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Exploring First-Year Teacher Support Within a Support Team Structure in an Alternative Certification Program: A Multi-Case Study

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EXPLORING FIRST-YEAR TEACHER SUPPORT WITHIN A SUPPORT TEAM
STRUCTURE IN AN ALTERNATIVE CERTIFICATION PROGRAM:
A MULTI-CASE STUDY

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Curriculum and Instruction

by
Candice Vanette Moore
May 2018

Accepted by:
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ABSTRACT

Educational policymakers have turned to alternative certification programs to expedite the certification process for those wanting to become teachers in an effort to combat a shortage of teachers in hard-to-fill content areas and geographical regions. However, an extensive body of research suggests a myriad of problems with alternative pathways. One such problem is that teachers from alternative certification programs have a higher attrition rate than their traditionally prepared counterparts. Therefore, a major issue with alternative certification programs is that they do not accomplish the main goal for which they were created, which is to circumvent the teacher shortage. While research suggests utilizing job-embedded coaching, mentoring, and induction is an effective way to increase teacher retention, there has been little research on what these supports should look like for those in alternative certification programs. This study seeks to examine this issue by exploring teacher support through a multi-member support team structure in an alternative certification program.

DEDICATION

This dissertation is dedicated to Rivers and Delaney. I continue to learn more from you than I could ever hope to teach you. I love you both.

ACKNOWLEDGEMENTS

I would like to express the deepest appreciation to my committee chair, Dr. Mindy Spearman, for almost a decade of unwavering guidance, support, and encouragement. She has been with me every step of the way and for that, I am so grateful. Similarly, I am appreciative of the invaluable feedback of each of my committee members—Drs. Susan Cridland-Hughes, Hans Klar, and Sandy Linder. And to my parents—thank you for believing in me even when I did not believe in myself.

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CHAPTER ONE: INTRODUCTION TO DISSERTATION

Background of the Study

Since the 1980's, states and school districts have been turning to non-traditional measures through the use of alternative certification programs (ACPs) to address the widespread geographic teacher shortage, content-area teacher shortage, or both. According to the National Education Association (2015), approximately one third of recently employed teachers have achieved their licensure through some form of alternative pathway. By 2010, ACPs were considered commonplace in the credentialing of teachers (Redding, C. & Smith, T. M., 2016). To that point, the most recent Title II report suggests that in 2012-2013, the state of Texas had 11,203 traditional program completers and 9,625 ACP completers (U.S. Department of Education Office of Postsecondary Education, 2016). ACPs provide those with no teacher preparation or experience with a way to enter classrooms without completing a standard four or five year university-based teacher preparation program (Constantine, Player, Silva, Hallgren, Grider, Deke, & Warner, 2009). In most cases, alternative certification (AC) routes require candidates to have a minimum of a four-year degree in a specific field, pass basic skills and state licensure exams, and complete a state-approved program containing pedagogical and content-specific coursework (U.S. Department of Education Office of Postsecondary Education, 2016). In many cases, however, candidates are accepted into an alternative certification program and immediately assume full responsibility over a classroom before most of the required training can occur, relying primarily on abbreviated coursework, job-embedded professional development, and the support of

mentor teachers to train teachers on-the-job (Darling-Hammond, 2010; Darling-Hammond & Berry, 2006; Darling-Hammond, Chung & Frelow, 2002; Humphrey & Wechsler, 2007). Not surprisingly then, in one nationwide study findings indicated that almost half of alternatively certified teachers leave the profession within 5 years--more than three times the rate at which fully certified teachers leave the profession (Henke, Chen & Geis, 2000). In a more recent study, researchers found that alternatively certified teachers have an attrition rate that is almost eight percentage points higher than that of traditionally prepared teachers—25 percent vs. 17 percent (Redding, C. & Smith, T.M., 2016). So while placing teachers in classrooms expeditiously may appear to alleviate a teacher shortage, these alternatively prepared teachers leave at higher rates than their traditionally prepared counterparts which may only serve to perpetuate this shortage (Henke, Chen, & Geis, 2000; Redding, C. & Smith, T.M., 2016).

Additionally, placing inexperienced, underprepared, or uncertified teachers in classrooms can have a negative effect on students, schools, and districts, in large part due to the high turnover rates and the instability that ensues, particularly when you consider that teachers in alternative certification programs are often placed in classrooms with the highest need (Darling-Hammond, 2010 & Ladson-Billings, 1992; Redding, C. & Smith, T.M. 2016).

Consequently, increasing the supply of teachers will not prove successful in addressing the teacher shortage if we are not also equally concerned with providing teachers in alternative certification programs the support needed to gain the knowledge and experience required to be successful in the classroom. Borrowing the words of

Shulman (1983), “The teacher remains the key. The literature on effective schools is meaningless, debates over educational policy are moot, if the primary agents of instruction are incapable of performing their functions well,” (p. 81).

This study sought to better understand how teachers construct knowledge in practice within the established support structures of one alternative certification program to ensure that they are performing their functions well. More specifically, I sought to understand how job-embedded professional development and support offered through a support team structure influenced the experience of beginning teachers in their first nine weeks of an alternative certification program.

Problem Addressed by the Study

A substantiated concern of critics of ACPs highlights the lack of preparation of AC teachers as they enter the profession and how ease of entry into an AC program may contribute to ease of exit from the profession (Greenberg, Walsh, & McKee, 2014; Redding, C. & Smith, T.M., 2016). Because alternatively certified teachers enter classrooms with little pedagogical knowledge on which to base instructional decisions that inform their teaching practice, they rely heavily on knowledge constructed as they practice. Therefore, job-embedded coaching has become a frequently used model of professional development in alternative certification programs through which, teachers engage in professional learning that is focused on practice and occurs in the classroom setting (Borman & Feger, 2006; Darling-Hammond, 1990; Garet, Porter, Desimone, Birman & Yoon, 2001; National Partnership for Excellence and Accountability in Teaching, n.d.; U.S. Department of Education, 1999). Despite the increased use of

support for new teachers through the use of mentoring and induction programs and job-embedded coaching, a detailed look at the extent to which teachers in alternative certification programs could benefit from such support has yet to be fully addressed. While research has acknowledged that effective alternative certification programs should include a mentoring component (Feistritz, 1990, Redding, C. & Smith, T.M., 2016), there has been little research on what these mentoring components should look like in practice and how AC teachers may benefit from such organizational supports (Boggan, Pope, Jayroe, & Wallin, 2016, Redding, C., & Smith, T.M., 2016). Stated differently, the field lacks research that is focused on teacher support within alternative certification programs that utilize intensive mentoring and coaching as a support mechanism.

Purpose and Significance of the Study

This study sought to address this issue by exploring how teachers in the Alternative-Southeast Teacher Education Program (A-STEP)¹ approach learning within the context of the support team that is established and implemented as a unique program design feature. This feature, called the Teacher Support Team (TST), is a multi-member team that seeks to provide teachers with intensive support and individualized coaching as they learn to teach within the context of their own classroom. Research on the use of multi-member support teams is currently absent from the literature on support for teachers from both traditional programs and alternative routes. Therefore, the deliberate design and implementation of the TST as makes the A-STEP program a worthy case for examining teacher learning within a job-embedded context. This study examined A-

¹ All proper names used in this study are pseudonyms.

STEP teacher learning within communities of practice; more specifically, the TST as a community of practice. Through this study, I wanted to know how support is offered through the TST as it relates to the support and development of general pedagogical knowledge. I also wanted to know what types of activities take place within the TST, and how A-STEP teachers' needs are met in and through the TST as a community of practice.

Therefore, in this study I explore the collaborations between the A-STEP teacher and his or her support team to determine how the A-STEP teacher learns within the context of a community of practice embedded in the program itself. This study adds to the existing body of literature by considering the critiques of alternative certification pertaining to teacher quality, teacher preparedness, and teacher retention and exploring how programmatic features designed to enhance teacher learning within ACPs could be used to mitigate at least some of the concerns these critiques present and influence how we approach teacher learning in ACPs in the future.

Research Question

Ongoing review of the literature in the fields of alternative certification, mentoring and induction, and job-embedded professional development led to the development of the research question for this study which provided both structure and focus throughout all phases of the study. The research question for this study is as follows:

In what ways can a teacher support team serving as a community of practice enhance the experience of first-year teachers in an alternative certification program during the first nine-weeks of school?

As stated previously, the primary purpose of this study was to explore A-STEP teacher learning through the established TST by examining the collaborations between the A-STEP teacher and his or her support team members. This research question was used to explain how A-STEP teachers approached learning during the first nine-weeks of school and how the assigned support team assisted in this learning development from the perspective of the teacher. To answer this question, I used data from multiple sources in order to provide a comprehensive understanding of the nature of A-STEP teacher learning.

Theoretical Framework

To make my position as researcher clear, in this section I present my epistemology, ontology and axiology. As mentioned in the previous section of this chapter, the research conducted for this study focused on understanding the perspectives of A-STEP teachers related to their own learning as first-year teachers in the A-STEP program. Regarding my epistemology, I resonate with a constructionist view. I believe that the data and the researcher represent unique perspectives and knowledge comes from a dialogue between these perspectives. Regarding my ontology, I connect with a relativistic view. I believe there can be multiple realities or truths depending on the perspectives that are brought into a research situation. In terms of my axiology, I lean toward a value-bound view where inquiry is guided by the values, perspectives and life experiences of the researcher. Therefore, as a qualitative researcher operating in the interpretivistic paradigm, my goal was to explore the understandings and perspectives of A-STEP teachers as they related to the support they received through the TST and how

this support assisted in the development of general pedagogical knowledge through communities of practice.

In this study, knowledge originated from a dialogue between the researcher and the A-STEP teacher through observations, interviews, reflections and other documents that are presented as data. Each observation, interview, or other interaction within the research setting provided pieces of understanding and knowledge as it pertained to the perceptions of the A-STEP teachers. Each contribution to understanding and knowledge is important to its own extent and in that particular context. Each research situation provided a unique facet contributing to an overall understanding of the phenomenon under study as the values, perspectives and experiences of both the researcher and the A-STEP teacher informed the research. Collectively, however, each facet contributed understanding and created a bigger picture from which a broader, deeper meaning and understanding of the learning of alternatively certified teachers was derived.

Operational Definitions Significant to the Study

In this section, I present operational definitions significant to the study. While various definitions exist in the field for each of the following terms, and will be presented in subsequent chapters as needed, for the purpose of this study the following definitions will be used.

Alternative Certification (AC) is used to refer to a teacher certification program that is open to candidates who have already achieved an undergraduate or graduate degree in a specified content area that did not lead to teacher certification. In an Alternative Certification Program (ACP), candidates are typically placed into classrooms

after minimal or no formal instruction in the pedagogy of teaching. Additionally, candidates receive minimal or no supervised field experience before entering the classroom. ACPs often allow candidates to complete program requirements as they function as the teacher-of-record. As described in chapter two, specific requirements of ACPs vary widely.

Traditional Certification (TC) is used to refer to any four or five year degree program that includes content-related coursework, instruction in pedagogy, and various supervised field experiences that leads to a state-issued teaching certificate. In a TC program, all coursework, field experiences and other requirements for degree completion are met before a teacher enters the classroom and before a state certification is issued.

The term Alternative Pathway is used to denote any pathway leading to teacher certification other than the traditional pathway described above. Alternative pathways may include, but are not limited to, degree programs other than the traditional 4-year degree programs that require program completion before obtaining certification (ie. Masters and Teaching programs) or programs in which requirements are met *while* serving in a classroom as the teacher-of-record. Therefore, an alternative pathway can lead to traditional licensure, in which licensure requirements are met prior to entering the classroom, or alternative licensure, where requirements are met while teaching. In essence, the term alternative pathway is used to describe the route a teacher takes to obtain certification, not the specific program or certification itself.

Another term used frequently throughout the study is the term Job-Embedded Professional Development (JEPD) which refers to teacher development that is centered

around the specifics of day-to-day teaching within the context of the school or classroom. JEPD is designed to enhance teacher learning with experiences relevant to the particulars of a teacher's classroom with the ultimate goal being increased student learning. Inherent in the notion of JEPD is a direct connection between teacher learning and daily practice that encourages teachers to take part in collaborative, inquiry-based work at the school or classroom level.

One type of JEPD examined in this study is Job-Embedded Coaching. For the purpose of this study, job-embedded coaching refers to the collaborative process whereby novice teachers are coached by more experienced teachers through the use of classroom demonstrations, observations, and conversations about the novice teacher's practice. Coaches can provide feedback and support on a variety of levels ranging from acting as a mentor for personal and nonacademic aspects of teaching to focusing primarily on the technical aspects of instruction. More depth on the various levels and functions of coaching is presented in chapter two.

Communities of Practice are, "...groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger, 2006, p. 1). In this study, the cohort from which the participants were chosen is the primary community of practice. Because the A-STEP program is a cohort-based program, the A-STEP teachers progress through the prescribed learning activities synchronously. Wenger (2006) maintained that people can belong to multiple communities of practice simultaneously. Therefore, while the cohort proved to be the

primary community of practice, the focus of this study was the TST. A more detailed treatment of communities of practice is provided in chapter two.

Study Design and Methods

This study utilized qualitative case studies using a multiple-case holistic design (Merriam, 1998) to explore teacher learning within an ACP. More specifically, through the study I aimed to provide insight into the learning of A-STEP teachers within communities of practice. To address the research question, I used interpretive case studies to examine the collaborations of the teacher with his or her support team within the broader context of the A-STEP program itself. Because “no single source of information can be trusted to provide a comprehensive perspective” I used various sources of data to provide a complete picture of each case (Patton, 1990, p. 244). The data collected from each case was analyzed holistically as one unit of analysis (Yin, 2014). Data analysis was ongoing during all phases of the study and guided data collection as it pertained to the central purpose and focus of the study. Once all data was collected and each case individually analyzed, I conducted a cross-case analysis in an effort to yield a general explanation that applied across all cases, despite the uniqueness of each individual case.

Scope and Limitations of the Study

One limitation of case study research is that it is often conducted by a sole researcher which raises concern over potential researcher bias. This is certainly the case for this study resulting in a need to identify my personal values, assumptions, and biases as the researcher that could influence the study. More specifically, it is necessary for me

to address my role as the researcher in relation to the participants. As part of my job responsibilities with Glenview County Schools, I am involved with the A-STEP program. While I am not the director of the program, I do assist with duties such as conducting information sessions about the program, interviewing and selecting A-STEP participants, providing support to A-STEP teachers needing additional support in the classroom, conducting classroom observations of A-STEP teachers, training Teacher Support Teams, planning for the Summer Institute and teaching one of the required professional development courses A-STEP participants take in the summer after their first year in the program. I sought to address this limitation in several ways. First, I did not provide support to any of the participants in this study. Instead, my aim was to remain a neutral observer and allow the TST to function without intervention on my part, should any of the participants in the study require additional support. Additionally, I only trained TSTs for A-STEP teachers who did not participate in the study. Because most of these trainings were held after participant selection had taken place, I worked with the director to ensure she conducted the TST trainings of the study participants. While it was determined during data collection that I conducted the State Mentor Training for one of the participants' mentors, this training, although required of all A-STEP mentors, is not specific to the A-STEP program. Classroom observations of A-STEP teachers conducted for the purpose of providing instructional support were also limited to teachers who did not participate in the study.

Similarly, a second limitation of the current study involved my professional investment in Glenview County Schools, the A-STEP program, and the success of the

participants. Part of my responsibility to Glenview County Schools and the A-STEP program is to ensure the support and subsequent success of the A-STEP teachers. While I do not advocate for or against AC in this dissertation, it is clear though my work with the A-STEP program that I value multiple pathways to the classroom. More than a specific pathway, however, I am passionate about differentiated support of all beginning and early career teachers. Consequently, it was often difficult to remove myself from investing professionally, personally, and emotionally in the support for each of my cases. I worried about them when they seemed overwhelmed, I was happy for them when they experienced success, and I was concerned for them when they experienced tough moments. I sought to address this limitation by focusing my time and professional efforts on the A-STEP teachers in the first cohort in order to minimize my interaction with the second cohort from which my participants were chosen. Also, once participant selection was complete, I also sought to limit my exposure to my participants to include only situations in which I was collecting data.

A third limitation involved the length of the study. While a level of saturation was achieved during data collection and complete, detailed case reports were compiled from multiple sources of data, the data collection period only spanned the first nine-week grading period of the school year. The first nine-week grading period was chosen for the study because I wanted to focus on a time when the A-STEP teachers were first gaining access to the classroom and would be relying most heavily on the support of the TST. It would be interesting to follow the participants for the duration of their first year or for the duration of their teaching while in the three-year A-STEP program. It is possible that the

current study captured at least a portion of the steepest part of their learning curve due to the nature of learning to teach through immersion in the classroom. However, the nature and extent of their learning is likely to change as they gain more experience and training, presenting a valuable opportunity for continued research.

A fourth and final limitation of the study also stems from my employment with Glenview County Schools. Because I am employed by the school district that supports the implementation of the A-STEP program, it is reasonable to believe this could present a conflict of interest in reporting results from the study. However, this limitation was mitigated by a mutual understanding at the outset that any results from the study would be considered as part of a larger picture of A-STEP teacher learning and the TST program feature, and should not be considered a comprehensive program evaluation of any sort.

Organization of the Study

In the next chapter, I situate this study within the current body of literature on alternative certification and job-embedded professional development. In the first section, I discuss some of the concerns expressed by critics of ACPs. I also offer that ACPs do not accomplish one of the goals for which they were created, and will explain how this informs the current study. In the second section, I explore various models of job-embedded coaching and highlight some of the benefits and challenges of teacher learning within the job-embedded coaching for professional development model. In the final section of chapter two, I explain how the work on JEPD and communities of practice can be used to build a theoretical framework for viewing teacher learning through the use of

job-embedded coaching and mentoring as it takes place through the support team assigned to each teacher.

In chapter three, I present the methods and research design I used to conduct this study. First, I offer a discussion of the strengths and limitations of case study research. After examining the strengths and limitations of case study research, I offer a justification of using case study as a fitting methodological approach for the current study. Then I describe the context of the study, and include detailed descriptions of the school district, the A-STEP program, and the school-specific school sites from which data was collected. Data was collected in three phases. In chapter three, I give a description of each phase and explain how participants were selected and how data was collected and analyzed. To conclude chapter three, I give treatment to issues of trustworthiness in the current study.

In chapter four of the dissertation I present a thorough picture of each of the three participants by describing in rich detail the individual case for each participant in the study. The individual cases include the nature of the collaborations between the participant and his or her support team and the extent to which these collaborations contributed to A-STEP teacher learning. The case reports also include information on the learning activities that influenced each participant during the first nine weeks of school. Each individual case was coded for themes, which served to support the cross-case analysis presented in the chapter five of the dissertation.

Chapter five describes the cross-case analysis and findings of the study. Key themes that emerged in the individual case reports and overarching themes that emerged

across cases are highlighted. These themes are tied to the study's original research question and the findings are discussed.

In the sixth chapter, conclusions are presented and discussed. Implications for the fields of alternative certification, pre-service teacher support, mentoring and induction, and job-embedded professional development are presented. In addition, recommendations are made for the design and implementation of multi-member support teams.

CHAPTER TWO: REVIEW OF THE LITERATURE AND THEORETICAL FRAMEWORK

The purpose of this multi-case study was to explore how teachers construct knowledge in practice within a multi-member support team. Specifically, I wanted to understand how job-embedded professional development and support offered through the multi-member team influenced A-STEP teacher learning during the first nine weeks of school. To conduct this study, I initiated a review of the current literature which I continued throughout the data collection, data analysis, and synthesis phases of the study. This study is situated within two areas of teacher education: alternative certification and job-embedded professional development. Presenting the need for the current study required examination of both areas. Accordingly, this chapter has been divided into three sections. The first section of this chapter is devoted to alternative certification. More specifically, I present some of the main concerns expressed by critics of alternative certification programs (ACPs) as well as the mixed research on AC teacher effectiveness to assist in developing a more complete understanding of the issues present in this field. I also discuss how ACPs, at least historically, do not accomplish one of the goals for which they were created, which is to circumvent the teacher shortage. I discuss how this finding impacts the need and significance of the current study. The second section of the chapter addresses research on job-embedded professional development in order to define what it is and what high quality job-embedded coaching looks like in practice. I also examine some of the benefits and challenges of teacher learning within the context of the job-embedded coaching for professional development model. In the final section of this chapter, I highlight how applying the theoretical framework presented in the work on job-

embedded professional development to the current issues in the field of alternative certification serves to fill a gap in the current body of literature on teacher learning within ACPs. This chapter aims to justify the need and significance of the current study by illuminating a gap in the research on teacher learning and support in ACPs within a JEPD context.

I. Alternative Certification

The practice of using ACPs as a way to address teacher shortages in hard-to-fill geographical regions and hard-to-staff subject areas has been widely debated since their inception in the mid-1980's. Many alternative certification programs---like the one in this study---offer a route to licensure that is abbreviated in content and time and is open to those candidates who have already achieved an undergraduate or graduate degree in an area that did not lead to teacher certification (Humphrey & Wechsler, 2007; U.S. Department of Education Office of Postsecondary Education, 2016). Beyond this definition, perhaps one of the few aspects of the debate on ACPs that can be agreed upon by both supporters and critics alike is that effective teachers are among the most valued resources we can offer students, and ensuring that all students have access to high-quality teachers should be our paramount concern.

The purpose of this section is to examine the literature in the field of alternative certification, focusing on some of the main concerns expressed by critics of ACPs to assist in developing a more complete understanding of the issues present in the ACP debate. Understanding the literature in favor of alternative certification as well as the critiques will prove imperative to apply and extend the findings in this study. To

accomplish this end, I first present the literature that exists in support of alternative certification. Then I present the major critiques in the field of alternative certification. Next, I examine one aspect of the shortcomings of ACPs. More specifically, I discuss how ACPs may not accomplish one of the goals for which they were created—to circumvent the teacher shortage. I go on to discuss one way this shortcoming can be addressed.

Support for Alternative Certification. In the current body of literature, one can find studies on many details of ACPs: characteristics, requirements, and features of ACPs (Blazer, 2012; Darling-Hammond, Chung & Frelow, 2002), teacher retention in ACPs (Henke, Chen, & Geis, 2000; Redding & Smith, 2016), the level of student engagement and achievement in classrooms with alternatively certified teachers (Fenzel, Dean & Darden, 2014), and the professional identities and self-efficacy of these teachers (Anthony, Gimbert & Fultz, 2013; Schultz & Ravitch, 2013). While the number of alternative certification programs has been steadily increasing in the past several years, few studies have investigated the effects of using inexperienced, uncertified teachers on the quality of classroom instruction, student engagement, and overall student achievement. Of the studies conducted, the evidence in favor of utilizing uncertified teachers in classrooms is mixed, at best.

For example, one study found that on average, Teach for America (TFA) teachers produced a positive effect on student achievement levels relative to other teachers in the same district recruited through other means (Raymond, Fletcher, & Luque, 2001). However, the same study reported that while the differences between the average TFA

teacher and the average teacher in comparison groups were always positive, they were generally not statistically significant. In their discussion, the authors also pointed out that, "...there were some TFA recruits that did not perform well in the classroom, and this is likely to continue," (Raymond, Fletcher, & Luque, 2001, p. 34).

Similarly, Decker, Mayer, and Glazerman (2004) conducted a randomized evaluation of the TFA program. They found that teachers recruited through TFA were significantly more effective than both uncertified and certified teachers in math and results were statistically indistinguishable in reading. In another study, little difference was found in the academic achievement of certified, uncertified, and alternatively certified teachers working in New York City schools (Kane, Rockoff, & Staiger, 2007). Harris and Sass (2007) also reported no evidence that teachers' pre-service training or college entrance exam scores were related to teacher productivity, a measure they used to predict student achievement.

Findings from a more recent study support the value of using teachers in alternative pathways provided they are well prepared, mentored, and given appropriate teaching responsibilities as they become proficient in the classroom (Fenzel, Dean, & Darden, 2014). More specifically, teachers who had mentored skill development showed greater classroom management and ability to engage students more effectively. Another finding from the study indicated that teachers in their second year of TFA were more satisfied with the quality of their teaching and reported greater success with engaging students. This finding corroborated the work of Boyd, Grossman, Lankford, Loeb, & Wyckoff (2006). Fenzel, Dean, & Darden (2014) stressed the importance of sustained mentorship as new

teachers become more proficient in the classroom, a finding that is relevant to the current study.

Critiques of Alternative Certification. The logical place to begin in terms of the critiques of alternative certification is with the question posed by many academics in the field pertaining to whether and how the policy and practice behind ACPs themselves serves to perpetuate the tensions that have played out historically for the poor, new immigrants, and racial/ethnic minority groups related to decisions about “whom to educate, with what resources, where and how, and toward what ends” (Darling-Hammond, 2010, p. 28). As such, I first examine the policy and practice fueling the ACP debate and use it as an entry point into the discussion on teacher quality in ACPs. I then examine concerns over the level rigor in ACPs as well as teacher retention from ACPs.

Teacher Quality: An Inequitable Distribution of Resources. While most would agree with the rhetoric of ensuring there is an equitable distribution of resources in public schools, there is a divergence of agreement when it comes to putting that rhetoric into practice. Perhaps Darling-Hammond presents this notion most succinctly when she states:

The presumption that undergirds much of the conversation about the achievement gap is that equal educational opportunity now exists; therefore, continued low levels of achievement on the part of students of color must be intrinsic to them, their families, or their communities. Yet, when the evidence is examined, it is clear that educational outcomes for these students are at least as much a function of their unequal access to key educational resources, both inside and outside of

school, as they are a function of race, class, or culture. (Darling-Hammond, 2010, p. 30).

Critics of ACPs argue that placing teachers who are not fully prepared into classrooms with the greatest need is not only counterintuitive, but it widens the achievement gap instead of closing it, primarily because a disproportionate number of underprepared teachers are placed in urban, low-poverty areas that would benefit greatly from expert teachers (Boyd, Dunlop, Lankford, Loeb, Mahler, O'Brien & Wyckoff, 2012; Cohen-Vogel & Smith, 2007). Darling-Hammond (2010) takes this point one step further when she argues that while much effort and energy at the national, state and local levels is devoted to the achievement gap, much less attention is given to what she describes as the opportunity gap--the accumulated differences in access to key educational resources that help support student learning. Compounded over time, these accumulated differences lead to a gap in educational opportunity and what Ladson-Billings (1992) has called an "educational debt" owed to those who have been denied the opportunity to a quality education over generations. One of the five key factors Darling-Hammond (2010) describes as contributing to this educational debt, and subsequently the unequal and inadequate educational outcomes in the United States, is the broken system by which we provide high-quality teachers and instruction to all children in all communities.

While it is widely accepted that a high-quality teacher is the most valuable resource in the classroom, "by every measure of qualifications—certification, subject-matter background, pedagogical training, selectivity of college attended, test scores, or experience—less-qualified teachers are found in schools serving greater numbers of low-

income and minority students,” (Darling-Hammond, 2010, p. 42). In other words, while high-quality teachers are among the most valued resources in schools, they are the most inequitably distributed school resource there is, a major factor in contributing to the opportunity gap. For example, in New York City schools in the 1990s, more than half of teachers hired each year were hired without full preparation while in a wealthier district minimum teaching requirements consisted of at least 5 years of successful teaching experience in addition to a Master’s degree from a respected institution (Darling-Hammond, 2010). In Massachusetts in 2002, students in predominantly minority schools were five times more likely to have uncertified teachers than those in schools serving the fewest number of students of color (Darling-Hammond, 2004). For poorer districts, the practice of hiring uncertified teachers in lieu of more expensive teachers who are certified and have teaching experience in an effort to save money is not only commonplace, but also detrimental—and the opportunity gap widens (Darling-Hammond, 2010; Ladson-Billings, 1992).

Research on teacher quality indicates that all aspects of teacher quality matter. For example, in one study of high school students in North Carolina, results indicated that the combined influence of teacher qualifications such as holding a certification in his or her teaching field, being fully prepared upon entry, having higher scores on licensure exams, graduating from a competitive college, having more than two years teaching experience and holding national board certification was larger than the effects of race and parent education combined (Clotfelter, Ladd, & Vigdor, 2007). In a similar study in New York City, findings indicated that student achievement was most enhanced by having a

fully certified teacher who completed a pre-service program at a college or university, who had a strong academic background, and who had more than two years of teaching experience (Boyd, Lankford, Loeb, Rockoff, & Wyckoff, 2008). One can reasonably conclude that both the achievement and the opportunity gap could be reduced if low-income minority students were assigned teachers like the one referenced above rather than those who lack preparation, certification and experience.

Congress acknowledged the importance of teacher quality through the provision in the No Child Left Behind Act of 2002 that required states to provide all students with access to “highly qualified teachers,” which they defined as teachers with full certification and demonstrated competency in the subject-matter fields they teach. All the while, the law also encouraged states to expand ACPs and considered candidates who had entered the classroom but had not yet completed their ACP as “highly qualified”. In 1983, only eight states offered routes to certification other than traditional college or university teacher education programs and by 2003, forty-six states and the District of Columbia reported some type of alternative means of certifying teachers (Birkeland & Peske, 2004). According to the National Education Association (2015), by 2015 every state in the nation reported some type of nontraditional route to licensure, with approximately one-third of recently employed teachers having obtained their licensure through some form of alternative certification pathway. So while it is widely recognized and accepted that we should place priority on ensuring that all students have access to high quality teachers, this is not the current reality in the very classrooms that could benefit most from a high-quality teacher providing high-quality instruction (Darling-

Hammond, 2010). Instead, perhaps to avoid having no teacher at all, the priority shifts to placing *a* teacher, and perhaps *any* teacher, in these hard-to-fill classrooms. As such, ACPs are often used to provide classrooms with the highest need teachers who are the least prepared to do the job for which they were hired. In the next section, I look closely at the research on ACPs in an effort to consider the rigor of ACPs, the preparedness of teachers from ACPs and the teacher retention from ACPs.

Rigor, Preparedness, and Retention. As the number of ACPs has increased over the last few decades, so has the variation among programs (U.S. Department of Education Office of Postsecondary Education, 2016). As Darling-Hammond (1990) points out, alternate pathways to teacher certification are as different from one another as they are from any given state's traditional certification pathways. For example, states like New York and Arizona, require a master's degree in addition to a subject matter degree before a full professional certificate will be issued, while other states, such as Virginia and Texas, require only 18 credits of professional education coursework at the undergraduate level with no additional internship requirements to compensate for the lack of professional preparation (Darling-Hammond, 1990). Not surprisingly then, ACPs also operate under widely divergent standards and even when the standards are seemingly comparable, there can be a stark difference in the level of rigor in each program.

Specific concerns raised by experts in the field and articulated by Darling-Hammond (2010) over the amount and rigor of the coursework required in ACPs is a well-documented concern in the literature. Researchers have found that beginning AC teachers generally feel less prepared than beginning TC teachers as a result of less

pedagogical training and pre-service classroom experiences (Darling-Hammond, Chung, & Frelow, 2002; Kee, 2012).

This lack of preparedness often translates to student achievement. One study found that while the traditionally certified teachers in hard-to-staff sample schools were also less well-prepared than most elementary teachers nationally, their students gained more on measures of achievement than those of alternatively certified teachers who were still taking coursework, as well as those alternatively certified teachers in their third and fourth years of teaching (Darling-Hammond, 2009). This finding not only illustrates that we are placing the least prepared teachers in classrooms with the greatest need for high-quality teachers, it also suggests that it can take alternatively certified teachers longer to achieve positive results in student achievement than other teachers in high-need classrooms. Additionally, findings indicated that in reading and math, students taught by teachers from “low-coursework” ACPs declined by almost two normal curve equivalent points between fall and spring of the academic year (Darling-Hammond, 2009). Teachers from “high-coursework” alternative certification programs did somewhat better, but even these teachers only added one or two NCE points in achievement over the course of the school year. Interpretation of these findings suggested that alternatively certified teachers do not much more harm than traditionally certified teachers in difficult contexts. However, Darling-Hammond (2010) argued that not only is this an unacceptable scenario, it presents a “race to the bottom for the students and schools in these communities, rather than the race to the top we need to create substantially higher levels of teacher effectiveness, especially for children who have been left furthest behind” (p.

46). Instead of focusing on what might constitute an acceptable level of harm to students by a novice teacher, we should instead focus on how we can facilitate more acceptable levels of growth—both student growth *and* teacher growth particularly during the beginning of a teacher’s career and indiscriminate of the pathway that led them to teaching.

One might conclude that because of the lack of preparation of AC teachers, they may receive more supports that would help in facilitating professional growth. However, in a recent study it was found that there were no significant differences in the assignment of organizational supports beyond that of a formal mentor for AC teachers (Redding, C. & Smith, T.M., 2016).

