacher preparation program. The aim was to explore the mentor teacher's experience through mentoring in the newly reformed secondary teacher preparation program. Therefore, the case study method was an effective way to explore, uncover, and better understand the mentor teachers' experience.

The following sections will explain the design of the study. First, I will explain the two settings used in this study. Second, I will describe the four ninth-grade mentor teachers who participated. Then, I will also discuss the data tools, data collection, and data analysis used in this study.

Description of Setting

There are two settings for this study: Bear University (pseudonym), the site of a practice-based secondary teacher education program, and Blue Bird High School (pseudonym), where the study participants worked as a mentor team.

Bear University

Bear University is a public research university in the Midwest region of the United States. With just over 20,000 students, the university offers over 130 bachelor's degree programs and over 130 professional graduate certificate, master's degree, and doctoral degree programs. Bear University describes their teacher preparation programs as clinically-rich, practice-based programs that prepare highly effective teachers. Bear University offers two different undergraduate programs: Elementary Teacher Education and Secondary Teacher Education. Bear University also offers graduate programs in elementary and secondary education.

The secondary teacher education program at Bear University is a field-based fifth-year program leading to recommendation for a secondary standard teaching certification, valid for teaching content area majors and minors in grades 6-12. Bear University believes that its secondary teacher education program prepares high-quality, reflective practitioners. Students in Bear University's secondary teacher education program engage in a year-long internship in public schools, which includes both coursework and field experiences. Further, Bear University's secondary teacher education program requires mentor teachers to support intern teachers' understanding and implementation of five high-leverage teaching practices: explaining and modeling content; implementing norms and routines for discourse; setting learning goals; selecting and designing assessments; and leading a group discussion.

As discussed previously, high-leverage teaching practices are relatively new to teacher education programs and, therefore, new to the mentor teachers. Due to the newness of content and expectations, and to ensure the integrity of the curricular

program, the secondary program faculty provided intentional and ongoing support for the mentor teacher participants in this study. Before the school year started, the program's mentors met to learn more about the curriculum and its expectations.

At this day-long workshop, led by the secondary teacher education program's faculty adviser, all mentors in the program were given training on the five high-leverage teaching practices they would use to support student teachers. Mentors were also given specific tools for feedback, documentation, and ways to engage student teachers in meaningful practice opportunities. For example, methods of feedback and documentation that the program suggested included: (1) telling the intern verbally what coaching points they had for their intern, (2) having the intern write them an email that lays out the feedback they were given, and (3) copying and pasting their email into a survey (created and provided by the university). Mentors with past experiences were also there to talk with the new mentors, and some of the university faculty members were there to offer support as well.

The mentoring program itself is complex with many moving pieces. On the university side, there are faculty members, supervisors, and placement coordinators. At the school site, there are teams of four to five mentors, each mentor working with one intern. The mentors are encouraged to think of themselves as a team. Each mentor team has a designated liaison that communicates with the university and directs the learning experiences of interns, which requires meeting periodically with interns and mentors.

Mentor teams meet monthly with their liaison and individually as needed. To support mentors with the specific tasks their interns are required to fulfill, such as documentation of a high-leverage teaching practice, mentors receive regular emails from

the university with supporting documents, such as explanations of high-leverage teaching practices and rubrics for evaluating student teachers' implementation of the high-leverage teaching practices.

Blue Bird High School

The secondary school used in this study is located in a wealthy suburban area. This school serves over 1,700 students in grades 9-12 and has a 96% graduation rate. The student population is just over 50% female and just over 70% white, with 11% of the population eligible for free lunch (Public School Review, 2020). Blue Bird High School is high achieving, with an average of 90% of its seniors being accepted into their first college of choice. This was Blue Bird's first year in the university's teacher education program.

The high school itself is a vibrant community that has seemingly endless opportunities for its students, such as an award-winning radio station, a weekly television news production, a student-produced newspaper, a student-led outreach and community service program, a wide variety of clubs and organizations for students to belong to, and high achieving athletic teams. Over 90% of Blue Bird High School's teachers are considered highly qualified by state standards with many of it's teachers haing master's degrees.

Blue Bird High School was designed with a focus on physical space dedicated to the learning community concept. The learning communities provide a variety of spaces that encourage collaboration, student-directed learning, project-based learning, and interdisciplinary instruction. The high school also features a performing arts theatre, a gymnasium/field house, a 12-lane pool, and a media center. A distributed dining concept

enables students to dine throughout the entire facility, strengthening relationships and collaboration.

My first impressions of Blue Bird High School were that it was friendly, energetic, and it encouraged social interaction. Upon entering Blue Bird High School, I was greeted with a friendly smile and was given a name tag. I was told how to get to the ninth-grade learning community. Walking down the hallway, I passed the bustling media center. I walked through the doors into the learning community and immediately spotted a coffee shop. In between class visits and interviews, I enjoyed walking through the ninth-grade learning community. Glass-walled classrooms, shared collaborative spaces for the teachers, glass-walled hubs for small group work, and a variety of seating was arranged in an inviting way. There was a "teacher collaboration room" where the teachers in that learning community shared a workspace. Each teacher had a cart with their classroom materials and pushed it to each of their classrooms.

Study Participants

In discussing my research questions and thoughts on the design of this study with the faculty coordinator of Bear University's secondary teacher education program, they recommended Blue Bird High School as the site for my study. Blue Bird High School was recommended because it was in its first year of participating as a host site for intern teachers from Bear University. As a researcher, I was looking for a site where mentors were new to the mentoring experience, thus positioning me to better capture potential disorientating experiences and the possibility for mentor learning and growth. Blue Bird High School would have four interns, thus would need four mentors (with one being the liaison) during the Fall 2019. I sent the liaison an email asking if her team would like to

participate in my study. She said that she was willing to participate only if each of the mentor teachers agreed to participate. She suggested that I email them all to get their input.

In my subsequent email, I briefly explained the research question, study design, and their participation expectations. Once they all agreed, I sent a formal letter of consent for them to review. I had my team of mentors, and we embarked on my research question which explored how being a mentor teacher in a practice-based teacher education program that focuses on high-leverage teaching practices impacts the mentor teacher's teaching and learning.

Regarding the selection process of the mentor teachers, Jessica (pseudonym), who had worked as a liaison and mentor in Bear University's program in the past, was asked by the faculty coordinator of Bear University's secondary teacher education program to lead a team of mentors. Jessica reached out to her principal, who was happy to be part of the program and happy to have Jessica lead it. As a ninth-grade team teacher, Jessica was hoping to have her ninth grade team of teachers join her as mentors. The program needed two language arts mentor teachers and two science teachers. The principal of Blue Bird High School told the ninth-grade team that they were going to be mentors. Other than that, the principal left Jessica to liaison between the university, mentors, and interns. For a variety of reasons, all the mentor teachers wanted to be mentors, but did not appreciate being told they had to do it. As one mentor teacher said, "*I don't agree that teachers should be told that they are going to be mentor teachers. I think it should be something you volunteer to do*." However, as they all did want to be mentors, they took comfort in Jessica being the liaison, and trusted their already well-established and collaborative co-

teaching relationships to support them. This newly formed mentor team mentored together, and were all part of the school's ninth grade learning community; thus, they also collaborated on their lesson planning. Two of the mentor teachers taught science and the other two taught language arts.

Jessica, a mom of one college student and one junior in high school, is a high school English language arts teacher with more than 20 years of experience. She has taken on a variety of roles in the education field and actively seeks ongoing growth. She belongs to a professional network for language arts teachers, and in addition to being a mentor teacher, she is also the liaison. Jessica has been mentoring since the mid 2000s and has worked with several interns during that time. In her late 20s, Jessica's intern was coming to education after a first attempt in a different field. In the classes that I observed, Jessica was smooth, relaxed, and calm. The class seemed to run itself.

Jean (pseudonym), a busy mom of two children under the age of four, has been teaching high school English language arts for more than ten years. Systematic and structure orientated, Jean is interested in becoming an administrator. She has worked with one previous student intern while at another school and thought it would help her move towards administration if she experienced mentoring at her current school. Her intern this year was a traditional male student who became a permanent substitute teacher while completing his internship. In the classes that I observed, Jean was organized, prepared, and structured.

Chloe (pseudonym), a mom of a middle school student and an elementary student, has been teaching high school science for more than ten years. Chloe is confident and practical. She has mentored once during her time as a teacher; and it was not a bad

experience. She says, “we did the best we could.” She was ready to have another intern this year with the hope of giving back to the field of education. Her intern this year was a traditional male student who also coached swimming at the high school. In the classes that I observed, Chloe was organized, prepared, and assured when presenting information to her students. Her content knowledge allowed her to support students at all levels.

Beth (pseudonym), a lively and enthusiastic science teacher, has been teaching high school science for ten years. Beth has never had an intern before. She thought it would be interesting to have an intern this year because the science department was focusing on curriculum mapping and Beth thought it would be beneficial for the intern to be part of that process. Her intern also worked at the high school’s community farm. In the classes that I observed, Beth’s room was energetic and warm. Students were collaborating and she was walking around the room, engaging with students, and supporting as needed.

Data Instruments and Data Collection

I used a combination of data instruments to ensure triangulation of the data for reliability and credibility (Carter, 2014; Meyer, 2001; Patton, 2002; Rolfe, 2006). In this case study, to triangulate the data, I conducted individual and focus group interviews with the mentor teachers, collected monthly questionnaires from the mentors, completed classroom observations of the mentor/intern pairs, and analyzed mentoring artifacts from the secondary education program. I chose these methods because of the variety of perspectives they offered, and the different ways they allowed participants to share their experiences.

Individual interviews allow for a conversation, which can be influenced by the ability to ask probing questions. Focus group interviews provide the opportunity for participants to hear others' perspectives, as well as check for any discrepancies between the different data tools. Surveys allow participants to share their thinking through their own understanding of the questions and without solicitation. Reviewing the artifacts and doing classroom observations were used as a way for me to better understand responses in the surveys and interviews. When a participant referred to a specific support tool they received from the university, it was helpful for me to have a copy of that tool to better understand the statement. Observing the interaction of an intern with the class allowed me to better understand the comments regarding the need to work on student rapport with their intern. Together, these tools allowed me to look at participants' experience of being a mentor teacher.

Interviews

Two forms of interviews were collected in this study: individual interviews and a mentor team focus group interviews. Within the individual interviews, there were two interviews: one at the start of the school year and one at the end of the school year. We had one focus group interview mid-year, with a total of three sets of interviews for each of the four participants.