Another critique of ACPs is that because these teachers feel less prepared and are at least initially less effective, they leave at higher rates creating a revolving door of novices year after year (Glazerman, Mayer, & Decker, 2006; Redding, C. & Smith, T.M., 2016; Xu, Hannaway, & Taylor, 2011). Low levels of teacher retention is a concern because while students may be able to overcome the negative differential of only a few beginning teachers over the course of their educational career, having beginning teachers year after year produces a combined negative effect causing students to fall behind (Darling-Hammond, 2010). For example, in the discipline of reading, it is estimated that the negative differential for upper elementary students taught by underprepared teachers was about the loss of one-third of a grade level (Sanders & Rivers, 1996). There have been other studies that have also found AC teachers to have a small negative impact on student performance (Clotfelter, Ladd, & Vigdor, 2010; Henry, Purtell, Bastian, Fortner,

Thompson, Campbell, & Patterson, 2014). Consequently, when students experience several underprepared teachers in a row, they fall even further behind.

This cumulative negative effect can create a substantial deficit. One analysis indicated that students who received three highly ineffective teachers in a row may achieve at levels as much as 50 percentile points lower than students who receive three highly effective teachers in a row which constitutes a substantial enough difference to distinguish students who may struggle to graduate from high school from those who go on to a competitive college or university (Sanders & Rivers, 1996).

Additionally, when teachers leave and are replaced by novices, which is often the case, this may upset school organizational structure and subsequently harm student performance in less direct ways (Ronfeldt, Loeb, & Wyckoff, 2013). In a nationwide study it was reported that 49% of those who entered teaching without certification left the profession within 5 years as compared to only 14% of certified teachers entering at the same time (Henke, Chen & Geis, 2000). Another analysis determined that attrition rates for new teachers lacking student teaching and applicable coursework doubled that of those who had student teaching (National Commission of Teaching for America's Future, 2003). Often, alternatively certified teachers enter the profession not realizing the need for specialized training, and are surprised and overwhelmed when they quickly learn that this is not the case (Darling-Hammond, Chung, & Frelow, 2002). In addition, because AC teachers are more likely to work in schools with high proportions of low-income and minority students, unfavorable working conditions become a factor in attrition (Borman & Dowling, 2008; Ingersoll, 2001; S.M. Johnson, Kraft, & Papay, 2012; Ladd, 2011;

Loeb, Darling-Hammond, & Luczak, 2005). Ultimately, it is the other teachers who carry the burden of the deficits created during years when students have an unprepared teacher which places an undue amount of stress on teachers in schools and districts experiencing high turnover.

While teacher attrition has been the topic of much research, this data highlights a need for additional research exploring attrition as it relates to a teacher's pathway to certification. In the next section, I will examine some of the existing research on teacher attrition in ACPs and how such high attrition rates prohibit these programs from achieving the primary goal for which they were created.

The problem with attrition rates of teachers from ACPs. Research examined in this chapter thus far highlights that 1) high proportions of inexperienced, underprepared, or uncertified teachers can have a negative effect on students, schools, and districts, 2) while not exclusively, this is in large part due to high turnover rates and the additional issues this instability creates and 3) teachers from ACPs leave the profession at higher rates than their traditionally certified counterparts.

A major shortcoming then, of ACPs, is that ultimately they do not accomplish one of the main goals they were created to accomplish and could even serve to perpetuate the issue (Borman & Dowling, 2008; Henke, Chen & Geis, 2000; Ingersoll, 2001; Ladd, 2011; Loeb, Darling-Hammond, & Luczak, 2005; Ronfeldt, Loeb, & Wyckoff, 2013; S.M. Johnson, Kraft, & Papay, 2012). Conversely, if a teacher shortage is the impetus for the programs we debate and research points to unfavorable retention rates of alternatively certified teachers, is the debate over ACPs really focused on the vital aspects of the issue

that would lead to positive change? In this section I argue that given what we know about the shortcomings of ACPs in terms of teacher quality and teacher retention, a more comprehensive effort is needed not only to increase the supply of teachers, but also to increase the support provided to teachers in alternative pathways, so we can more effectively support and retain the high quality teachers we are working so diligently to recruit.

Supply and demand theory and the ACP debate. Supply and demand theory maintains that where the quantity of teachers demanded is greater than the quantity supplied you can either increase the quantity of teachers supplied or decrease the quantity of teachers demanded (Ingersoll, 2007). The favored policy response to school staffing problems has focused on increasing the supply of teachers entering the field, but recruitment programs alone will not solve the staffing problems of schools if they do not also decrease turnover. Ingersoll (2007) illustrates the nature of the issue by suggesting the image of a bucket rapidly losing water because of holes in the bottom. Pouring more water into the bucket will not be the answer if the holes are not first patched (p. 170). In other words, increasing the supply of teachers will not be enough to ameliorate the teacher shortage if we do not also focus on what it takes to retain them once they've entered the classroom.

In an analysis conducted by Smith and Ingersoll (2003) a strong link was found between participation in induction and mentoring programs and teacher retention after the first year of teaching, even after controlling for the background characteristics of teachers and schools. The predicted probability of turnover of first year, newly hired,

inexperienced teachers with no induction and mentoring was 40%. The probability of first year turnover for those receiving some induction consisting of a helpful mentor from the same field, common planning with other teachers in the same subject area, and regularly scheduled collaboration with other teachers on issues of instruction was 28%. The final group described included those experiencing full induction and mentoring which included the three characteristics above in addition to a general induction program, seminar for beginning teachers, regular or supportive communication with the principal, other administrator or department chair, participation in an external network, and a reduced number of course preps . Collectively, these induction efforts had a large and statistically significant impact on retaining first year teachers. The probability of departure at the end of the first year was less than half of those who participated in no induction activities. Interestingly, less than 1% of beginning teachers in this study experienced what was identified as a full induction and mentoring program which suggests increasing full induction and mentoring programs is a viable place to begin our work to retain teachers.

Not only would increasing teacher retention alleviate some of the pressures presented by a teacher shortage, retaining teachers through the use of intensive induction and mentoring programs would also work toward creating a more experienced teaching workforce. In the research on teacher quality, experience is one of the major factors contributing to the success of teachers and their students (Boyd et al., 2008; Clotfelter et al., 2007). By equipping teachers with the supports needed to successfully navigate their first years in the profession, teachers, students, and schools will begin to reap the

cumulative benefits that can only be gained through experience. As teachers gain experience and increase effectiveness in the classroom, teacher retention rates will increase. Stated differently, we cannot provide high-quality, experienced teachers to all communities if we do not retain them as they seek to gain the experience that leads to increased effectiveness in the classroom. The revolving door scenario which stems from a one-dimensional focus of increasing the supply of teachers keeps novice teachers in classrooms, and in the most extreme cases, multiple beginning teachers in the same classroom in the period of a single school year. A two-dimensional focus, however, would focus on both supply and retention. Shifting our focus toward programmatic features of all types of programs that will produce teachers who feel prepared, regardless of the route that leads them to the classroom would ensure a more than adequate supply of teachers entering the field. Providing induction and mentoring programs throughout the first three to five years of a teacher's career that is specifically tailored to the unique needs created by the school context in which the teacher works and the pathway by which they arrived at the classroom would ensure we are providing the support necessary to retain these teachers so they will continue to gain experience and increase effectiveness (Smith & Ingersoll, 2003).

What should this support look like? While there are many models of mentoring in schools across the United States, one superior model has not been identified (Fletcher & Barrett, 2004; Marable & Rainmondi, 2007; O'Brien & Christie, 2005). However, characteristics have emerged as proving important in the mentor/mentee relationship. These include: mentee professional development and shared philosophy of teaching

(Denver, Jonnaon, & Hobbs, 2000), use of common planning times, on-site mentoring support and time for interaction and observation (Gilbert, 2005; Marable & Rainmondi, 2007), and voluntary participation of mentors and respect of one another's opinions (O'Brien & Christie, 2005). While these characteristics may be important to ensuring a successful mentor/mentee relationship, the key to being able to effectively address both the water being poured into the bucket (teacher supply) and the holes in the bottom of the bucket (teacher retention) is a differentiated approach to induction and mentoring that takes into account the various pathways through which teachers enter the classroom and the unique needs of each individual teacher.

In sum, this study aims to provide a shift in focus pertaining to the debate over ACPs (Figure 2.1). Efforts to argue for or against the existence of ACPs has served futile for decades (Darling-Hammond, 2010; Redding & Smith, 2016). However, because the rate of attrition is higher from graduates of ACPs than traditional pathways, it can be argued that ACPs do not adequately address the issue for which they were created. While strong mentoring and induction into communities of practice has been found to reduce attrition of teachers from traditional pathways, research is needed on communities of practice for teachers in ACPs. Thus, while increasing the supply through ACPs, we should also require intensive mentoring and coaching for beginning teachers based on the unique needs of the participants. Retaining teachers through intensive support and mentoring as they accumulate experience in the classroom affords them the opportunity to gain the experience needed to become increasingly effective in the classroom and

helping teachers perform their functions well is a worthy goal that is irrelevant to the pathway preferred.

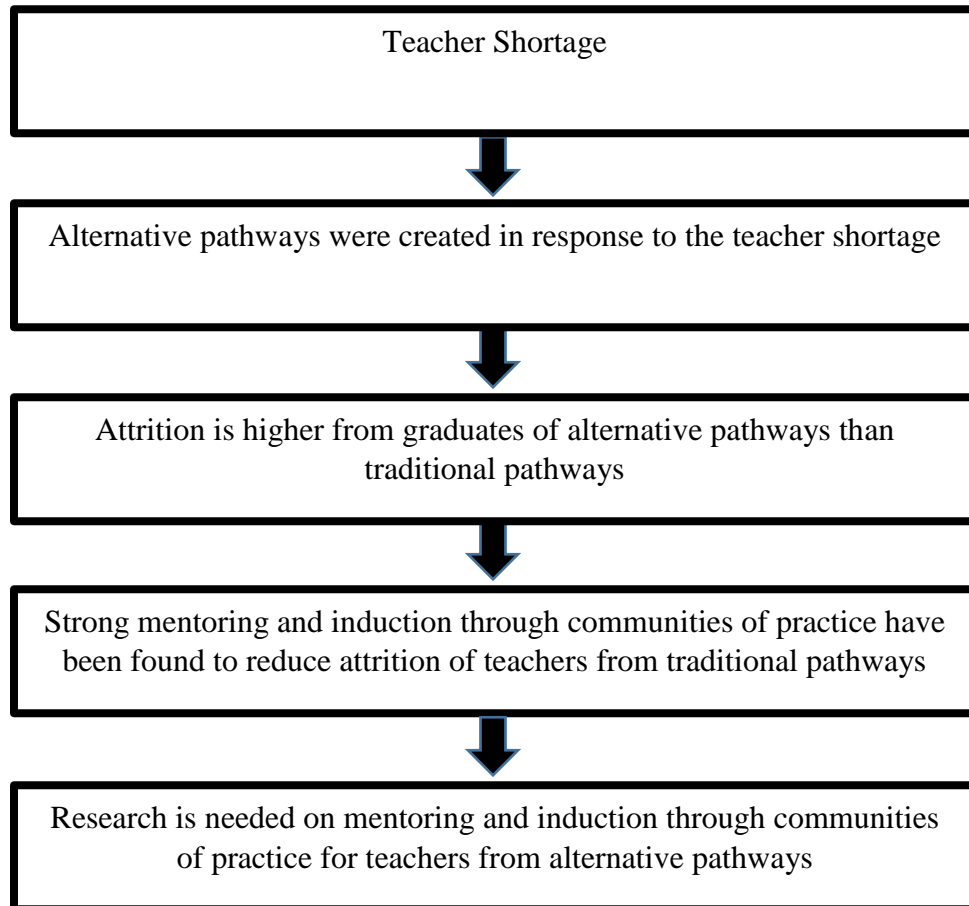


Figure 2.1: Teacher Shortage Theory of Action

This study sought to take the valid critiques of ACPs pertaining to teacher quality, teacher preparedness due to the lack of rigor of ACPs, and teacher retention in ACPs and explore how programmatic features designed to influence and enhance teacher learning in the A-STEP program specifically, could serve to mitigate these concerns and influence how we approach the field of alternative certification moving forward. In the next

section, I focus on the significance of JEPD in our understanding of teacher learning in the current study.

II. Job-Embedded Professional Development

High quality professional development that is sustained, relevant, actively engaging, standards-based, focused on practice and occurring in and around teaching practice is commonly referred to as job-embedded professional development (JEPD) and can be found in the literature in a variety of models (Borman & Feger, 2006; Garet, Porter, Desimone, Birman & Yoon, 2001; National Partnership for Excellence and Accountability in Teaching, n.d.; U.S. Department of Education, 1999). A few of the more prevalent models of JEPD include mentoring and induction programs, professional learning communities, practitioner inquiry, and coaching. In this section I provide a look into the research on job-embedded coaching, in particular, in order to define what it is and what high quality job-embedded coaching looks like. I also address teacher learning within a JEPD environment in order to provide a framework for examining teacher learning within the context of the current study. Finally, I outline some of the benefits and challenges of teacher learning within the context of the job-embedded coaching for professional development model.

Job-Embedded Coaching: What Does it Look Like? In the words of Neufeld & Roper (2003), “At its best, coaching helps educators make informed decisions about instruction and school organization that will lead teachers to teach in ways that help students gain a deep knowledge of subject matter so that they can bring that knowledge to bear on problems and questions that matter,” (p. 1). Many districts began creating these

“coach” roles in order to support local implementation of reforms and curricula because the literature suggests reform efforts rarely permeate the classroom without direct support of implementation (Borman & Feger, 2006). While the coach role is becoming more commonplace, it remains highly variable. Just as there are multiple models of JEPD, there are also many different models of coaching that have surfaced in the literature. Furthermore, within each model of coaching, what takes place within the coaching relationship can look different according to the context in which the coaching relationship plays out as well as the individuals participating in the coaching relationship.

Coaching Models. In this section I provide a brief overview of six different models of coaching including the purpose of coaching and the role of the coach in each model. I then summarize what high-quality job-embedded coaching looks like according to the literature and distinguish between the different coaching roles in terms of quality and purpose.

One model of coaching is cognitive coaching. In this model the coach focuses on the internal thought processes and beliefs of the teacher in order to determine how he or she might lead the teacher to challenge their own thinking through reflection, discourse and application of knowledge (Costa & Garmston, 1994). This takes place largely in the context of the classroom with the goal of effecting changes in practice (Costa & Garmston, 1994).

In the instructional coaching model, the purpose of coaching is to partner with teachers to implement pedagogical best practices related to classroom management, content, planning, instruction, and assessment for learning (Borman & Feger, 2006).

Here, the role of the coach is to promote dialogue with teachers that leads to a shared implementation of best practices that refine and enhance the teacher's practice (Borman & Feger, 2006; Knight, 2007).

Peer coaching is another model of coaching that seeks to build relationships that lead to shared observation of teaching and collaboration in each teacher's class. In this approach, each peer coach provides a critical lens into teaching practice through shared observation and assessment of each other's teaching practices and student learning (Joyce & Showers, 1982).

Differentiated coaching uses assessment of teacher learning styles to differentiate coaching and to help the teacher understand the learning styles of students. The coach in this model provides differentiated coaching that models how teachers should differentiate instruction based on student learning styles (Kise, 2006).

In content coaching, the coach partners with teachers in order to focus on content and improve teachers' instructional strategies in specific content areas. The role of the content coach is to help teachers focus on rich and relevant content and create lessons that provide students with opportunities to develop understanding of big ideas within the discipline (Neufeld & Roper, 2003; West & Staub, 2003).

Change coaching helps participants understand the interrelationships among organizational components and design aligned policies and actions that lead to systemic change. Here the role of the coach is to help develop an understanding of the school as a system of interrelated parts and to provide ways to align those parts toward improved efficiency in a professional learning community (Brown, Stroh, Fouts & Baker, 2005). In

addition, change coaches help to develop the leadership skills of teachers and assist in analyzing school-wide assessment data to plan improvements aligned with school resources and district priorities (Neufeld & Roper, 2003).

What Does High-Quality Coaching Look Like? Even within differing coaching models, there are varying degrees of function. Coaching may be consultative or directive, collaborative or supervisory, focused on inquiry or teacher behavior and may be peer-to-peer or expert-to-novice (Borman & Feger, 2006). Additionally, the responsibilities and day-to-day roles of the coach vary across schools and districts. Killion (2009) has defined several overarching roles of a good coach as someone whose primary goal is to help teachers think deeply about their practice and ensure that every student is successful.

To attain this goal, coaches may take on many different roles and balance them in different ways according to the needs of the teachers and students in the school (Killion, 2009). One of the roles coaches assume is that of assisting teachers or teams of teachers in examining student data and using this data to design instruction to meet the needs of students. Coaches also serve as resource providers to connect teachers with supplies, references, guest speakers, and other resources. Serving as a mentor to new or struggling teachers or as a classroom supporter to experienced teachers in which they can co-plan, co-teach, observe lessons, and engage in reflective conversation about teaching are other roles of coaches. Coaches also assume a “specialist” role in the areas of curriculum and instruction as they focus not only on *what* teachers should teach, but *how* they should be teaching the content. Often a large part of what a coach does within a school is facilitate

the learning that goes on among the adults within the school through school-wide professional development opportunities. Facilitating a Critical Friends Group would be an example of a coach serving in this role. Coaches also must be leaders within the school, contributing to and supporting school-wide reform efforts. Related to this role, often coaches serve as the catalyst for change, not only contributing to the change, but initiating it based on the trends, patterns and needs within the faculty and student population. Finally, coaches must also find time to engage in their own professional learning and development.

For Killion (2009) there are two kinds of coaching—coaching light and coaching heavy. She maintained that coaching light occurs when coaches place priority on building and maintaining relationships with teachers over working to improve teaching and learning. With this approach, coaches often avoid having challenging conversations about practice, or offer guidance and advice without the expectation of follow-through on the part of the teacher. Coaches who coach light tread lightly in their interactions with teachers and typically limit their interactions to praise or questions that simply ask teachers to recall and describe their actions.

Coaching heavy, on the other hand, centers around a deep commitment to improve teaching and learning. Coaching heavy involves analyzing data with teachers and using this data to inform instruction to maximize student learning. The coach who coaches heavy assists teachers in challenging their own thinking about students, their learning and the strategies they employ in the classroom, in addition to the belief systems that drive these decisions. Killion asserted that coaching heavy is high quality coaching.

In essence, coaching light yields a light impact on student learning whereas coaching heavy yields a heavy impact on student learning. While coaches may coach light and coach heavy, Killion (2009) maintains that coaching light should be limited to a brief introductory period in which the coach is working to assess the culture, context and conditions of the school.

The International Reading Association (International Reading Association, 2004) has formally outlined what high-quality coaching looks like in their literacy coach standards. While these standards are written to apply specifically to literacy coaches, the four leadership standards delineated by the IRA can be used to describe high-quality coaching in any context or school setting. The first of the IRA leadership standards states coaches should be skillful collaborators who function effectively in their school setting. Coaches should also be skillful job-embedded coaches who can coach teachers in the core content areas of English language arts, mathematics, science, and social studies. Coaches should be skilled evaluators of literacy needs (or other instructional needs) who are able to interpret and use assessment data to inform instruction. The fourth leadership standard states high-quality coaches are skillful instructional strategists who are adept at developing and implementing instructional strategies to improve academic literacy in specific content areas.

Benefits and Challenges of the Job-Embedded Coaching Model. Neufeld and Roper (2003) present a balanced treatment of the benefits and challenges of teacher learning within the context of coaching, one that was derived from an analysis of Education Matters' longitudinal, qualitative studies of coaching as a professional

development approach in Boston, Corpus Christi, Louisville, and San Diego. After in-depth interviews with coaches, teachers who worked with coaches, principals and central office administrators, observations of coaching in action, and document review they were able to arrive at a common set of benefits and challenges related to coaching. One challenge that emerged from the data is the difficulty districts face in deciding how to utilize coaches for maximum impact on instruction. The authors suggest that spreading coaches too thinly across schools greatly limits a coach's ability to make a significant difference. Enabling coaches to work intensely with a small group over a period of time before moving to focus on another group allows coaches to work efficiently and teacher learning can take place at a faster rate when allowed to collaborate in this manner.

A second challenge reported by coaches is simply finding the time to do the work of a successful coach. First, the nature of the schedule of the school day makes it difficult for coaches to meet with teachers immediately following an observed lesson or demonstration. Because conferencing cannot occur immediately after the activity, coaches report this reduces the effectiveness of their feedback. Additionally, the success teachers experience as a result of coaching causes teachers to want to spend more time with the coach. Unfortunately, coaches who are already pressed for time do not have additional time to spend with individual teachers or small groups of teachers.

A third challenge reported by coaches is that it is difficult to change a teacher's practice given that it typically takes years for teachers to fully master fundamentally new and different instructional strategies. For teachers who do not understand the instructional reform, they may even be resistant to the coach's efforts.

A final challenge of teacher learning within the context of coaching is that it is difficult to measure the quality and impact of the coaches' work. Without an accurate assessment of a coach's strengths and areas for growth, a district cannot effectively provide growth opportunities for the coach that would impact their work with teachers. Without clear links between coaching, teacher learning and student achievement, the use of coaches can be difficult to justify.

While there are definitely challenges of coaching for teacher learning, there are benefits as well. Neufeld and Roper (2003) argued that coaching can produce better targeted school-based professional development that addresses teacher needs as they relate to student needs. Their research suggested that using data as a way to focus the professional development offered by coaches provides a way for coaches to differentiate the assistance they provide to teachers in a similar way teachers are encouraged to provide for their students. The authors also maintained that coaching can lead to teacher learning that carries over to classroom practice when the coach helps teachers implement strategies learned. As a result, no longer are teachers attending isolated and seemingly disconnected professional development sessions. Instead, coaches can identify an area of growth for a teacher and work alongside them as they implement the strategy in their classroom until they experience success. Coaching can also lead to a culture where teachers are willing to share their practice and seek out learning opportunities as well as assume a collective responsibility for all student learning in the building. This is in direct contrast to the isolation in which teachers have worked in the past (Neufeld & Roper, 2003). Neufeld and Roper (2003) suggested that utilizing coaches can also lead to school

cultures where instruction is the focus of professional discussion, reflection on teacher practice takes place regularly, and the impact on students and achievement drives instructional improvement. Ultimately, the authors maintained that with time and a deep level of commitment to meet the needs of students, teachers come to value their work with coaches and their work with their colleagues. The literature presented in section one of this chapter corroborates this point with an added benefit of increased teacher retention within alternative certification programs when a mentoring or coaching component is added. In the final section of this chapter I explore teacher learning within the JEPD model and delineate how the work on job-embedded coaching can be used as a framework for studying the learning of the teachers in the current study.

III. Linking Alternative Certification and Teacher Learning Within the Context of Job-Embedded Professional Development

Conceptions of Knowledge. According to Cochran-Smith and Lytle (1999) teacher learning has become one of the most important concerns in education. In their work, they identify three conceptions of teacher learning: knowledge-for-practice, knowledge-in-practice, and knowledge-of-practice. They unpack each conception by exploring their differing images. Each conception can be applied to teacher learning within a JEPD context, although the level of application varies by conception. For example, in knowledge-for-practice teachers acquire formal knowledge from experts outside the context of the classroom. Within this conception, the more knowledge that is acquired, the more effective the teacher can be in the classroom. Additionally, teachers are updated, similar to an “operating system update” where the teacher, serving as the operating system, is expected to seamlessly incorporate these newly acquired “features”

or strategies into existing ways of knowing and practice. This conception of teacher learning is evident in the current realities of traditional education programs whereby teacher candidates accumulate the theoretical knowledge during the first years of their program, culminating in a clinical experience provided as an opportunity to apply the knowledge learned prior to experiences with students. This conception is also evident in the structure of many professional development opportunities for teachers in which workshops offer strategies and activities, mostly out of context, that teachers take back to their classrooms to implement with the goal of improving instruction. While this is arguably not the goal of JEPD through coaching, it is certainly possible that some of a district's or coach's efforts could manifest as knowledge-for-practice when teachers are resistant to change their practice or follow-up to implementation is lacking. For the alternatively certified teacher, knowledge-for-practice manifests itself in the content area training received prior to entering the classroom. In addition, knowledge-for-practice is gained through any pedagogical or theoretical training received either before entering the classroom, or after, when that knowledge is presented in isolation or out-of-context from the teacher's practice as it relates to their unique classroom context.

Perhaps more closely aligned with the practice of JEPD is the conception of knowledge-in-practice where knowledge is acquired through experience and reflection about or inquiry into teaching practice (Cochran-Smith & Lytle, 1999). Here, the teacher assumes a more active role in constructing knowledge through their experiences and through collaborative endeavors with other competent professionals, such as a mentor or a coach. The teacher is given opportunities to articulate knowledge embedded in their

own experience and the experiences of other teachers. This conception of knowledge and teacher learning is evident in the increase of teacher residency programs and co-teaching models that are changing the landscape of the traditional pathway into teaching. This conception of teacher learning is also evident in mentoring programs as well as in the increase of coaching efforts. Professional development initiatives for knowledge-in-practice push teachers to elucidate discrepancies between their beliefs and practices and examine ways of teaching that are consistent with these beliefs. For the alternatively certified teacher, much of what they come to know happens in practice, often through a trial-and-error approach to learning. An established system of support for these teachers utilizing a combination of coaching and mentoring that encourages teacher learning within the context of their own practice is one way to create an opportunity for knowledge-in-practice.

The third conception of knowledge is knowledge-of-practice where knowledge is neither presented as formal nor practical, but rather knowledge is constructed collectively within communities of practice, both local and beyond (Cochran-Smith & Lytle, 1999). Knowledge is socially constructed, suggesting the importance of communities of practice as paramount in order for learning of practice to occur. Recent reforms of teacher development consistent with the knowledge-of-practice conceptualization of teacher learning suggest teacher learning should take place in and around practice in the form of thoughtful and challenging work within communities of practice that permeates instruction and provides more complex learning outcomes for students.

According to Ball & Cohen (1999) teaching occurs in particulars, and therefore, must be learned, refined, and improved within the context of teaching practice. In terms of coaching, teachers are supported and encouraged to operate experimentally in response to students and situations in the classroom. Taken a step further, coaches can assist teachers in learning in and from practice, by adopting an inquiry as stance in which teachers learn from teaching and by engaging in inquiry to interpret and theorize their teaching (Ball & Cohen, 1999; Cochran-Smith & Lytle, 1999). In the construct of inquiry as stance teachers work in communities of practice to make problematic their own teaching while generating knowledge that is both local and public where local knowledge refers to what teachers and communities come to know when they build knowledge collaboratively (Cochran-Smith & Lytle, 1998; Geertz, 1983; Lytle & Cochran-Smith, 1992).

In this sense, teacher learning is truly job-embedded with the primary goal of teacher learning and professional development being all about “understanding, articulating, and ultimately altering practice and social relationship in order to bring about fundamental change in classrooms, schools, districts, programs, and professional organizations” (Cochran-Smith & Lytle, 1999). For the alternatively certified teacher, this would require that they be involved in such a community of practice that would not only afford opportunities for mentoring and coaching as necessary, but would also “through inquiry...make problematic their own knowledge and practice as well as the knowledge and practice of others and thus stand in a different relationship to knowledge” (Cochran-Smith & Lytle, 1999, p. 273).

Communities of Practice. Wenger (1998) proposed a social learning model centered around communities of practice. In this social learning model, Wenger argued that learning is a process that takes place through social interactions in and around practice. Additionally, Wenger maintained that one can belong to multiple communities of practice simultaneously. Within these communities of practice, the process of learning and knowing includes four interconnected components: meaning, practice, community, and identity (Figure 2.2). Meaning, or meaning-making, takes place as an “experience of everyday life” (Wenger, 1998, p. 52). It is a transformative process of becoming through individual experiences and shared experiences within the community of practice. Practice refers to the, “...shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action,” (p. 5). Therefore, practice involves learning that is generated through an active process of doing within the community of practice. Community refers to “learning as belonging,” (p. 5). Within the community of practice, the community itself is formed through mutual engagement, joint enterprise, and shared experiences (Cuddapah & Clayton, 2011). Identity refers to how learning changes who we are and our “process of becoming” (Wenger, 1998, p. 215).



Figure 2.2: Components of a social theory of learning. Adapted from *Communities of Practice: Learning, Meaning, and Identity* by Etienne Wenger, 1998, p. 5.

The participants in this study were chosen from the A-STEP program's second cohort formed for entry into the classroom for the 2017-2018 school year. The A-STEP teachers progress through the prescribed learning activities of the program synchronously beginning with the Summer Institute, a three-week training designed to give A-STEP teachers an overview of the basics needed to function in the classroom. The cohort also engages in monthly seminars and other learning activities provided by the A-STEP program throughout the school year. Therefore, the cohort was the primary community of practice in the study.

While the cohort did surface in the data as influential in the learning of the A-STEP teachers in this study, the focus of the study was on how the Teacher Support Team serving as a community of practice served to enhance the experience of the A-

STEP teachers during the first nine weeks of the school year. According to Wenger (2006), communities of practice possess certain identifiable characteristics (Figure 2.3).

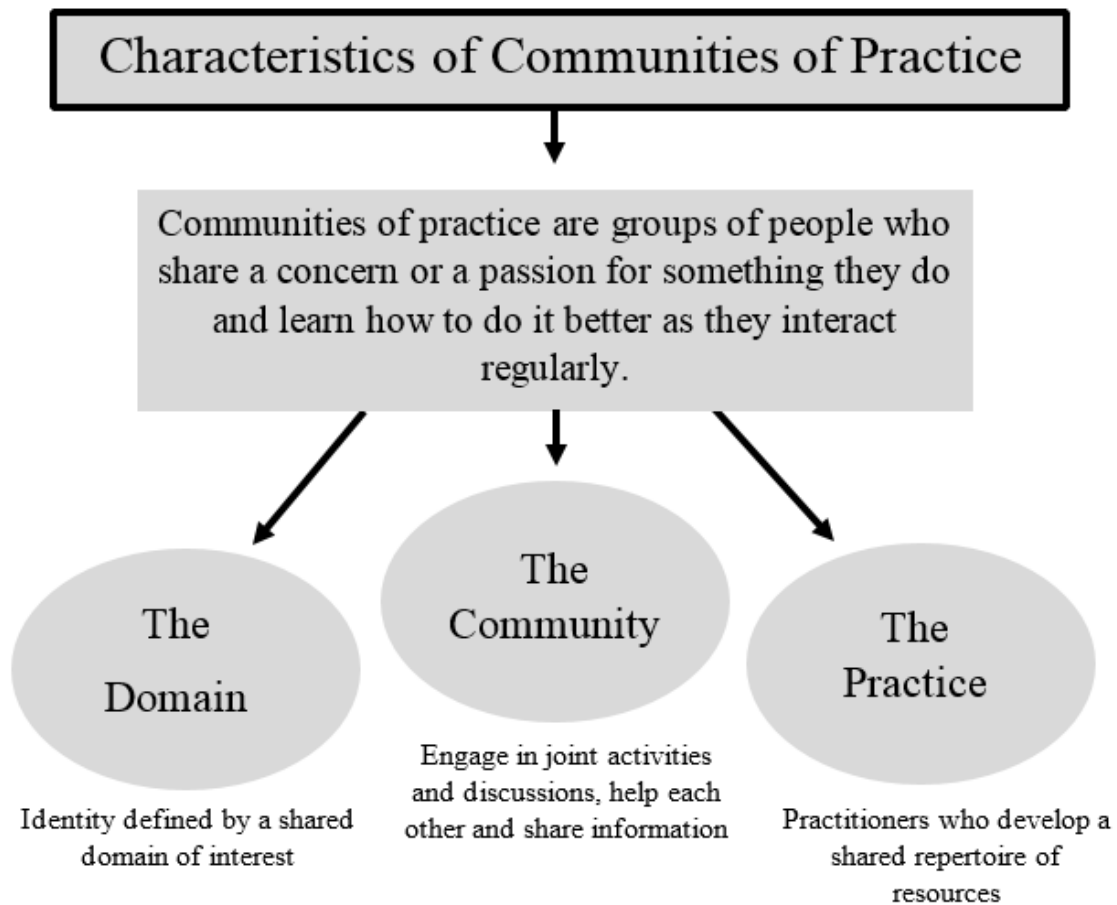


Figure 2.3: Characteristics of Communities of Practice. Adapted from *Communities of Practice: A Brief Introduction* by Etienne Wenger, 2006, p. 1.