Before diving into each of the interviews separately, I wanted to frame the thought process of their global development. When designing the interview questions for each of the different interviews, I started with the goal of the study, which was to explore and examine how the mentoring experience impacted thoughts or behaviors about teaching and learning in mentor teachers. As this study was exploring change over time, I

had to be sure to ask a similar thread of questions in each interview to show potential change over time (Creswell, 2002).

After I understood the purpose of the interviews collectively, I thought of goals and purposes for each of the three interviews. For the first individual interview, my goal was to establish the mentor teachers' thoughts on mentoring and what they hoped to experience. For the middle mentor team focus group interview, I wanted to share the themes that the data was presenting, as well as get their input on them. For example, I asked questions such as, "Reading through the monthly reflections, the four of you mentioned that you have learned from your interns. What are your thoughts on that? In what ways have you learned from your intern?" The second and final individual interview had to firm up the conjectures and discuss the overall mentoring experience.

This mapping also allowed me to create specific questions to further address the goals/purpose of the interviews. Although each interview had its own goals and purpose, the study was meant to show change over time, so the responses in each interview built up to the final interview to see what, if any, changes of behavior or thinking had occurred.

Individual Mentor Interviews

In line with the study's explorative nature, the goals of the interviews were to see the research topic from the perspective of the interviewee and understand why he or she came to have their particular perspective. To meet this goal, I followed advice from King (1994), who recommended that one have "a low degree of structure imposed on the interviewer, a preponderance of open questions, a focus on specific situations and action sequences in the world of the interviewee rather than abstractions and general opinions"

(p. 15). I held two 45-minute individual interviews with each of the four participants. The first individual interview was in September 2020 and the last was in April/ May 2021. The protocols for the two individual interviews were the same: the semi-structured interviews were scheduled to be 45 minutes and would be audio recorded. Mentor teachers could choose the location and time (see Appendix A: Interview Protocols). This study's goal was to explore if the mentor's experienced a change in belief and understanding regarding instruction while being a mentor.

The first interview was in September 2020, during the school day on the mentor teachers' preps. Participants signed up for a 30-minute class observation and selected the location of their 45-minute individual interview. Two participants chose their classrooms, one after school, and one at lunch. The other two participants chose to have it in private workspaces. I followed my interview protocol with each participant to ensure questions were relevant and consistent (See Appendix A: Interview Protocols). For example, it was important to ask in September, "What do you hope to gain from your mentoring experience?" In this question, I hoped to learn more about their motivations for mentoring, such as learning new instructional strategies, giving back to the profession, and having help in the classroom. The questions asked in the first interview had to align with the questions in the other two interviews. In the first interview, I needed to establish a baseline.

The last individual interview was in April/ May 2021 after the interns had completed their intern experience. The goal of this interview was to test the conjectures I had pulled from the data, and to ask any follow-up questions that remained pertaining to my research question. This includes examples the mentor teachers could provide that

demonstrated learning from their interns. I was also interested in their reflections after the year-long mentoring experience. It was essential to set up this interview so that participants could reflect and speak openly.

Mentor Team Focus Group Interview

The focus group interview was after school, during one of their mentor team meetings. The main goal of this interview was to share my preliminary analysis of data collected during the initial months of the study. I wanted to check their response to the themes I saw emerging from the data. Triangulation of the data is essential for validity, so I needed to bring their individual ideas to the collective for consensus. To illustrate, I shared the responses to the surveys and asked them to reflect on the data. For example, in the survey responses, all the mentors said that their mentor team meetings were supportive and helpful. I wanted to know if and in what ways the mentor team meetings were supportive and helpful for them as a group. I included the mentor teachers in this process because I wanted to be transparent with them in all aspects of the study, and I wanted to have their perspective on the accuracy of the patterns and themes found in the data. The mentor team focus group interview was a way to triangulate and synthesize the data and firm up possible conjectures for later analysis. Additionally, I asked the same thread of questions from the first individual interview to monitor potential changes in thoughts.

Monthly Mentor Reflection Surveys

Along with the interviews, the participants in this study completed monthly reflection surveys. The use of surveys allowed for a regular monthly check-in with the mentors and provided a different format to capture the mentors’ thoughts and self-

reported actions throughout the study. Through the surveys, mentors had a different format for reflecting and responding on their mentoring experiences. The surveys were cross analyzed with the individual interviews and the focus group interviews to support triangulating the data.

When designing the questions for the survey, I wanted to ask questions that could be repeated every month to track any changes in thoughts or behaviors from participants, as shown in Table 3: Mentor Data Instruments: Individual Interview, Focus Group, and the Monthly Survey. I wanted the questions to do two things- provide an opportunity for the mentor teachers to reflect on their experience and provide a way for me to gather monthly, ongoing data. The questions on the survey were specific to essential components of the secondary teacher education program; for example, these include mentor team meetings, coaching sessions, program materials provided by the university, and high-leverage teaching practices (see Appendix A for more details).

I sent out the monthly response surveys in a Google form a week before the last Friday of the month. I asked participants to complete the survey by that Friday, which they did most of the time. Occasionally, I had to send a reminder to one or two of the participants to complete the survey; in general, this data collection process was straightforward and easily followed. I compiled the survey responses into a GoogleDocs, where I could read through them as will be discussed in Chapter Four.

Table 3 shows sample questions from each data instrument and how the question connects with the research. The first column lists the data instrument and the second column bullet points the procedures. The third column pulls one of the questions from the interview, which is then connected to the research question in the fourth column.

Table 3. Mentor Data Instruments: Individual Interview, Focus Group, and the Monthly Survey

Data instrument	Procedures	Sample Question	Connect with research questions
Individual Interview	• Private location • 45 min • Semi-structured • Audio taped	What are some of the ways you have grown or changed as an educator because of your mentoring experience? Probe if needed: with regards to: Students? Instruction? Mentoring?	The sample question provided was pulled from the final interview. It asks the mentor teacher to reflect on their mentoring experience and think about how they have grown or changed because of mentoring. The goal of this question was to see in what ways the mentor teachers felt they had grown as an educator, and to directly address the research question, "How does mentoring impact a mentor teacher's understanding and beliefs regarding teaching and learning?"
Focus Group	• Private location • 45 min • Semi-structured • Audio taped	How has your mentoring experience with High-leverage teaching practices shifted your understanding or beliefs on instruction?	A much more specific question, the sample question was pulled from the group interview, asking mentors to reflect on how and in what ways their experience with High-leverage teaching practices shifted their understanding and beliefs regarding instruction.
Surveys	• Last Friday of every month • Sept- April • Google Form • No more than 10 minutes	How has your participation in the mentor/liaison team meetings this month impacted your understanding and beliefs regarding instructional practices? Please provide an example.	This sample question focuses on team meetings as a site for mentor learning. Mentor teachers are asked to reflect how and in what ways their team meetings impacted their understanding of teaching and learning.

Table 3: Mentor Data Instruments: Individual Interview, Focus Group, and the Monthly Survey shows sample questions from each data instrument and its connection to the research. Importantly, the table shows how I monitored changes throughout the year by presenting three ways of asking a similar question for the mentors: how has mentoring impacted your beliefs and understanding regarding teaching and learning. Mapping the interviews and monthly surveys to address the research question was an important process in the development of the data tools for this study.

Mentor/Intern Classroom Observations

Along with interviews and surveys, I attended two 30-minute classroom observations for each mentor teacher participant. The main goal of these class visits was to observe the interaction between the intern and mentor and gain familiarity with the interns to help me better understand the monthly surveys or the transcribed interviews. Mentors were able to sign up for their preferred observation and interview times. In my visits at the beginning of the year, I observed the mentor teacher teaching and the intern observing. In the second half of the year, I observed the intern lead teaching and the mentor teacher taking notes and supporting as needed in real time. To record my observations, I created a template on GoogleDocs to use for each of the observations. The template allowed me to see the notes on each teacher/intern individually, and collectively and comprehensively.

Program Artifacts: Mentor Resources and Tools

As the secondary teacher education program used in this study focuses on high-leverage teaching practices, the university provided mentor teachers with a binder of resources and tools to support them in their roles with interns. The binder included such

resources as descriptions of specific tasks that interns must complete while interning, a calendar for pacing the tasks, descriptions of the high-leverage teaching practices interns were meant to practice, feedback and evaluation tools. Additionally, the university sent the mentors' reminder emails with supporting documents for upcoming tasks. Reviewing and referencing artifacts from the binder and these follow-up emails were helpful to better understand responses given by participants.

Analysis of Data

I embraced the idea that each data source is one piece of the puzzle, with each piece contributing to understanding the whole phenomenon. I understood that the data tools are independently and collectively important (Baxter, 2008; Thomas, 2006). The convergence of the data adds strength to the findings as the various strands of data are braided together to promote a greater understanding of the case (Baxter, 2008; Thomas, 2006). I designed the study with the understanding that I had to find a convergence of evidence that connects the findings directly, clearly, and soundly to the research question through grappling with and trawling through the data.

The section below explains the analysis process for each data instrument and concludes with how I looked across the data to determine findings. Generally, during the early months of data collection and analysis (September through January), I used inductive coding (derive codes from that data, rather than preconceived codes) to determine potential themes with both the interviews and monthly mentor surveys. Then, I looked at the potential themes from both instruments to hone and craft global themes, which I termed conjectures. Later in the data collection and analysis process (February through April), I used deductive coding (using he themes that emerged from the inductive

coding process) to confirm and further hone the conjectures found through the inductive coding process.

Individual Interview Analysis

After each of the participants' first interviews, I listened to the interview and jotted down big ideas. After listening to each individual interview at least twice, I transcribed them. The first interview was used as a starting point to guide the rest of the data analysis. Through inductive coding, I looked for themes and patterns in the data. The process of inductive coding included many layers of analysis. In the initial coding phase, I reread the transcriptions, on and off, sometimes with intention and sometimes casually. After familiarizing myself with the data, I coded the data line-by-line. After the data was coded, I looked for patterns and themes that connected to my research question. Through analysis of the patterns and themes found in the first interview, a codebook (list of codes with descriptions and examples) was created, which I used in analyzing every other data point.

After the participant's final interviews, I followed the same process described above. However, when it came to analyzing these transcriptions, I used deductive coding to confirm the conjectures found through the inductive coding process. As I completed a transcription, I added it to a synthesizing instrument I created on GoogleSheets, entitled Interview Questions and Transcriptions.

Table 4, Individual Interviews: Data Supporting Conjectures, provides a few samples of data representing the ways in which I coded data around a set of conjectures in the individual interviews with mentors. In analyzing the data from September to January, the data presented five conjectures. From February to April, I examined how the

Table 4. Individual Interviews: Data Supporting Conjectures

Data Conjecture	First Interview	Final interview
Being a mentor teacher is a disorienting experience.	*Having conversations. Being more aware. Reflecting. Maybe reflecting more. I do reflect but now that I have someone else there that I am reflecting with and talking about what I did and how I presented it that changes it.* - *Chloe*	*I had to think why am I doing this? Why do I do it a certain way? Where have I even learned this? A book or is it just something I came up? I questioned everything about why and how I did things. An example would be how to model how to read a piece of the text. So, it was a challenging text and a challenging concept and there was so much vocabulary. When he tried, he just read through it and didn't address any of the vocabulary. Showing him how do you model to the students about how you annotate and stop to ask questions. It's not like that was a method I had, it's just something I do. So, trying to communicate that to him was challenging.* - *Chloe*
Being a mentor teacher impacts a mentor teachers' understanding and beliefs on teaching and learning.	*I am thinking about what I am actually doing and if I am not doing the HLP, then why? And think about how I can add that high-leverage teaching practice in? Jessica*	*Well, you can no longer be on autopilot and can't just continue to do the things you did before just because- because now you are modeling for someone else. I wanted to model best practices for my intern. It was almost like you had to validate why you are doing things and really think about how to verbalize how to do it to a teacher who has never done that before. And then, obviously you evaluate yourself and really reflect on why you do things the way you do. Jessica*

Table 4. Individual Interviews: Data Supporting Conjectures *Continued*

Data Conjecture	First Interview	Final interview
I learned useful skills/strategies/approaches/techniques regarding instruction from my intern.	*The first semester is mostly us modeling. The second semester is when our interns will be able to contribute more to the lesson planning.* - *Joan*	*So, am I reaching every type of student? My intern always talked about how he was a disengaged student and that he wants to make sure he connects with them. I thought I was connecting with them. So, it made me think about it more.* - *Joan*
Mentor team meetings were helpful in my growth and understanding of teaching and learning	*We focus on the goals and expectations. We talk about how we use the rubric and the different ways we give feedback to our interns.* *Beth*	*I think I learned quite a bit during our team meetings. We were able to really talk about what was happening with our interns and talk about how to support our interns. We were able to flesh out the conversations we needed to have with our interns. We were able to figure out how to give constructive feedback and encouragement. I think that was really helpful.* - *Beth*
Mentor teachers transfer what they learn through mentoring into their practice and work with colleagues.	*I know and do many things on the rubrics and in the binder, but now I have to learn how to explain it to my intern. I know that it will be easier to have an intern again, because I will be more familiar with the rubrics and specific language.* - *Chloe*	*I thought that maybe in the summer time I could make visuals for the students so that they can start using prefixes and so forth.* *Next time mentoring: weekly goal; record progress; how to write on the board; log of progression on that specific thing.* - *Chloe*
	-	-

data supported the conjectures. In the table, the first column is the data conjecture, and the second column is data that supports the conjectures pulled from September to January. The third column provides data pulled from February to April.

Table 4, Individual Interviews: Data Supporting Conjectures shows examples of data that support the conjectures from the first and final interviews. It's interesting because the data in the first column is an example of how the conjectures were developed and the data in the third column shows how the mentor teachers experienced each of the conjectures. Although the table only shows a few examples, it is also important to note that the conjectures became findings only if all four mentors shared data to support them.

Mentor Team Focus Group Interview Analysis

The goal of the group interview was to get input from the mentor teachers about the emerging themes mid-way through data collection. It was an opportunity to check my interpretation of the data as a researcher. Through the mentor team focus group interview, I was able to confirm the conjectures and find examples to support them. I then reflected on what the data was telling me and what my research question was asking, which allowed me to hone my questions for my final interview.

Table 5 provides a few examples of data pulled from the group interview to support the conjectures. The first column is the conjectures, and the second column is data pulled from the group interview to support the conjectures.

Table 5. Mentor Team Interview: Data Supporting Conjectures

Data Conjectures	Data Pulled from Group Interview
Being a mentor teacher is a disorienting experience.	*Along with supporting interns with High-leverage teaching practices, we have to support them in becoming professionals (i.e.: timeliness, use of phones, etc).* - *Jessica*
Being a mentor teacher impacts a mentor teachers' understanding and beliefs on teaching and learning.	*Being a mentor has made me think about the ways I communicate with my students and if I am reaching the needs of all my students.* - *Jean*
I learned useful skills/strategies/approaches/techniques regarding instruction from my intern.	*My intern's teaching style and rapport with students is very different from mine. It makes me think about how I connect with my students.* - *Jean*
Mentor team meetings were helpful in my growth and understanding of teaching and learning	*We talk about the ways we give feedback to our interns and if our interns are able to make changes based on our feedback.* - *Chloe*
Mentor teachers transfer what they learn through mentoring into their practice and work with colleagues.	*Being a mentor has made me think about collaborating with adults, including my colleagues.* - *Beth*

The above table shows examples of data pulled from the group interview that support the conjectures. The mentor team focus group interview was important to my study because it connected the individual ideas into a collective understanding. Additionally, the mentor team focus group interview confirmed my interpretation of the data. With the confirmation that my conjectures were accepted and agreed upon with the mentors, I began drafting questions that still needed to be addressed in the final interview.

Monthly Reflection Survey Analysis

I collected monthly reflection surveys from mentors throughout the data collection period from September through April. After each survey, I read the responses several times. Initially, I read them without immediately trying to code them. After, I used my codebook to find specific data that supported my conjectures. Subsequently, I read with an open mind to see if new themes or threads were developing as the year went on. I created a working document to put all the data from the surveys into one place to analyze it more easily. I broke the document into sections; each question had its section, and then I added a column for each month as I received new replies. The structure of the document made reading the responses easier and more linear to show potential growth or change over time. As explained earlier, in September through January, I analyzed the monthly surveys, along with the interviews, through inductive coding. From the inductive coding process, I developed conjectures. From February through April, I used deductive coding to clarify and support the conjectures. Table 6, Monthly Reflection Surveys: Data Supporting the Conjectures, shows the process of data analysis for the surveys. The first column is the data conjecture that was developed from themes found through the inductive coding process. The second column shows data that supports the development of the conjecture, and the third column provides examples of data pulled from the February through April surveys, which support the conjectures. Although Table 6 is just a sample of the data and process, it is important to note that in the analysis from February through April, for a conjecture to be considered a finding, the conjecture had to be supported with an example from each of the four mentors.

Table 6. Monthly Reflection Surveys: Data Supporting the Conjectures

Data Conjectures	Data to Support- Sept- January	Data to Support- February- April
Being a mentor teacher is a disorienting experience.	*Coaching this month has been difficult. Maybe I am not blunt enough? My intern has been asking to lesson plan, and when I gave her a unit to use as she takes over the class, she said she would familiarize herself with it. I tried to make it clear to her that we do not just familiarize ourselves with things we teach. She needs to plan what the kids are doing and what she is doing for each of the 90 minutes of the class period. What are the learning goals for each hour? What do you need to do to prepare? I've been modeling this for 20 weeks, making my thinking visible. She hasn't seemed to pick it up this way.* - *Jessica*	*I've found that it is difficult to really explain my personal planning strategies and activities and how to coach someone else on the best practices for effective unit planning.* - *Jean* *My coaching sessions have focused on the execution of lessons. I have been reflecting on how a lesson can be developed well on paper, and yet the teacher still needs to work on the execution. The planning that goes into a lesson, thoughtful and effect strategies, well-planned transitions, etc. are only half the battle. I have thought about how there are so many nuances to teaching that are hard to "teach" to another person* - *Chloe*
Being a mentor teacher impacts a mentor teachers' understanding and beliefs on teaching and learning.	*I notice how often I use these practices and how often I modify and critique my own practice.* - *Jessica*	*I realized I do not use "formal" formative assessment data to guide my instruction as much as I should. Like, I do not often keep track of numbers (i.e. 40 out of 140 students can write a claim that is nuanced, debatable, and defensible.)* - *Jessica*
I learned useful skills/strategies/ approaches/ techniques regarding instruction from my intern.	*I am a bit of a perfectionist. And, sometimes I feel like my classes can seem so prescriptive. And so I really wanted it to be more- I guess open to more ideas. Because Jenny, had an intern a few years ago, yeah and on the fly, she said, "let's do this lab" and so we did it. But the whole time, I was anxious and nervous because it wasn't a normal rotation. I guess I want to be more comfortable with that. Because I guess sometimes you need to go with the flow and I am sometimes bad at going with it.* - *Beth*	*The student teacher was in his guided lead teaching, so he incorporated all three High-leverage teaching practices into his lessons over the week. We had a great discussion on different ways to hold group discussions, the importance of engaging all students and voices and not just the loudest students who usually participate. We talked about certain routines that encourage more students' ideas to be heard. He ended up trying a "four-corners" visible thinking routine to move from individual thinking to small lab group share-outs, to whole class discussion.* - *Chloe*

Table 6. Monthly Reflection Surveys: Data Supporting the Conjectures *Continued*

Data Conjectures	Data to Support- Sept- January	Data to Support- February- April
Mentor team meetings were helpful in my growth and understanding of teaching and learning	*Working with Jessica (our liaison) on the understanding and beliefs regarding the practice does help keep the team on the same track. We also review rubrics together and talk about outcomes.* - *Jean*	*As always, talking with my colleagues about student teachers reminds me of the importance of feedback-- for our students and for our student teachers.* - *Jessica*
Mentor teachers transfer what they learn through mentoring into their practice and work with colleagues.	*Though I do not think my practice has shifted, I am more aware of the moves I make when modeling.* - *Beth*	*Coaching sessions continually make me reflect on my daily practice much more often. These reflections are much more formal. In the past I may just label a document, "change for next year" - Now I am actually changing the document with my student teacher to show how it might be better.* - *Beth*

The monthly reflections were an important part of the study because they provided ongoing data which captured the thoughts of the mentor teachers as they moved through the school year. The surveys kept the study in the forefront of the mentors' minds and provided the structure and opportunity to reflect on their mentoring experience. An important take away from the above table shows how that in the first half of the school year, mentor teachers were not seeing a change in the way they think about teaching and learning. However, by the end of the year, each mentor teacher provided specific examples that supported the conjectures, and ultimately showed that mentor teaching was an opportunity for professional growth.