By definition, “communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly,” (Wenger, 2006, p. 1). Communities of practice also possess three characteristics: the domain, the community and the practice. The domain refers to the

community's identity which is defined by a shared domain of interest. In the case of the TST, the community's shared domain of interest is the support of the A-STEP teacher. The community refers to the joint activities and discussions members engage in to help each other and share information. In the case of the TST, this would be activities such as TST meetings, A-STEP teacher observations, conversations about the teacher's practice and coaching sessions. The practice refers to the set of shared resources, experiences, stories and tools developed as a result of the activities that have taken place within the community. In the case of the TST, it is the learning that occurs in and around the A-STEP teachers' practice as a result of the supports the TST provides.

In the current study, Wenger's social learning theory was used as the lens to examine how the TST functioned to enhance the learning of A-STEP teachers in the first nine weeks of the school year. More specifically, I examined how the TST as a community of practice assisted in the development of the A-STEP teachers' general pedagogical knowledge.

Knowledge Growth in Beginning Teachers. Shulman (1986) studied knowledge growth in beginning teachers. From his research, he concluded that one must blend both content knowledge and pedagogical understanding when examining the art of teaching. In his work, he outlined particular kinds of content knowledge and pedagogical strategies (Shulman, 1987). He argued that the categories of the knowledge base of a teacher include, at minimum: content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their

characteristics, knowledge of educational contexts, and knowledge of educational ends, purposes, and values, and their philosophical and historical grounds.

Of these categories, three in particular are pertinent to the current study. First, A-STEP teachers enter the program based on the assumption that they bring to the classroom a solid content knowledge base from which to build as they gain experience in the classroom. As such, a minimum requirement for potential candidates is a four-year degree with a major or emphasis in a specified area of expertise. The second of Shulman's categories that is of interest in this study is general pedagogical knowledge. This category of knowledge includes those principles and strategies that transcend subject matter such as classroom management and organization. The third category relevant to the focus of this study is pedagogical content knowledge, or the special blend of content knowledge and pedagogical knowledge that forms "...an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction" (Shulman, 1987, p. 8). In the words of Shulman (1987), "pedagogical content knowledge is the category most likely to distinguish the understanding of the content specialist from that of the pedagogue," (p. 8).

Shulman (1987) described his approach to research of teacher development of content knowledge and pedagogical knowledge similarly to how Piaget approached his learning of knowledge and development--from careful observation of the very young. In this study, I wanted to understand how A-STEP teacher learning develops upon entering the classroom. Thus, following the lead of both Piaget and Shulman, I chose participants who were just learning to teach with the hope that the experience of the neophyte would

become, "...the scholar's window" (Shulman, 1987, p. 4). I used the theoretical constructs of developing pedagogical knowledge in communities of practice as a lens to examine the support and learning of the participants in this study. Because alternatively certified teachers in general, and A-STEP teachers specifically, enter challenging classrooms with little or no knowledge of students, pedagogical knowledge, or understanding of human development, they must develop this knowledge as they practice. As such, I wanted to understand how the Teacher Support Team serves as a community of practice for the A-STEP teacher and how this community of practice influences the learning and development of pedagogical knowledge of the A-STEP teacher.

Conclusion

In this chapter I illuminated the lack of research in support of ACPs and various critiques of ACPs. I also suggested that ACPs fail to achieve the goal of ameliorating the teacher shortage because teachers who enter the profession through alternative pathways typically leave the profession within their first few years of teaching. I also argued for the need to ensure ACPs are providing necessary support structures for teachers that lead to teacher growth, improved instruction, and ultimately teacher retention in these programs. I grounded this argument in the literature documenting the extent to which mentoring and induction programs improve teacher retention, and I proposed utilizing quality mentoring and coaching in ACPs as a way to support teacher retention during the first few years of teaching so that teachers can gain the knowledge and experience needed to be successful in the classroom. In the second section of this chapter, I examined

models of JEPD, explored the notion of high-quality JEPD and outlined benefits and challenges of JEPD. In the final section of this chapter, I described how Wenger's social learning theory provided a lens through which teacher development of pedagogical knowledge in ACPs could be examined. In doing so, I sought to fill a gap in the literature on teacher support and learning within ACPs. More specifically, my aim was to extend the literature on teacher learning in ACPs by examining how a multi-member support team serving as a community of practice served to enhance the experience of teachers in the first nine weeks of the school year as they construct knowledge in practice.

CHAPTER THREE: RESEARCH DESIGN AND METHODS

Because through this study I sought to better understand the perspectives and experiences of teachers in an alternative certification program specifically as it relates to their learning within the context of JEPD, I conducted a qualitative study. Merriam (1998) explained that the key philosophical assumption upon which qualitative research is based is the view that reality is constructed by individuals interacting with their social worlds. She went on to explain that qualitative researchers, therefore, are interested in understanding the meaning these individuals have constructed and how they make sense of their lived experiences. Glesne (2006) stated that qualitative research is used to “understand some social phenomena from the perspectives of those involved, to contextualize issues in their particular socio-cultural milieu” and qualitative researchers “seek to understand and interpret how the various participants in a social setting construct the world around them” (p. 4). Similarly, Creswell (2007) described qualitative research as a way to “study research problems inquiring into the meanings individuals or groups ascribe to a social or human problem” (p. 37). Thus, a qualitative study design allowed for exploration into the reality teachers constructed in and around their practice as they interacted and collaborated with the Teacher Support Team.

I conducted case studies using a multi-case holistic design. Yin (2014) maintained that a qualitative researcher engaged in case study research should “understand and openly acknowledge the strengths and limitations of case study research” (p. 4). The strengths and limitations of a particular research design are inherently related to how well the design can address the research problem,

therefore, when a research design is the most appropriate plan for addressing the research problem the strengths outweigh the limitations. As such, a strength of conducting case study is that it provides a way to investigate complex social units in a real-life context, resulting in a holistic account of the case. Merriam (1998) described the particularistic nature of case studies as focusing on a particular situation, event, program, or phenomenon. They “concentrate attention on the way particular groups of people confront specific problems, taking a holistic view of the situation” (Shaw, 1978, p. 2). Case studies are also descriptive, producing a rich, thick description of the phenomenon under study (Merriam, 1998). Therefore, instead of presenting findings in the form of numerical data, “case studies use prose and literary techniques to describe, elicit images, and analyze situations” (Wilson, 1979, p. 448). Case studies are also heuristic, providing a means to discover new meaning, extend the reader’s experience or confirm what is already known (Merriam, 1998). In this way, a case study may reveal knowledge we would not otherwise have access too, offering meaning and perspective to its readers that can illuminate understanding of a phenomenon which can be used to improve practice, inform policy, and prompt future research.

Additionally, Stake (1995) stated “qualitative research has everything wrong with it that its detractors claim,” (p. 45). For some, what is wrong begins with practical limitations such as the amount of time it takes in the field to reach a level of saturation with data collection that will yield a complete picture of the phenomenon being studied. Then, aside from the sheer amount of data collected, the amount of time it takes to analyze the data can be overwhelming for researchers. If enough time can be devoted to

the field and analyzing data, the reader may not have the time to read the findings in a lengthy report (Merriam, 1998). Another concern about case study research is the level of rigor needed to conduct a case study of quality (Yin, 2014). Included in this discussion is not only a lack of adherence to protocols which can lead to an increase in researcher bias, but also the notion that there are few protocols that are well-defined and widely accepted in case study research. Similarly, there are few texts that are devoted to specific procedures within case study research that could help to eliminate such bias and present case study as a more established and rigorous approach (Yin, 2014). Even the three prominent case study methodologists, Robert K. Yin, Sharan Merriam, and Robert E. Stake, do not reach consensus on the definition, design, and implementation of case study research which makes it difficult for researchers to navigate the rough case study terrain in such a way as to achieve an acceptable level of rigor.

Despite these limitations, I conducted case studies given the richly descriptive data it provided about the participants and their learning (Merriam, 1998). In the paragraphs that follow, I describe the context in which the case studies took place, beginning first with the city and district in which the A-STEP program is implemented. I go on to describe the program itself, providing a brief history and overview of the structure, roles, and expectations of the TST and its members. Next, I describe the framework for the study including how I selected participants, collected and organized data, and then how I analyzed and reported the data. This chapter concludes with a discussion of how study limitations were addressed throughout the study.

Context of the Study

Glenview is located in the southeast region of the United States. Glenview has been identified as one of America's fastest growing cities. According to the US Census Bureau (2017), Glenview's population is just over 474,000. Glenview County Schools boasts that it is a Nationally Accredited school district and the largest district in the state serving over 76,000 students and employing over 10,000 employees, about half of which are teachers or other certified staff. Glenview County Schools has 101 schools and centers, of which, 21 have been recognized as among the state's top schools. The average years of experience for teachers in Glenview County Schools is 12 years and 66% of teachers have a Master's degree or higher. Fifteen percent of students attend a school in Glenview County on school choice, representing the largest percentage in the state. The graduation rate for the 2016 graduating class was 87% ("Fast Facts About Glenview County Schools", 2017).

Glenview County Schools has recently implemented the Alternative-Southeast Teacher Education Program (A-STEP). The program was presented to the State Board of Education for approval on April 12, 2015, and at that time was accepted as a pilot program for one year. On January 11, 2017, the program was presented once again and received final approval. The first district-embedded alternative teacher certification program in the state, the program offers a job-embedded approach to certification for individuals who have basic qualifications to teach in middle or secondary schools, but have not completed a traditional teacher preparation program. A-STEP is a three-year program that primarily utilizes in-district professional development as the means by

which teachers are trained, with additional graduate-level courses woven throughout the program. A small cohort of 10-20 people with a major or emphasis in math or science are selected each year to participate in the program. The application process includes a pre-screening phase, district screening phase, and a school interviewing phase followed by an employment offer and finally, acceptance into the A-STEP program. This district cohort model with a school-based team approach, delineates four major goals:

- To increase the number of Highly Qualified middle and secondary math and science teachers to more acutely meet the needs of Glenview County Schools and STEM initiatives.
- To increase the number of Highly Qualified middle and secondary math and science teachers in underrepresented demographic groups.
- To prepare effective middle and secondary math and science teachers through a research and performance based, districted-embedded program that meets the needs of GCS and its diverse student population.
- To retain Highly Qualified middle and secondary math and science teachers.
(Glenview County Schools, Pilot Program Proposal, 2016).

An expressed intent of the A-STEP program is to provide a comprehensive and differentiated approach to A-STEP teacher support in their first three years of teaching through the use of the Teacher Support Team (TST). While aligned with research promoting increased support for new teachers, the job-embedded mentoring and coaching component through a Teacher Support Team is a markedly unique feature that is neither found in traditional teacher preparation programs nor alternative certification programs.

In the A-STEP program, A-STEP teachers are assigned a Teacher Support Team (TST) consisting of a mentor, school administrator, instructional coach, external coach and the program director. So while many mentoring and induction program efforts utilize mentoring and coaching as a component designed to provide support for new teachers, the support team approach that A-STEP utilizes is unique in scope, design and implementation, making the A-STEP program a worthy case for study.

The TST is designed to provide a support structure for the A-STEP teacher, which is provided in an embedded fashion in the daily context of the school. Since A-STEP teachers do not typically have experience in the classroom setting, the implementation of the TST allows for the teacher to experience guided support and feedback while teaching. Each member of the TST has specific roles and responsibilities combined with common roles and responsibilities shared by everyone on the team. Overall, the TST provides formal and informal observations, conferencing with the teacher, and coaching and feedback on an ongoing basis. The TST meets at least quarterly, and more often when necessary, to discuss the progress of the teacher and make recommendations for continued growth.

Three members of the TST are based within the same school location as the A-STEP teacher in order to provide on-site support as needed. These members are the school administrator, mentor and the instructional coach. The administrator on the TST is responsible for assisting in assigning a qualified mentor for the A-STEP teacher, scheduling a school orientation, observing the teacher, evaluating the teacher's teaching dispositions and professionalism, and providing the leadership, resources, involvement

and oversight needed at the school level. The administrator does not receive a stipend for his or her involvement on the TST. The mentor assists the A-STEP teacher by using effective instructional coaching and mentoring to assist the A-STEP teacher in planning, implementing and assessing classroom instruction and management, guiding the teacher through the daily operation of the school, modeling lessons for the teacher, conducting weekly observations and conferences, advising, assisting and supporting the teacher in lesson planning, instructional strategies, and classroom management, nurturing the teacher's professional dispositions, notifying the TST if problems occur, and collaborating with the TST members. Mentoring and coaching techniques are expected to align with the mentoring guidelines provided by the State Department of Education and the Center for Educator Recruitment, Retention and Advancement. It is strongly recommended that the mentor participate in the two-day State Mentor Training. The mentor is expected to serve as mentor for the teacher's first two years in the A-STEP program, which affords the opportunity for a sustained professional relationship to take place. The mentor is paid a \$250 stipend each year for two years for his or her service on the TST. Another on-site resource for the A-STEP teacher is the instructional coach. This member of the TST models lessons for the teacher, conducts observations, provides coaching and feedback, provides instructional resources as needed, facilitates reflective teaching opportunities for the teacher, and collaborates with the other TST members. The instructional coach receives a \$125 stipend each year for two years of service on a TST. Typically, the school administrator, mentor and the instructional coach would only serve on one or two TSTs per year.

Unlike the three TST members noted above, the external coach is not based at the same location as the A-STEP teacher, and serves on multiple teams across the district. The external coach's role includes scheduling and chairing meetings with the teacher and the TST, evaluating the teacher, serving as the liaison between the school and the program director, observing and conferencing weekly in the teacher's classroom including at least four formal observation cycles each semester, and conferencing with other members of the TST. The external coach is awarded a \$3,500 stipend each year and works with up to three A-STEP teachers. The program director is the final member of the TST. In addition to the managerial responsibilities related to running the program, the roles of the program director include coordinating all program efforts and activities, attending TST meetings, observing the teacher at least once during each semester, consulting with TST members regarding the teacher's progress and the overall program, and supporting the TST members to help ensure a rich, successful teaching experience. Currently, the program director's salary is paid on an hourly basis. Table 3.1 provides a summary of the roles outlined for each team member as described in the A-STEP handbook.

Table 3.1: A-STEP Team Members Overview (Retrieved from A-STEP TST Handbook)

A-STEP TEAM MEMBERS OVERVIEW

	Fall	Spring
School Administrator (no specified A-STEP compensation)	<ul style="list-style-type: none"> • Assigning qualified mentor • Involvement in program • Supportive resources • Consistent teaching assignment (if possible) • School orientation, expectations • 1 formal classroom observation (school form - Oct) • Professional Behaviors Assessment (form 3 – Oct) • TST meetings 	<ul style="list-style-type: none"> • Involvement in program • Supportive resources • Consistent teaching assignment (if possible) • 1 formal classroom observation (school form - January) • Professional Behaviors Assessment (form 3 – Mar) • TST meetings
Instructional Coach (\$125 stipend per year for 2 years)	<ul style="list-style-type: none"> • Model lessons • Observe, coach, feedback • Instructional resource and strategy support • Classroom organization and management support • TST meeting - Oct 	<ul style="list-style-type: none"> • Model lessons • Observe, coach, feedback • Instructional resource and strategy support • Classroom organization and management support • TST meeting – Jan, Mar
Mentor (\$250 stipend per year for 2 years)	<ul style="list-style-type: none"> • 2 year commitment (if possible) • Instructional mentor, school colleague • Pre in-service meeting(s) • School procedures, culture, expectations, responsibilities • Model lessons • Weekly observations/contacts • 2 scored classroom observations (form 1) • 1 midterm evaluation form (form 2 - Oct) • Pre-post observation conferences • Professional Behaviors Assessment (form 3- Oct) • Instructional units, daily plans, assessment assistance • Classroom organization and management advising and support • Documentation of teacher's progress • Professional Growth plan assistance • Professional Portfolio guidance 	<ul style="list-style-type: none"> • 2 year commitment (if possible) • Instructional mentor, school colleague • School procedures, culture, expectations, responsibilities • Model lessons • Weekly observations (transitioning to bi-weekly) • 2 scored classroom observation (form 1) • 1 final evaluation form (form 2 - Mar) • Pre-post observation conferences • Professional Behaviors Assessment (form 3 - Mar) • Instructional units, daily plans, assessment assistance • Classroom organization and management advising and support • Documentation of teacher's progress • Professional Growth plan assistance

	<ul style="list-style-type: none"> • TST Meeting - Oct 	<ul style="list-style-type: none"> • Professional Portfolio guidance • TST Meetings- Jan, Mar
External Coach (\$3,500 stipend per year for up to 3 teams)	<ul style="list-style-type: none"> • Provide support, assistance, expertise, resources • TST meeting leadership (Oct) • Submitting TST minutes to CD • Liaison between school and Clinical Director • 8 classroom visits and conferences <ul style="list-style-type: none"> ○ 2 scored classroom observations/conferences (form 1) ○ 6 open-ended visits ○ 1 midterm evaluation form (form 2 Oct) ○ Professional Behaviors Assessment (form 3 Oct) • School contact made each visit • Assessment data submitted to Clinical Director • Additional observations, if requested 	<ul style="list-style-type: none"> • Provide support, assistance, expertise, resources • TST meeting leadership (Jan, Mar) • Submitting TST minutes to CD • Liaison between school and Clinical Director • 4 classroom visits and conferences <ul style="list-style-type: none"> ○ 2 scored classroom observations/conferences (form 1) ○ 2 open-ended visits ○ 1 final evaluation form (form 2 Mar) ○ Professional Behaviors Assessment (form 3 Mar) • School contact made each visit • Assessment data submitted to Clinical Director • Additional observations, if requested
Program Director (Hourly compensation)	<ul style="list-style-type: none"> • Program leadership, oversight and administration • A-STEP contact person • Application and admittance process • Certification process • Program assessment • Curriculum • Pre-service meetings • Seminars • Personnel • Community outreach • Recruitment, publicity • TST meetings • Teachers' observation • Consult with clinical mentor, instructional coach, external coach, and administrator 	<ul style="list-style-type: none"> • Program leadership, oversight and administration • A-STEP contact person • Application and admittance process • Certification process • Program assessment • Curriculum • Pre-service meetings • Seminars • Personnel • Community outreach • Recruitment, publicity • TST meetings • Teachers' observation • Consult with clinical mentor, instructional coach, external coach and administrator
Teacher Support Team (all of the above)	<ul style="list-style-type: none"> • Meet in Oct (additional meetings may be scheduled as needed) • Review data • Analyze strengths, areas for growth 	<ul style="list-style-type: none"> • Meet in Jan and Mar (additional meetings may be scheduled as needed) • Review data

	<ul style="list-style-type: none"> • Make recommendations for improvement • Document progress 	<ul style="list-style-type: none"> • Analyze strengths, areas for growth • Make recommendations for improvement • Make recommendations for continuation • Provide documentation for decision
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Case Study Design

Given a thorough understanding of the strengths and limitations of case study research, Yin (2014) offers three guidelines for determining whether case study can be valuable for a particular inquiry. They are as follows: 1) the study asks how and why questions, 2) the topic under study does not require control over external events, and 3) the study focuses on contemporary events in a real-life context (Yin, 2014). This study meets these three criteria. In this section I describe how I used case study to address my research questions. I also describe aspects of the design that were considered in an effort to enhance issues of trustworthiness.

The job-embedded nature of the program and the communities of practice that were formed to support A-STEP teaching candidates were designed to set the stage for a collaborative culture marked by peer and mentor reviews, critiques, collaboration with colleagues and self-reflection. It is within this context and the social learning theory described in chapter two, that the research question for this study was derived. The research question for this study is as follows:

In what ways can a teacher support team serving as a community of practice enhance the experience of first-year teachers in an alternative certification program during the first nine-weeks of school?

I believe reality is constructed by individuals interacting with their social worlds, and in this study I was interested in understanding the meaning people constructed in these interactions (Merriam, 1998). Specifically, I was interested in the learning of each A-STEP teacher, what they know about teaching, how they come to know what they know about teaching, how support is provided through the TST, and how the TST assists in meeting the needs of the A-STEP teacher. To address the research question, I used interpretive case studies using a multiple-case holistic design whereby the collaborations of the A-STEP teacher within their communities of practice were examined within the broader context of the A-STEP program (Figure 3.1). In this manner, data was collected from each case, and then analyzed holistically as one unit of analysis (Yin, 2014).

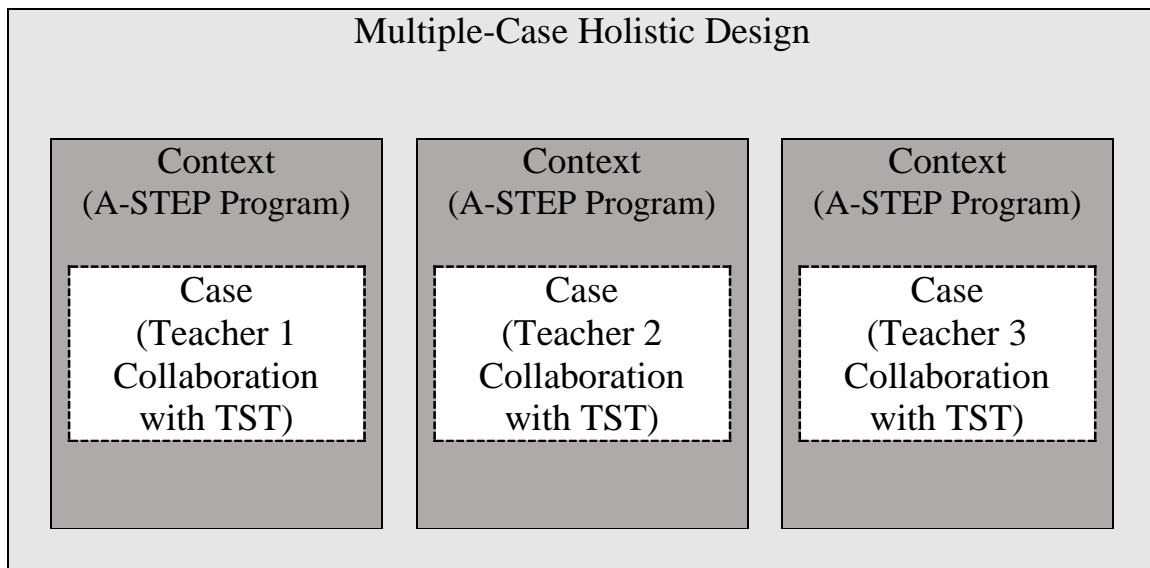


Figure 3.1: Multiple-Case Holistic Design

Drawing from Merriam’s (1998) understanding of “...the case as a thing, a single entity, a unit around which there are boundaries” I attempted to “fence in” what I studied within a bounded context (p. 27). Each case was bounded in the following ways. First, the cases were examined during a specified time frame beginning with the Summer Institute, which was the first professional development activity for the A-STEP teachers, and extended through the end of the first nine-week grading period which culminated in a TST meeting. The purpose of the TST meeting was to evaluate the A-STEP teacher’s progress during the first nine-week grading period and provide feedback and suggestions for moving forward. This time frame provided a specific beginning and ending of the phenomenon under examination. A full nine-week grading period was chosen, in addition to the Summer Institute and the first 9-week TST meeting, because this period of time allowed ample opportunity for the teacher to collaborate with multiple members of the TST so an understanding of how the collaborations within and among different

members of the TST contributed to the learning of the A-STEP teacher. Next, the cases were bounded by the individuals included in the TST. While there were certainly other individuals in the building who contributed to the development of the teacher, I was most interested in how the TST as a support structure and community of practice influenced the learning of the teacher.

Because the A-STEP teachers came to the program with a wide range of prior experiences and unique backgrounds, it was important to understand how these prior experiences influenced their experience as a teacher. Selecting multiple cases and using thick description to describe each case served to strengthen the transferability of the study by enabling a more complete understanding of the learning of A-STEP teachers given these individual differences. The study was inductive, and intended to build theory from observations and understandings gained about the cases (Goetz & LeCompte, 1984). The findings from the study, as described in the following chapters are holistic and richly descriptive, providing a vivid picture from which the reader can derive meaning and understanding of teacher learning within the context described (Merriam, 1998).

Participant and Site Selection

The A-STEP program described above began in the 2016-2017 school year with 10 participants, eight of whom returned to the classroom for the 2017-2018 school year. The second cohort has 18 participants in 15 middle or secondary schools across the district. Of the eleven participants working toward middle level certification, seven are teaching science and the other four are teaching math (Table 3.2). Of the seven participants working toward secondary certification, five are teaching science and two are

teaching math. The sample for this study was selected from this population. Because there was a relatively small number of potential participants from which to choose, a one-phase approach to case selection was used (Yin, 2014).

Table 3.2: 2017-2018 Cohort II Demographics (Retrieved from A-STEP Mid-Year Report)

2017-2018 Cohort II Demographics				
Content Discipline	Level	#	Gender	Race/Ethnicity
Math	Middle Level	4	3 female 1 male	7 Caucasian
Math	Secondary	2	1 female 1 male	2 Caucasian
Science	Middle Level	7	6 female 1 male	7 Caucasian
Science	Secondary	5	3 female 2 male	4 Caucasian 1 Asian

A purposeful sample was selected through direct observation so that information-rich cases could be selected for study in-depth (Patton, 1990). Taking into account the backgrounds of the A-STEP teachers and observations during the Summer Institute, I selected three participants that represented unique cases based on “unique, atypical, and perhaps rare attributes or occurrences” that emerged during the Summer Institute (Merriam, 1998, p. 62).

The A-STEP Summer Institute is the first and only professional training cohorts receive prior to entering the classroom. This three-week training covered a wide range of topics such as lesson planning, classroom management, ethical considerations for the classroom, classroom culture, building relationships with students and many others.

There were also sessions devoted to cohort building as well as a debriefing and reflection time built in each day. The cohort also co-planned and taught two lessons in a school conducting a summer program for middle school students.

On the first day of the A-STEP Summer Institute I assisted participants as they checked in and introduced myself as someone who frequently assists with various aspects of the program. Some of the participants I had met previously during information sessions I held about the program in early spring. I had also talked on the phone with several who had questions about the A-STEP program early on as they were collecting information about the program to determine whether or not they would pursue becoming an A-STEP candidate. On the first day, I also mentioned that I was working on my Ph.D. at a nearby university and my focus was on teacher learning in alternative certification programs. Throughout the remainder of the week I was at many, but not all, of the sessions and my primary purpose for attending the sessions was to collect anecdotal notes to guide participant selection.

Each day I attended A-STEP activities during the Summer Institute, I made observations and took notes about participants who stood out to me, for one reason or another. Some participants had already spent 20+ years in their field while others had just graduated with a four-year degree. Many had earned Master's degrees and one had even earned a Ph.D. and had taught in higher education. Some had families, while others were single. Some seemed excited and others rather scared to enter a classroom where they would be outnumbered by adolescents 30:1. Ultimately, the participants were chosen because their backgrounds, their approach to the classroom, and their specific

school settings stood out as being unique or atypical cases within the current cohort (Merriam, 1998).

Felicia was chosen because of her level of content knowledge. Having received a Ph.D. in Microbiology, Felicia represented a unique case of study. Felicia also had some teaching experience at the college level, but noted in the Summer Institute that she didn't really think that experience prepared her to teach at the high school level, partly because she had never received any formal training to teach and partly because she recognized that high school and college are structured much differently. Clearly an expert in her field, I was particularly interested to see if and how her level of content knowledge benefitted her in the classroom and if and how her prior teaching experience at the college level made the transition into the classroom different for her than for her peers. Felicia was hired to teach at Westside High School, one of the highest performing high schools in the district, which was also interesting considering teachers in alternative pathways are generally hired to work in lower performing schools. This was another factor I considered when choosing Felicia to participate in the study because the other two participants would be teaching at two of the lowest performing schools in the district.

Michael was the second participant I chose. He was the youngest member of the cohort and a recent college graduate who, like Felicia, had some prior experience working with students. While not in a traditional classroom setting, Michael had been involved in a mentoring program that served the student population at Northeast Middle, the Title I middle school where he was hired to teach. While this scenario was certainly more consistent with the hiring trends of alternatively certified teachers, I was interested

to see if given his years of experience with students of poverty, Michael might have more success in the classroom having already learned how to work with these students. This experience qualified Michael as an atypical case for the study.

The final participant, David, was chosen not because of his level of content knowledge or prior experience with students. Instead, he was chosen because of his unique school context. David was hired to teach at Campbell High School, the smallest and one of the lower performing high schools in the district. Having recently developed a focus on project-based learning, Campbell offered several integrated classes in which two teachers with two different content area backgrounds co-teach a class in a project-based format. David was hired to teach geometry with a co-teacher who was certified in business. Their class would integrate geometry with anamania. I thought this would be an interesting case of study for two reasons. First, I thought it would be interesting to see how David would adjust not only to teaching, but how he would adjust to teaching using a strictly project-based learning approach--an approach for which even traditionally prepared teachers have to be specifically trained in order to implement successfully. I was also curious to see if having a co-teacher in the classroom at all times would serve to benefit David's learning about teaching, and perhaps even provide an unintentional support mechanism that the other A-STEP teachers did not have. Table 3.3 provides a summary of the participants.

Table 3.2: Summary of Participants

Summary of Participants			
Name	Felicia	Michael	David
Age	46 years old	22 years old	33 years old
Highest Degree Earned	Ph.D. in Microbiology	BS in Chemistry	BS in Industrial Engineering
School Name	Westside High School	Northeast Middle School	Campbell High School
Grade Level Teaching	10 th and 11 th Grades	6 th Grade	10 th Grade
Subjects Teaching	Genetics Chemistry CP Chemistry Honors	Science	Integrated Geometry

Ultimately, each participant was chosen based on criteria that made him or her stand out from the other A-STEP teachers. Felicia is the only participant who holds a Ph.D in her field, Michael is the only participant who has extensive experience working with the student population for which he was hired to teach, and David is the only A-STEP teacher who was expected to teach in a prescribed format alongside a co-teacher. Each of these cases proved to provide a level of insight into the experiences of teachers in an alternative pathway that the other A-STEP teachers could not provide making each a unique case of study. What follows is a detailed description of each school site where the participants chosen for this study were hired to teach.

Northeast Middle School. Of the 19 middle schools in Glenview County Schools, Northeast Middle is one of three Title I middle schools. Based on the school's 2017 state report card. Northeast Middle serves 681 sixth-eighth grade students and employs 50 teachers and administrators. Their school mission is to provide students

with, “Success for Today—Preparation for Tomorrow—and Learning for a Lifetime”. According to the 2017 state report card, Northeast Middle has an absolute report card rating of average. Northeast Middle boasts meaningful community partnerships that provide school supplies for students in need, non-perishable food items for families in need and bicycles for the Northeast Spinners club. This club allows students who have an interest in riding bikes, to keep the bike provided by the program and ride with mentors, teachers, and community members on a regular basis. Additionally, a nearby university partners with Northeast Middle through a university-based, student-led mentoring program. This program provides tutors to students needing academic assistance and mentors to students, as well as exposes students to potential advantages of a college education. The participant selected for this study participated in this mentoring program while he earned his Bachelor’s degree.

The College and Career Ready (READY) assessment was given to students in grades 3-8 in the spring of 2017. Students were assessed in English and math. READY results were reported based the following readiness levels: Exceeds Expectations, Meets Expectations, Approaches Expectations, and Does Not Meet Expectations. According to the state report card, the results for Northeast Middle were as follows. In English, 26% of students either exceed or met expectations. In math, the percentage of students who either exceed or met expectations was 20%. Northeast Middle’s performance on this state assessment was lower than Glenview County School’s average in both subjects reported. Another state assessment administered in spring of 2017 was the Palmetto Assessment of State Standards (PASS) which assessed science and social studies.

Results were reported as: exceeds expectations, meets expectations, approaches expectations or does not meet expectations. In science, 33% of students either met or exceeded expectations on PASS. In social studies, 65% met or exceeded expectations. Once again, Northeast Middle's scores were below the state average for science while only slightly below the state average for social studies. Northeast Middle offers two courses with End of Course (EOC) Tests: Algebra 1 and English 1. 100% of students at Northeast Middle scored 70% or above on the Algebra 1 EOC and 100% of the students taking English 1 scored 70% or above as well.

Northeast Middle School has an overall student attendance rate of 94% and their poverty index is 78%. Eleven percent of students at Northeast Middle are served by gifted and talented programs and 18% are students with disabilities. Twenty-six percent of students at Northeast Middle are enrolled in high school credit bearing courses. Sixty percent of teachers have advanced degrees and 74% hold a continuing contract. According to the most recent state report card data, teachers received 9 professional development days during the school year. The principal is currently in her 9th year at Northeast Middle.

Westside High School. "Strength through human understanding" is the motto at Westside High School. One of 11 high schools in the district, Westside serves 1,504 students in grades 9-12 and employs 80 teachers and administrators. Recently, the School Improvement Council (SIC) at Westside started a Lunch and Learn program for parents to learn about high school student life as well as the transition from high school to college or the workplace. Westside's partnership with the local Hispanic Alliance allows

for informational nights in which students serve as translators to inform parents of helpful strategies and school-related information.

Westside students consistently perform above the district and state average on the ACT in all areas. The average composite score on the most recent state report card for students taking the SAT was 1133. ACT WorkKeys, a job skills assessment system measuring skills deemed important in the workplace, measures readiness in applied mathematics, reading for information and locating information. Students earn certificates at the platinum, gold, silver and bronze levels on WorkKeys assessments. The percentage of students meeting platinum, gold or silver levels on this exam were as follows: applied math-82%, reading for information-95%, and locating information-87%. Once again, Westside performed above district and state levels in all three areas. EOC tests are given in Algebra I, English I, Biology I and US History. Pass rates for these exams combined is 84%.

Westside High School has achieved an excellent rating on the state report card for four consecutive years. Their four-year graduation rate is 93% and their five-year graduation rate is 94%. The four and five year graduation rate has risen consistently over the past four years. The poverty index at Westside is 30% and the attendance rate is 98%. Students with disabilities make up 11% of the population while students being served by the gifted and talented program is 60%. Almost half of the student population is enrolled in an AP/IB program and 67% of these students are successful in these programs. All students enrolled in dual enrollment courses experienced success in these courses. Seventy-one percent of teachers at Westside have advanced degrees and 87%

are on continuing contracts with the district. The principal at Westside is in his 6th year at the school. The student-teacher ratio in core subjects is 29:1, up from 28:1 from the previous school year.

Campbell High School. The mission of Campbell High is to “...help students reach their full potential through engaging experiences that are academically excellent and socially equitable”. Using a tagline of “Whatever it Takes,” the principal at Campbell High seeks to continually encourage his faculty, staff, and students to become “stronger, smarter, and better” at everything they do. As the smallest high school in the district, Campbell High serves 771 students in grades 9-12 and employs 53 teachers and administrators. Campbell High joined the New Tech Network in the 2015-2016 school year, which enabled them to offer six integrated courses which combine standards from two fields. One such course is quantitative thinking which combines standards from algebra and scientific research. Campbell High continues to expand the New Tech program each year with a goal of eventually becoming a complete project-based learning school. Campbell High is now a model school for New Tech, hosting teachers from schools in the Southeast to observe the implementation of the New Tech program.

In addition to a focus on project-based learning, Campbell High also focuses on building meaningful relationships with students, which the principal maintains is one of the main reasons the school’s graduation rate has increased over 25 percentage points in five years. As a part of this relationship-building effort and a focus on increasing graduation rates, the principal has all freshmen sign a cap and gown at the beginning of

the school year as an agreement that they will do “Whatever it Takes” to complete requirements for graduation.

Campbell students consistently perform below the district and state average on the ACT in all areas. The average composite score for students taking the SAT was 921. For ACT WorkKeys, the percentage of students meeting platinum, gold or silver levels on this exam were as follows: applied math-49%, reading for information-78%, and locating information-54%. Once again, Campbell performed well below district and state levels in all three areas. The pass rate for EOC tests 39%.

Campbell High School received a below average rating on the school report card for the 2012 and 2013 school year and has received a rating of average for each year since. The four-year graduation rate in 2017 was 84%, up from 62.4% in 2013. The five-year graduate rate was 78%. The state four-year and five-year graduation rate in 2017 was 84%. In fall 2017, 34% of graduating Campbell students were enrolled in a two-or four-year college or technical college pursuing an associates degree, certificate, or diploma compared to 77% at the district level and 71% at the state level. The poverty index at Campbell is 80% and the attendance rate for students is 89%. Sixteen percent of the students at Campbell are identified as having a disability and 14% are served by the gifted and talented program. Five percent of students were retained in 2017, with a dropout rate of 6%. Twenty percent of Campbell students are enrolled in AP/IB courses, 28% of which were successful in these courses. Thirty-four percent of teachers at Campbell hold advanced degrees and 53% hold a continuing contract. Eighty-two percent of teachers returned from the previous school year. The student-teacher ratio in

core subjects is 26:1 and the attendance rate for teachers is 92%. The principal is in his 6th year at Campbell. Table 3.4 provides a summary of the 2017 state report card data for all sites selected.

Table 3.4: 2017 State Report Card Data

2017 State Report Card Data			
	Northeast Middle	Westside High	Campbell High
Number of students	681	1,504	771
Grades served	6 th , 7 th , 8 th	9 th , 10 th , 11 th , 12 th	9 th , 10 th , 11 th , 12 th
Number of teachers and administrators	50	80	53
Students scoring meets or exceeds expectations on READY—English	26%	NA	NA
Students scoring meets or exceeds expectations on READY—math	20%	NA	NA
Students scoring meets or exceeds expectations on PASS—science	33%	NA	NA
Students scoring meets or exceeds expectations on PASS—social studies	65%	NA	NA
Average composite SAT score	NA	1133	921
Students earning platinum, gold, or silver on ACT WorkKeys—applied math	NA	82%	49%
Students earning platinum, gold, or silver on ACT WorkKeys—reading for information	NA	95%	78%
Students earning platinum, gold, or silver on ACT WorkKeys—locating information	NA	87%	54%
Four-year graduation rate	NA	93%	84%
Five-year graduation rate	NA	94%	78%
Students successful in EOC exams	100%	84%	39%

Student attendance rate	94%	98%	89%
Poverty index	78%	30%	80%
Students served by gifted and talented program	11%	60%	14%
Students with disabilities	18%	11%	16%
Students enrolled in high school credit bearing courses	26%	NA	NA
Students enrolled in AP/IB program	NA	67%	20%
Student-teacher ratio in core subjects	NA	29:1	26:1
Teachers with advanced degrees	60%	71%	34%
Teachers with a continuing contract	74%	87%	53%
Number of professional development days	9	NA	NA
Principal years of service at school	9	6	6

Data Sources

I used data from multiple sources in an effort to glean the complete and complex nature of each case, and then triangulated the data to enhance the trustworthiness of the study (Yin, 2014). I collected data in the form of observations, interviews, weekly reflections and document analysis. According to Patton (1990), “Multiple sources of information are sought and used because no single source of information can be trusted to provide a comprehensive perspective...By using a combination of observations, interviewing and document analysis, the fieldworker is able to use different data sources to validate and cross-check findings” (p. 244).

Because A-STEP teacher learning within the context of the TST was the focus of the study, I utilized data sources that captured the nature of the collaboration(s) between the teacher and TST members as it related to the learning of the teacher. Such data sources included observation of collaborative planning sessions, observation of lessons taught, observation of lesson debriefing/feedback sessions, TST meetings, analysis of pertinent documents and interviews between the teacher and the researcher about sessions observed by the researcher.

Due to the bounded nature of the timeframe of the study, along with the types and timing of the data collected, I collected data in three phases. During phase I, the A-STEP teachers participated in the A-STEP Summer Institute, which served as the preservice learning portion of the program. The time frame of the first phase spanned from the first day of the Summer Institute, to the last teacher work day before school started for students. During this phase, the program director facilitated the majority of the learning experiences with the primary goal of developing the A-STEP teachers as a cohort. Some of the A-STEP teachers also met and began working with their TST members during this phase. It is during this phase that participants were selected based on their unique attributes.

Phase II included the first nine-week grading period of the 2017-2018 school year. During this phase, the focus was collecting data related to the job-embedded and collaborative nature of A-STEP teacher learning. It is in phase II that the majority of the collaborations between the A-STEP teacher and his/her TST members took place, because this is when the A-STEP teachers began their work with students. This was also

the longest phase of data collection. During this phase, a weekly reflection was given to each teacher. Some A-STEP teachers were more consistent than others at submitting those reflections. I used this data, along with interviews and observations, to drive the direction of future data collection. The last phase of data collection provided an opportunity for final reflections by the A-STEP teachers and the TST members. Toward the end of the first nine-week grading period, each A-STEP teacher's TST met as a whole to discuss the progress of the A-STEP teacher. At the end of the meeting, each A-STEP teacher received feedback and suggestions for improvement moving forward. As such, Phase III allowed for a more formal collaborative effort and opportunity for reflection on A-STEP teacher learning to culminate the study. Exit interviews for each A-STEP teacher were also conducted as a part of Phase III. Table 3.5 provides an overview of each of the data collection phases.

Table 3.5: Overview of Data Collection Phases

Overview of Data Collection Phases		
Phase I		
Data Collection Overview	Time Frame	Frequency
Preservice Learning: Summer Institute *Teacher work days	(Four weeks, not consecutive) July 17-20 July 24-27 July 31-August 3 *August 15-21	<ul style="list-style-type: none"> • Multiple observations during each week of Summer Institute • Participants selected at the conclusion of Phase I • Initial Interview of each A-STEP teacher
Phase II		
Job-Embedded Learning: First nine-week grading period	(Nine weeks, consecutive) August 22-October 26	<ul style="list-style-type: none"> • Weekly reflective summary from each A-STEP teacher • Ongoing observations of learning activities

		<ul style="list-style-type: none"> • Ongoing interviews with A-STEP teachers and TST members as determined by data collected • Ongoing document analysis
Phase III		
Reflection on Learning: Final reflections from A-STEP teachers and TST members **TST Meeting for first nine-week grading period	(One to two weeks) October 27-November 10 End of Nine Week Grading Period **As scheduled	<ul style="list-style-type: none"> • TST meeting observations (one per case) • Follow-up interviews with TST members as determined by the data collected • One exit interview per case • Document analysis of TST feedback

As previously mentioned, data sources included weekly reflections, observations, interviews and document analysis. Table 3.6 includes a more detailed account of the data sources I used in the study and the phase of the study in which these data sources were collected. It is important to note that no one data source was expected to answer the research question in full. Rather, it was through the use of multiple data sources that a more complete understanding could be derived. Additionally, by using multiple data sources, the data could converge in a triangulating fashion, strengthening the findings of the study.

Table 3.6: Data Exploring the Research Question. Variation of Yin's Case Study Protocol

Data Sources Exploring the Research Question	
Research Question	Data Exploring the Research Question (and phases of data collection)
In what ways can a teacher support team serving as a community of practice enhance the experience of first-year teachers in an alternative certification program during the first nine-weeks of school?	<ul style="list-style-type: none"> • Summer Institute observations (Phase I) • Initial interview with A-STEP teachers (Phase I) • Learning activity observations (Phase I, II, III) • Weekly reflections (Phase II) • TST meeting observations (Phase II, III) • Observations of post-observation conferences (Phase II) • Interviews with A-STEP teachers (Phase II) • Interviews with TST members (Phase II) • Exit interview with A-STEP teachers (Phase III) • Other data sources as determined by the data collected (All Phases)

Data Analysis

In terms of analysis of the data collected, I served as the “primary interpretive instrument” (Merriam, 1998, p. 7). As such, data analysis took place on multiple levels and during all phases of the study. Data collection and data analysis took place simultaneously in order to guide data collection so that as the researcher, I could attend to data as it pertained to the focus of the study. As data were collected, a constant comparative analysis was conducted in which I used emergent coding to create categories

that emerged from the data, constantly comparing the new data with the data already collected (Merriam, 1998). An electronic copy of the raw data was kept on my password protected computer and on a password protected cloud-sharing program in a file folder under each A-STEP teacher's chosen pseudonym. These master copies of the data were labeled and dated so that I could refer back to the data easily. As themes emerged, I created a file for each theme, where data was stored that was relevant to that theme or category. When creating categories, I applied the guidelines Merriam (1998) suggested for the constant comparative method of data analysis in which categories: reflect the purpose of the research, are exhaustive, are mutually exclusive, are sensitizing, and conceptually congruent (p. 183-184). Merriam also suggested that the researcher "keep track of [your] thoughts, musings, speculations, and hunches" while engaging in data analysis (p. 165). Therefore, I made notes and memos in my analysis that served to point to possible emerging themes in the data. Merriam (1998) called this "having a conversation with the data" (p. 181). I used these notes and emerging themes to guide further data collection and analysis.

Once all data was collected, a second phase of analysis was conducted where "tentative findings are substantiated, revised, and reconfigured" (Merriam, 1998, p. 181). Because the current study is a multi-case study, I first conducted a within-case analysis in which each case was treated as a comprehensive case in itself, where I paid particular attention to the contextual variables that may have influenced the case. The goal of each within-case analysis was to understand each individual case in-depth before being combined thematically (Patton, 2002). Once each case had been analyzed, a cross-case

analysis was conducted. Miles and Huberman (1994) warned that cross-case analysis is often tricky. Thus, in an effort to avoid a superficial summarization of themes, throughout the cross-case analysis, I sought to “search for patterns and themes that cut across individual experiences” (Patton, 2002, p. 57). Once patterns and themes had been identified, I attempted to “build a general explanation that fits each of the individual cases, even though the cases will vary in their details” (Yin, 1994, p. 112). Findings are reported in detail in the subsequent chapters of the dissertation.

Issues of Trustworthiness

As with all research, the researcher must attend to issues of trustworthiness through careful design features to circumvent concerns about the trustworthiness of a study becoming a severe limitation to the study’s findings. While Merriam (1998) offers a treatment of trustworthiness that attempts to reconcile the terms and ideas within a constructivist epistemology, she is consistent with the terms often found in positivistic epistemological orientations. Lincoln and Guba (1985) offer different terms altogether, in an effort to distinguish qualitative researchers from the positivist paradigm in which the preferential terms for internal validity, reliability, objectivity, and external validity are credibility, dependability, confirmability and transferability. While these qualitative constructs have been accepted by many, both Merriam and Yin still offer treatment of trustworthiness in case study using terms that are more aligned with the positivist researcher.

In this study, I drew from the work of Lincoln and Guba (1985), and adopted their terms for trustworthiness. As such, it was important for me as a qualitative researcher to

establish credibility so that there is confidence that the findings are congruent with reality as it is experienced by the participants. Therefore, as I have mentioned, I used triangulation of data sources to show that the data converge and yield the same results whether data is collected through interview, observation, or document analysis.

Establishing dependability was also important to ensure that the findings were consistent with the data collected. In this study, I established dependability by leaving an audit trail, describing in detail how data were collected, how categories and themes were derived, and how decisions were made throughout the study. To ensure the findings were shaped by the participants, with myself as the researcher remaining neutral, confirmability was addressed by conducting member checks, allowing participants access to the data and my initial interpretations of the data to confirm that the results are plausible and consistent with their perceptions. Finally, I aimed to strengthen the transferability of the study so that the data are applicable to other situations and contexts. I addressed this through the use of thick, rich description to describe cases so that readers can determine how closely their situations match the research situation and whether the findings may apply to their own situation (Merriam, 1988).

Conclusion

Because through this study I sought to understand the experiences of A-STEP teachers as they relate to their learning in the context of job-embedded professional development and through the support structure of the TST as a community of practice, I conducted a multi-case study. Data collection took place in three phases. Phase one included the Summer Institute which allowed for participant selection. The second phase

spanned the first nine weeks of the school year and included the bulk of the data collection for the study, followed by phase three which allowed for exit interviews and final reflections from participants and TST members. I collected data through the use of interviews with TST members, classroom observations of participants' teaching, post-observation conference observations, weekly written reflections, professional development observations and follow-up interviews and document analysis. Data analysis took place both during and after data collection. Individual case reports were compiled and are presented in the subsequent chapter. In chapter five, I present a cross-case analysis. The final chapter presents conclusions and implications for the field.

CHAPTER FOUR: INDIVIDUAL CASES

In the current chapter, I provide individual cases for each of the three participants in this study. For each case, I present a detailed description of the participant's experience during the first nine weeks of the school year as it relates to their learning about teaching. Specifically, in this chapter I show how individual members of each Teacher Support Team contributed to the learning of the A-STEP teacher, as well as how formal learning experiences provided as a part of the A-STEP program shaped the A-STEP teachers' learning and growth throughout the study.

In this chapter I present each case separately, but follow the same general outline in how I present the data for each participant. Each participant's case will follow this sequence: (a) introduction to the participant and the first lesson, (b) the participant's Teacher Support Team, (c) the participant's learning activities, and (d) the participant's last lesson and (e) a summary of the participant. I begin the cases with a quote from each participant's exit interview, which highlights their unique approach to learning to teach in an alternative certification pathway. After a brief introduction to the participant, I describe the first lesson I observed in the participant's classroom to provide context for what his or her teaching looked like at the beginning of the data collection period. Because I sought to understand how the TST served as a community of practice to support the A-STEP teachers' development of general pedagogical knowledge, in the next section I describe in detail, the function of each TST member as it relates to this development. In the following section, I discuss the learning activities that existed within the community of practice to illustrate the formal and informal activities that were likely

to develop general pedagogical knowledge. Finally, I describe the last lesson I observed in the A-STEP teacher's classroom and close with a summary of the participant.

Introduction to Felicia and First Lesson

It's like...when you're learning a foreign language in a classroom versus going to a different country where they speak another language, not knowing anything...and you have no choice and you're just figuring it out and stumbling along...and I think you learn at a much faster pace.

---Felicia, Exit Interview.

When Felicia entered the A-STEP program, she was 46 years old and held a PhD in Microbiology from the University of Washington. While she was working on her PhD, she served as a teaching assistant and mentored undergraduate students on research projects. After she completed her PhD, she was awarded a post-doctoral fellowship funding grant-writing and research for new antibiotic drug discovery targeting pathogenic organisms that were select agents for possible bioterrorism. Early in Felicia's post-doctoral experience, she taught a class at a local community college. Eventually, she transitioned into a tenure-track position at a small liberal arts college in Pennsylvania. When her husband was transferred to a new part of the United States, Felicia initially started applying for college and university faculty positions. In the midst of the job search, she had a change of heart and decided to refocus her career on preparing high school students for the transition to college. Felicia had no desire to go back to school to gain her teaching certification, so she researched alternative routes to certification and was ultimately accepted into the A-STEP program's second cohort. She was hired to teach genetics and chemistry at Westside High School.

One of the first things I noticed about Felicia was her soft-spoken demeanor. I also noticed that she was naturally reflective, often pausing to formulate her thoughts and choosing each word deliberately. She exuded a passion for science and research and seemed eager to participate in this research project because she saw participating in the study as an opportunity to contribute to research through her participation. When I walked into her room to conduct our initial interview the week before school started, she was busy working on her computer at her desk. She mentioned before the interview that she had prioritized getting her planning (lesson plans, syllabus, etc.) completed over decorating her room because she knew that she could take care of her room at the end of a day when she was tired, but the lesson planning component needed to be completed when she was fresh.

As I explained what the current study would entail, Felicia communicated that the written weekly reflections would be good for her because she is naturally reflective and values the reflective process. However, at several points during the initial interview I worried Felicia was feeling overwhelmed. I found it difficult not to finish sentences and thoughts for her during long pauses, a behavior I made conscious efforts to avoid during our conversations. I eventually realized that this was her way of communicating—carefully and intentionally, taking all the time she needs to think through what is being asked and how she can best respond. These discursive patterns continued throughout the data collection period, even as she became more comfortable in our communication.

The first time I saw Felicia teach, it was the first week of school in an Honors Chemistry class and her external coach was conducting an observation. The room was

neat and organized. Artwork and posters on the walls featured both general positive messages and content-specific messages such as “Think Like a Proton and Stay Positive,” “Talk Nerdy to Me,” or the molecular structure of caffeine. I could sense that she was nervous, and she did not acknowledge my presence until after the class was over. I could also tell that she was overwhelmed with so many outside observers in her room so early in the year. As students entered the room, an assignment was displayed on the Promethean Board. The class worked on their “About Me” sheets as students came up by row to turn in their lab fees for the year. Once the money for all students’ lab fees had been receipted, Felicia presented the agenda for the day which included a safety video on which they were to have a quiz the following day, and a lesson-summarizing activity. Felicia became very flustered while trying to get the safety video to play on the Promethean Board, her cheeks grew slightly rosy and her soft voice grew shaky and even softer than initially. When she realized the video wasn’t going to work, she froze the screen and pulled up a PowerPoint that included the lab safety rules and went through the presentation slide by slide. At times you could barely hear Felicia, her voice fading in and out from audible to inaudible and back again many times throughout the lesson. Her shoulders were rolled in slightly and she taught from one spot at the front of the room. At certain points, she would begin to tell a story to illustrate the safety rule on the slide, but would then stop her story and move on to the next slide, seemingly unsure about whether or not it was appropriate for her to share her personal anecdotes. At the end of class, students completed the lesson-summarizing activity answering the following

questions: What is one goal you have for this class? What is one chemistry question you'd like to have answered this year? and What would you like to do after high school?

Felicia collected each student's responses as they exited the classroom. She then closed the door and came over to where I was sitting with the external coach. Eager to collect my first piece of collaboration data, I queued up the audio recording application on my phone. Yet when Felicia sat down, I saw tears welling up in her eyes. Empathy took over and I turned off the recording. I just listened as the external coach assured her that technology glitches happen to everyone, that it was great she had a back-up PowerPoint covering the same material that she could pull up quickly without loss of instructional time, and that it is okay to let students see her personality. While my goal for the post-observation touch point was to remain a silent observer, I found myself reassuring her and offering encouragement along with the external coach. While each of us only offered support and encouragement, neither of us convinced Felicia that the lesson was not a failure. When I left that day, I wasn't sure that Felicia would continue to participate in the study, let alone continue in the A-STEP program.

In the weeks that followed, I reached out to Felicia several times to verify she could access the shared Dropbox folder with each week's written reflection. She did respond once indicating that she hadn't yet tried to open the folder, but that she planned to. During the third week of data collection, I started emailing her the weekly written reflection. She submitted two by email, but I still noticed that it seemed to be a struggle for her to complete the reflections. Looking for an easier way for Felicia to communicate her weekly reflections with me, I offered to call her at 4:00 on Friday of each week so

that I could record our conversation on her way home from school. Quite relieved, she agreed and said that the new format would help her decompress and reflect as she traveled home each week. During one such phone call, Felicia admitted that while she values research immensely, she is really not the type of person to agree to having someone follow her around. She explained that the only reason she agreed to be in the study was because she liked me.

Felicia's Teacher Support Team

Like all of the TSTs in this study, Felicia's consisted of an instructional coach, an administrator, and a mentor who were all based at her location, as well as an external coach and the program director who were not school-based. The A-STEP program director served on all of the TSTs. What follows is how each TST member served to support Felicia in her learning about teaching.

The Instructional Coach. The role of the instructional coach on the TST was to provide instructional resources, strategies and support as indicated by the A-STEP teacher's needs. Table 4.1 provides an overview of IC roles as outlined in the A-STEP handbook compared to roles the IC assumed in practice.

Table 4.1: Felicia's Instructional Coach

Felicia's Instructional Coach	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Model lessons • Observe, coach, feedback • Instructional resource and strategy support • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Monthly meetings with other first-year teachers • Walk-through observations • Informal conversations • Support based on building Felicia's confidence through conversation and encouragement • TST meeting - October

The approach of the instructional coach (IC) on Felicia's team was less directed toward Felicia's specific needs than some of the other members. Instead, she seemed to see Felicia as one of the many first-year teachers she was responsible for checking on in the building. The IC's approach to working with Felicia was informal and was based on what she saw as she completed walk-through observations or as she worked with the first-year teachers as a group. Even though Felicia did not specifically mention the IC in her weekly reflections which were used to guide my follow-up interviews with team members, I stopped by to speak with the IC about what she was seeing in terms of Felicia's experience and development in the classroom. The IC described informal conversations where she asked Felicia about how she feels about planning, collaborating with other chemistry teachers, and classroom management. When I inquired as to Felicia's response to her questions she stated,

She usually feels good. She says—just the end of last week she said that she's still learning and thinking things are going to work well and then they don't and

she's adjusting between one class and the next, which is good. But she's learning, "this method isn't working" or some of the things she went right into teaching content-wise, I think, was too high and she had to back off a little bit. (IC Collaboration, September 18, 2017, p. 2)

The support provided through Felicia's conversations with the IC were based less on specific pedagogical strategies that might serve to help Felicia in the classroom and more on the general theme that the first year is always one of the most difficult and that things would get better. The IC perceived that Felicia benefited from their conversations by being reassured that "all of us are learning" and that "every year you learn and you don't get everything right every year" (IC Collaboration, September 18, 2017, p. 2). When I asked the IC about her perception of Felicia's greatest needs and her role in meeting those needs she indicated that building confidence was by far Felicia's greatest need. She perceived that continuing to have informal conversations and "carving out time to really sit down and meet with her about specific things" would help her build the confidence she needs to be successful in the classroom (IC Collaboration, September 18, 2017, p. 2). The IC planned to utilize monthly meetings with the first-year teachers to assist with meeting Felicia's needs.

The Mentor. The primary role of the mentor was to maintain weekly contact with the A-STEP teacher and provide needs-based school-level support (Table 4.2). Felicia's mentor had a pulse on her day-to-day experiences, which he maintained by keeping in frequent contact with her achieved by the frequency he maintained contact with her. He explained, "I check on her every morning before school, during my

planning period, at lunch, and after school. Every day.” (Mentor Collaboration, September 19, 2017, p. 1). In one of my first conversations with him, the mentor told me that he remembers being thrown into the classroom himself as a teacher going through an alternative route. He stated that he still remembers what that was like, so that provided extra motivation for him to continually touch base with Felicia to see if he could help meet her needs (Reflective Commentary, September 18, 2017).

Table 4.2: Felicia’s Mentor

Felicia’s Mentor	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Instructional mentor • School procedures, culture, expectations, responsibilities • Model lessons • Weekly observations/contacts • Two formal classroom observations • Post-observation conferences • Assessment forms • Instructional unit, daily planning, assessment assistance • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Maintained contact multiple times per day • Assistance with lesson planning • Encourager • Provided basic resources such as copy code, access to printer, lab materials • Classroom set-up • Set up GradeCam and gradebook • School tour guide • Lesson planning assistance • Advocate • Classroom observations • Post-observation conferences • Conversations about classroom management

The mentor ultimately assumed various roles throughout the data collection period, signifying a differentiated approach to the mentor role that was driven by Felicia’s most pressing needs at any given time. At various points throughout the data collection period, Felicia had basic needs such as needing access to a copy code to run copies, instructional needs such as needing assistance with lesson planning, and

emotional needs such as needing someone to help boost her confidence after a tough class. The mentor either assumed a role to meet Felicia's specific need or served as a resource or facilitator to put her in contact with someone who could provide the support needed. Particularly at the beginning of the year, the support the mentor provided was primarily checking in with Felicia to see what basic needs she had. The majority of the basic support provided centered around helping her set up her classroom, giving her access to a printer because hers wasn't working, setting up her GradeCam, making sure she had all necessary lab materials, setting up her gradebook, and in general, "...showing her everything that a new teacher needs to know," (Mentor Collaboration, September 19, 2017, p. 1). The mentor also made Felicia aware of school policies related to purchasing supplies for the classroom.

Mentor: And you did use some of your money for that. That's the kind of stuff, too, that you can use your student money for...

Felicia: And I didn't realize until, I think Eric sent an email...I can't get reimbursed in hindsight from that...I didn't have the P-card, so I can't --

Mentor: You -- well, we can go --

Felicia: I kept all the receipts.

Mentor: You have all the receipts? All right, we'll go to Mary...I'll go with you, and we'll talk to Mary...Or if I can get down there sixth period, I'll talk to Mary. She may be able to work something out for you. All right? So if you kept the receipts, she may be able to

go back and let you use those receipts against that. But usually the way you have to do it is you have to... (Mentor Post-Observation, September 19, 2017, p. 8)

The mentor also explained that while he did focus on helping her with any needs that she presented, he also liked to keep her abreast of what was coming up so that she could plan accordingly:

But, yeah, I just check on her all the time and help her with whatever things she needs at that time, and preparing her for the things that are coming up. Like progress reports are coming up and she has to have those major grades in and the minor grades in, a certain amount of each one, and just to make sure she has everything she needs. I don't want her to get blindsided. (Mentor Collaboration, September 19, 2017, p. 1)

The mentor also anticipated basic needs she may have and served as a tour guide of sorts, introducing her to key people in the building that she could use as resources in the future:

I have taken her down to the office and introduced her to all the guidance counselors, the secretaries, media center. I want her to realize that those are the people that she needs to keep in her circle and that when she needs something, who she can go to get those answers. (Mentor Collaboration, September 19, 2017, p. 2)

At one point, the mentor realized that Felicia was spending a tremendous amount of time doing lesson planning. He put her in touch with another chemistry teacher he thought she could collaborate with easily for planning. He kept her needs in mind and

made sure to get her connected with someone who was on the same page as Felicia in terms of personality, planning and instruction (Mentor Collaboration, September 19, 2017). Eventually, he realized that part of the problem was that the A-STEP program was requiring her to submit a very detailed lesson plan format that was not required at the school level. He soon realized that what began as an instructional need ultimately became an emotional need because of the level of stress the intense lesson planning was causing. During one of the post-observation conferences I observed, Felicia's mentor felt the need to address me directly about the lesson planning issue. He thought that I needed to be made aware of the level of planning she was being required to do.

Felicia: Because the lesson planning is taking me a lot of time and I'm really worried that—

Mentor: That's probably what's hurting you the most is that lesson planning, because you have a—your lesson plans are meticulous, like four or five pages long. All the transitions. [He turns to me] She's having to do them every single day that way, and that is so time consuming. The rest of our lesson plans are on one sheet for the week. And we're writing what the central question is basically and what we're doing that day and is it a video, test, or whatever. So ours is simple compared to what she's doing on a daily basis with hers. And that is so time consuming for her. But that's just my opinion. You can record that. I'm just kidding. (Mentor Post-observation, September 19, 2017, p. 9-10)

In our collaboration interview later that day he brought it up again:

The only thing that has been bothering me for her is those lesson plans that have been piling up on her... But I want to help her alleviate some of that problem so that she can focus on teaching the kids, and that's what I think her passion's going to be is really opening those kids' minds...and watching her with the genetics, and knowing how she is about genetics, and seeing how she's teaching those kids, is a really cool thing. (Mentor Collaboration, September 19, 2017, p. 2-3)

The mentor also addressed Felicia's instructional needs by observing her teaching and engaging in discussions about her teaching. I inquired about how he was helping her to develop general pedagogical content knowledge.

Mentor: I would think, how do I handle this or this transition? And everybody would say 'read this book', and I'd read a book and come back and say, 'Well, that didn't really help me'. So I pretty much had to learn by the seat of my pants. But everything that she has a question about, and that's what I think we have a good conversation, she will make notes and she'll say, 'Okay, this happened in my classroom. How should I have handled it?' And then we'll talk about some different ways that you can handle it. And I think that's kind of helped her. She realizes that it's her classroom, and she sets that expectation and where she wants the kids to go, and if that expectation is not working or the kids are trying to buck at her or come back at her, then she's going to have

to pick up the phone and make a phone call to the parents. I mean, there's steps that you have to go through, but I think the first thing, especially with her honors kids, you call a parent and you know, the parents are really going to go off on that child and the child's going to come back and be in a better position, I would hope. But just by having an honest, open conversation, when things go wrong in her classroom, she'll tell me what went wrong and ask me how I would've handled it. And then we talk about that, and then we come up with ways that she can handle it, because the way I handle it might not be the same way that she might want to handle it. But just having that open conversation, I think, and dialogue with each other.

Researcher: Do you see or hear about her following through or following up or implementing the things that you all talked about?

Mentor: Yeah, a lot of times she will tell me what she did in the classroom. Like there was one boy she was having some troubles with, and we actually went to the guidance counselor and talked about this particular child. And she didn't want -- the guidance counselor was like I'll pull him, we'll have a conversation with him, and she didn't want that. She wanted to handle it within herself. And that's what I found when I was at Campbell, that writing a kid up isn't always the right answer, or disciplining in front of the entire class

is not always the right answer. Sometimes you don't know what a child is going through in their day-to-day life, and they might just need a pat on the back or some encouraging words saying, I know you're smart. And I always try to tell people to start with a positive before you even -- even when you're talking with a parent, say, oh, I enjoy your son being in my classroom, but can you help me work on -- and ask the parent for help, and that's what I always try to do, too. Can you help me with this? And then a lot of times it's not like you're attacking their child or whatever. But some of the stuff she has used and some she is working on her own, and I think that's good. And she'll have to find her own way of doing things. But I can give her my suggestions and she can use those or she can find another way. (Mentor Collaboration, September 19, 2017, p. 3-4)

During the exit interview, Felicia named the mentor as the one TST member she turned to the most for support and assistance. However, she said that she saw her reliance on him beginning to lessen by the end of the data collection period.