Classroom Observations and Artifact Analysis

The classroom observations and the artifacts were not data tools in the sense of gathering new data or analyzing the information found; both classroom observations and

program artifacts served as secondary data sources. Conducting classroom observations and looking through the artifacts were ways for me to better understand the context of each mentor teacher's experience, which is essential in case studies. Additionally, these secondary sources supported triangulation (using more than one data point to support codes/ideas pulled from the data).

Chapter Summary

Using a qualitative case study approach, this study sought to explore four mentor teachers' experience supporting secondary teacher interns from Bear University. The participants of this study—Beth, Chloe, Jessica (liaison), and Jean—are four ninth grade teachers at Blue Bird High School who, in addition to collaborating as teachers, worked together on a mentor team during the academic year.

The data instruments selected for this study allowed me to examine up-close mentors' experience in this unique site. Those data collection instruments included two individual interviews with each of the four mentors, a group interview with the mentor team, monthly reflection surveys from each mentor, classroom observations of each mentor and her intern and tools and resources provided to mentors by Bear University's secondary teacher education program.

As stated above, from September through January, I used inductive coding to determine potential themes in the data. After coding each data instrument individually, I looked at the themes from each data instrument to see if the themes were found in other data instruments as well. If a theme was found across the data instruments, it became a conjecture. For example, I found that in the surveys, mentor teachers mentioned that they reflected on and rethought their use of high-leverage teaching practices. I then

reexamined the themes from the interviews to see if mentor reflection on their use of high-leverage teaching practices was one of the themes that emerged from the interviews. As reflecting on their use of high-leverage teaching practices was a theme in both the interviews and the survey, it became part of a conjecture for the study.

Reading through the data, pulling out themes and thought patterns was a recursive and fluid process. After I coded a section of the data, I spent time away before rereading it. I then checked it for accuracy, consistency, and further articulation of the conjectures (Meyer, 2001; Merriman, 1998). To be considered a finding in the data, all four mentors had to provide an example supporting the conjecture. Chapter Four will discuss the findings.

CHAPTER FOUR

FINDINGS

This chapter will demonstrate how the data answers the research question: how does mentoring interns in a clinically rich, practice-based secondary teacher education program impact mentor teacher's teaching and learning? The data suggests that mentor teaching provides opportunities for mentor learning. I begin this chapter by introducing the four mentor teachers and their overall experiences with mentoring interns. Next, I share some of the ways in which mentor teaching was a disorienting experience. Then, I illustrate how mentors learned from their mentor team and from their interns. The final section discusses how mentor teachers transferred what they learned from their mentoring experience to their own practice.

Mentors and Their Mentoring Experiences

This study shines a light on the mentor teachers' experiences through the mentoring teaching experience. However, it is important to note that these mentors have pre-existing relationships and ways of working that are not being examined in this study, such as, their friendliness towards each other, their understanding of how each other teaches and lesson plans, and their understanding of each other's personal lives. These pieces of their relationship were not analyzed in this study but may impact the way they work together as mentors.

This section introduces each participant and highlights their overall experience with mentoring. For each mentor, I discuss about their current teaching position, why they became a mentor teacher, and general thoughts on their learning.

Jessica: Experienced ELA Mentor & Liaison

Jessica, a language arts teacher for over 20 years, has been at Blue Bird High School for the last three years. Prior to her current teaching position, she taught in a neighboring district where she also worked with secondary interns from the teacher preparation program used in this study. In addition to serving as a mentor, Jessica was the liaison between the site and the university. In this role, Jessica was responsible for the team of mentors in this study, and the cohort of four interns assigned to them. It was her job to ensure that mentors had the tools and structure they needed to support the interns. As a liaison, it was also her responsibility to organize monthly meetings with the cohort of intern and cohort learning experiences, like observing other teachers and discussing high-leverage teaching practices. As the liaison, Jessica had to think not just about her intern, but the experience she was creating for the entire cohort of interns, as well as the mentor team.

In our interviews, we talked about her past experiences as a mentor of intern teachers. Jessica has been participating in the university's secondary teacher preparation program since 2006. During that time, she had mentored 12 interns and was a liaison at a different school. As this was Blue Bird High School's first time participating in the program, this was also her first time as liaison at this school. Jessica's goal as a mentor is two-fold- she wants to give back to the education field and improve the profession through mentoring. Throughout the interviews and my correspondence with Jessica, it was clear that she is dedicated to the field of education. Not only does she want to help grow the profession by supporting interns, but she also actively seeks out opportunities to

learn and grow as an educator, as evident in the quote below referencing her work as a mentor teacher.

> *I know that specifically working with this university's secondary teacher education program as a mentor teacher, I have been able to attend various professional development. It has really impacted me as a person, and I think it's made me a better teacher.*

Jessica, a veteran teacher, liaison, and mentor teacher, is passionate about teaching and learning.

Chloe: Experienced Science Mentor

Chloe has been teaching science for over 10 years, with the majority of her experienced gained at the high school where she is currently employed. During her time at Blue Bird High School, Chloe taught biology to ninth graders. Chloe explained that in her first few years of teaching, emails were sent out from a university asking for teachers to be mentors. Although she was not ready at that time, Chloe knew that eventually she wanted to give back to the profession and support an intern, just as her mentor had done for her. By her third year of teaching, she felt comfortable enough to be a mentor.

Chloe's first mentoring experience was with a different university than the one used in this study. She found her first time mentoring challenging. One of the problems was that her mentoring role as that program lacked structure. Chloe said that she had a contact from the university and that her intern had a person that came in to observe her once. Other than that, Chloe felt like she never knew what to do: *"I felt like it was hard- especially as a first-time mentor. I didn't know what I should be doing. So, I just went with it. We got through it."* Chloe tried to ask the intern to talk about what she was

learning in her class and what they could do together, but that was not fruitful from Chloe's perspective. She said that sometimes they had the same language to talk about teaching, and sometimes they would not. *"I would say 'visible thinking', and she said that she didn't know what that was, and I didn't know if she didn't know what that was or if they called it something different in her class."* Chloe's first mentor experience was challenging. However, knowing that she would be co-mentoring with colleagues and that Jessica would be the liaison encouraged her try again with Bear's program.

Chloe appreciated the resources and support form Bear University. Chloe mentioned that she most utilized the binder of resources she received from the university that explained the roles, responsibilities, and expectations of being a mentor. As mentioned previously, in Chloe's last mentoring experience, she felt unsure of how to support her intern. Having a binder that Chloe could reference to be sure she was providing the appropriate support was comforting to her and made mentoring easier and more meaningful for Chloe and her intern. Specifically, Chloe talked about the intern calendar as being helpful so that she felt she was "*on the right track*." She found the use of the high-leverage teaching practices' rubrics designed by the program were also beneficial. Chloe felt that the rubrics gave her language to use when offering feedback to her intern.

Chloe explained that one of the benefits of mentoring is that the experience allowed her to pause and reflect on her teaching. What does she find important about teaching? What is it that a new teacher needs to know? Reflecting on her stance as a learner, Chloe said, *"I am a collaborative person so I enjoyed having a new fresh person come in to share ideas with and he had some fresh ideas so that was really fun."* Being

open to fresh perspectives and reflecting on her own teaching illustrate the ways in which Chloe embodied the characteristics of a lifelong learner.

Beth: First-Time Science Mentor

After 10 years of teaching ninth grade science, Beth decided to become a mentor teacher for the first time. When asked how she became a mentor, she said*, "Jessica (liaison) showed up and told me that we would have four interns and asked if I wanted to mentor. And so I said sure."* The more Beth thought about it, the more she realized that it was an excellent time to have a mentor because they were in the process of redesigning the ninth-grade science curriculum. She thought it would be interesting to work with the interns on the curriculum because she never learned how to develop her own units of study. When she was student teaching, she always taught someone else's curriculum.

Beth went into mentoring with some ideas of what she wanted to get out of the experience. In her words:

> *I am a bit of a perfectionist. And sometimes I feel like my classes can seem so prescriptive. And so, I wanted it to be more open to more ideas. Chloe had an intern a few years ago, and on the fly, she said, "Let's do this lab," and so we did it. But the whole time, I was anxious and nervous because it was something unplanned and different. I want to be more comfortable with that. Because sometimes you need to go with the flow, and I am sometimes bad at going with it.*

The above quote shows that Beth was aware of an area that she wanted to grow in, namely, being able to go with the flow more easily. Beth thought that being a mentor teacher would provide her with opportunities to practice going with the flow more easily.

Beth's self-awareness and willingness to state what she hoped to gain from mentoring shows that she is flexible and open to new things regarding her professional growth.

Through the mentoring experience, Beth realized many things about herself and teaching. When reflecting on her mentoring experience, Beth said:

> *It was fun. I learned a lot about myself. I never realized how many things you do that you know you have to teach someone, like when I do things naturally and how much I have learned over the years. I also realized that I do miss the kids. I was feeling the teacher burnout that they talk about, but when I had to step in and teach when my intern wasn't in the class, I realized that I do still like teaching.*

Through mentoring, Beth realized that teaching is complicated and that there are many things that one must learn to become a teacher. She was also reminded of how much she enjoys students. Being a mentor teacher reminded her of the joy she gets in working with students and how much she has grown as a teacher over the years.

Jean: Experienced ELA Mentor

Jean has been teaching language arts for over 15 years. Some of those years have been in other states, but she has been in her current position for most of the time. When I asked Jean why she became a mentor, her response was layered. She started by saying that she is a lifelong learner and always seeking out opportunities to grow and learn. She had a very positive experience as an intern with her mentor and wanted to give back. Jean was a mentor before, and said, *"First time mentoring, I didn't have any guidance or structure. I just used my student teaching experience of what my mentor did."* This time, Jean felt much more comfortable mentoring because of the structure, organization, and focus on high-leverage teaching practices. Focusing on high-leverage teaching practices

allowed Jean to reflect on her teaching. Using the high-leverage teaching practices' rubric from the university, Jean was able to analyze her teaching. For example, while she says that her teaching did not necessarily change, she did become more aware of including high-leverage teaching practices in her lesson planning more regularly. She benefited from using provided rubrics with specific language for feedback and specific items to implement, adding some structure to the work she was able to do with her intern.