Felicia: At the beginning he was -- yeah. So at the beginning, he was probably always checking in, before school, after school, fifth period planning, which they overlapped for us. So at least three times a day, I would say, he was stopping by to poke his head in. In the beginning, I probably talked to him quite a bit during that

fifth period planning or before school, just questions I had about the day or schedules or if there was a new bell schedule or home room or what are we supposed to do with this student? All kinds of questions. ...and then it -- the before school and after school tapered off, and then he'd check in during fifth period planning. If I had anything before school, I would email him the day before or something and say can I ask you a question quickly before school? And he'd stop by. Now I don't see him every day. I mean I know he's there if I need him. And he'll stop by a couple of times a week or if I pass him in the hall he'll always stop and ask if I need anything.

Researcher: But you feel like you don't need the level of support that you did at the beginning?

Felicia: No, not at all. (Exit Interview, November 10, 2017, p. 10)

While the mentor was still providing regular support, the intensity of the support Felicia needed was beginning to taper off as she gained experience. However, Felicia found comfort in the knowledge that even though she no longer saw him every day, she knew he was there if she needed him for any reason.

The Administrator. The administrator assigned to Felicia's TST was an assistant principal new to the school. Similar to the IC on Felicia's TST, the administrator offered support to Felicia that aligned with her overall job responsibilities (Table 4.3), and was mentioned only once in Felicia's weekly reflections. The

administrator explained that the assistant principals have a schedule they adhere to when making classroom visits, and Felicia is on her list of teachers to observe. She put Felicia at the top of her list of teachers to see, along with the other new teachers. This decision to give Felicia priority came from her own experience as a teacher who was certified through an alternative pathway and an understanding of the huge learning curve faced by teachers in alternative routes, much like Felicia's mentor. She remained consistent with the message that she never really saw anything with Felicia that was a cause for concern outside of what is typical of other first-year teachers and teachers coming through alternative routes. As long as Felicia's experience seemed to be within normal first-year teacher limits, the administrator did not see a need for intervention on her part, particularly since the mentor was working so closely alongside her (Administrator Collaboration, August 18, 2017).

Table 4.3: Felicia's Administrator

Felicia's Administrator	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Assign school-based mentor • Provide supportive resources • One formal classroom observation • Assessment forms • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Walk-through observations • Defer to IC for any instructional concerns • Casual conversations • Help finding a substitute • Support with receipting money

Like other TST members, the administrator noticed that Felicia is very shy and thought this kept her from seeking out help because of her administrative position. Based on her observations of Felicia, she also noticed the overall lack of confidence other TST members noticed. The administrator also mentioned that it took Felicia a long time to

plan and deliver instruction, but this was not a huge concern given how early it was in the school year. In terms of her role in assisting Felicia with this growth, the administrator stated that typically if it involves more than a casual conversation, she would defer to either the mentor or IC to do more hands-on mentoring or coaching.

Felicia sometimes felt that all of her questions were too taxing on her mentor, so in certain cases she would reach out to the administrator for what she called housekeeping questions or logistics of special school events (Weekly Reflection, September 26, 2017). She later expressed to me that having several people who are formally assigned as contacts was helpful for her and served to alleviate some degree of pressure she might have felt otherwise to find answers to the questions she had trying to start a new school year as a new teacher (Exit Interview, November 22, 2017). In one such instance, the administrator stayed after a meeting to go over upcoming Spirit Week procedures with new teachers that Felicia had inadvertently missed. Felicia recalled coming into the meeting as they were finishing up because she had been cleaning another teacher's room she had used during 7th period to do a lab and didn't want to leave it a mess. Felicia was appreciative of the administrator staying after the meeting to answer her questions as well as the follow-up she provided to address the questions she could not answer initially. Felicia stated,

I was just impressed because she's new there, too, so Spirit Week was all new to her. So she had to find answers to many of the questions the new teachers were asking, but she got all the answers. She followed up within 24 hours with written response to every question. (Weekly Reflection, September 26, 2017, p. 4)

There were two other instances throughout the data collection period in which the administrator intervened to provide specific support on Felicia's behalf without Felicia having to seek it out. One situation involved substitute planning for A-STEP trainings that took place during the school day. Each month A-STEP teachers attend a half-day training for which they had to secure a substitute teacher. Felicia quickly learned that substitutes prefer to commit to a full day as opposed to a half day and she was struggling to find someone to cover her class. Without Felicia asking, the administrator stepped in and found a substitute to cover all of the A-STEP training days for the year. In a separate instance, the administrator intervened to take care of unpaid lab fees. When students do not pay their lab fees, teachers are required to send notices to students and parents. Instead of Felicia having to deal with this herself, the administrator had her send a list of the students who hadn't paid so that she could take care of the follow-up required. While neither of these instances may seem like a great deal of support at first glance, it made enough of an impact on Felicia that she not only mentioned it in the weekly reflection, but also considered that as going above and beyond what was required of her as illustrated when she stated, "And she stepped in without even my knowing...which was nice. I thought that was really neat. She's got enough on her plate. I had no idea she was working on that," (Weekly Reflection, September 26, 2017, p. 4). Hearing Felicia's response to the administrator's assistance with both issues indicate that alleviating the pressure of the menial tasks that teachers are bombarded with makes a difference, especially for the first-year teacher.

The External Coach. Felicia’s external coach is a retired middle school teacher from a nearby school district. Her role on the team was to ensure all members of the TST were providing support as indicated by the written roles and responsibilities provided to all team members at the outset of the school year as well as to schedule, coordinate and lead the TST meetings (Table 4.4). Additionally, the external coach was expected to conduct at least eight classroom visits and/or observations in the fall semester to touch base with the A-STEP teacher and provide support and feedback as necessary.

Table 4.4: Felicia’s External Coach

Felicia’s External Coach	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Provide support, assistance, expertise, resources • TST leadership • Liaison between school and program director • Eight classroom visits and post-observation conferences • Assessment forms • School contact each visit • Six open-ended visits • Additional observations, if required • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Encourager • Classroom management support • Emotional support • Lesson planning support • Instructional feedback • Observations • Post-observation conferences

It was clear that Felicia respected the external coach and valued the suggestions she offered. When the external coach would make suggestions on ways Felicia could improve or suggestions of things she could try, Felicia would quickly write notes in her red journal (Reflective Commentary, October 4, 2017).

The external coach primarily functioned in two main roles: as a source of emotional support to build Felicia's confidence as well as a source of instructional support that gently guided her as she developed as a teacher by focusing on the positive things going on in the classroom.

For example, early in her first nine weeks of teaching, Felicia was particularly worried about having lost control of her classroom after the external coach had observed a lesson in which a few students were choosing to socialize instead of do their work. In this instance, the external coach offered general suggestions along with a great deal of encouragement that Felicia had not lost control and that she could get her classroom management fine-tuned so that she was operating more confidently as the teacher in the room.

External Coach: So I probably would've looked at her and said you're not working, move back to your seat.

Felicia : Okay. That's a good --

External Coach: And you know, sometimes you just have to be blunt. I mean it's just very matter of fact. 'No, I'm sorry. You're not working. There's your seat.' And you're really nice, and you're really soft spoken.

Felicia: It sucks! It does. It really -- and then if I try to raise my voice, then I just feel like -- or try to use my--seventh period last Friday, when they were getting all squirrely, I tried to use my teacher voice and all I felt it turned out is

what they say not to do. I didn't yell. I wasn't yelling, but I was trying, and they're not used to it, so they were looking at me and they were like, 'What's your deal? What's wrong?' And I'm like, I can't win. So I'm really -- the classroom management is definitely --

External Coach: And that is the hardest part.

Felicia: And I am terrified, terrified of all these things that everybody told us about, it's just, I told you from the beginning. And that does not help. I'm sure it does not help that it's my fear that they're --

External Coach: That you're going to lose control.

Felicia: That I'm going to lose control, and it's going to be a runaway class and it's going to be one long year.

External Coach: Yeah, don't --

Felicia: And I'm going to hate teaching.

External Coach: And you don't want to lose control, and you don't want to have a bad year.

Felicia: I don't, because you can't get --

External Coach: It's hard to get it back. It's not impossible. Some people will tell you it's impossible. It's not impossible to get it back. You can, because you can be out -- if you're a teacher and you've established great classroom expectations

and you're out on maternity leave or something and that sub could've let them do whatever. When you walk back in the room, you can get that back. And you can get it back, but you haven't lost it yet. Don't worry about that.

Felicia: You don't think so? Looking around -- everything today you don't think I've lost control?

External Coach: I don't think you've lost it, because they're not up, out of their seats and stuff. They know they're supposed to stay in their seats. They understand that. They're not loud, and they're not -- this group is not talking to this group and this group talking to this group. They're just not focused at their tables. And you might have to say, 'Okay, you're working on your own completely. I gave you the opportunity to work together. You chose to talk about everything else. You're on your own. I want to see your work at the end of the period' ...But I just think you -- firm, be firm. You can be firm without having to be loud...But that's -- but you haven't lost them. Don't worry about that.

Felicia: Really? You don't think so?

External Coach: But you need to get -- you're going to have to get --

Felicia: I need to get -- and start having -- there needs to start being repercussions for, like you said, or consequences.

External Coach: They've got to have consequences. And that's the bottom line. They've just got to have consequences. You're okay. It's not chaos in here. Oh, my gosh, no. I mean, and they're not talking while you're talking. They're just not working when they need to...And I think you're going to be fine. Don't worry about that. You'll have it. You haven't lost it. If that's your fear, you have not lost it.

Felicia: Okay.

External Coach: Okay?

Felicia: Sounds great. Thank you. So you'll be back in the not too distant future and I'll implement some of those consequences?

External Coach: Okay. Yea, I will... (Post Observation Conference, September 13, 2017, p. 16-18)

Felicia's need to ask multiple times for reassurance that she had not lost control of the classroom was fueled by her fear of what her daily classroom experience would be like if she did lose control. She not only needed reassurance that she had not lost control, but also that she could address the behaviors she was seeing in her classroom even though she felt that being soft-spoken was working against her. Toward the end of their discussion, she was eager to implement the consequences discussed and was looking forward to the external coach returning to provide feedback on her progress in that area. In one of my follow-up conversations with the external coach, she stated that she sees

herself as, "...one more person for advice or for reinforcement, one more person to give her what she needs—feedback—and especially positive feedback" (TST Collaboration, October 4, 2017, p. 1). She, like the other TST members, also noted that Felicia's greatest need is to build confidence in her ability as a teacher and that was certainly one of the primary goals of the external coach.

The external coach also acted as a source of emotional support in the area of achieving a work/life balance. This was evident in a conversation that transpired after I turned off the recording following the observation referenced above. The external coach asked Felicia about who she was planning with in her Genetics course. Felicia told her that there was no one to plan with at the school; furthermore, because it was not a course with an end-of-course exam, there was no guide or standards to go by. Felicia told the external coach that she was spending a lot of time planning, and that she rarely has a week's worth of plans ready at any given time. The external coach mentioned that it is important to make sure she is making time for her family. Upon hearing that, Felicia teared up and later explained to me that she had to almost will herself not to cry (Reflective Commentary, September 13, 2017).

Not long after their conversation, Felicia told me that the external coach had communicated to her that she should begin using the lesson planning format that the school used instead of the more detailed version she had been doing for the A-STEP program. In addition, her mentor put Felicia in touch with another teacher who taught chemistry so they could plan together. Both of these actions alleviated the majority of the planning pressure Felicia had been experiencing.

In addition to providing encouragement to build her confidence, the external coach also provided instructional feedback for Felicia. During one observation the external coach conducted, Felicia gave the agenda for the day and then she began going over how to determine the number of protons, neutrons and electrons on a puzzle sheet her Chemistry I Honors students had been working on. The lesson was a mix of direct instruction and independent work. During the direct instruction portion of the lesson, Felicia asked questions to scaffold student understanding such as “Can you articulate further how you came up with that answer?” “How did you figure it out?” or “What did you tell me last time?” At one point, she asked a question and said “I have a prize for the person who can give me the correct answer” and she got a basket from her desk to let the student choose a piece of candy. The whole exchange took only a few seconds and she continued with the lesson. Students were engaged and attentive and frequently provided answers to her questions. She also gave personal strategies such as “one thing I always do is write the number off to the side of my chart. Because that’s where you need to start.” Or “This is what I like to do...” to help students navigate a tricky problem (Lesson Observation, October 4, 2017).

When students were working independently, Felicia circulated throughout the room and provided assistance to students who had questions. Again, she used questioning to scaffold student responses and promote understanding of the content. Students were comfortable asking questions such as “What if it don’t have a number?” to which Felicia replied, “Ah...great question.” She used scaffolding to help the student arrive at the answer herself and she celebrated with the student when she got the correct

answer. When Felicia was assisting individual students, other students in the class engaged in discussion about the assignment, walked up to the Promethean Board to get a closer look at the Periodic Table on display, and rarely appeared to be discussing other topics (Lesson Observation, October 4, 2017).

Following the observation, the external coach met with Felicia to discuss the lesson. She mainly provided positive feedback on her instruction, noting specific areas of strength from the classroom observation checklist she used to guide her observation such as in the following example:

External Coach: Whole group instruction and individual instruction—you do a good job of going around, and I think you've got a good rapport in that students don't mind asking you questions. Yeah, you'll see people that kids don't want to ask them a question, and they're comfortable enough with you to say that they don't understand something, and get you to help them. I think that's great. And I just put I was so excited to see you so much more relaxed. You just seem so much more relaxed today. The students were well-behaved. I visited this class before. I see a huge improvement in their interaction, participation, and understanding of the objectives. I thought they understood, probably because they're more focused. So they were getting the right answers and as you went around and

helped them you were saying 'good job', 'that's right'. I thought it went well.

Felicia: Okay. Great. Good. (Post-Observation Conference, October 4, 2017, p. 6-7)

Toward the end of their conversation the external coach asked if she had any questions.

While Felicia did not pose a specific question they day, she did offer the following:

Felicia: No, I just—again, I really appreciate all your help and feedback and suggestions.

External Coach: I think it's progressing well.

Felicia: Okay.

External Coach: I really do. You look so much more comfortable and relaxed, and that just makes me feel good. That makes me feel good that you do.

Felicia: I'm starting to have a lot of fun, too.

External Coach: That's good. That's when you can relax.

Felicia: Right now, the more I -- I'm getting more comfortable at letting my personality show through...It's a side thing, but I love that the first period was asking me at the end to ask more questions.

External Coach: Yes!

Felicia: They were staying after the bell – (Post-Observation Conference, October 4, 2017, p.9)

For Felicia, teaching became fun as she started to gain confidence in how she interacted with students, how she delivered content, the efficiency at which she was planning and perhaps most of all—the fun began when she realized that students were eager to learn and were having fun as well.

The Program Director. In Felicia’s case, the program director did not play a central role in the school-based support that was provided. Overall, her role was to provide oversight of the program and serve as the A-STEP contact person for any issues that might arise related to the A-STEP teacher or the function of the TSTs (Table 4.5). In an interview with the program director, she described that her involvement in the teams at the school level was completely driven by need—if a TST was meeting the needs of the A-STEP teacher and she did not have to intervene, then she just made sure that she got in to observe at least once before the TST meeting during the first semester. Beyond conducting observations in classrooms, attending TST meetings, and being an instructional resource and getting involved at the school level when needed, the program director made it a focus and priority to touch base with all of the A-STEP teachers with relevant articles, words or encouragement and inspirational stories to address the emotional needs often experienced by first-year teachers (Program Director Interview, October 19, 2017). During her classroom observation of Felicia, she stated that while she first saw Felicia flush and heard her voice start to shake, what was quickly made evident was,

...amazing preparation, greater interaction with kids, which surprised me a little bit. I thought she would be more formal, but she wasn’t. I knew she knew her

content, but her content was so interesting because she was making it meaningful, linking it to things that the kids were interested in. You wouldn't know she hadn't been teaching in high school. (Program Director Interview, October 19, 2017, p. 2).

Table 4.5: Felicia—Program Director

Felicia--Program Director	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • A-STEP contact person • TST training • Observation • Consult with mentor, instructional coach, external coach, and administrator • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Support based on needs of A-STEP teacher • Classroom observation • Provide encouraging e-mails, relevant articles, inspirational stories • Advocate

In their discussion following the observation, the program director emphasized the importance of maintaining balance. She felt Felicia was overly concerned about being behind with grading when they talked after the observation. She also felt that Felicia tended to spend an enormous amount of time focusing on one area, only to fall behind in others. The program director indicated that this may be the case for Felicia's grading, as it had been with planning toward the beginning of the school year.

The first time the program director saw Felicia teach, it was eight weeks into the school year. By that time, Felicia acquired more confidence in her teaching ability, so when asked about Felicia's greatest needs, the program director indicated that she needed a lab. Felicia was the only science teacher in the building who had a regular classroom instead of a lab. This forced her to either conduct lessons with labs in her room, which is

not conducive to most lab-based lessons, or to make arrangements to switch rooms with another science teacher. The latter option requires more planning, disruption to at least two classes, and pressure that Felicia would feel to make sure she cleaned up her colleague's lab perfectly. The program director hypothesized that Felicia would not necessarily feel this pressure if she were conducting labs in her own classroom.

In this way, the program director served as an advocate for Felicia when needs such as the lab and further explanation of grading expectations were needed. The program director followed-up with her TST about clarifying grading procedures and reached out to the principal about the need for a lab. In the TST meeting, they discussed ways Felicia could meet the minimum number of major and minor grades to be consistent with the district grading policy, while not falling behind or getting overwhelmed with the task of grading (TST Meeting, October 17, 2017). To address the need for a lab, the TST made sure other science teachers were open to sharing their lab with her for the current school year. They also made sure the science teachers had a key to her room, in the event they switched classrooms. They also agreed that it should be a priority for Felicia to be moved into a lab should one come available in the future (TST Meeting, October 17, 2017).

Felicia's Learning Activities

Felicia valued the formal aspects of the A-STEP training provided through the Summer Institute, monthly seminars, and the support of her TST. Table 4.6 includes the learning activities that Felicia indicated were most beneficial during the first nine weeks of school. However, even at the end of the first nine-week grading period, she did not

automatically think of interactions with the TST as being a learning activity when asked about what was most influential in her learning:

Researcher: What...learning activities have you participated in through the A-STEP program...do you think influenced you the most in terms of your development as a teacher? Is there something specific that sticks out...?

Felicia: Are you including interactions with members of my cohort -- or not my cohort, my --

Researcher: Support team?

Felicia: Support team.

Researcher: Yeah, any of that.

Felicia: So definitely interactions with my support team--having people come in and do evaluations, provide feedback, help out with challenges I was experiencing in the classroom, telling me what seemed to be working well from an outsider's perspective. (Exit Interview, November 10, 2017, p. 2)

Table 4.6: Felicia's Learning Activities

Felicia's Learning Activities
<ul style="list-style-type: none">• Summer Institute• Monthly seminars• TST support• Classroom observations set up on her own• Learning labs• Interactions with the cohort

Once I offered clarification, she agreed that her TST was influential in her learning and was able to provide specific aspects of her work with the TST that was helpful. Moreover, especially toward the beginning of the school year, she valued and even relied on the established contacts of those serving on her TST to be her first line of contact if she had a question.

However, Felicia did not solely rely on her TST or the formal training of the A-STEP program for her development as a teacher. For example, she set up two observations of two different teachers in her department on her own. The reason for one observation was that she knew the teacher was a few days ahead of her in their lesson plans and she wanted to see how he implemented the lab lesson they had planned so she could get some ideas about how to set that lab up herself. In the other instance, she had been using the teacher's lab for a lesson and stayed to clean it up during her planning while he was teaching a class. She identified both of these observations as valuable learning opportunities (Seminar, September 26, 2017). Felicia also sought out the help of the ESOL teacher at her school when she found it difficult to accommodate for the language barrier of her ESOL students in her class.

Researcher: Why do you think you do that? What makes you do that?

 Because I've also seen first-year teachers just sit in their classroom and just be overwhelmed...But you know you have a need—you go observe a classroom. You know you have a need—you go talk with the ESOL teacher. You know you have a need—you go, whatever.

Felicia: Yeah. That's a good question. So is it just part of my personality or is it something that I've learned over the years. Is that kind of what you're asking?

Researcher: Yeah, I mean, I'm just curious. Have you ever thought about --

Felicia: I think maybe it goes back to -- this might be an area where all that science training is helping, because you become an expert in your field. You're expert or someone that may be able to help you develop this one protocol, or someone you can bat around ideas about this idea or analyzing your data. You kind of go where the individual is that can help you in that sense, and you start at the bottom of a ladder in a lab and -- I started as a research technician and you seek out help, and then you need help in a different area and then you're mentoring. It's a whole mentoring hierarchy. I don't know if it's that. One experience in my life that stands out a lot is -- I think I've shared -- I was very shy... I remember I would track down my professors to ask them questions. And I remember one of the professors saying, in hindsight later on, he wrote a letter for me for graduate school and he said, 'You stood out in my mind because you came and found me and asked me questions, where normally I think

the students would go to the grad students first or would never approach a professor'. But it never occurred to me not to approach the professor, because the professor was always available to answer questions...I don't know, maybe it's just --

Researcher: So even before you had formal research training?

Felicia: Yeah.

Researcher: Because I also wondered maybe she's just approaching it as a researcher...

Felicia: And that's what I was going to say is the other, I think I'm just -- that's what I'm used to -- yeah, I think that's probably exactly it. I think I've just always -- yeah.

Researcher: It's a different stance, I think...like in relation to what you don't know.

Felicia: Yeah. If I don't know, I'm going to go find out some information so I can have -- and I think I view teaching that way, too. And it helps me take -- well, one of the things I like about teaching is trying different things and seeing what will work, what will connect with the students, what's going to get them engaged, what's going to...and I like to learn. I love to learn. And so that's probably why I've been in academics so long, so finding people that you know are

good at something and learning from them. I think it's great. I love hearing what people have to share...

(Seminar, September 26, 2017, p. 7-8).

Felicia identified the learning labs as the learning activity that was most helpful for her and the activity that contributed most toward her learning during her first nine weeks of teaching. The learning labs were set up by the science and math specialists in the district solely for the A-STEP teachers. A-STEP teachers spent a full day at two different schools observing other teachers. After the observations, the math or science specialist guided the A-STEP teachers through a period of reflection based on what they had observed.

One of the reasons Felicia identified the learning labs as being particularly helpful is because discussions at the lab reassured her that many management issues she encountered were not unique to her classroom. For example, she said,

The first individual that I observed teaching chemistry, and she's been teaching it for a while, and I think she's recognized as being a really good chemistry teacher. And it was neat to watch her class, because she had similar levels of activity, and sometimes the students getting off-topic and their chatter and seeing how she redirected, and it was comforting. Because things that I thought, oh, no, might be bad, I think are just fine. (Learning Lab, September 29, 2017, p. 2)

Moreover, she gleaned specific teaching strategies from watching someone else teach.

Felicia also appreciated seeing how one teacher handled students who did not finish tests within the allotted time, "...I've always wondered on that aspect of having a test go

longer, because technically they could go home and look up the answers, but if they're learning, and come back and answer them, well, that's not such a bad thing," (Learning Lab, September 29, 2017, p. 4). In this way, seeing other teachers in action enabled her to consider aspects of the classroom from a different perspective as well as give her practical ideas that she could easily incorporate into her teaching. But most importantly for Felicia, she needed to see herself in the other teachers that she observed—their classroom organization, their struggles with students, their classroom management styles and their teaching strategies. She appreciated the opportunity to watch other people and talk to them after the lesson she observed so she could ask questions about why they made the decisions they made in the classroom. Once she had the reassurance of being able to see herself in those teachers and in those classrooms, she gained a certain degree of confidence that she was doing well as a teacher in her first year in an alternative pathway.

Felicia also valued her interactions with the cohort as being just as important to her as the content presented in the professional development activities they shared:

Felicia: It's fun to -- it's fun and helpful to get together for our A-STEP meetings. They're informative, but it's also nice to see my peers share their experiences and kind of see how they're doing. It'd be fun to have more time or opportunity to do that, but I know we're teaching so much it's not easy to fit in more. But it would be fun to have a chance just to get together with them and bounce ideas off of each other.

Researcher: Would you say the times that you guys meet as a cohort, would you say that just touching base with your peers is just as important as the content that's covered in some cases?

Felicia: Yeah, probably in a way. Definitely in that first one, where you just feel so overwhelmed and coming back together is almost like seeing your summer camp buddies. But just knowing you're not alone out there, and it's going to be okay, and hang in there. (Exit Interview, November 10, 2017, p. 2)

Felicia's Last Lesson

The last time I observed Felicia teach it was toward the end of the first nine weeks. Felicia was being observed by her mentor and she was teaching genetics. When I walked in the mentor was already seated in the back of the classroom. When she saw me, Felicia gave a big smile and seemed almost happy to see me—a completely different reaction than the first time I went to her classroom to observe. The day's lesson consisted of a DNA lab. When the bell rang, Felicia gave an agenda for the class and described what they would be doing in the lab. The students appeared excited and were attentive to the directions Felicia was giving. She had set up stations around the room that contained the materials needed to conduct the lab. In one area, Felicia had pre-poured Gatorade in individual cups for each student. She also had test tubes for each student, pipettes, pineapple juice, dish soap, and rubbing alcohol sitting in a large bowl of ice. As Felicia walked around the room to distribute the cups of Gatorade, I noticed that she seemed very confident in front of her students and did not seem at all phased by the

fact that she was being observed. She talked easily with individual students and addressed the class with a smile. The first task of the lab was to swish the Gatorade for two minutes before spitting the Gatorade back into the cup. Students playfully objected to the idea of having to hold the Gatorade in their mouths for a full two minutes. Felicia joked with them as well, telling them to be careful not to laugh and spew or swallow the Gatorade because that would ruin the experiment. When the two minutes had passed, the students spit out the Gatorade into a separate cup and then transferred a sample of their Gatorade/DNA mix into a test tube. Then they visited the stations around the room to add the dish soap, pineapple juice and alcohol to the mix. All students were participating and engaged and she circulated around the room assisting students as needed and asking questions such as, “What do you predict your DNA will look like?” and “What do you think is going to happen?” The structure of the class was less formal than other classes I had observed her teach. Some students were standing, some were sitting, and all were free to get up and get the materials they needed as they needed them. At one point in the lesson, the students gathered around the desk with the rubbing alcohol to get directions for the last step. Students were laughing and engaged and genuinely appeared to be enjoying the class.

At some point during the lesson I noticed that Felicia was sporting a “Once an Eagle, Always an Eagle” t-shirt, and this reminded me how the Instructional Coach had told me the week before that Felicia had volunteered to chaperone the Homecoming dance. I began reflecting on how overwhelmed she had been during the first few weeks of school and how at that point, school spirit was the last thing on her mind. Felicia was

passionate about science and had, in a relatively short amount of time, earned a great deal of respect from the students, faculty and administrators at her school. This respect was confirmed by the principal of the school who did not serve on the TST as he popped his head into the TST meeting:

[Principal enters room]

Mentor: Hey!

Principal: We want to keep that Felicia girl. Is that who you're talking about?

Mentor: Yep, that's who we're talking about.

Principal: Guys, make sure to keep her.

Program Director: They're doing more than their fair share.

Mentor: We're on it.

Principal: She's awesome. You know that's a hall-of-famer, too, right there.

Program Director: I know. I got it... (TST Meeting, October 17, 2017, p. 7).

Summary of Felicia

Felicia demonstrated a tremendous amount of growth as she gained confidence in her teaching practice and developed general pedagogical knowledge, both of which were accomplished in part through consistent interactions with members of the TST. Her TST was devoted to building her confidence and valued her contribution to the school. While Felicia knew she had the support of her TST, she was not reluctant to seek out

opportunities for learning on her own, such as the classroom observations she arranged at her school. She likened her learning to teach to learning a foreign language through immersion. She explained using the following analogy:

Felicia: Yep. I think it's more challenging, probably a steeper learning curve, but I think you probably learn faster. An analogy might be when you're learning a foreign language in a classroom versus going to a different country where they speak another language, not knowing anything.

Researcher: You don't have a choice.

Felicia: And you have no choice and you're just figuring it out and stumbling along until -- and I think you learn at a much faster pace.

(Exit Interview, November 10, 2017, p. 5)

Felicia also indicated that there were formal and informal activities that influenced her learning during the first nine weeks of school. The learning labs were the most impactful formal learning activity that contributed to her development of general pedagogical knowledge, while conversations with her mentor and external coach about her teaching practice were important informal learning activities. The TST met a variety of needs that were vital in order for development of general pedagogical knowledge to occur. These needs included basic needs, emotional needs as well as instructional needs.

Introduction to Michael and First Lesson

Calm down...trial by fire doesn't always burn you.

---Michael, Exit Interview

When Michael entered the A-STEP program, he was 22 years old and had recently graduated with a Bachelor of Science in chemistry from a nearby university. He was hired to teach science at Northeast Middle School. Despite being the youngest member of the A-STEP cohort, he had several years of experience as an instructor and as a mentor. He taught tennis and had also been involved with a middle school mentoring program for a number of years. His experience with the middle school program helped ease his transition into the classroom. The university he attended sponsored a mentorship program at Northeast Middle School. This mentoring program was a single-gender program that met weekly. At their meetings, he led character building activities and general recreational activities to build relationships between the mentors and mentees. Occasionally, they held study halls or visited to the middle school to have lunch with their mentees and meet with the teachers to see if there was a specific way they could assist the students. After his first year as a general mentor, he served as head director of the program for the remaining three years of his university experience. As head director he coordinated all programs, transportation, food, character curriculum, and dealt with any other issues as needed.

Michael indicated that he started thinking about pursuing a career in education when he was in high school, but he chose to study science because he enjoyed the content. Additionally, he stated that the education degree at the university he attended was more geared toward elementary education. After finishing his degree in chemistry,

Michael knew he wanted to pursue a teaching certificate and teach locally. Much like Felicia, he had neither the desire nor the funds to go back into a formal degree program. At that point, the principal of the middle school where he had been mentoring informed him of the A-STEP program. Michael indicated that the main reason he chose the A-STEP program is because it was district-led, the program valued the cohort model, and he had heard from several others that there were ample amounts of support and resources for those in the program.

Michael displayed a passion for his content and building relationships with students. He stated:

My big push for this year is going to be -- the three words that I have up on the wall...claim, evidence, and reasoning. And so my big push is getting kids to have a little bit more of a formula-like approach to critical thinking. So every time they say something, I'm really going to be pushing them to give me the evidence and kind of explanation for it. So I think the big push is getting them excited about science, but also deeper into critical thinking. I'm excited to build relationships, I think. One thing that's kind of nice is I am a young teacher. I'm pretty--pop-culture-wise, I kind of know some of the similar things that are going on, and I understand the same trends that some of the younger students do, which I think gives me a little bit of extra credibility in the classroom. So to go with that, forming relationships that the students are more comfortable in their new middle school environment. (Initial Interview, August 18, 2017, p. 2-3)

He recognized that flexibility and organization would be two of his greatest assets.

During the first week that teachers were in school planning for students to arrive, he recalled:

For the first few days, I was struggling, but I think -- I sat down for three hours and just got myself organized with what emails I needed to get back on, the checklist to get through with the rest of my classroom. I had lesson plans already to go on my computer, but that died before I got a district laptop, so we're going to have to figure that one out. (Initial Interview, August 18, 2017, p. 3)

Michael exhibited a level of enthusiasm for having observers in his room early and often:

As a learner, I'm ready -- I'm actually very excited to have people come in and observe me on a pretty regular basis. I would love to have people come in as much as possible, because I think I'm going to work well with kids in general, but I think teaching is a little bit different in that you're also trying to get the content across and I'm nervous that -- I think my presentation ability is good, but my communication to a specific level might be the biggest area where I'm going to learn. So I'm excited for people to come and not -- well, yes, critique, but also coach me on what's going to be better. And so I think just being open, flexible and somewhat resilient to consistent constructive criticism. (Initial Interview, August 18, 2017, p. 3)

Michael also identified personal growth opportunities focused on the incorporation of technology in his classroom and learning to balance the duties teachers are assigned outside the classroom. Overall, Michael began his first nine-weeks confident in his

ability to teach and learn to teach. He seemed prepared and willing to seek out help if he needed it.

When I walked into Michael's classroom to observe my first lesson, his mentor was also in the classroom observing. There were approximately 20 students working silently on the following questions posted on the Promethean Board, "Are houses wired in series or in parallel? Why? How do you know?" One student who had a question walked up to Michael quietly and asked a question. I saw Michael refer the student's attention to an illustration on the board as they discussed it quickly and quietly. After a brief time, Michael asked someone to answer the question on the Promethean Board. After a review of content previously learned, Michael went over the rubric for the project they were about to begin. He stood at the back of the room and controlled the Promethean Board with a wireless mouse. After they went over the rubric in detail, he explained that if students finished the project early, he had two assignments ready that they could begin working on. After all instructions were given, students moved throughout the room quietly and retrieved their materials before getting to work on the project with their group. Michael circulated throughout the room as students worked and offered feedback and suggestions for each group. Once it was clear that students were engaged in the project, Michael called students up individually to meet with them about a test they took recently. At one point, when Michael was working with individual students, the noise level started to rise. He simply said "We are talking at about a six right now, please make it a three." Students responded "Yes sir" and the noise level dropped dramatically. After about 40 minutes, the mentor left the room, but before

leaving she and Michael exchanged a friendly smile. The mentor handed him a handwritten note from the observation.

Michael’s Teacher Support Team

The Instructional Coach. Michael’s IC provided support consistent with the support he offered the other teachers at his school (Table 4.7). Of the eight weekly reflections Michael submitted, he only mentioned the IC twice. One of these instances was during the first month of school when the IC came in to do a brief observation. While Michael mentioned his visit, he did not mention any follow-up or post-observation conference with the IC. When asked, Michael stated he did not see his IC as part of his TST. He qualified his response by saying, “It’s not to say he’s not a helpful person around the school, but I’m not typically—I’m looking to my external coach and my mentor most of the time,” (Seminar, September 26, 2017, p. 4).

Table 4.7: Michael’s Instructional Coach

Michael’s Instructional Coach	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Model lessons • Observe, coach, feedback • Instructional resource and strategy support • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Quarterly planning period for 6th grade science teachers • TST meeting - October

Michael recalled that the IC in his first reflection and stated that the IC led a quarterly planning period for the sixth grade science teachers. During this planning session, the IC helped the science team plan when they would be teaching and assessed

each standard for the units covered in the first quarter (Weekly Reflection, August 18, 2017). Structured, guided planning sessions like this one proved beneficial for Michael in terms of planning because he later admitted that the other sixth grade teachers were “...tough to work with when it comes to developing different and fun lessons. I feel like I am learning a lot of tools, but it still feels like a mouth to a firehose on implementing them,” (Week 2 Reflection, September 1, 2017, p. 1). Michael’s mentor elaborated, “...it was difficult in the science department trying to get concrete information,” (Mentor Interview, September 1, 2017, p. 1). Michael was not satisfied with having lessons, or a menu of activities handed to him. He wanted a more guided approach to lesson planning in which he was able to talk through the implementation of the strategies planned. In addition, his mentor was aware of a dynamic in the science department that she helped Michael navigate so he got the lesson planning assistance he needed.

The Mentor. Michael’s mentor entered education through a traditional pathway and had never served as a formal mentor. She was very conscientious and wanted to make sure the roles she assumed were meeting Michael’s needs (Table 4.8). In one of our conversations she said, “...this is my first time being a mentor, so I’m not really sure if I’m doing it the right way...” (Mentor Interview, September 1, 2017, p. 4). Michael’s mentor explained that her desire to become a mentor stemmed from her own experiences as a first year teacher, “...Well, I just know that my very first year it was trial by fire. I started like middle of the year and it was oh, so hard. So I try to keep that in the back of my mind every time I’m talking to him to encourage him as much as possible,” (Mentor Interview, September 1, 2017, 4).

Table 4.8: Michael's Mentor

Michael's Mentor	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Instructional mentor • School procedures, culture, expectations, responsibilities • Model lessons • Weekly observations/contacts • Two formal classroom observations • Post-observation conferences • Assessment forms • Instructional unit, daily planning, assessment assistance • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Maintained contact multiple times per day • Consistent, sustained support • Encourager, emotional support • Provided lesson planning assistance • Provided basic resources such as access to laminator, copier, printer • Help navigating the school • Help with transitions • Help finding a substitute • Classroom set-up • School tour guide • Classroom observations • Post-observation conferences • TST meeting - October

While all TST members contributed in his development and learning in some way, Michael's mentor quickly became his go-to TST member for basic needs, emotional needs and instructional needs. Michael's mentor made an effort to check in with him consistently at the beginning of the school day, during class change, and again at the end of the day, as well as during planning (Mentor Interview, September 1, 2017). Even after only being in school for a few days, Michael's appreciation and respect for his mentor and the role she was already beginning to fill was very apparent:

...she is in the room right next door to me, and she has been so nice with anything from helping me figure out what dress code's going to be for these teacher in-service days to how to put things on the wall, and has given me constant resources in sending me things and is really friendly. I knew right off the bat that she didn't feel like we'd have to break down any barriers. She was just in it and ready to go

and willing to help a first-year teacher--and very sympathetic to the experience of being a first-year teacher, which is great. (Initial Interview, August 18, 2017, p. 4)

Not only was the mentor's support valued by Michael, it was also consistent. Michael explained the type of support she offered as well as the impact it had on him:

My mentor has been absolutely wonderful at helping me and encouraging me this week. She has given me so many resources and lists to help get me going. She has even given me some classroom supplies. Especially for the first day of school, she was helping me figure out the schedule, how we walk kids to lunch. Basically, she has really helped me navigate the school. She showed me how to laminate, copy, print. She is teaching me logistics, I guess. (Week 1 Reflection, August 25, 2017, p. 1)

During the first week of school the mentor mainly helped Michael get acclimated to the school and navigate his first week with students. Because Michael had no formal training or experience teaching students in a school-based setting, even activities such as how to walk his class to lunch had to be quickly learned.

She [my mentor] was very helpful in pointing out to me that in the mix of my lesson, kids were getting lost between activities because I hadn't been direct with instructions on transitions. Kids had materials when they weren't supposed to and stuff like that. It made it difficult for me to keep them on task. (Week 3 Reflection, September 8, 2017, p. 2)

In Michael's third week of school, the mentor helped to point out aspects of his instruction that needed to be addressed in order to help him manage the classroom more effectively. The feedback the mentor offered during their conference was positive and in one specific case was also constructive:

The only thing, and honestly, I think this is like nitpicking, because I thought you did a great job. Maybe some help with transition time might be helpful. Like, for example, some of the students were still working on their graphic organizer when the video was on. And I don't think that's necessarily a big thing, they were just trying to get it done, but I didn't want them to miss part of the video. So I know that you told them beforehand an important thing to look for in the video, but maybe if you just like gave them questions or something like that where they had to pay attention. (Post-Observation Conference, September 6, 2017, p. 2).

Michael later elaborated on how he internalized this advice from his mentor:

My mentor didn't give me professional support so much as she gave me emotional support. She was helpful in preparing for my substitute... She helped me feel confident in that plan. She also helped me figure out how I would be able to coordinate a substitute for the coming Monday because I would be traveling home for the funeral. (Week 4 Reflection, September 15, 2017, p. 1)

Michael's mentor offered support when she discovered that he experienced frustration about securing a substitute for his class when he needed to attend a required A-STEP meeting. So not only was he experiencing the stress of learning how to get a substitute for his class, he was also experiencing stress because he felt like he was missing out on

valuable instructional time with his students. His mentor showed him how to secure a substitute. She also reassured him that she would ultimately check in on the substitute to make sure his class was ok, but that either way he shouldn't worry about the substitute:

Some subs are wonderful, and they'll come in and they'll do exactly what you've listed, and some will come in and do absolutely nothing that you've listed. So just don't stress over it. If it gets done, it gets done. If not, just pick up with it the next day and go on... but it is a lot of prep beforehand. Just write in there [in his substitute plans] if you have any questions, ask me, and that will handle any of your stress. I'll get them going, you know, and we'll work with it, whatever happens... (Post-observation Conference, September 6, 2017, p. 4).

As his first nine-weeks of teaching progressed, Michael found himself relying less on his mentor.

Michael: I have absolutely loved my mentor teacher. She's been wonderful. Now I can't say that I am consistently using her as my mentor teacher. Like what do I need to be doing next? But when she comes in for observation, she's always got something helpful. But I think I'm also lucky, I don't think this is the same for everybody, but she's on my team, and so I work with her every day and her door's right next to mine so she's been very helpful for making sure that I'm adjusted to being at Northeast Middle and making sure I'm getting the support I need to around the building.

Researcher: But you did rely on her pretty heavily at the beginning?

Michael: Yes.

Researcher: Do you think you just need the type of support that you were getting from her less at this point in the year?

Michael: Yes. Absolutely, yes. (Exit Interview, December 1, 2017, p. 3)

While the mentor did provide feedback on instruction, the fact the she had a class of her own prohibited her from engaging in the level of instructional coaching other TST members were able to provide.

Toward the end of the first nine-weeks, I checked in with the mentor again to see how Michael was progressing and how their interactions were going. She had the following to say about Michael:

He seems more confident now. He--he feels more established, I think, in his classroom. I think at the beginning, especially like the very first week before the kids got there, he kind of had the deer in the headlights look, which any new teacher would have. But now he definitely seems more confident in what he's doing and disciplining the kids and that type thing...I mean it's just like, I feel like he was born to do this kind of thing. I mean it's really the best for us, because we have such a hard time getting good male teachers, good science teachers, and then to have it combined it's a really great thing. (Mentor Interview, October 4, 2017, p. 1).

The Administrator. The administrator on Michael's team served as the administrator for all sixth grade teachers and students at Northeast Middle. Michael's administrator treated Michael like any other first-year teacher she was responsible for at

the school. Overall, Michael’s administrator primarily served to get Michael acclimated to the school (Table 4.9). This was evident in the nature and timing of Michael’s mention of her in his weekly reflections. Michael mentioned the support she offered both during his initial interview, which took place on one of the teacher work days before the students arrived, as well as during his week one reflection. However, Michael made evident in his weekly reflections that his learning needs changed from needing to figure out the logistics of day-to-day functioning within the school, to needing more specific support in classroom management and instructional strategies. Therefore, the role the administrator was fulfilling for Michael was no longer needed on a daily basis.

Table 4.9: Michael’s Administrator

Michael’s Administrator	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Assign school-based mentor • Provide supportive resources • One formal classroom observation • Assessment forms • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Support consistent with other first-year teachers • Support with logistics of the school • School-based introductions • Positive and welcoming • Valued Michael as a member of the school community

When Michael did mention the administrator in his reflections, he was always positive and thankful for the support she was providing. For instance, he had the following to say about the administrator during our initial interview:

...she's a great resource, because she's been super positive and fun and welcoming and stops by every couple of hours to make sure I'm doing well. And I know she's got a number of other things she could be doing. And she's made sure to

introduce me to other people around the school, which has been great. (Initial Interview, August 18, 2017, p. 4-5)

Michael was keenly aware that the administrator had other “...things she could be doing,” and her interest in welcoming him and making sure he was getting acclimated to the school made an impression on him. He was grateful for the role she played in making him feel wanted, needed and welcomed at the school, as well as the role she played in facilitating introductions to other key players in the school that Michael may benefit from, such as the Student Resource Officer (SRO) at the school. During the first weekly reflection, Michael mentioned that she helped him to navigate his first student issue:

She is so wonderful. She has talked to me many times. We had a few issues with one student in particular that led to the SRO coming to my class on the second day. She talked me through a bunch of procedures as far as conduct goes and has been very helpful when it comes to understanding the school administratively.

(Week 1 Reflection, August 25, 2017, p. 1).

Having a student issue that would necessitate the SRO getting involved on the second day of school could prove to be somewhat stressful for any teacher. However, having the administrator assigned as a contact for school-based issues allowed Michael to use that experience to learn the procedures and protocols associated with such student behaviors.

The administrator explained the reasoning behind her helpful, welcoming approach:

...we realize the value in trying to retain new teachers and getting them acclimated to the environment...I go around each day to say good morning to the teachers, to let them know that I’m here and available for them...I just like for the

teachers to at least know that I'm in the building as their administrator and there to support them in any way that I can. (Administrator Interview, August 31, 2017, p. 1).

Michael's administrator focused on being positive with both the teachers and the students because of her belief that positive reinforcement, particularly with a first-year teacher who may be struggling to figure out the classroom, goes a long way in building that teacher's confidence and desire to remain in the classroom. Much of the motivation for the type of support she strived to offer was geared toward retaining the teachers they hired:

Well, Michael is -- he's very excited to be here, and he's worked with the students at Northeast Middle before, and we're excited to have him. But Michael does a lot...but usually about by November we realize that it can become overwhelming with all the other things that we're doing. He actually sent out a spreadsheet and shared with the team even this week. So he wants to do a lot, he's excited about it. We certainly appreciate that. But sometimes it's okay for him to...let somebody else do it, because he's going to overwhelm himself...Well, that's our concern. Not a big concern. That can be a good problem to have. And so we'll work with him if it gets too much...or if we see it being too much, then we're here to help him to disseminate some of that. (Administrator Interview, August 31, 2017, p. 4,).

This concern was verified by Michael's mentor who stated, "...I think the biggest worry I have for him...is I don't want him to get overloaded, because he's very eager and really

wants to please... But I just don't want him to take on too much," (Mentor Interview, September 1, 2017, p. 2). For both the mentor and the administrator, Michael's greatest need was being able to resist the urge to overcommit and burnout early in the school year.

Michael's administrator was also aware that the mentorship experiences that Michael had before entering the A-STEP program facilitated his success in the classroom. Michael himself agreed, and explained:

So I'm pretty aware of how these students interact with each other, between put-ups and put-downs, and their negative and positive interactions and how they respond to the positive and negative consequences. I also think I'm more aware of what some students use as their social capital, because I think image -- image might play similar roles in the schools, but I think image -- there's a different perception of how the image plays out at Northeast Middle in terms of being big and bad. And responding to authority has so much to do with sticking up for your group as opposed to sticking up for yourself, because there's a lot of pre-established groups. Like when these kids go home, they're riding the bus to areas where they might not all be going into -- they might be going in the same neighborhood, but like same apartment complex, sometimes their parents aren't home. So I know of like five girls from my team that they just go to one of their apartments every day. And so it's less of just friendships and for a lot of them it is like their families or extended families. I had two girls come in the other day and said over the weekend they learned they had the same father, and so it's just -- yeah, that was a shocker. They were like, "We have the same dad, can we have a

Jolly Rancher?” And I was like, “What?” And they explained it to me.

(Learning Lab, September 26, 2017, p. 1-2)

While learning to work with their student population might have been identified as a struggle for another first-year teacher, both the administrator and Michael himself felt that he had this aspect of his position under control.

The External Coach. Michael’s external coach was a retired middle school teacher who had recently retired from Glenview County School District. Michael frequently mentioned the external coach as providing support for, or contributing to, his learning in a variety of ways (Table 4.10). During the first couple of weeks of Michael’s teaching, her contact was primarily in the form of encouraging notes or stopping by to introduce herself (Back to School Reflection, August 18, 2017; Week 1 Reflection, August 25, 2017). For example, Michael mentioned that the external coach stopped by during the second week of school to do a brief observation and from that, she was helping him develop strategies for establishing a routine that would assist with transitions between group work and direct instruction (Week 2 Reflection, September 1, 2017).

Table 4.10: Michael's External Coach

Michael's External Coach	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Provide support, assistance, expertise, resources • TST leadership • Liaison between school and program director • Eight classroom visits and post-observation conferences • Assessment forms • School contact each visit • Six open-ended visits • Additional observations, if required • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Encourager • Consistent, sustained support • Classroom management support • Help with non-instructional routines • Provided instructional feedback and strategies • Instructional accountability • Support with summarizing strategies • Cognitive coaching • Help with interactive student notebooks • Observations • Post-observation conferences • TST meeting - October

When asked about her first impressions of Michael, the external coach said that the first time she met Michael, he "...had a list of things he needed to do on the board. That told me a lot about Michael right there," (External Coach Collaboration, September 11, 2017, p. 1). She also said that Michael was "very organized," "thinks things through," and was "upbeat" (External Coach Collaboration, September 11, 2017, p. 1). The following week the external coach came in for a more formal observation. This is what he had to say about the visit in his weekly reflection:

I'll be honest, as a class we realized that the quiz did not go over well. That morning, I scrapped the lesson for the day and instead changed it to focusing on test taking skills. We reviewed the quiz and highlighted key words in questions. Then, we did a gallery walk with the categories of each type of energy and students would write hinting words for each category; for example, stored or position are key words for potential energy. We then retok a similar quiz at the

end and my students did much better. She thought I did well with my students, but really wanted me to focus on a simple, intentional and routine focusing strategy. I think the lesson went well and so did she, but we still had a tough time walking through the halls in quiet lines. That Friday, I started the 5-4-3-2-1 countdown and my kids immediately responded to it. (Week 3 Reflection, September 8, 2017, p. 2).

In our conversation, the external coach mentioned many of the same things Michael brought up in his weekly reflection:

He had given a little quiz, I think, the day before that day. He was not happy about how they did. He was going to change the plans. It was really a meaty lesson. He's well-planned, of course. I was there at the very beginning. He was very directive as they came in, told them what to do. The bell work was up on the board so they could see that. He was very organized. While they were working on the bell work, which was content-related question to prior knowledge, which was good, and then he was taking roll, which took very little time... So when I talked with him, I asked him first of all... what did he think went well in that particular class? I always like to start with that, because I want to get the teacher's impression, what they think. He said, 'well, I think the gallery walk went well'. And I asked him if he had done it before and he said no he had not, which I thought they did really well considering that. So in talking about that gallery walk, my suggestion was that... I said some teachers use a timer. When the bell goes off, you rotate, or everybody stops where they are, whatever it might be.

And so that was something we talked about. ...but I recommended that -- or suggested that maybe as students...did a gallery walk, that they bullet the items so other students coming through can kind of see what's there already. Just to organize some writing.” (External Coach Collaboration, September 11, 2017, p. 2)

Michael was confident in his ability to teach content, plan lessons, and manage the classroom. Therefore, while Michael’s external coach was positive in her comments, her primary focus was to offer very specific suggestions of teaching strategies such as the strategies mentioned above, as well as suggestions on ways he could better manage the classroom. She highlighted Michael’s approach to classroom management:

...and we did talk about the routines and procedures. And I did like--if you can hear my voice, clap once. And I said, I noticed you had to go a little while, and he said, ‘yeah, I did for that class’. And I said, so maybe practice -- continue practicing with them. Just do some practice times. Say, I want us to get really down to one clap, and that's when everybody's quiet, because we have more time to do other things. So I said just do a practice with them every so often, and just say this is a practice time. You're in the middle of something, let's see how you do, let's see if you can get that clapping down to maybe one or two times or whatever. So that was a suggestion... (External Coach Collaboration, September 11, 2017, p. 5)

The external coach pointed out what many beginning teachers do not understand—you have to explicitly teach, rehearse and reinforce non-instructional routines. Michael could

implement the strategy, and eventually the students got quiet, but the external coach wanted to make sure that he was aware that if he practiced the strategy with the students, it would ultimately be a more efficient and effective non-instructional routine.

Another specific strategy the external coach offered to Michael was to utilize some of his wall space to create a visual that he could add to throughout the year. She suggested that he create a year-long graphic organizer that students could refer back to that would tie together the concepts they would study in science throughout the year. She explained to Michael that students too often study topics in isolation and even when you refer to prior learning regularly, they need visual assistance to see how topics in a given field are interrelated. She encouraged him to use it as a teaching tool, as well as a review tool throughout the year. After offering that suggestion in a meeting, the external coach asked if he had any other concerns. At this point Michael self-identified implementing summarizing strategies as an area of growth. The external coach agreed:

He has difficulty fitting summarizing in at the end of a period. And...all teachers do. It's not unusual. They do. Time gets away from you. And so I suggested a timer...you know that he could use maybe four minutes before the end of class, set it for that time to go off, and it might help him remember. (External Coach Collaboration, September 11, 2017, p. 5)

She also suggested that Michael do some summarizing throughout the lesson. She explained to Michael that she observed three distinct sections in his lesson and he may want to try and implement summarizing strategies throughout the lesson, when appropriate, and summarize after each section if the lesson structure allows. She

indicated that while Michael was doing well in the classroom, there were definitely areas in which she hoped to help him learn the craft. She did not bring up any other areas of focus related to this conversation because she said she felt like they'd had a full conversation at that point (External Coach Collaboration, September 11, 2017).

One role that Michael's external coach played was that of cognitive coach, asking Michael questions to guide his thinking and he subsequently responded with reflective answers. In one instance, Michael didn't feel the lesson went very well overall, so the external coach started by asking specifically what he felt like didn't go well, attempting to guide him through his own thinking about the lesson:

Michael: But I just felt like I was stumbling over things and—I mean, part of it may have been the fact that you all were in the room, but that makes no sense, because I've never felt nervous from that before either.

External Coach: And you have people in all the time.

Michael: Yeah. Exactly, so I don't think that's what it was. I don't know. It just felt more off than it should've been.

External Coach: Well, what felt off about it? That's what I want to talk about with you first about how did you feel that went really? You said it felt off, but what -- if you've got to pin it down, what would you say felt not --

Michael: In my head I just kind of got jumbled with what slide was

coming when, which was not good for my words, and I probably should've taken more time with the various slides and getting through that, because that is, I think, my slowest processing class.

External Coach: Oh, are they?

Michael: Yeah, oh, absolutely. If I have to -- and so like even going through those Kahoots!, like I could tell based on the scores like compared to my other classes, those were horrifically low, which is kind of scary. I mean, they do fine on their assignments. They had the highest average for the poster project we worked on last week, and they had like five of the top ten scores for our test a few weeks ago. But as a whole they kind of—

External Coach: Do you mean—when you say slower processing, it takes them longer to get it?

Michael: Longer to get it. Those students, most of them eventually get it, but it is a process. (Post-observation Conference, October 9, 2017, p. 1).

Once Michael articulated that part of the problem with the lesson was a timing issue related to the level of understanding of the students in his class, the external coach then guided him through a series of questions to help him identify ways he could adjust the lesson to better meet the needs of his students. As they talked about the lesson, Michael

made notes for himself on a legal pad. The external coach continued cognitively coaching Michael as they considered various other aspects of the lesson.

External Coach: So did you notice anything as you were watching that bell work that they were struggling with?

Michael: A lot of students were struggling with series versus parallel circuits. And some of them -- this might be the wrong way of phrasing what I'm about to say, but I think some of them conceptually get it, but are struggling with actually drawing them, and like making their understanding match their circuits. And maybe I'm wrong. But when I was asking them about it, they were able to describe to me what the difference was. They just couldn't draw it on paper. So I think we're going to do more circuit practice. But that -- most students were able to get what current was, and most students had what generator was. (Post-observation Conference, October 9, 2017, p. 2-3).

The external coach also asked Michael how he could incorporate some review in the lesson. Not only did he offer that he could chunk the lesson differently to allow for more review, he also provided the following related to the review needs of each period:

Michael: So on Wednesday is our electricity review day, and so each class is going to be a little different. Like I know for the class I just had, we're primarily going to be reviewing

insulators and conductors, because they didn't do too hot on that.

External Coach: That's good.

Michael: The second period, which you all saw, they did fine on heat transfer. They need help on electricity. So that will be my time to go back with them and review circuit structure setup with them and a couple other things we talked about today. (Post-observation Conference, October 9, 2017, p. 5).

As the external coach had asked at the end of the previous observation, she ended the post-observation conference by asking if Michael had anything he wanted to work on moving forward. Not only had he identified an area of focus, but he had also already formulated a plan of how he wanted to effectively utilize the Interactive Student Notebook (ISN) in the classroom so that students could use them as an instructional resource.

Michael: We're changing up the way that we are going to do the ISNs. I've never read the book how you do it, but I'm going to be giving them completed right-side pages with all their notes, so they can go through, highlight, underline, do whatever they want, but then they just have to fill out their left-side pages. So it kind of removes that whole right-side

thing. I forgot why I even started to tell you this. What were we talking about...Oh! To prepare for the test...

External Coach: What, you noticed that they were not keeping up with things in the ISN like you wanted them to?

Michael: Yes, so we had three pages due the day of our test, which, I think at this point was two or three weeks ago. And so -- it must've been two weeks ago. So we put it up to student vote as to whether or not they wanted to continue with it, because there were people who, they might not have done all three pages, maybe they just did one, and started to do half of another and then just stopped. So I knew they had an understanding of journaling and of the expectations. There were some people who were confused by it. Some people just...they had done a page from the previous marking, or from the previous notebook check, but they didn't do any of those three. And when I asked them, they were like, 'oh, I just forgot'. And so I asked them, like we can do regular homework more frequently or we can do this. I don't want to overwhelm you with homework. And when we put it up to a vote, I had like 75 kids, and it was about 68 to 7 decided to keep it.

External Coach: Okay, so you're going to—

Michael: They like it. They said they like it a lot. So I'm just—

External Coach: So what is your understanding about how it works? The
ISN? The right side is—

Michael: Teacher input.

External Coach: Teacher input.

Michael: And so what I was trying to do initially was give them kind
of like a format for them to organize their thoughts and
notes...But what I realized is that was difficult for some
students, because if they weren't able to take the notes
during the class, they would go on to the different tools we
were using online, but they wouldn't then copy it down.
And so it just kind of became a cycle of not having the
information. So now I'm just going to provide it to them
filled out.

External Coach: So will they tape it in, glue it in? What are your plans?

Michael: They'll glue it in.

External Coach: The management of it? Because that's the other thing, will
they have glue sticks? Will they have them on their own?
Is there a little bucket at each little group—how do you see
that working?

Michael: So we had two or three pages that have been glued in

already. So we've done this before and they know how to do it.

External Coach: Good...What's going to go on the left side of the page?

Michael: Whatever way the student decides to study. So hopefully pictures, graphics. I had a girl write a rap, which was hilarious. And people have made flashcards with pockets and decorated it however they want. And so the way that I was grading these is every page was worth five points. One point was just did you fill out the right side page? Which that won't be a thing anymore, because that will be filled out for them. It's going to be one point for using the entirety of the page, one point for creativity, and two points for putting down good, correct content. So hitting as many points as they can and then having it be correct. (Post-observation Conference, October 9, 2017, p. 7).

It was clear from their interactions, that the external coach was very comfortable with the coaching aspect of her role. Ultimately, Michael benefitted from her expertise and he appeared to value her input. This was evident when I asked him how he benefitted from her support.

Michael: I really like the discussions to follow, because it really makes me analyze my lessons, sometimes more than I think I would otherwise. Or if I'm confused on something and --

there's a good level of clarification and guidance as to what I need to do for the follow-up. And also what's good is what she just talked about, two weeks ago, I made a note to myself where we talked about needing to change the pacing for different classes. And even today that was still a thing, so it's a good way to remind myself -- or I guess keep myself accountable, because I'd say for the two or three days after that, I was pretty good about it, but then you slide back in. I'm just trying to stay afloat sometimes.

External Coach: Yes, indeed. And here's the other thing to remember. It's a process. Nobody expects it to be perfect now. Nobody. This is a growing thing. When you've done this for ten years, you'll still be figuring out, oh, really? I thought I knew how to get that right, but this class needs something different. So that's the beauty of it. It keeps us...keeps us thinking. (Post-Observation Conference, October 9, 2017, p. 19)

At the end of his first nine weeks, Michael reiterated his appreciation for the work the external coach did with him throughout the data collection period. He also recognized that she not only provided support, but a level of accountability as well:

Michael: With my external coach especially, I really like that because she comes in about once a week, which I'm pretty

sure is more than what she's supposed to be doing, and that's been nice because she's really on me about implementing the different things we talk about in our room in making sure that those things get done. For me it's a lot of -- it was slowing down and having more time for students to process and think and making sure that I was asking questions that weren't so surface level, like really trying to get deep into having students analyze different questions. And now we're getting more to the point of how am I setting up my classroom for the most effective learning. And, not going to lie, I could be doing more with that and I intend to, but being more intentional with the things that I put up on my walls and understanding different graphic reminders that I could have put up as opposed to just the random pictures I've got at School Spot... And then just making sure that I have something regular on my board every time. Making sure that the EQ is always visible and really relating it back to the EQ every time.

Researcher: So you think she provides like a level of accountability?

Michael: She does. Absolutely. And I don't know if that's the same with every external coach, because it does help with the regularity that she comes and inconsistency is not the right

word, but she doesn't tell me when she's coming. It's not that I expect her on Tuesdays and during my second period. She just kind of shows up, which is good. It's always kind of keeping me on my toes in making sure that I'm not slacking every day, (Exit Interview, December 1, 2017, p. 3).

The Program Director. The support the program director provided Michael and the other A-STEP teachers made an impact on his teaching experience during the first nine-weeks of school. The program director assumed several roles in practice that helped Michael become acclimated to his new teaching role (Table 4.11). During his first week of teaching, Michael wrote in his weekly reflection that he received a cheerful email from her as well as a very kind letter (Weekly Reflection, August 18, 2017; Weekly Reflection, August 25, 2017). Michael recalled that he once received a meme from the program director related to forgetting to take attendance. He not only found it funny, but he said that she sends emails like that frequently and he expressed that he appreciates how often she is in touch with them, checking on them, and providing little notes and emails to keep them going (Reflective Commentary, October 4, 2017). At the end of his first nine-weeks of teaching, Michael reflected that, "...she is definitely just a comforting presence to have around. She's definitely one of the faces where when I see her at the seminar it's kind of like a breath of fresh air. Someone I know I can talk to in a judgment-free kind of way," (Exit Interview, December 1, 2017, p. 4).

Table 4.11: Michael—Program Director

Michael--Program Director	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • A-STEP contact person • TST training • Observation • Consult with mentor, instructional coach, external coach, and administrator • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Support based on needs of A-STEP teacher • Classroom observation • Follow-up conversation • Provide encouraging e-mails, relevant articles, inspirational stories • Advocate • TST meeting - October

When I spoke with the program director about Michael, she indicated that if she didn't know otherwise, she wouldn't think he is a first-year teacher. She observed him in early October and saw a high comfort level with the kids, which she attributes to his prior experiences with students at Northeast Middle through the mentoring program he was involved with and directed while he was in college. Additionally, she noticed that when she dropped by early in the school year to see him, he displayed a distinct sense of pride and ownership that she did not see in many of the other A-STEP teachers. This was made evident when Michael told the program director that he wanted her to see *his* room. The program director stated,

...which I thought was interesting, because he didn't say I'd love you to see a lesson... He feels ownership. That's *his* room. And I think that says a lot, maybe I'm over-interpreting it. But to me that says a lot about his comfort level, him seeing himself as a teacher already, that it's his room, his kids. I don't hear all of them talk that way, because they're still focused on this lesson I have to teach.

(Program Director Collaboration, October 17, 2017, p. 2).

She also mentioned that he was extremely organized and of the A-STEP teachers she had observed so far, he was the only teacher who handed her a lesson plan when she walked in to observe (Program Director, October 19, 2017).

The program director felt that Michael's areas of growth were both related to pedagogy. She mentioned--effectively utilizing summarizing strategies consistently, an area which had also been self-identified by Michael in his first observation by the external coach. The program director also addressed incorporating lesson closure into his lessons with Michael, which they discussed in their follow-up conversation after the observation. She was concerned that he either did not understand the importance of providing a summarizing strategy at the end of a lesson or that he did not know of strategies that he could use. After she and Michael discussed summarizing strategies, she helped facilitate school-based support for Michael as he developed in this area (Program Director Collaboration, October 17, 2017). The administrator mentioned in a TST meeting that they would make that a focus of the school-wide newsletter for the following month because the administration had noticed that as an opportunity for growth school-wide (TST Meeting, October 18, 2017).

The second area she mentioned dealt with managing student behavior.

Program Director: His classroom management is good, but if he says there will be no talking, then there shouldn't be any talking. And he doesn't let them talk, but they needed to talk, and he's got -- in situations, he's got to recognize 'am I requiring something they're not even able to do?' So if they need to

talk about what they're doing on their Chromebooks, how can he best manage that? ...I started making tallies on it, how many times he said, 'I said no talking'. Well, he should've realized after the second time that it wasn't going to happen, they were going to talk.

Researcher: Because they were talking about the activity they were doing?

Program Director: Yeah, they weren't just -- yeah, they were saying, oh, look what I did. They were looking at each other's Chromebook because they're playing this game. It was competitive. Kids talk when they play games like that. And you're just beating your head up against the wall or fighting an upstream battle or whatever it is when you try and say no talking. So no talking has to be very deliberate, but you also have to say can they handle that? Is that appropriate? I know he wanted them to focus, but if that's going to be the case, have them put headphones on. They didn't have headphones in. Or he had to really have a consequence and he didn't. He just said it, I think four times. And then he finally just gave up. (Program Director Collaboration, October 17, 2017, p. 3).

The program director indicated that she needed to follow up with him in order to specifically focus on how he handled giving directions, expectations, and consequences.