Specifically, through this mentoring experience, Jean reported that she developed skills in the high-leverage teaching practice of leading a discussion and eliciting and interpreting. Working on the high-leverage teaching practices with an intern helped her be sure she was effectively having group discussions and adding a variety of ways to elicit student thinking. Among the positives of mentoring, Jean said that the team of three other mentors in the school was extremely valuable, as well as the resources and binders of information provided by the teacher preparation program. When asked about mentoring as professional growth, Jean replied, *"Mentoring is an opportunity for professional growth if the mentor is open to reflection and growth."* Jean was very clear that mentoring is not for everyone. In the past Jean has seen mentors take advantage of the system and not support the intern. Jean believes those mentors would not be open or willing to learn; no matter how supportive the program was or how talented their intern was, that type of mentor would not learn or grow

Looking Across Mentors and their Mentor Teaching Experience

All four mentor teachers have been teaching for over 10 years. As shared earlier, all mentors are ninth grade teachers, and meet to map out units and lesson plan. In their role as mentor teachers, they met at minimum monthly to talk about how to best support

the needs of their interns. Passionate educators, this team of mentors enjoyed working together and came to mentoring with a collective mindset of wanting to help intern teachers, as well as give back to the field. They were willing to learn and grow from each together and their interns, as well as share what they have learned through their teaching experiences.

Findings

The first finding is that mentor teaching was described by the mentors in this study as a disorientating experience. Mentors also described two ways in which they learned about teaching and learning through mentor team meetings and from working with interns. Lastly, mentor teachers described transferring what they learned to their future practice as mentors.

Mentoring as a Disorientating Experience

In this section, I share some of the ways in which the mentor teachers in this study reported having a disorientating experience. In Chapter One, I defined disorientating experience as an occurrence that alters one's worldview, and therefore, changes their perspective. The examples I share in this section speak to some of the growth the mentor teachers in this study experienced. For example, Jessica and Beth spoke on being reminded of simple, yet profound components of teaching and learning, both focused on connecting with students: creating and finding joy in teaching and being present with students. Chloe's and Jean's examples were connected to elements of teaching and learning such as teaching content and using technology to engage their students. In each case, through the work of mentoring, each mentor learned something that made them rethink their understanding of and approach towards teaching and learning.

When asked if mentoring is a disorientating experience, Jean talked about how making her think visible was a metacognitive practice: "*Mentoring is a disorienting experience because as a mentor teacher, you have to explain your thinking out loud all the time, which means you have to be clear on why you are making the instructional decisions you are making."* Jean's mentoring experience was disorientating for her because it made her really think about her instructional decisions. Pausing to consider why she was doing a specific way of teaching gave her the opportunity to reflect on her instruction in a way that she would not have done had she not been a mentor teacher. In other reflections, Jean talked about how being with an intern whose personality was completely different than hers allowed her to see how her own personality impacts her interaction with students: *"Everyone has a different style and personality—am I reaching every type of student?*" Jean's awareness of varying her interaction with students was reflective, as it included rethinking lesson planning, and rethinking ways to interact with students.

Regarding mentoring as a disorientating experience, Beth, a first-time mentor, said, *"I realized that I miss the kids. I was feeling the teacher burnout that they talk about, but when I had to step in and teach when she wasn't in the class, I realized that I do still like teaching."* Beth was reminded of how much she enjoyed working with kids which changed her focus during class time. Beth talked about how intentional she was to model being present with her students, specifically for her intern. Modeling being present completely changed the way she spent her time in class. She became more aware of creating relationships with students and being fully present with her students. Rather than getting work done on her computer, she interacted with students and worked on getting to

know each student. In this example, having a disorientating experience (i.e., Beth realizing how much she enjoyed working with students) impacted the way she interacted with her students.

Chloe's disorientating experience was rooted in reflection; *"Mentoring made me think about what I had thought about teaching in the past and reflecting on what I now find important about teaching."* Pausing to think about teaching and learning and recognizing that your thoughts on teaching and learning have changed, is a form of awareness that can lead to a change in behavior. Chloe also talked about how she wanted to model best practices for her intern. In order to model best practices effectively, Chloe read through the rubrics to better understand the language used to describe high leverage teaching practices; *"After reading about the high leverage teaching practices, obviously you evaluate yourself. Mentoring is a way to self-evaluate and really reflect on why you do things the way you do."* Chloe's mentoring experience provided her with the opportunity to reflect on her understanding and beliefs regarding what she thinks are important regarding teaching and learning. The pause allowed her to make shifts in her practice. For example, after working on the high-leverage teaching practices group discussion with her intern, Chloe researched new ways to hold group discussions with her classes and practiced using them with her intern.

Jessica, as a mentor and a liaison, believes deeply in teacher education and giving back to the field. As Jessica reflected on her experience as a mentor, she was able to name things she would like to change and grow from. For example, Jessica stated that although mentors might not be learning new and different things, such as high leverage teaching practices, they are more aware of them. Jessica said, *"I am more aware of the*

high-leverage teaching practices that I do not do enough of." As previously discussed, Jessica was able to remember the fun in teaching through mentoring. Watching her intern provide stickers and wear costumes, reminded her of how much fun teaching is and how making it fun for students improves their engagement. Jessica plans to include more playful teaching next year.

Each participant reported feeling the disruption of thought; the need to pause and rethink their understanding of teaching and learning because of their mentoring experience. Based on participant self-report, it seems reasonable to claim that each mentor had some form of disorienting experience, or, as defined by Mezirow (1978), an experience that alters one's worldview, an experience that changes their perspective.

Two Sites for Learning: Mentor Teams and Interns

All mentors agreed mentor team meetings were helpful in their growth and understanding of teaching and learning. Mentor teachers also reported learning from their interns. Sifting through the data, two patterns emerged regarding mentor learning: team meetings supported mentor learning and mentor teachers learned from their interns.

Mentor Team Meetings: A Site for Mentor Learning

The mentor team had standing monthly meetings that all four mentors would attend. These meetings were typically 45 minutes long. Mentors also met individually or as needed as a team. As the liaison, Jessica was the one who set the meeting schedule and an informal agenda. In reviewing the data, I found a typical agenda included these four activities- reviewing expectations for themselves and their interns, supporting interns' individual needs, brainstorming strategies for providing interns with feedback, and taking the time and space to reflect more generally on issues of teaching and learning.

Reviewing Expectations

Team meetings offered support and a review of the university's teacher education requirements. One item always on the agenda was looking at the intern teaching calendar and expectations (provided by the university) to ensure that mentor teachers were implementing the university's curriculum. The agenda included time for the team to share any questions or concerns they had. The mentors reflected that working with their liaison on the university's expectations of the intern experience helped keep the team consistent. To foster consistency, they also reviewed rubrics together and talked about the ways in which their interns delivered high-leverage teaching practices. For example, Chloe mentioned in one of her interviews:

> *It was helpful to have others to talk through the expectations, or talking about how much are they grading right now. And, it was nice to see if what the intern is doing is in the normal range or if it is something I should be really concerned about.*

As the above quote exemplifies, the mentor teachers felt like their team meetings were an opportunity to share their experiences, ask questions and ensure that they were supporting their interns according to the university's requirements. Another benefit felt by all the mentors was that their liaison created an open line of communication, and that they never had to worry about what they should be doing because their liaison and mentor meetings kept them on track. The group's agenda was structured but also flexible enough to meet the needs of its members. The team meetings offered support and a review of mentoring expectations.

Addressing Interns' Individual Needs

Not only did mentors feel like their team meetings helped keep them on track with the university's expectations, all the mentors in this study stated that having the mentor team helped them support their interns' individual needs. The mentors were able to discuss individual questions about their interns. As Jessica explained:

> *After taking over my classroom, talk of high leverage teaching practices decreased with my intern. I've been trying to help my intern understand that the high leverage teaching practices are used when designing all class periods. We do not just focus on one each day. When meeting as mentors this month, this seems to be a common theme across all of our interns. We talked about how we could more intentionally work with our interns on layering the use of high leverage teaching practices.*

The above quote shows an example of a mentor using the team meetings to talk through her questions regarding her intern. Mentors felt they had a place to share their experiences, ask questions, and discuss ways to work with their interns. Mentors acknowledged that, *"having the team was great because if I had any questions about my intern, I could talk with them. Similarly, I would listen to their concerns, and it confirmed the work that I was doing."* Each mentor commented on how it was helpful being part of a mentor team because it was a place where they could ask questions about how to support their intern.

Providing Feedback to Interns

All four of the mentors commented on how, in their mentor team meetings, they learned more effective ways to give constructive feedback to their interns. Beth stated:

> *I liked having the monthly meetings because often one of the other mentors would bring up something that I was wondering about and we could talk about it. And, then we would share ideas of how to support our interns about the topic we were wondering about. One of the things we talked about that was helpful was talking about the ways we offer our interns feedback.*

Beth's example shares how team meetings supported mentor teachers with specific questions they had regarding their interns as well as shared ways to help support the intern through feedback. Jessica furthered the connection to feedback by saying, *"As always, talking with my colleagues about student teachers reminds me of the importance of feedback—for our students and for our interns."* Jean followed up by adding, *"We were able to flesh out the conversations we needed to have with our interns and figure out how to give constructive feedback and encouragement. I think that was really helpful."* Team meetings provided the opportunities for mentor teachers to talk about ways to give feedback to their interns.

Reflecting on Teaching and Learning in Team Meetings

One area the mentor team supported was the time and space to reflect on teaching and learning in general. Jessica commented:

> *I can see the connections between how science mentors and English mentors have similar issues with interns maybe because teaching isn't natural; it's science and*

art. And, the interns struggle in similar ways learning the moves of teaching, regardless of their content area.

Jessica was able to see the components of teaching that extend past her content area. Having a team to talk to allowed mentor teachers to explore teaching beyond the moment and even beyond just their intern. Being on the mentor team allowed mentor teachers to explore and reflect on aspects of teaching and learning, such as giving feedback, the importance of being present with students, the impact bringing joy into the classroom has on students, and new ways of engaging with students.

The mentor meeting was a place for the mentors to share, discuss, and openly reflect on their mentoring experience. Having this team to connect, process, and reflect with, supported the mentor in their work with interns. This study did not set out to examine the inner dynamics and specific workings of mentor teams, or to evaluate the how mentor teams getting along (or not) impacts the level of support and growth that occurs. That said, it is clear from the data, the mentor teachers in this study were able to be vulnerable, share their questions and concerns, and feel comforted by the fact that they had support.

Working with Interns: A Site for Mentor Learning

The findings from the data also show that mentor teachers learned from their interns. I have organized this section by mentor teacher to better show how each mentor learned from their intern, and to show that all the mentors learned and grew in different ways.

Beth shared two examples that impacted her way of teaching and learning. The first example was that her intern easily connected with other teachers, whereas Beth

never really tried to connect with her colleagues. Through her intern's connection, she was able to organize field trips to the farm, discuss student issues, and make cross-curriculum connections with her colleagues, as well as make lunchtime with her colleagues more relaxed and enjoyable. Beth realized the benefit of connecting with her colleagues. It opened new ways of teaching students and enhanced her enjoyment of her day, which promoted positive energy that could be transferred to her students.

Secondly, Beth shared an experience she had because she wanted to model being present with students while teaching, which was already mentioned above. Beth wanted to model that being present with students was an important part of teaching. In fact, Beth admitted that whenever possible, instead of interacting with students, she worked on her computer. Making the choice to model being present to her intern, Beth had to change her ways. As she explained:

> *In order to model being present with my students, rather than my usual: use time when students are in the classroom to plan, I would join a table and hang out with the students, help them along. I really liked it because it made me so much closer to the students. It is more fun getting to know kids than being on my computer.*

Modeling for her intern the importance of being present with students reminded Beth of how much she liked getting to know the kids. Realizing how much she enjoyed spending time with students, she planned to be more present with her students in years to come.

As a veteran teacher and mentor, it was interesting to see what Jessica learned from her mentoring experience.

> *I think that over the years, I just tried to keep my head above water and focus on what I thought was important. And, because of that, I kind of lost the joy in*

teaching. My intern was concerned with rapport and relationship building. She tried to make things fun. I think I will try to continue that in some way.

This excerpt shows the kind of learning that can shift how a person approaches teaching and learning globally, rather than a specific high leverage teaching practice or content specific example. Jessica was reminded of the joy, celebration, and fun of teaching. Jessica spoke to the challenges she has been facing in education: *"pay freezes, cranky teachers, more expectations, more mandates…."* Her intern reminded her that the students are why she was there, and rather than letting herself get bogged down with the challenges of education, she wanted to bring life and joy into the classroom for her students.

Jean also shared two examples of learning from her intern. The first one is short and straight to the point: *"My intern showed me how to use technology. He's younger than me [laughter]."* Jean learned through her intern the importance of providing ways for more students to interact and participate in class discussions through technology. I selected this example because it was not the university's program that set up this learning, it was the intern himself.

Jean's second example of learning from the intern was about better understanding how her own personality impacts her teaching. Jean talked about how different her intern was from her which includes his designed lessons. She noticed how her intern connected with the students differently and was able to connect with a wide variety of students. Jean spoke about how, through reflection, she became more aware of her own teaching.

I would ask myself the purpose of the activities that I am including in my lesson, and it wasn't that I changed my lesson plans, but I became aware of how much

my personality influences my lesson planning. I reflected on that and thought about how the choices I am making for my activities and presenting new materials are not the only ways to do it. I was more aware of adding variety to my lesson plans to ensure that I was connecting with as many students as possible.

As the above statement demonstrates, because her intern was different than she was, Jean was reminded of the importance of considering other ways of doing things, such as the activities selected for a lesson and ways to engage with students.

Chloe shared two examples of learning from her intern, both of which directly connect with instruction. The first example, Chloe said, *"we had a great discussion on different ways to hold group discussions, and the importance of engaging all students and voices and not just the loudest students who usually participate."* Chloe described this interaction with her intern as a "discussion." The mentor did not tell the intern what to do and the intern did not just do what they were told; rather, they shared ideas. The way they worked together is an example of two colleagues talking about practice, sharing knowledge and experience, which is different from a mentor informing the intern. The second example Chloe shared was regarding her intern's appreciation for Latin. She said:

My intern really likes Latin and perhaps one thing that I saw that he did was to teach the root words of the science vocabulary. I thought that maybe in the summertime I could make visuals for the students so that they can start using prefixes and so forth.

The first example shows how the university's curriculum initiated the topic of learning, and the second example shows how the learning was brought on by the intern himself.

The above examples speak to the role interns played in supporting mentor learning. Beyond the curriculum articulated by the university's teacher education program, the mentors all learned something personal connected to their own process of learning and growing. Beth remembered that being present with students and getting to know them is one of her favorite things about being a teacher. Jessica rediscovered the joy in teaching. Jean learned how to use technology to engage students in different ways. Chloe discovered a new way to teach old concepts.

Mentors Transfer Learning into Their Mentor Practice

The data shows that mentor teachers are applying changes they learned from their mentoring experience to their practice. In previous sections, I provided examples of how the mentor teachers in this study learned from their mentoring experience making changes in their teaching practices moving forward. This section highlights mentoring topics participants said they will do differently in the future.

One of the things that Beth plans to focus on next time mentoring is how to lesson plan. Beth said that after delivering a lesson, she reflects on the lesson after she teaches and makes notes on the lesson plans for the following year; *"In the past I would just label a document, "change for next year." Now I am actually changing the document with my student teacher to show how it might be better."* After working with her intern on lesson planning this year, Beth went on to say that modeling lesson planning is something she would like to do more of next year.

Jean talked about how, next time she has an intern, she will support her intern with lesson planning differently. Jean said that she would, *"model more lesson planning in the first semester, sharing the experience with interns (collaborating, and tweaking*

instead of starting from scratch). Then, in the second semester, I will do more guided practice with lesson planning." Jean also said that she would help her interns better understand day-by-day planning versus unit planning. Through reflection, Jean was able to reconsider how she will support her intern in the future to better understand lesson planning.

Chloe reflected on her mentoring experience and decided she would do things a little differently next time she had an intern. Chloe said that the next time she mentors, she will set weekly goals with her intern and record their progress. Although the university curriculum is helpful and beneficial, Chloe noticed that there were several things she needed to work on with her intern that were not in the curriculum, such as how to write on the whiteboard. Chloe said that next time she would be more intentional with the individual needs of the intern and setting small weekly goals to support their needs.

Jessica, a veteran mentor, explained that the way she gave her intern feedback was the most "aha" moment that she had. She said:

> *I felt like I was constantly giving her feedback because I was either telling her to her face or through email, and she felt like I was giving her no feedback because it wasn't written. So there was a disconnect of what she expected feedback to look like and what I was doing.*

Jessica thought about that disconnect and considered how to make it better next time mentoring; she intends to ask how her intern would to give and receive feedback.

Chapter Summary

These findings showed that being a mentor teacher impacts a mentor's teaching and learning. The mentor teachers in this study reported having a disorientating

experience, which they were able to process through the two sites of learning found in this study. The findings in this study show that mentor teachers are part of two learning communities, one with their interns, and the other with their team of mentor teachers. As part of that learning community, mentor teachers also learn and grow as educators. Additionally, the mentor teachers in this study have already applied or plan to apply changes to their teaching and mentoring based on what they have learned through their experience. Although the specifics of what each mentor learned are different, each mentor teacher was able to provide examples of learning a useful skill/strategy/approach/technique regarding instruction from their intern. Chapter Five will discuss these findings through the lens of the transformative learning theory and communities of practice.

CHAPTER FIVE

DISCUSSION

This study explored how mentoring impacts mentor teachers' beliefs and understanding regarding teaching and learning. In this final chapter, I will discuss the implications of viewing mentoring as a disorientating experience, as well as the two sites for mentor learning, and the impact of how mentors transfer what they learn into their practice. Then, I will share the limitations of this study, as well as provide suggestions for future studies.

Before diving into each finding separately, I wanted to frame how in this study transformative learning and communities of practice work together to support mentor learning in this study. Table 7, Transformative Learning & Communities of Practice Work Together for Mentor Learning, shows how the two learning theories work together in the context of mentor learning. The first column lists the 10 phases of Mezirow's (1978) transformative learning theory. The second column connects the findings from the study to the phases of transformative learning, noting which findings directly connect with communities of practice. I shaded the rows to show the connection between the phases of transformative learning and the findings. The un-shaded rows represent the findings that directly connect with communities of practice: mentor teams as a site for learning and working with interns as a site for learning.

Table 7. Transformative Learning & Communities of Practice Work Together for Mentor Learning

Mezirow's Transformative Learning (1978)	**Findings**
(Phase 1) A disorienting dilemma	Outcome: being a mentor teacher is a disorienting experience
(Phase 2) A self examination with feelings of guilt or shame	Finding: mentor teachers learn from their mentor teams (communities of practice)
(Phase 3) A critical assessment of epistemic, sociocultural, or psychic assumptions	Finding: mentor teachers learn from their interns (communities of practice)
(Phase 4) Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change	Outcome: being a mentor teacher impacts understanding and beliefs regarding teaching and learning
(Phase 5) Exploration of options for new roles, relationships, and actions	Finding: mentor teachers learn from their mentor teams (communities of practice)
(Phase 6) Planning a course of action	Finding: mentor teachers learn from their interns (communities of practice)
(Phase 7) Acquisition of knowledge and skills for implementing one's plan	
(Phase 8) Provision trying of new roles	
(Phase 9) Building of competence and self-confidence in new roles and relationships	
(Phase10) A reintegration into one's life on the basis of conditions dictated by one's perspective	Finding: mentor teachers transfer what they learn through mentoring into their practice

Table 7 shows us how the transformative learning and communities of practice work together in the context of mentor learning. The importance of this table is that it shows how the university's secondary teacher education program utilizes communities of practice to provide the structure and opportunity for mentor teachers to experience the transformative learning process, i.e., through the mentor team and working with the interns (un-shaded rows).

Now that the findings have been framed through the theoretical framework, I will discuss each finding individually. The next sections will connect the finding that mentoring is a disorientating experience with the two sites for mentor learning found in this study- mentor teams and working with interns. Finally, I will discuss mentors transferring what they learn from mentoring into their practice.

Two Sites for Mentor Learning

As previously discussed in Chapter Four, the findings have shown a variety of ways in which the mentoring experience is disorientating to the mentor. Each mentor self-reported that mentoring caused a pause in their thinking; a disruption of thought. According to Mezirow's (1978) transformative learning theory, having a disorientating experience is the necessary precursor for transformative learning. In this study, through the structure of the university's secondary teacher education program, two sites for mentor learning provided the opportunity for mentor teachers to explore their disorientating experience.

This study sought to better understand the impact mentoring has on mentor teachers' teaching and learning. As presented in Chapter Four, the findings suggest being a mentor impacts components of mentor teacher's teaching and learning. Using the

theoretical lens of transformative learning (Mezirow, 1978) and communities of practice (Lave & Wenger, 1991), I was able to view the research question in a way that illuminates the ways in which the mentoring experience was disorientating. The mentor teachers in this study reported learning as a result of their experience and, the reason they learned these things is because (a) mentoring acted like a sort of disorienting experience and (b) they worked collaboratively in two unique ways that supported that learning (e.g. via the mentor team and the mentor/intern pair). In this section, I discuss the two sites for learning found in this study

Mentor Team Meetings: A Site for Mentor Learning

The first site for learning revealed in the findings was the mentor team. In this section, I describe the mentor meetings, how the finding connects with the research, theoretical framework, and addresses the research question. The section concludes with how the finding suggests that mentor team meetings are a site for mentor learning.