The program director was interested in how Michael was functioning, not just in the classroom in front of students, but holistically. She saw a need for Michael to develop a tight-knit social group. The program director explained that in order to retain teachers, they need to have a balance of school success and success away from school:

I want him to be socially happy. Young people have lots of opportunities, because they have a lot more flexibility in where they go, what they do--they don't have family ties. I don't want to lose him. And he has not found yet, that's one thing that we discussed after his meeting, he has not found a group to hang out with. He's got individuals, but he said... 'Where do you meet them after college?' So I don't know what's going on there, but that would help Michael.

(Program Director Collaboration, October 17, 2017, p. 3)

For Michael, success away from school included developing a group of friends with which he could spend time outside of the school day. Michael shared with the program director that many of his friends had moved away after completing college and while he was still in the same area, he was starting over in a sense because of his transition from school to work. The program had arranged for a couple of the other A-STEP teachers who were more established and outgoing to reach out to Michael to plan some social activities because she realized that even if he is happy in the classroom, he may not remain in the program or in the district upon completion of the program if he isn't having his social needs met.

Michael's Learning Activities

Michael described a variety of learning activities that benefited his learning during the first nine-weeks of school (see Table 4.12). For instance, Northeast Middle provided many opportunities for professional development (PD). Some of these opportunities included: “Taming the Team”, a PD on how to best work as a team when assessing student needs, training on how to use Rubicon Atlas, a Discovery Education training for the online textbook and resource, a co-teaching session with the Discovery Education representative, “Capturing Kids Hearts”, and a session on how to implement the Study Island online resource for students. However, while Michael mentioned each of these PD activities in his weekly reflections and perceived that they were important in terms of being able to implement the resources his school was providing, these PD sessions were not what seemed to benefit him most.

4.12: Michael's Learning Activities

Michael's Learning Activities
<ul style="list-style-type: none">• School-based professional development• Interactions with the cohort• Summer Institute• Monthly seminars• TST support• Informal conversations with TST members• Post-observation coaching

Michael explained that his interactions with the cohort provided a great benefit. Whether these were informal interactions with the members of the cohort that he kept in touch with outside of the typical A-STEP program requirements, or the more formal seminars, he valued being able to touch base with them regularly. When the first seminar had to be rescheduled because of inclement weather, Michael was disappointed because

he had been looking forward to reconnecting and hearing about their experiences during the first few weeks of school (Week 4 Reflection, September 15, 2017). He explained that part of what he looked forward to when the cohort was together was being able to share and to hear about the experiences of other teachers who were currently in a situation similar to his own. In the exit interview he commented:

Michael: ...yesterday it was great. It was nice seeing the other A-STEP teachers, as always. I've mentioned that before. It's good to be around other first-year teachers. I'm not getting that so much, and so it's hard to get the -- emotional may not be the right word, but just the general support of another first-year teacher.

Researcher: Okay...you think being around your cohort more or being around any first year teacher more...?

Michael: It probably -- if you gave me the option of any first-year teacher versus the cohort, I would absolutely pick the cohort, but I think another first-year teacher would just be nice. The only other first-year teachers in the building are another A-STEP teacher, who I don't get to see much because we're on different planning periods and she's on the opposite end of the building, and then one other girl from Pennsylvania. And so like when we talk, it's good, but it is also nice just to hear from other people who come from a similar background and are teaching similar subjects (Exit Interview, December 1, 2017, p. 1).

He further explained that being able to commiserate with others in the same or a similar situation was more comforting than veteran teachers at his own school recounting what their first year experience was like and assuring him that it would get easier. He also stated:

“I think it would be cool to have time to sit and kind of -- I don't really get good planning time with the other teachers here, but if I had like planning time with A-STEP teachers again periodically, I think that could be fun to collaborate on different activities and something like that,” (Exit Interview, December 1, 2017, p. 5

Not only did the seminar meet Michael's need to reconnect with the other first-year teachers and cohort members, the topic of the first seminar was also closely aligned with a need that Michael had articulated many times in his weekly reflections. From his first weekly reflection he indicated that he wished the A-STEP Summer Institute had addressed how to understand and accommodate students' Individualized Education Plans, 504 plans and how to address students whose primary language is not English (Week 1 Reflection, August 25, 2017). The presenter of the first seminar was a former Special Education Coordinator for the district and her presentation addressed all of these topics. In my conversation with Michael about the A-STEP seminar, I asked if he had any “ah-ha” moments during the presentation:

Researcher: Any “ah-ha” moments today?

Michael: Yeah, I -- so anything the presenter said... “ah-ha!”

Researcher: Okay.

Michael: So we -- I'm the only first-year teacher in the sixth grade. There's a few new teachers to the school, I think I mentioned. And so when we've been in these IEP meetings, I've been trying to ask questions and get them answered and going to other people for help, but they haven't really laid it out the way the presenter did, and I think I'm now re-considering what the role of the Special Education Coordinator is. And so I've already talked to one of them today about going and meeting with them sometime next week to understand the IEP she's given me.

Researcher: Already?

Michael: Yeah.

Researcher: Since you left--?

Michael: I ran into her as soon as I walked in the building. I was like, "You!" So I'm going to hunt the other one down in a little bit. But hopefully...Because I have a lot of students who require oral administration, and I wasn't sure how I was supposed to do that while the other kids are quiet. It's not that I have limited space in my room or limited things to do. And then I have a few students who currently their IEPs are being altered, and now I know I can be more in the conversation with those people about that, which I didn't think I had any say in doing. I thought it was like here's the paper, you follow it. But I'm glad to know that I can have some --

if not say, like input into what happens...And now I know that the time that they go to related arts can be a time that is helpful for me working with those students in that class. I really didn't know what they were doing in there. I should've asked. That was my own fault.

Researcher: You didn't know to ask.

Michael: Yeah. (Seminar, September 26, 2017, p. 2-3)

Part of the learning that occurred for Michael as a result of the seminar was not only how IEPs and 504s work, but how the Special Education Coordinator at each school should be utilized as a resource for the teachers in being better able to implement the accommodations and modifications of these plans. Michael knew that he was responsible for ensuring his students' needs were met and responsible for implementing what was written in the plan. Knowing of the responsibility, but not knowing how to execute these plans was a source of stress for Michael until he better understood his role and the role of the Special Education Coordinator at his school.

Michael did not find the learning labs to be one of the more beneficial learning activities in which he participated. He explained that one reason for this was because in the first two classes they observed, the teachers were primary doing review so they were unable to see new content being delivered which he thought would have been more helpful. He also noted that the student population at the school where they were observing was so different from the student population at Northeast Middle that he struggled to see how much of what they were doing would transfer over, "...not that I

don't think my kids are as smart or as capable, but they have such different vocabularies and such different ways that they act in the classroom, that I feel like made the observations tough to apply," (Learning Lab, September 26, 2017, p. 1). He also said, "...they were bright kids and they did some interactive things, but they weren't loud, they weren't aggressive, they weren't willing to talk back to a teacher. I think they did authority a little bit differently than my kids," (Learning Lab, September 26, 2017, p. 3). Because Michael saw such a contrast in the students he observed during the learning lab as compared to his own students, he had difficulty determining how to apply what he saw to his own classroom.

During the learning labs, the A-STEP teachers were given an observation guide before the observations to focus on rigor and student engagement seen in the instruction. Michael expressed that he didn't think the learning labs accomplished either of those goals because of the nature of the activities going on in the classrooms he observed—two were spent in review, one class was working solely on computers and the other class had students working independently. He also indicated there was not a lot of time allocated for debriefing.

Michael's Last Lesson

At the end of the first nine-weeks of school, I observed Michael teach a review lesson on energy. As the students came into the classroom, Michael stood at the door greeting each one individually. Students came in and chose their seat. The desks were all arranged in a "U" shape, which was a different arrangement than he had at the start of school. Michael handed me a copy of his lesson plan and I sat in the back corner waiting

for the lesson to start. Students came in quietly and immediately began working on the bell work that was posted on the Promethean Board. As students finished, they raised their hands at Michael's request and he came around to check work. After he went around to check student progress on the bell work, he guided the students through a discussion about the questions posted on the board.

Michael then passed back a project from the prior week. He went over how these projects were assessed and referred to their conversation about scoring from the week before. Students graded themselves on part of the rubric, writing down scores on sticky notes. The students chose their own groups, and Michael emphasized importance of choosing group members with whom they could be successful. The projects were graded on creativity, neatness, and content. Once they looked over their rubric, he dismissed students in small groups to file their sheets in their numbered file folder in the file cabinet by the door. Then he instructed students to have a clear desk. He started a discussion on magnets and had definitions and examples on the Promethean Board. He used a copper wire to explain that a magnetic field gets stronger as it is wrapped around in coils. Once the lecture was over, he asked students to put their heads down on their desks and he pulled up a Kahoot!, which is a web-based tool used to administer whole-class quizzes and surveys.

As Michael moved through the review questions on Kahoot! he stopped at certain points to identify and address student misconceptions. He also addressed student misbehavior with ease. At one point, he called on a student to answer a question who looked confused and said, "But I didn't have my hand raised!" to which Michael replied,

“I know, I called on you because you were talking!” The student provided the correct answer without further commentary and they moved on. He also managed student behavior by utilizing the “5,4,3,2,1” counting method to get students focused. He gave out strikes for students who were talking too much. At the end of the lesson, the class got to vote on an activity that they won for earning 50 points as a class for good behavior.

Michael’s countenance both during and after the observation was upbeat and it appeared that he was genuinely enjoying teaching. He was confident, made jokes in class, interacted with students, addressed student behavior appropriately and worked to motivate students to do their best both academically and behaviorally. It was clear that Michael’s passion for science fueled the work he did with his students:

I think it's fascinatingly interesting and applicable to a lot of different things, but also it can be somewhat difficult because it comes with its own set of vocabulary, like most disciplines. But it's fun to teach that vocabulary and something that people don't go in as confidently as they might for other classes, and to kind of watch them have that a-ha moment and then start to be able to apply that knowledge to their everyday life, because science is all around us. (Initial Interview, August 18, 2017, p. 2).

Part of the success Michael experienced in the classroom with his students stemmed from his love of science and genuine interest in the well-being of the students in his classroom. While Michael was eager to please those around him from early on, he was still able to approach his learning about teaching with flexibility, and open mind, and an understanding that rarely do things go perfectly in any classroom. His advice to himself,

“Calm down... Trial by fire doesn’t always burn you” illustrated his understanding of this. He explained:

I think there was a lot of anxiety going into the school year, and in a way the anxiety was nice, because it kept me motivated to get something done every day. But at the same time, I still don't know what's coming every morning that I get here. I mean I have a plan, but there's just going to be things you can't control, and if you just calm down and allow yourself a breath before you tackle something that you've got to be flexible with, it's going to be fine. (Exit Interview, December 1, 2017, p. 6)

Summary of Michael

Michael’s development of general pedagogical knowledge occurred as a result of frequent conversations and coaching sessions with support team members. His TST members were specific with their feedback and provided support with summarizing strategies, non-instructional routines, questioning techniques, and transitions. While most of the TST members provided encouragement to Michael, what influenced him most were the conversations that took place within this community of practice about the particulars of his own teaching and classroom. Formal learning activities like the monthly seminars provided relevant and timely content to address classroom concerns including providing accommodations for students with IEPs and 504s. The most impactful informal learning activities that occurred were interactions Michael had with his cohort. He found value in commiserating with other teachers who were also navigating their first year in the A-STEP program. Michael’s TST met a variety needs,

the bulk of which were centered around the development of general pedagogical knowledge.

Introduction to David and First Lesson

I don't care what you think you know, you don't know shit. You're walking into a world that is completely different than anything you can imagine, and you have no idea. Buckle up.

--David, Exit Interview.

David, a 33-year-old male, entered the A-STEP program with a BS in Industrial Engineering and a minor in Math. He taught integrated geometry at Campbell High School. One of the first things that I noticed about David was his effervescent personality and overall positive approach to any task. Throughout the Summer Institute, he lived in a perpetual state of excitement and anticipation about beginning his teaching career. Even when he dislocated his shoulder during the Summer Institute, he remained upbeat and engaged in the task of preparing to teach. I met him for our initial interview at his school at 8:00 AM, at his request. When he walked in the office, he was chipper, with a bounce in his step, coffee in his hand, a smile on his face, and a backpack on his back. He seemed eager to begin the interview. We found a quiet spot in the school library to discuss the path that had led him to pursue a career in teaching.

During the previous year, David had lost his job as an engineer. Looking for ways to generate income, he maintained baseball fields until, at his wife's suggestion, he began substitute teaching. David recalled the first time he helped a student in math he realized that he enjoyed being able to teach someone something new. He continued to substitute and maintained a steady schedule. Eventually, he said that he and his wife

wrote a pro/con list pertaining to David pursuing a career in teaching. Based on his love for teaching math, the desire to pass that passion onto students, and the pro/con list he and his wife made, he decided to apply for the A-STEP program.

David placed an importance on building relationships with students, which also seemed to be a focus school-wide. For instance, he stated, "...this school really has a family atmosphere that they try to build. And there's a poster, if you go out in the hall, it says, 'In this house' — we don't call it a school, we call it a house — 'In this house, we do hugs, we do love, we do all these different things'. And that really is the mentality of every teacher here," (Initial Interview, August 17, 2017, p. 8). David explained that he also coaches football at Campbell and because the football team had already reported for practice, he had an opportunity to begin building relationships with some of the football players. He took pride in his tough love approach in one situation he described:

I'll give you an example. I crawled up one kid's tail the other day just chewing him up one side and down the other because of something that he did...And he didn't like it and kind of walked off the field. And it was just kind of like, okay, see you later. But when we got back to the coaches office, he was standing there waiting on us and apologized to every one of us. And instead of letting him apologize, I just gave him a hug and said, look, I came down on you because I love you and I want you to be successful. And I want you to know that. So that's the kind of environment we try to foster with the kids, even on the football field, is that, hey, we do care about you. We care about what's going on at home. If you need something, call us... (Initial Interview, August 17, 2017, p. 8-9).

While David had not had prior experience with the student population at Campbell until he accepted the position, he did begin establishing relationships and working with students prior to the start of the school year. This helped him understand not only their needs, but the approach the school decided to take as a whole in terms of meeting the students' emotional and relational needs as a foundation for learning.

Campbell is a school that delivers instruction using the project-based learning approach, offering a few integrated classes in which two teachers co-teach certain integrated courses. David taught one such integrated course. David appeared very comfortable with the project-based learning (PBL) approach and attended a week-long training on how to teach using PBL before entering the A-STEP program. He also seemed comfortable with what his role would be with the co-teacher in the classroom. David described:

I'm going to be the main facilitator in the classroom. We co-teach. The business teacher there, we have already talked about our roles in the classroom, and the math standards are what drive it, so that kind of puts me as the main facilitator; however, in a co-taught classroom, you shouldn't know who's teaching what. And that's the goal, but it's definitely -- that's the driving force. (Initial Interview, August 17, 2017, p. 2).

Even though he was comfortable with PBL and co-teaching, he also realized that PBL presented a unique learning challenge. David explained the learning curve in this way:

Okay, so right now, I think the obvious answers are classroom management skills, finding myself as a teacher, being myself in the classroom, letting the kids see me

as a human being and as a person and finding a way to relate to them. Those are the obvious answers, but the unique answers are what we do at Campbell, which is project-based learning. So I also have that learning curve to pick up as well. So it's what do we need to do, step by step, to accomplish our goals as a project-based learning school, which I'm getting help from my academic team here, as well as my mentor and the IC. (Initial Interview, August 17, 2017, p. 5).

One of David's early lessons focused on establishing a mission statement for the upcoming integrated PBL unit. When I entered the room, the co-teacher was giving instructions and David was trying to get the Promethean Board working. As soon as he saw me, he came over and made sure that I knew this was his most challenging class behaviorally. I saw the external coach seated at the back of the room and walked back to join her. The classroom looked like a lab. There were tables---5 on each side of the room—and students were seated in groups of 4 or 5. I later learned they were in groups based on an activity they did the week prior that dealt with personality. Each group sent up a representative to write a response on chart paper that contained the prompt “We are...”. Responses included, “We are...aniamania students, Trojans, image editing designers of aniamania” etc. The co-teacher integrated classroom management and character development throughout his instructions. He reminded students to offer constructive feedback and not to be an antagonist. David took over facilitating the student responses at what appeared to be a pre-determined point in the lesson. The co-teacher interjected to define some of the aniamania terms that came up in the discussion as David led the group through the activity. They continued to work on the goal statement

“We are...who...so that” throughout the class, an activity that David later identified as standard to the PBL approach to instruction.

As I walked out of David’s class, I talked with the external coach to see if they would be engaging in any type of post-observation reflection. She indicated that she was going to arrange to do another observation when David planned to teach Math content, instead of having a conference about what she observed as they were setting up a project. We would both soon realize that in a true PBL approach, the type of direct instruction she was planning to see is minimal. The external coach continued to observe lessons in which David was engaged in direct instruction of the Math content, but the role David assumed more often than not, was that of a facilitator.

David’s Teacher Support Team

The Instructional Coach. Because of the focus on project-based learning at Campbell, David’s mentor, IC, and administrator offered the majority of the instructional support David received. The IC, in particular, engaged in what Killion (2009) describes as heavy coaching in order to facilitate his learning about PBL (Table 4.13). Their interactions started informally, however. In fact, during a follow-up interview with the IC after David mentioned her in his first weekly reflection the IC had this to say about her support for David:

David actually comes to me a lot just informally, when he gets here in the morning or after school, and I just kind of say ‘hey, how's it going? Do you need anything?’ And he's very open and seeks feedback, and I think that's really

helpful and a good quality for any new teacher is that willingness to receive feedback, but also to ask for it,” (IC Interview, August 30, 2017, p. 1).

Table 4.13: David’s Instructional Coach

David’s Instructional Coach	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Model lessons • Observe, coach, feedback • Instructional resource and strategy support • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Teacher-initiated contacts • Classroom observations • Moral support and encouragement • Facilitated self-assessments • Coaching sessions about PBL • Video-taped lessons and coaching sessions • TST meeting - October

The IC noted that David asked her to come by during the first week of school to observe and provide specific feedback. While she had not planned to stay and do a formal observation, he seemed to want the feedback so she stayed and observed the class. As she observed, she said she noticed:

...When he was trying to lead or get the students' attention his voice just wasn't quite as loud as what I know it can be. Since he's a coach, I know that he can get loud. And it's not to say you need to yell at the kids, but I could just tell that he lacks that confidence, because he's in a new occupation. And so I told him that that will come. And I think that he has really taken that to heart because he's had follow-up conversations with me about how he's working to find the right balance between being too quiet and not being so loud as what you would be if you were coaching someone. (IC Interview, August 30, 2017, 1-2)

The IC also noticed that David was not only one to seek out feedback on how he could improve his practice, but he was also eager to implement the feedback he received. The IC indicated that she saw her role was to provide moral support for David as well as more formal instructional support:

And so giving him that feedback in a positive, inviting way so that he can take that and make changes based on it, if that's giving a coaching cycle, or recording a lesson and watching it together, and really just being his cheerleader, but also being -- I don't want to say hard on him, but providing that constructive criticism when necessary. (IC Interview, August 30, 2017, p. 2-3).

She also predicted David's biggest area for growth:

I think probably understanding the structure of project based-learning, because that's what we're doing, and it's very different than what he has experienced even in being in the classroom himself. And I'm interested to see, I guess not a need of his, but I'm interested to see how his relationship with his co-teacher develops, because I could see that knowing his co-teacher, I could see that potentially -- there could be clashes. And so making sure that he feels empowered to speak up if he disagrees with something, if that makes sense. (IC Interview, August 30, 2017, p. 2)

David did, indeed, seek out help with how to handle some concerns with his co-teacher. The IC worked with them in an attempt to strengthen their co-teaching partnership by engaging in self-assessments, coaching sessions, and the IC also video-taped a lesson they taught and they met later to discuss what they saw and next steps.

The IC also engaged in heavy coaching about PBL. I had the opportunity to observe one such coaching session. One of the first topics they tackled was how the math content he had identified for their current PBL unit tied into the project. The conversation began after David mentioned the math content application had been a concern in a prior meeting:

David: ...was a reflection on how can we take similar triangles and transformations and use them to make a mini golf course. So trying to tie the triangles back to the project...

IC: Okay, and then the activity. Can you explain to me, as the Math expert, because I am not a Geometry expert, how will they be using this information for their golf course?

David: Okay, so if they -- when they make their golf course, they're going to have angles. They're going to have to scale things up and down. Okay? So they may not know every measurement of a triangle that they use as an obstacle. So say they want to make the ball do a 90-degree turn, they may not have the measurements of every angle in that triangle. They just know that that line has to be 45 degrees.

IC: So is it the path that the ball is taking how they're making their triangles?

David: Yes.

IC: Okay. That helps me.

David: And obstacles that they're making could be triangles...they're going to be scaling things up and down, and they would be using triangles to make the ball go where they wanted it to go. (IC Collaboration, October 18, 2017, p. 5-6)

At this point in the conversation, David's understanding of the math application in the project seemed to be that the students will use triangles to create obstacles on their mini-golf course hole design. He also indicated that students appeared to understand that they will be expected to use scaling to manipulate the size of the triangles they create in the obstacles, but neither the concept of scaling nor how triangles are used to create obstacles seemed to be solidified in his understanding. The IC further probed David's math content knowledge as well as his knowledge of the PBL process.

IC: Have you thought about what you're going to do with the students who are not making that connection?

David: For me, I think we need to have a workshop.

IC: I think that would be good.

David: Just with those students and that's why I wanted to do this reflection...

IC: So do you feel like based on the reflection that they're not getting the content or that they're not understanding the purpose in how the two are related? Because those are two different things. I might

be able to explain that we're scaling, but not understand how to do the math. Do you see what I'm saying?

David: Yeah, they're not understanding the purpose of why we're doing triangles and angles.

IC: Okay, so how would a workshop on the Math of scaling help them see that purpose, or would it help them see that purpose?

David: It would have to be a workshop in scaling, but more of the design part of it. Basically I'm going to have to use my engineering background to show them, okay, if you hit the ball here, it's going to go here, off this obstacle.

IC: Okay.

David: And you want to scale this obstacle up and down. What ratio do you use? How do you know what ratio to use? You use these theorems.

IC: Okay. So you might have some examples like say a worksheet with a golf course, and tell me if I'm wrong, I'm just trying to picture it. So I have this paper and I have the golf course or whatever for that hole and in the workshop you're leading it and the students are going to draw or you're already going to have the path drawn and you're going to kind of go over showing them how triangles are...

David: How triangles are used in making the ball go where you want it to

go. And the ones I was going to use in our final drawing this weekend, like over the long weekend, or sometime early next week. Well, we took pictures and measurements of the golf course at McPherson Park.

IC: Okay, that's cool. (IC Collaboration, October 18, 2017, p. 6-7)

It was apparent that talking through the application of mathematics content with the IC served to solidify either his understanding or simply how to clearly articulate the math application.

IC: Okay, so what is the benchmark that they're currently working on?

David: The benchmark is supposed to be creating a rough draft of a logo design. We haven't started that benchmark yet. We're at least a week to a week and a half behind.

IC: So what benchmark are they working on now?

David: We're just working on scaffolding now.

IC: Okay. I don't know if you've seen this before. Yeah? (The IC drew a graphic organizer [Figure 4.1] similar to the one she recreated below. As their conversation continued, she filled in the information related to the benchmarks and final product to provide David a visual.)

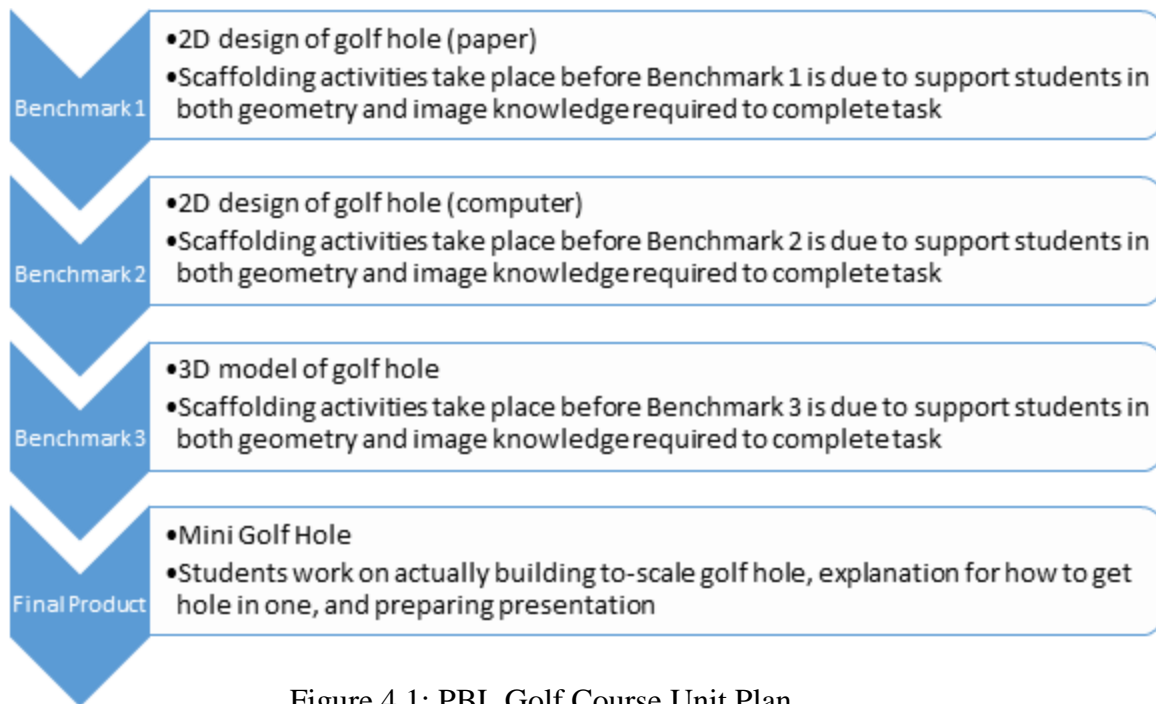


Figure 4.1: PBL Golf Course Unit Plan

David: No, but I saw it in St. Louis.

IC: Okay, so this helps me visualize. ... how many benchmarks do you all have?

David: Two.

IC: And then the final product?

David: And then the final product.

IC: Okay, what's benchmark one?

David: Rough draft of a hole. Rough draft of a golf course hole.

IC: Okay, and what's benchmark two?

David: More clean draft of the hole. Like a revision. Or a revision of benchmark one.

IC: Okay, so this is the bones of your project, right? You've got roll out, rough draft, first rough draft is benchmark one. Second revision is benchmark two, and then they get another revision for the final product, right? Okay, so your scaffolding should be happening here, here, and here. So anything -- so you're right here in the project, right?

David: Yes.

IC: Between roll-out and benchmark one. So everything that you're doing should be getting the kids prepared for benchmark one.

David: Agreed.

IC: Have they already been given the information about benchmark one and the expectations?

David: No. That's what I was planning on doing on Monday.

IC: So when you start a project, the students should know, what is benchmark one?

David: Okay.

IC: What is it that we're going to have to do? And you can create --

David: Well, they know what the final product is going to be, they just don't know what benchmark one and two are.

IC: Right, so for any project, regardless of subject, they need to know what benchmark they're working on. As soon as they're done rolling out the project, they need to know what benchmark they're

working on. As soon as they're done with this one, they need to know what the next benchmark is, and so that they're working towards that. So that's something we need to take back to the team, and it's going to be about how you lay out the -- actually you might -- you want them to start scaling in benchmark one, don't you? Or do you want them to not do that until benchmark two?

David: I want them to be ready to scale in benchmark one and understand what scaling is, and then come back. Because I'm not covering this in great detail. I'm giving them kind of the bare bones, okay, this is what this is. (IC Collaboration, October 18, 2017, p. 7-8)

In this section of the conversation, the IC was doing some heavy coaching on the PBL process. It was clear that David did not have a clear understanding of how the project would progress. He knew they would be making mini-golf course holes using angles and triangles to create obstacles and determine the path of the ball. But he did not articulate what either benchmark would be or how each benchmark would segue into the next part of the project. The IC continued to probe and scaffold David's understanding throughout the rest of their conversation.

IC: Well, on your scale -- are you having them make a model?

David: Yes.

IC: And then are they making a larger one?

David: Yes.

IC: Like actually -- are they actually making this on the golf course?

David: We may actually be building full-sized holes.

IC: Building it. So this... is the drawing on the software, right? This is the model... They're scaling from their drawing to their model, and then their model to the actual thing... Okay, that makes sense. You probably already have this in your head.

David: Yes.

IC: I just had to get out -- Because I think this will be important...

David: ...I've had it in my head, I'm kind of like, okay, I've got it, I understand it, but like my question is now that we're looking at that bones part of it, like the fishbone diagram, we're, time-wise, we're midway through where we should be between benchmark one and two and we haven't done benchmark one yet.

IC: Okay....so you all need to put a pause on what you're doing, restructure, refocus, the two of you or maybe the four of you, and really think about this and be intentional in your planning so that everything that we are doing, because really we're right here, between the roll-out and benchmark one, everything that we're doing, the Math, the business apps, the support for figuring out how to even draw a hole or the workshops, everything should be getting them to this point.

David: What I would like to do in the future, and I guess this is just

coming more from learning PBL, is take -- give them the specs for the benchmark and I know you've already said this -- give them the specs for the benchmark and teach based on what they need for the benchmark as they come up and say how do we do this?

IC: Yes. And you're right, I did already say that, but that is good for you to say it again, because that -- you saying it out loud helps you make sure that you understand it. It's always good to talk it out. I would also say that anytime you give out new information, like say for a benchmark, you re-address the knows, need to knows, and next steps.

David: Yeah. (IC Collaboration, October 18, 2017, p. 21-24)

David explained that he had the project plan in his head, but he struggled to articulate it. The conversation with his instructional coach provided relief, as the well-defined project plan eased some of his stress about the project. While veteran teachers at Campbell may not typically use this level of detail in their planning, it was helpful support for David as a new teacher.

The Mentor. David and his mentor had similar interests in terms of coaching sports, and, like David, his mentor had also completed certification through an alternative pathway. David's mentor had four years of teaching experience. He served as a mentor to David as well as one other first-year teacher in the building. He also served on evaluation teams for the ADEPT process in the district.

David's mentor indicated that the majority of the work he did with David in providing support came in the form of informal interactions (Table 4.14). Not only did they coach football together, which allowed for conversations after school, but they also shared a room for part of the day. The mentor used the classroom during the first two blocks of the day and David and his co-teacher used the classroom the last two blocks of the day. The mentor said that he would often check on him mid-day when David came in the room to teach, and he would sometimes stay and watch him teach. This enabled them to have access to each other so that these conversations could occur at various points in the day. Additionally, many of their conversations took place before or after football practice. This type of relationship allowed for very informal, but very frank conversations about what was going on in David's classroom. (Mentor Interview, August 26, 2017).

Table 4.14: David's Mentor

David's Mentor	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Instructional mentor • School procedures, culture, expectations, responsibilities • Model lessons • Weekly observations/contacts • Two formal classroom observations • Post-observation conferences • Assessment forms • Instructional unit, daily planning, assessment assistance • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Informal conversations before, during, and after school • Informal conversations before, during, and after football practice • Confidant • Assistance with co-teacher conflict • Encourager • Provided lesson planning assistance • Classroom observations • Post-observation conferences • TST meeting - October

David's mentor connected strongly to his experience and his overall success. He told me that they had developed a working relationship early in the summer because David participated in the week-long PBL training in St. Louis and because football practice began during the summer before teachers reported to school. Over time, I began to see that while the mentor did offer some instructional support, he primarily served as a confidant for David as well as an advocate when it came to dealing with David's co-teacher issues.

For example, when the mentor discussed what he perceived as David's current struggles and greatest needs, he did not focus on classroom management or learning the PBL process (which other members of the TST identified). While these topics did come up in our conversation, the mentor definitely saw the co-teacher dynamic as David's greatest struggle.

Researcher: What would you say the struggle is?

Mentor: It's the co-teacher. He's going above and beyond.

Researcher: Okay.

Mentor: What he's supposed to do with the co-teaching. I don't think the co-teacher is meeting him where he needs to be met.

Researcher: Okay. So like just in terms of expertise or effort?

Mentor: Effort. (Mentor Interview, October 2, 2017, p. 1)

The mentor thought that the co-teacher was not pulling his weight in the classroom, which left David at a disadvantage when he was teaching. The mentor felt that the co-

teacher was an impediment to David's growth and learning: "...his co-teacher is his weakness right now. I think he's hurting him more than he's helping him," (Mentor Interview, October 2, 2017, p. 4). He elaborated that when David stepped in to cover another class at the school, David confided in his mentor that he almost felt more comfortable teaching by himself than with the co-teacher. Clearly a bothersome topic for the mentor, he later offered a specific example of how the co-teacher was a hindrance more than a help in the classroom:

I just don't think his co-teacher's really had his back in terms of helping him. If [David's] obviously helping a group, he shouldn't have to turn around and talk to the group behind him. ...especially when [his co-teacher] was sitting up front. So, and those are some observations I wrote down in my notes... (Mentor Interview, October 2, 2017, p. 6-7).