Monthly mentor meetings provided the support, organization, and opportunity for mentor learning. Opportunity was given monthly for scheduled meetings, as well as meetings with mentors and/or the liaison as needed. Every mentor teacher felt supported through attending the mentor team meetings. The mentor teachers in this study stated that the team meetings offered them a chance to make sure they were following the university's requirements and share and discuss any questions or concerns they have in their work with their intern. Specifically, mentors shared that they appreciated hearing how their colleagues were providing feedback, as well as what challenges their interns were facing and what "off-curriculum" teaching concepts they were working on with their interns. To help keep the mentor teachers organized discussing the university's

requirements and timelines for interns was always on the mentor team's meeting agenda. More than anything, mentor teachers felt it was comforting to have a group of people working through the same tasks so that they could share progress and get support as needed.

Mentors as a site for learning connects with the research from Chapter Two. Clarke's surveys revealed teachers' strong call for a space to converse about their work as mentor teachers (2006, 2007). In their study, they formed a group of mentor teachers who met regularly to talk about their role and work as mentors. Mentor teachers discussed issues that went well beyond topics that might be found in more traditional professional development. It became apparent that the group fruitfully extended the notion of teacher learning to teacher inquiry around the concept of mentoring beginning teachers. A member of the group stated, "being a cooperating teacher is the best professional development I've ever had" (Clark 2006, p. 853). As discussed in Chapter Four, the mentor teachers in this study all found the mentor team meetings meaningful and helpful.

The findings discussed in Chapter Four demonstrated that mentor team meetings were helpful in mentor teachers' growth and understanding of teaching and learning. This finding directly connects with the learning communities component of the communities of practice social learning theory (Lave & Wenger, 1991) discussed in Chapter One. The findings presented in Chapter Four support my argument that the mentor team served as a learning community that provided the support, organization, and opportunity for the critical reflection and exploration necessary for transformative learning.

The findings from mentor team meetings were helpful in mentor teachers' growth and understanding of teaching and learning addresses the research question regarding the

impact mentoring has on mentor teachers' understanding and beliefs on teaching and learning through its application. The research question specified how mentoring impacts mentor teachers and this finding is a direct response: mentors learn from the mentoring experience. Specifically, the findings suggest that there are two sites for mentor learning: mentor teams and working with interns. Chapter Four articulates specific learning each mentor teacher experienced in both sites for mentor learning.

Working with Interns: A Site for Mentor Learning

The second site for learning found in this study was mentor teachers working with their interns. In this section, I explain how this finding connects with the research, theory, and show how the finding addresses the question of the impact of mentor teachers on their belief and understanding regarding teaching. The conclusion of this section establishes that the data suggests working with interns is a site for mentor learning.

Working with interns as a site for mentor learning connects with the research from Chapter Two. To illustrate, Bullough (2002) claimed that mentor teachers reported that the intern teachers brought "fresh ideas" toward improving their classroom practice. Similarly, Fairbanks' (2000) study also claimed that mentor teachers said that as a result of their mentoring partnerships, mentor teachers learned from their intern teachers by asking questions and inviting their feedback and suggestions. Additionally, Koerner's (1992) study found the experience of mentoring intern teachers fostered reflecting on and reviewing their own teaching. As shared in Chapter Four, the four mentor teachers who participated in this study also felt they had learned something from their interns.

The findings show that mentor teachers learned something about teaching and learning from their interns. This result connects with the ideas of shared learning and

negotiation of meaning between newcomers and old-timers within the social learning theory communities of practice (Lave & Wenger, 1991). Sharing learning and negotiation of meaning fosters the self-reflection and exploration of a new way of being/doing that leads to transformative learning.

Chapter Four articulated how each mentor teacher learned from working with their intern. Each mentor learning from their intern directly connects with the research question regarding the impact mentoring has on mentor teachers' understanding and beliefs on teaching and learning through its application. Mentors learned or were reminded of skills, strategies, approaches, or techniques regarding teaching and learning from their interns. The finding pulled and discussed in Chapter Four demonstrated that each of the mentors were able to articulate something they learned from their intern. Through the opportunity mentoring provided, along with the organization of the university's curriculum, mentors felt supported and were able to work learn something from their intern that impacted their teaching.

Mentors Transfer Their Learn into Their Practice

Mentors transferring what they learn into practice was the next finding. In this section, I talk about what mentors transferring what they learn into practice means, how the finding connects with the theory, and how the finding connects to the research question. In this section, I explain the data finding that mentors transfer what they learn through mentoring into their practice.

In Chapter Four, I shared some of the specifics of what mentor teachers learned and how they would apply what they learned into their teaching, such as use of technology, and new ways of teaching vocabulary. Also of importance, the mentor

teachers in this study shared things they would do differently as a mentor teacher next time around. The findings demonstrated that mentor teachers transferred what they learn through mentoring into their practice. This finding connects to both communities of practice (Lave & Wenger, 1991) and Mezirow's (1978) transformative learning theory. This finding is the outcome of the findings mentor teachers learn from their mentor teams, and mentor teachers learn from their interns. Mentor teachers transferring what they learn into their practice also connected to the final phase in Mezirow's (1978) transformative learning theory (phase 10), a reintegration into one's life on the basis of conditions dictated by one's perspective. Mentor teachers transferring what they have learned through the mentoring experiences into their practice moving forward demonstrates how the components of communities of practice provide the support, organization, and opportunity that lead to transformative learning.

The finding that mentor teachers transferred what they learn through mentoring into their practice addresses the research question exploring the impact of mentoring on mentor teachers' understanding and beliefs regarding teaching and learning. In this study, the findings showed that mentor teachers plan to incorporate what they have learned into their future work in teaching and mentoring. Each participant felt the disruption of thought, the need to pause and rethink their processes, and understanding of teaching and learning throughout their mentoring experience. Based on participant self-report, it is reasonable to claim that each mentor had some form of disorienting experience, defined by Mezirow (1978) as an experience that alters one's worldview, and changes their perspective.

Sites for Mentor Learning & Communities of Practice: Transformative Learning

Further analysis of the two sites for learning shows that each site for learning demonstrated fundamental aspects of communities of practice. Referring to Chapter One, communities of practice must have a shared domain of interest (i.e., teaching and learning), the community (people: interns and mentors, and the mentor team), and the practice (i.e., high leverage teaching practices). In addition, as stated in Chapter One, communities of practice is about the negotiation of meaning. The idea of negotiating meaning is that the community members work together to define, hone, redefine, and even reconstruct the community's practices through mutual engagement and active participation. As described in Chapter One, mutual engagement is that all members of the community are equal and active participation is when all parties are able to contribute and participate to the conversation.

Table 8, Two Sites for Learning and Communities of Practice, shows how each site for learning connects with three components of communities of practice- mutual engagement, active participation, and negotiation of meaning. The first column is the site for learning, and the second through fourth columns represent the three components of communities of practice previously stated. Under the second, third, and fourth columns, I have summarized the themes from the data to support each site for learning's use of the mutual engagement, active participation, and negotiation of meaning.

Table 8. Two Sites for Learning and Communities of Practice

Site for Learning	Mutual Engagement	Active Participation	Negotiation of Meaning
Mentor Team	Even though there was a liaison, all the mentors felt like they were equally part of the team and contributing to team meetings.	Mentors had regular team meetings that they attended, as well as impromptu meetings as needed.	Mentor worked together to talk about high leverage teaching practices: i.e.: how to support their interns with effective implementation; how to offer feedback to inters.
Interns and Mentor Teachers	Mentors and interns worked closely together on the running of a classroom, including implementing high leverage teaching practices.	The mentors and the interns were equally invested in the student teaching experience.	Mentors were able to recognize that they could learn from their interns, including the ways to engage with students, use technology, and bring joy into the classroom.

The purpose of this table is to show how the structure of the secondary teacher education program used in this study provided two sites for mentor learning, and how these two sites for learning utilized pieces of communities of practice to foster transformative learning for the mentor teachers in this study. Not to say that the secondary teacher education program used in this study intentionally designed their program to include these pieces of communities of practice, more to state that through analysis of the findings, it seems communities of practice is in the program design. Understanding that communities of practice is included in the design of the secondary program used in this study, I wonder how much more impactful mentor learning could be if a teacher

education programs intentionally designed their program with components of communities of practice and transformative learning.

Implications

The purpose of this study was to examine how mentoring impacts mentor teachers' understanding and beliefs regarding teaching and learning through the lens of learning theories communities of practice (Lave & Wenger, 1991) and transformative learning (Mezirow, 1978). The findings demonstrate that components within the communities of practice provide the support, organization, and opportunity for mentor teachers to experience the process of transformative learning. With the findings in mind, two concepts this study sheds light on which may impact in the field of education- implementation of some components of communities of practice to educational and professional development design, and implementation of some components of transformative learning in education and professional development design.

The first concept that may impact the field of education is the intentional implementation of some aspects of communities of practice (Lave & Wenger, 1991) into the design of educational institutions and systems. There are many ways to be intentional in creating and maintaining learning communities. For example, bringing awareness to the roles present in a learning community and being intentional about the shared practice and negotiation of meaning among those roles may provide the support and opportunities for teachers to experience transformative learning. Research supports that ongoing professional learning is essential in education, and that job-embedded professional growth is an effective way to grow professionally (Zeichner, 2010). Intentional

implementation of aspects of communities of practice in the design of educational institution and systems may foster transformative learning for those teachers involved.

The second concept to consider in the field of education is intentional implementation of transformative learning (Mezirow, 1978) in aspects of educational institutions and systems. There are many ways to rethink current ways of doing teaching and learning to be more intentional and supportive towards transformative learning. One example is to establish a mentoring program that includes opportunities for the mentors to work on their own growth. Understanding that mentor teaching is a disorienting experience, we can intentionally design the mentor experience to support mentor learning and not just focus on the intern's learning. Additional studies may include examining the impact of the mentor's common disposition on learning or how their pre-existing relationships might impact the significance of the mentor team

Beyond the learning theories, this study suggests the importance of how we select our mentor teachers. The first step in the transformative learning process is to have a disorientating experience. This study highlights simply that being a mentor teacher is a disorientating experience, which is the vital first step in the process. However, transformative learning is not guaranteed just because one has a disorientating experience – one has to be willing to engage in the disorientating experience. This study suggests that the two mentor learning sites for learning are how mentor teachers engage with the disorientating experience. Step two of Mezirow's transformative learning theory is self-reflection and openness to rethinking (CITE). Digging into the data, the mentor teachers in this study had strong views about mentoring and the kind of people who should be mentors. The mentors in this study strongly believe that mentoring provides an

opportunity for transformative learning; however, they believe transformative learning to be dependent on the disposition of the mentor teacher. Are they open to learning new ways? Further research on the mentor selection process would be helpful if one of the goals of the mentoring experience is meant to be transformative for the mentor teacher.

As someone who creates mentoring programs for new teachers, the findings in this study encourage me to think more deeply about the mentor experience. For example, concepts of transformative learning and communities of practice could be shared with mentors in a workshop, and by the end of the workshop, mentor teachers could create their goals to work on while mentoring. Then, using the transformative learning phases, mentor teachers could map out how they plan to work through the process. Additionally, it might be beneficial to have a joint meeting with new teachers and mentor teachers to talk about the negotiation of meaning and allow the team to work together to discuss and create their community of practice allowing both parties to become active participants.

In general, the implications of this study suggest that the field of education might benefit from rethinking its adult learning programs and redesigning them to intentionally include components of communities of practice (Lave & Wenger, 1991) and transformative learning (Mezirow, 1978).

Study Limitations

It is important to mention the impact of the COVID-19 pandemic. The pandemic took over the world as we knew it; hospitals were at maximum capacity, grocery store shelves were empty, the working world went remote, and schools were shut down. Schools were shut down in March (2020). Districts, teachers, and families struggled to reestablish balance and normalcy in an unprecedented and unnerving time. Data

collection for this study ended in April (2020). I originally had face-to-face interviews planned for the final interview in April, but due to schools being closed and teachers working remotely, the final interviews were held virtually. Along with the way the interviews were held, COVID-19 was an unknown experience and I cannot account for how it might have impacted the participants in this study, and therefore the results of this study.

Suggestions for Future Research

In general, the goal of this study was to have a better understanding of the mentor teachers' experience. More specifically, I wanted to have a better understanding of how transformative learning (Mezirow, 19178) and communities of practice (Lave & Wenger, 1991) connect with mentor learning. This study only sheds light on a small group of mentor teachers and cannot make generalizations or categorical statements but offers a starting point for further research.

Ultimately, it would be helpful is to have best practices for designing a successful mentoring experience. Potential takeaways from this study could be the idea of mentor teams and regular meetings with the mentor teams are beneficial for mentors. Another possible take away from this study is to provide mentor teachers with specific resources to better understand and support interns. For example, this could include providing mentor teachers with pacing guides, descriptions of expectations, rubrics, and feedback templates. Another important area that impacts the mentoring experience is the selection process. I shared the selection process for the mentor team used in this study in Chapter Three, but I think much more research needs to go into considering how mentors are selected. What is the criterion? What is the role of the university in the selection process?

What is the role of the administration at the mentor site? What is the mentor mindset? These questions can be examined and explored, then applied to finding the mentor teachers who would not only add to the intern's learning and growth, but also embrace learning and growing through the mentoring experience.

The next area that would benefit from further research is how instrumental learning and transformative learning (Mezirow, 1987) present themselves in the mentoring experience. The data gathered for this study showed mentors experiencing a shift in how to approach teaching and learning with such examples like, being present with students and brining joy back into the classroom. Other ways in which the data showed mentor teachers' views on teaching and learning being impacted were more practical. For example, the data showed mentor teachers learned new ways to use technology for student engagement, and examples of learning new ways of teaching old, familiar concepts. What would it look like to design the mentoring experience to include instrumental learning and opportunities for transformative learning? An example of instrumental learning could include new insight into teaching and learning that interns are learning in their courses that they can share with mentors, like high leverage teaching practices. Knowing mentor teachers are able to grow and learn through the mentoring experience, how can we tap into the communities of practice components in designing mentor programs? How can we utilize the newcomers (interns), the university, and mentor teams to expand the experience of the mentor, as well as the intern? Clarifying the types of learning that mentors experience might help in the use of communities of practice and transformative learning when designing teacher education programs to also include professional development for mentors.

On a much broader scale, I would like to break down Mezirow's (1978) steps in the transformative learning process into specific practices or techniques that encourage and support the learner to engage in the transformative process. This would require more research, but once the steps in the process are concrete and practical, I would like to explore how we can use the transformative learning process (and the concrete practices) to foster a transformative learning mindset/approach to life. That is, looking at life to grow, learn, and reshape perspectives through disorientating experiences.

Conclusion

This study adds to the field by addressing the question regarding how mentor teachers' beliefs regarding teaching and learning are impacted through the mentoring experience using the lens of Mezirow's (1978) transformative learning theory and key components of Lave & Wenger's (1991) communities of practice. This study connects communities of practice with the transformative learning process in the context of mentors working alongside interns during the student teaching semester. The results of this study demonstrated that there are two sites for learning in the secondary teacher education program used in this study, mentor teams and mentors working with interns. Additionally, the findings in this study show that through components of communities of practice, mentor teachers transfer what they learn into their practice, which represents the outcome of Mezirow's (1978) transformative learning theory.

The implications of this study suggest that because research supports that ongoing professional learning is essential in education, and that job-embedded professional growth is an effective way to grow professionally (Zeichner, 2010). As such, we should consider how to intentionally implement communities of practice (Lave & Wenger, 1991)

and transformative learning theory (Mezirow, 1978) into aspects of the current educational institution and systems. This study is small in its participants and therefore only sheds light on the mentor experience of four mentor teachers. Much more research must be done to utilize the mentoring experience, as well as other ways of professional development and job-embedded learning through a better understanding of the pieces of communities of practice (Lave & Wenger, 1991) that support transformative learning (Mezirow, 1978).

APPENDIX A

INTERVIEWS AND SURVEY PROTOCOLS

Context

This study will take place in a practice-based secondary teacher prep program that focuses on high leverage teaching practices and includes a robust set of supports offered to mentor teachers. The supports include regular site-based team meetings between teachers and designated liaison, program materials/activities on high leverage teaching practices, as well as the expectation that mentors follow the teacher prep program by providing structured coaching in high leverage practices. Interns are evaluated on high leverage teaching practices throughout their student teaching semester. The high leverage teaching practices form a curriculum for both the mentors and interns.

Interview Protocols

Who:

- Sara Horne - administering
- High School working with Secondary Teacher Preparation Program
- Roles: Mentor teachers and Liaison

Protocol:

- Private location and Time:
- September (first interview)
- January (group interview)

- April/May (Final interview)
- 45 min
- Semi-structured
- Audiotaped

First Individual Interview Questions:

- How did you become a mentor?
    - Did you seek this role?
    - Have you served as a mentor before? What was that experience like?
- What are some of the reasons you wanted to be a mentor teacher?
- What do you hope to gain from your mentoring experience?
    - Probe: learn new instructional strategies, give back to the profession, have help in the classroom. Others?
- What were thoughts about mentoring in the university's secondary teacher education program before and after the orientation on August 22, 2019?
    - Did your thoughts on mentoring shift? If so, why?
    - What is your understanding of your role within the university's secondary teacher education program?
- Let's talk about High-leverage teaching practices
    - high-leverage teaching practice1: Explaining and Modeling content, Practices and Strategies…
    - Read through the section, what do you notice?
    - Let's look specifically at pages 9-10, the rubric.

- When you were looking at the advanced columns, what areas do you feel like you already do and/or that you are confident in?
- Similarly, when looking at the advanced columns, what parts were new to you or things you would like to implement in your future trainings

Group Interview Questions:

Follow up questions from September:

- We talked in September about your thoughts on why you wanted to be a mentor?
    - Have those motivations changed?
    - Can you give me an example?
    - Can you point to what might have shifted or changed your thinking?
- Share monthly survey responses with mentors
    - Go through each question and ask mentors to share their thoughts on the responses.

Survey Questions:

Part 1: Below are questions regarding the ways you are working with your interns on implementing High-leverage teaching practices

- How has your participation in the mentor/liaison team meetings this month impacted your understanding and beliefs regarding instructional practices? Please provide an example.

- How have your coaching sessions this month impacted your understanding and beliefs regarding instructional practices? Please provide an example.
- How have the provided program materials/activities this month impacted your understanding and beliefs regarding instructional practices? Please provide an example.

Part 2:

- Which high-leverage teaching practice have you been working on this month with your intern?
- How has working on this specific high-leverage teaching practice impacted your thinking regarding instructional practices?
- How has your thinking regarding instructional practices shifted this month?

Final Individual Interview Questions:

- What were your most positive experiences as a mentor? What made that positive? Any other positive experiences you want to share?
- What were some of your challenges as a mentor? What made that a challenge? Any other challenges you want to share?
- What are some of the ways you have grown or changed as an educator because of your mentoring experience? Probe for expected responses, e.g. teaching practice, beliefs about new teachers, beliefs about instruction, etc.
- After mentoring this year, think back to how you started your year this year, what will you do differently or the same next year?

- What are some of the ways the support provided by the university has influenced your mentoring experience?
- How have these supports influenced your own instruction?
- In what ways have you grown/changed as an educator?
- Explain how each of the following has impacted your understanding and beliefs regarding instructional practices:
    - Team meetings
    - Coaching
    - Program materials/activities
- Let's reflect on our first interview in September regarding High-leverage teaching practices

Surveys

Who:

- Sara Horne administering the monthly check-ins
- Mentor teachers and Liaison

Protocol:

- On the last Friday of every month (September-April), I will send a Google form to the mentors. The form should take no more than ten minutes.

Purpose:

- Monthly check-in
- Ongoing data collection
- Support mentor teachers' thinking and reflecting on how mentoring impacts their instruction

Questions:

Part 1: Below are questions regarding the ways you are working with your interns on implementing High-leverage teaching practices

- How has your participation in the mentor/liaison team meetings this month impacted your understanding and beliefs regarding instructional practices? Please provide an example.
- How have your coaching sessions this month impacted your understanding and beliefs regarding instructional practices? Please provide an example.
- How have the provided program materials/activities this month impacted your understanding and beliefs regarding instructional practices? Please provide an example.

Part 2:

- Which high-leverage teaching practice have you been working on this month with your intern?
    - How has working on this specific high-leverage teaching practice impacted your thinking regarding instructional practices?
- How has your thinking regarding instructional practices shifted this month?

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