The mentor indicated that he advised David to revisit the co-teaching contract with his co-teacher and perhaps pull in an administrator to mediate. However, he felt somewhat conflicted as to what his role should be in stepping in with the co-teacher:

Because I've told him, I said, what you need to do right now is, you all had a teaching contract between you two that you all had expectations. You all need to revisit that. And I think they said that they revisited that, but that was like a week ago, and they said that they agreed to fix those things. Well, in teaching, that's got to be now, not a week from now. And I don't think some of their expectations were truly said on the paper. ...to me, it just all relates back to he's not getting the support he needs from his co-teacher, and I don't know how to approach that. It's

just my big struggle. And I don't think I need to go talk to him and like, hey -- because I don't want to -- I don't think that's my bounds to step in. (Mentor Interview, October 2, 2017, p. 7)

David's mentor assumed a protective stance in terms of the professional relationship David and his co-teacher had developed. In the TST meeting he made the following comment to the rest of the TST describing the issue with David and his co-teacher:

Mentor: ...do I need to step in and say something, or do you feel like you can handle this? To just kind of put that ball back into his court, and he said he actually preferred for him to want to handle it versus going into -- and he did. And now, when he's feeling that animosity again, he comes to me and says, what can I do?...They've worked out for the most part, but it's still -- I still see a struggle. (TST Meeting, October 10, 2017, p. 8)

The mentor explained that they engaged in conversations about instructional practices and the PBL process when David presented a need or asked a question.

Mentor: I mean we've talked for hours in terms of working through a project idea and how to guide him from beginning to end, and give him project ideas and let him create the idea and like, do you think we need to fix this? And that's what we - - we basically just sit down and talk through it...

Researcher: How do you think he benefits from your conversations?

Mentor: Oh, I think he -- I feel like if he did not have me specifically, I think he'd be still lost, because he knows he can go to me and talk and vent... (Mentor Interview, October 2, 2017, p. 3)

After one of our interviews, the mentor asked me how he could be a better mentor to David. Through this comment as well as the mentor's comments above, it was clear that he wanted David to be successful and he wanted to be a part of that success.

The Administrator. David's administrator assumed a variety of roles in practice (Table 4.15). While the administrator seemed to be keenly aware of David's growth and progress during the TST meeting, David only mentioned him once in the weekly reflections as having formally observed him during the data collection period. This was the only team in which the principal of the school, not an assistant principal, served on the TST.

The administrator valued and reinforced David's willingness to grow and learn: ... he almost aggressively seeks feedback and wants to know how he can improve. So he really has a growth mindset about the profession and about what he does in the classroom. He does not shy away from hearing hard things. He takes it all as a learning experience, which I think is great," (TST Meeting, October 10, 2017, p. 2).

Table 4.15: David's Administrator

David's Administrator	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Assign school-based mentor • Provide supportive resources • One formal classroom observation • Assessment forms • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Support consistent with other co-teaching pairs • PBL resources • Encourager • Observations • Instructional feedback • Facilitated planning assistance • Valued David's efforts and growth mindset

The administrator was also reasonable about his expectations of David given that he is not only a first-year teacher in an alternative route, but he is also a novice on a team of veteran teachers.

The other hard part for him, just to make us all aware, that we're all on the same page, is he is in the one cohort that has three veteran teachers. Ironically most of our cohorts are all new teachers. He's in the one that actually has three veteran teachers who have been doing this a while. So they already have their own perceptions of how it should work and what it should look like and all of that.

And when you have those strong personalities, sometimes it's hard to be that lone voice. (TST Meeting, October 10, 2017, p. 11)

While some administrators may have seen the context of a novice being outnumbered by veteran teacher 3:1 as an opportunity for growth and support—a situation in which the novice could rely on the experience of the veteran teachers on his team—David's administrator expressed concern that David's particular team could present a challenge.

IC: Are you all looking at the calendar and making adjustments at your weekly meetings?

David: No.

IC: Are you having your weekly meetings?

David: Yes.

IC: Okay. What do you all normally talk about at your meetings?

David: How things are going, adjustments we need to make. So I mean we are discussing it, but not in great detail.

IC: Okay. How structured?

David: It's not very structured at all.

IC: Is it kind of like just chit-chatting?

David: Yeah. (IC Collaboration, November 1, 2017, p. 4)

While David met with his team to plan on a weekly basis, because the team consisted of David and three veteran teachers who were comfortable with project-based units and have taught them many times, they did not need to go through the plans each week in detail, which David desperately needed. Where the veteran teachers could meet to discuss adjustments needed, David needed a much more structured and detailed planning session as a first-year teacher who was also new to PBL.

The administrator also realized that the element of co-teaching presented another learning need for David that does not typically come easily for teachers in general. However, he had a pulse on what was going on inside his integrated teams at Campbell. Upon realizing there were issues that needed to be addressed with co-teaching across

most of his integrated teams, he adjusted the way the entire administrative team approached their observation rotation.

I will say this, that's part of—for people who have never taught in this environment, this is very hard to teach in. When you're used to education being a private practice and you shut your door and just do what you do as opposed to being married to someone and have a co-teacher all year, it's different. And that's part of why we've broken up the groups into some intense coaching for those reasons right there. (TST Meeting, October 10, 2017, p. 7).

The administrator recognized that all of his integrated teams could benefit from coaching, so each administrator was assigned a team with which to work. They planned to conduct observations and meet following each observation to do some instructional coaching to provide assistance with how to successfully implement the co-teaching model. The administrator addressed David directly in the meeting regarding working with his co-teacher:

Administrator: The other thing that you can start doing with your co-teacher is you'll go through what's called the co-teaching assessment scale.

David: Okay.

Administrator: And you'll actually rank each other of how you're performing in the classroom, and then you'll discuss that. So this is, like it says, I can easily read the non-verbal cues of my co-teacher partner, and you'd say rarely, sometimes,

or usually. It's those sorts of questions. So you two will do that on each other and then you'll discuss that. (TST Meeting, October 10, 2017, p. 26)

David recognized where some of his frustration stemmed with his co-teacher in terms of knowing his role in the classroom and not only planning content, but also planning out his interactions with his co-teacher and his own responsibilities during any given lesson. David explained that the planning they engaged in together took place five minutes before class started and the administrator provided David with several planning tools designed to alleviate last-minute planning. He also reaffirmed that what David was feeling was appropriate given the situation when he acknowledged, "...And that's why it's a struggle. You're missing that up-front planning. You're living day-by-day right now in your world, and that's hard. So we need to work on that," (TST Meeting, October 10, 2017, p. 27).

Similarly, the administrator weighed in instructionally when needed, both directly with David after his observation and during the TST meeting when instructional matters arose.

And one of the pieces of feedback I did give him, which goes back to something you were just talking about, he does a great job going around the room and helping different groups. And one of the things I told him, because this day he was in a room by himself because his cooperating teacher was out, was a small tweak would be to change your body position when you're helping the groups. And I alluded to football, just like in football, you have to have your head on a

swivel. When you're in the classroom, you have to be the same way. So instead of turning your back to the rest of the class to help a group, go on the other side of the table. And he and I had that conversation, and then I noticed on doing that, the very next time I was in the classroom where every time he helped a group, the whole class was still in front of him. (TST Meeting, October 10, 2017, p. 5)

The administrator saw an opportunity for learning and related David's need to a topic that he knew well and was interested in--coaching. Through this brief conversation he brought awareness to an issue David began working on immediately. The administrator also weighed in during the part of the discussion that focused on David's need to become more comfortable with the content standards. During that discussion, someone suggested that David begin planning with the mentor because they had a great working relationship. The administrator quickly interjected, "... planning could be very dangerous, because then it looks like he's gone rogue and doing his own thing and not involving his team. So you have to be very careful with that. What you might want to coach him on is unpacking standards... And you work with him on unpacking the standards and what the standards mean," (TST Meeting, October 10, 2017, p. 12).

Additionally, the administrator recognized that teaching is difficult and he respected David for being able to handle and prioritize all of the responsibilities he was managing:

Because the other thing, you know, that he has done well is he's found a good balance between his coaching responsibility and his teaching responsibility, which can be very hard for a first-year teacher, not only an alternate certification first-

year teacher. So he does a great balance there and works it well...But even doing that, he's not dropping any balls. He's juggling them all and he's managing them all, and he's doing it professionally, and he's doing it the right way. He's prioritized his activities. He's prioritized what he needs to do and he fulfills his requirements, above and beyond. (TST Meeting, October 10, 2017, p. 3)

The administrator's approach to running his school was both global and individualistic. While he addressed the issue with integrated teams at a school-wide level, he also addressed David individually as well. He affirmed the effort David put forth as he balanced a variety of roles within the school, "I enjoy watching you. I enjoy seeing you interact. I enjoy seeing what you're doing, even when you're frustrated...so I'm proud of what you're doing, so thank you," (TST Meeting, October 10, 2017, p. 32). In this comment, the administrator communicated that he sees David and appreciates his efforts. For a first-year teacher to receive such specific feedback from the principal is impactful in building and maintaining confidence.

The External Coach. David's external coach taught pre-calculus classes part-time at another high school in the district. She deferred much of the instruction-specific support to the TST members at the school level and primarily offered classroom management support and offered suggestions when there were errors in the math content he taught (Table 4.16). The reason she, like the program director, deferred a certain level of support to the school level was because of their PBL focus. The administrator, IC and mentor at Campbell had all received many hours of training in PBL and the expectations were for David to teach using this approach. Because the external coach was not as

familiar with the implementation of PBL, her focus remained based on specific math content and classroom management. Not only was the external coach hesitant to give specific instructional strategies that would be counterintuitive to the PBL process, she mentioned that many times when she would observe, they would be at a point in the unit they were teaching in which the focus was not the math content. One such instance was during the TST meeting where she stated:

And he's asked me for the specific feedback, too. I've had a hard time giving him more than general feedback. I've been to observe him seven times and it seems like every time I come, they're writing a problem statement, they're -- I've only seen him teach the Math one time. So he's wanting feedback...I haven't been able to observe it to give him the feedback on the math that he's asked me for and he's seeking. I'll come in to observe it and something will shift and he won't get to the math and I won't see it. But he desperately wants that feedback. (TST Meeting, October 10, 2017, p. 4)

Table 4.16: David's External Coach

David's External Coach	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • Provide support, assistance, expertise, resources • TST leadership • Liaison between school and program director • Eight classroom visits and post-observation conferences • Assessment forms • School contact each visit • Six open-ended visits • Additional observations, if required • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Deferred instruction-specific support to school-based members • Content support • Classroom management support • Help with general instructional routines • Provided instructional feedback and strategies • Observations • Post-observation conferences • TST meeting - October

Like others on the TST, the external coach also saw David's willingness to receive feedback. She told the TST that they had met one Saturday for over two hours, "And because of the coaching and because of other stuff, we met at a coffee shop on a Saturday. And he took notes and he emailed you the notes where we sat, and he wanted to improve and wanted feedback for two and a half hours," (TST Meeting, October 10, 2017, p. 3). She commented on general instructional routines and his overall demeanor during the meeting:

He also, when I've been in to observe him, he's done a phenomenal job as far as rotating around the room from group to group. He doesn't stay at one group too long. He'll check in on them. He'll move to the next group, stay for a few minutes, then he'll keep floating around the room. So that's more of a veteran teacher, knowing how to move and not to stay too long with one group, to come

back. The norms, he's phenomenal for using the norms. He -- are you fully present. Everything that you -- that Carolina expects, he does it... He's a phenomenal cheerleader, too, for the school. And he has -- the first day I came in, before I could even barely introduce myself, he gave me a 15-20 minute spiel on how great Carolina was. So he's an advocate for the school. (TST Meeting, October 10, 2017, p. 4-5)

The external coach also commented on the co-teaching dynamic and what she had seen in one of her observations:

And the frustration that I saw was coming from...there was an example one day where David said you can only vote once and the co-teacher said, no, it's okay if you vote more than once. It was kind of a -- and they would set a time for pacing and David would say, okay, your time is up, and then the co-teacher would say, no, we're going to restart the time. That was where the frustration -- it was almost like an undermining of it ...and the pacing was driving him insane. Which the pacing -- he was right. It was extremely slow. That the kids were being kids, and if they know that you're going to reset the timer three times, the kids are going to waste time. But if they know that you're going to hold their feet to the fire, they're going to work and get done by the ten minutes. So that was where some of his -- but I think that they've worked out --- (TST Meeting, October 10, 2017, p. 7-8).

The TST decided that the mentor would assist David with unpacking the standards to ensure David understood the content, the IC would work with David and his co-teacher on developing a more effective co-teaching partnership and she would also assist with

coaching him through the PBL process. While the external coach was willing to assist and usually some of these responsibilities would fall to the external team members, the school-based members felt it would be most beneficial for the mentor and IC to take on much of the support needed for the areas of growth identified. The external coach did volunteer to come in and take over David's class so that they could go and see other co-taught lessons and reflect on what they saw with the help of the IC.

The Program Director. The program director gave priority to working with the A-STEP teachers with the most pressing needs. Several instances came up when working with David that necessitated the program director take on a more active role in David's learning and support (Table 4.17). The program director indicated that she went out to observe him early on because she knew from talking with the external coach that David was having some difficulties with his co-teacher. As a result, the external coach suggested that she go out and observe the class not only for David's benefit, but also so that she could see the interaction between David and his co-teacher. In addition, David reached out to the program director about how he should handle working with the co-teacher. The program director had the following to say about her conversation with David:

The co-teacher was tending to take over all the time. So David and I talked about some things that might help him, but I said, do you want me to come and have a meeting and we can talk about this? And he said, no. At Campbell, they have actually a protocol for dealing with situations where the co-teaching is not as productive as it could be. But the first step is for the teacher to talk to the other

teacher. So David and I talked a little bit that Sunday about how he could address this with his co-teacher, because he was going to have to make the first step, and that's hard. This is a novice teacher talking to an experienced teacher. And then if that didn't solve it, then there's a next step. There's mediation where there's another teacher from the school that's involved. It's not his mentor, but it's somebody else. So they have a process that they go through to help. So I would assume they've had issues in the past with co-teaching if they've got a protocol set up about here's how we resolve these things. (Program Director Interview, October 10, 2017, p. 1-2).

Table 4.17: David—Program Director

David--Program Director	
Roles Outlined in A-STEP Handbook	Roles Assumed in Practice
<ul style="list-style-type: none"> • A-STEP contact person • TST training • Observation • Consult with mentor, instructional coach, external coach, and administrator • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Support based on needs of A-STEP teacher • Encourager • Classroom observation • Follow-up conversation • Provide encouraging e-mails, relevant articles, inspirational stories • Advocate • Support with co-teacher conflict • TST meeting - October

After talking with David and observing his classroom, the program director indicated, that David's greatest need was, "...help with identifying what his role is in that classroom. He knows he's not an aide and he resents being an aid or looked at as an aid. But he doesn't have a teacher voice in that classroom yet, because he doesn't have the confidence to be that teacher voice, and that it's okay. But I think the co-teaching right

now is the biggest area for him,” (Program Director Interview, October 10, 2017, p. 4).

In this situation, David’s co-teacher was dominating the class time and thereby undermining David’s authority in the class which prohibited him from developing as a teacher in the classroom. The program director indicated that this ultimately led to a confidence issue for David. Although David began the year with confidence and positivity, and his teaching context began to deteriorate his confidence. The program director explained:

He just wants to do the best he can at everything. He gives it his all. And when I talked with him during his conference, I usually start with, tell me three good things that have happened, and he has a hard time sometimes identifying his strengths. He just always sees what more can be done. And I said if you do that, you won't be around all that long. It's great to know what can be done, because that's how we grow, but you've got to recognize what you're doing well so you keep on doing it and you know that you're being successful at it. But it's hard for him to identify what he does well at. So that's why I tried in our conference to help him figure out ways that he can self-assess on his strengths. But he keeps, as you know, he keeps a daily log. He says he's turned that into answering your questions now. But that is common activity for him, is that reflection every day. But it's always focused—that's why I said to him, what you're telling me is your reflections always focus on what can I do better? A piece of that reflection should be what went really well. (Program Director Interview, October 10, 2017, p. 2)

In addition, David's issue with his co-teacher presented a unique circumstance. Because the school approached instruction differently than other schools, what would normally constitute a situation wherein the external members of the TST would become more involved, this particular situation required the external members to defer to the school-based members on the TST. The program director explained:

I think individuals on the team are giving him help, but this is so school-driven that I think it's best to have the majority of the support come from the people who reside in that school, because they know the culture, they know expectations, and I've cautioned even the external coach on we cannot overlay whatever we think, because it's different. And David has to work in that culture, and figure it out. I think that the only way -- now I'll say this, I think the A-STEP team concept in David's case helps to communicate to the school that this young teacher needs support. So I think that is one function of the team. (Program Director Interview, October 10, 2017, p. 5)

One function of the external members of the TST is to serve as the liaison between the A-STEP teacher and the school if an issue arises that cannot be addressed and resolved by the external members. In David's case, what was occurring was intricately tied to the context of the school which necessitated that the issue be addressed primarily at the school level. Knowing this, the program director assumed the role of providing feedback on his strengths in an effort to build back his confidence as he continued to work on the dynamic with his co-teacher at the school level.

He's always very appreciative of any feedback. So I think it says to him that people want him to succeed and they want to work with him to ensure that he does. I think he felt when I left -- he said something. I'm trying to remember exactly what the words were. I think he felt more confident when I pointed out some very specific things he was doing really well, because he doesn't see in himself. So I think the co-teacher diminishes his confidence many times, because he talks over him, or he won't let David's directions stand alone. He'll have to insert something after the fact, which I think diminishes David's feeling of "I got this." So I think hearing what he's doing well, but having it be authentic. I think being able to support what he's doing well with very specific examples, I think is what he likes the best. I mean he's so coachable and he understands coaching and he understands not winning all the time or being where you want to be. I mean he understands that process, so I think that's what he's looking for is coaching. And so I think when I left, he was reassured that things were going better with his co-teacher, which I did -- I saw some indications that that was the case. And that he was doing really well, given the fact that he doesn't have a background in this.

(Program Director Interview, October 10, 2017, p. 4)

David's Learning Activities

David valued a variety of learning activities (Table 4.18). David trusted his TST members and sought out specific feedback from all members at various points throughout his first nine-weeks of teaching. In terms of the more formal training components of the A-STEP program, David thought that both the seminar and the learning labs were not

only well-timed, but relevant and impactful learning experiences. In the seminar, strategies were given to accommodate IEPs, 504s and ESOL students. David particularly appreciated the hand-out provided that listed possible accommodations that could be implemented in the classroom according to a specific student need.

David: It was very enlightening, especially because I have so many students with IEPs.

Researcher: Okay.

David: I have so many students with IEPs, and 504s and all that kind of stuff. And it was really -- because we've struggled with how do we accommodate these students? Even our ESOL students, I've got how many in my first period? I've got eight students who don't speak any English at all, none.

Researcher: Wow.

David: So everything we do has to be translated in English and Spanish just to help facilitate them. So that was really -- it really hit home with me. So I really enjoyed it. I was really engaged in it. I shared it with my co-teacher, and he was just kind of like, okay. But I was like, this sheet that she gave us, the handout, of what to do for each accommodation was like a piece of gold, you know? (David Seminar Follow-up, September 29, 2017, p. 1)

Table 4.18: David's Learning Activities

David's Learning Activities
<ul style="list-style-type: none"> • Week-long PBL training in the summer • Monthly seminars • TST support and feedback • Learning Labs • The struggle • Regular self-reflection • Informal conversations with TST members • Post-observation coaching • Video-taped lessons and reflection • Planning session with the IC

Perhaps even more impactful than the seminar, was David's experience in the learning lab. Even though they were not observing in PBL schools, he still saw ways the strategies he observed could translate into his own classroom. In one class, the teacher had two other co-teachers to assist with inclusion. David had this to say about what he saw related to the co-teaching relationship:

David: She was much slower paced in the CP class. Yeah, you could definitely tell her pacing was significantly slower, and she was more patient with them and more one-on-one time. She had two co-teachers in the room with her.

Researcher: For the same period?

David: For the same period.

Researcher: Wow. Okay.

David: So my assumption is some of the students in there are below grade level and are really struggling and that kind of thing. But they worked really well together, which is one thing that I kind of -- I

really picked up on, because I have a co-teacher that I'll teach with every day all day. The relationship between them was almost -- was so fluid that you didn't realize that they were in the room together. He was more hands-on with the kids. She was more doing the lesson. But it was so fluid that you didn't know which one was which. Which is how it should be.

Researcher: Yeah.

David: In a co-teaching environment.

Researcher: So when you were seeing that, were you thinking the way they were doing it could translate to your situation or maybe not, considering you guys are both teachers of content?

David: Right, it can translate, because there's going to be times when I'm doing a lesson and he needs to be going around making sure everyone understands. When he does a lesson, I need to make sure that I go around and make sure everyone understands. (Learning Lab, September 29, 2017, p. 2)

David also observed strategies he wanted to implement to increase student engagement.

David: Student engagement---she did a really, really good job of keeping her students engaged the entire period, whether it was asking them questions, having them come up to the board to write on the board. She played bingo with them in one period. That was very evident, and even in the fourth period class that we saw, the kids had input

on what the teacher did...they did a Kahoot!, just a quick little quiz to see formative assessment of how the kids are doing, so. And that was kind of their exit ticket, as well. So really the student engagement, I think I need to get my students more engaged in what I do.

Researcher: So did you pick up on any strategies that you could use to promote engagement?

David: Using -- especially with our kids here. I think using more games would be beneficial to them, especially for the formative assessments. And I've done that with one thing, and the kids really enjoy it. But the problem here is getting them to participate. I mean, even though we're a one-to-one school, a lot of them will just kind of sit there and, just like, yeah, whatever. So I have to figure out how to get over that hurdle as well. And I talked with my mentor about that last night after the football game. But that was one strategy. Another one was making the classroom more fun. To me, our classroom is very dull. And it's not decorations on the wall dull, that kind of thing...And I think for me, I picked up on [the teacher's] energy in the room. I mean, she was very positive, very enthusiastic. I mean, she was up there and she was talking and she was walking around the room and just had a

bounce in her step and I picked up on that. So I said, okay, maybe I need to do that, too. (Learning Lab, September 29, 2017, p. 6)

David found value in a struggle. In one of our conversations, we were discussing the timing of when a certain topic should be introduced to A-STEP teachers to provide the most benefit to their growth and learning. When I asked if he thought the topic of the seminar should be introduced sooner or later he stated that it should be later, "...because I think you need to kind of struggle a little bit --yeah. You need to kind of struggle a little bit, and then get the instruction that you need..." (Seminar, September 29, 2017, p. 5). During the data collection period much of his learning did prove to come about after a certain level of struggle. For David, the "epitome of hands-on learning...living your learning" experience that the administrator mentioned in David's TST meeting is what had the most impact and shaped his learning most (TST Meeting, October 10, 2017, p. 31-32). On the other side of the struggle, however, was careful and intentional reflection. David was habitual about engaging in some type of reflection and it was no different in his learning lab experience. He described that he was intentionally reflective as he observed the math lessons:

And one of the questions that I was constantly asking myself is: Am I doing this? Am I doing this? Am I doing this? And a lot of times the answer was no. Some of it is because of how we teach here at Campbell, some of it is things that I don't know yet..." (David Learning Lab, September 29, 2017, p. 1).

David valued the support provided by the TST even before he realized the full scope of that support. During the exit interview he stated:

David: So I mean my team has been great. I couldn't ask for a better group of people to be around. My co-teacher, even though we had our issues in the past, we've overcome those, and we've become stronger as a unit because of that. And I couldn't do this without them.

Researcher: What do you think [the support team] gives you that you need the most?

David: Reassurance...and support.

Researcher: That you can do it, you can figure it out?

David: Yeah, you can do it, you can figure it out, you're smart enough, you're good at what you do, you've got it down pat, and you've just got to trust yourself. (Exit Interview, November 15, 2017, p. 2).

David only noticed the extent of his TST involvement during the member checking process:

I finally finished reading all 42 pages, and it's so interesting to notice exactly what you said in the email below. Yes there have been struggles and no I don't always focus on what I do well, but reading what things were like at the beginning of the year has really shown me how much I've grown. As I was reading I actually felt the need to start writing thank you notes to my TST team. Also, I didn't realize how much was going on behind the scenes... (Email Correspondence, January 11, 2018).

David also valued learning alongside his peers from the cohort. When asked what he would change about his experience, he indicated that he would have liked more interactions with the cohort even from the beginning of the Summer Institute:

David: Honestly I would've had more to do -- I would've had us do more social stuff in the beginning to get to know everybody a little bit better... but I think you get that initial kind of bonding -- some kind of initial bonding experience where everyone has to do something together and you have to work together, I think would help us out a lot. Like a breakout session or something like that.

Researcher: What has your contact been with other cohort members?

David: I've tried to reach out to a couple of them. I don't know, I've talked with Amy several times just because we're both coaches, and it's kind of like hey, how have you been handling this? How have you been handling that? Are you doing okay with balancing the load?

Researcher: Yeah, it's a lot.

David: ... I reached out to John a couple of times, just to say hey, how are you doing? I know that you're at one of our feeder schools. Wondering how your year's going, because I know how our kids are. So, you know, had some contact, but not a whole lot with most of them.

Researcher: Okay. How important do you think that the cohort model is...?

David: I think it gives you a sense of community and belonging that you

wouldn't get from say, like [other alternative certification programs], where you're a bunch of different people, but you don't really get to know each other, because you're not always together. Whereas we do everything together as a cohort... (Exit Interview, November 15, 2017, p. 6).

In terms of David's learning, he realized the importance of the cohort and the TST as separate and influential communities of practice. The growth David experienced during the first nine weeks of school was a result of interactions within these communities of practice, formal learning activities provided by the A-STEP program, and his own personal struggle as he learned to teach. This is most clearly demonstrated in the contrast between his demeanor at the beginning of the nine-week grading and his demeanor at the end of the nine-week grading period. He had this to say about how he felt about teaching at the culmination of the Summer Institute:

...it kind of gets you pumped up about it. I kind of came into school, kind of with an attitude like yeah, I've got this. I know people that...came in here and they've gone...what am I going to -- I've got to do this, I've got to do that. And I came in here like Superman (Exit Interview, November 15, 2017, p. 3).

The contrast of how David perceived himself at the beginning of the school year compared to how he perceived himself at the end of the data collection period was both enlightening and humorous. What follows is a portion of my conversation with David about advice he would give his pre-Summer Institute self:

David: How profane can I be on here?

Researcher: What?

David: How profane can I be on here?

Researcher: You can say whatever you want to.

David: I don't care what you think you know, you don't know shit.

Researcher: Okay.

David: You're walking into a world that is completely different than anything you can imagine, and you have no idea.

Researcher: And so what would you tell him?

David: Buckle up. Because it's coming, and you've got to be ready for it, because it's going to be ready for you (Exit Interview, November 15, 2017, p. 7).

David's Last Lesson

In spite of the struggle, David remained positive and eager to learn whatever the TST said he needed to learn, or whatever he determined in his reflections that he needed to learn. He truly tried to make a learning opportunity out of all experiences and to find the positive in all situations, just like this one:

David: My first period class, I have zero behavior issues. I mean, none. You just say be quiet. They're quiet. You can start talking, they start saying, hey, coach is talking, be quiet. They'll police themselves. My third period is like a zoo.

Researcher: And that's the one everybody comes to observe.

David: I know. Which is actually -- I see it as a good thing that

Everybody comes to observe third period, because that's when I've got to be at my best, and I'm in the worst situation.

Researcher: That's a great way to look at it. (David Seminar Interview, September 29, 2017, p. 2)

The last lesson I observed was a videotaped lesson of his first period class in which David delivered math content through direct instruction. In the video, the co-teacher began the recording before the students entered the room at the beginning of the day. Students came in, took their seats and participated in the school-wide morning announcements. Students were arranged in pairs or small groups at tables. To begin the lesson, they reviewed math terminology and David guided students through a discussion on how to find sides and angles for right triangles. Students were relatively quiet and engaged during the direct instruction portion of the lesson and David addressed students who had their heads down, were not paying attention, or who were being disruptive. During the observation it was clear that students respected him. When he addressed student behavior, it was done quickly and without major loss of instructional time. When David finished with the review, he gave the students a worksheet, set the timer for ten minutes, and asked them to label everything they could related to the right triangles on the sheet. The sheet contained what David referred to as a real-world example of a mini-golf course hole. Just before the timer went off he used a clapping strategy to get the students refocused. Then he facilitated a discussion that walked students through how to

find the length of the sides and the measurement of the angles of the right triangles on the sheet.

After David had written answers on the white board, the co-teacher said, “Can you repeat what you just said and what you wrote up there? There are some darker writing markers up there. I can barely see what you wrote back here,” (Videotaped lesson). David acknowledged his co-teacher’s comment and addressed the issue on the board seemingly appreciative of the feedback. Throughout the lesson, the co-teacher appeared to be engaged and assisted students with the lesson as David was teaching. He also enforced that students shouldn’t have headphones out or snapchat on their phones if they are using them as calculators. After they went over the answers on the first worksheet, David gave them an assignment that he anticipated would take them the remainder of the class. He also indicated that if students needed help, they could ask him or the co-teacher. When students had finished their sheet, the co-teacher said that they should all scan their work so that he would have access to it via the image editing software they would be using for the project. Throughout the remainder of the lesson David circulated throughout the room and offered students individual assistance as needed while the co-teacher worked with students in the back of the room. Despite the issues David had with his co-teacher throughout the data collection period, it appeared he was genuinely appreciative of his supportive presence in the classroom during the lesson.

Summary of David

David felt that teaching is unlike anything he had ever experienced. He valued the struggle as an informal learning experience, and throughout the data collection period

he had plenty of opportunities for learning related to struggles with planning, Project-Based Learning, and his co-teacher. David's support team assisted with these struggles by offering feedback, engaging in coaching, and providing scenarios that allowed for guided and self-reflection—a process that was important to David. David also needed to engage in regular conversation within the community of practice to assist with his development of general pedagogical knowledge. While I started to see some of his spark diminish the more he was made aware of all he had to learn, he still remained positive and willing to put forth the effort necessary to become an effective teacher.

CHAPTER FIVE: CROSS-CASE ANALYSIS AND FINDINGS

The primary purpose of this chapter is to analyze and synthesize the three individual cases presented in the previous chapter through the use of a cross-case analysis. I sought to “search for patterns and themes that cut across individual experiences” that emerged in the within-case analysis through the use of a rigorous cross-case analysis (Patton, 2002, p. 57). As I conducted each within-case analysis, I made notes to myself or had a “conversation with the data” to mark initial findings and emerging themes (Merriam, 1998, p. 181). Merriam states that, “ultimately, cross case analysis differs little from analysis of data in a single case study” (Merriam, 1998, 195). Therefore, just as I used the constant comparative method of data analysis for each within-case study, I used the same approach for the cross-case analysis portion of data analysis. Additionally, I used a similar structure for reporting the findings related to the TST as I used in the previous chapter. After I conducted the within-case analysis, I read back over all of the data as well as my notes and reflective commentary. As I read the data once again I tested the categories, themes, and initial findings that emerged against the data to ensure there was sufficient data to support a particular cross-case theme while also being open to new themes, “verifying as much as possible with as accurate evidence as feasible...but not to the point where verification becomes so paramount as to curb generation” (Glaser and Strauss, 1967, p. 28). It is in this chapter that I present a general explanation of the overall findings that cut across the individual cases despite the variation in the specific details of each case (Yin, 1994).

As described in the first chapter of this dissertation, the research question used to guide the study is as follows:

In what ways can a teacher support team serving as a community of practice enhance the experience of first-year teachers in an alternative certification program during the first nine-weeks of school?

In this chapter this question will be answered and the findings of the study will be discussed.

The Design and Function of the TST as a Community of Practice

One focus of this research was to examine how the TST supports and meets the needs of the A-STEP teacher in terms of developing general pedagogical knowledge. One theme that emerged while examining the TST in this context was that while each TST operated from the same design, each TST functioned somewhat differently in practice. A-STEP policies allow for each TST member to assume a level of expertise in a particular area as it related to their role. For example, there was an instructional coach on each team to assist with any instructional needs. The mentor was included in the TST to assist with various day-to-day needs, getting the A-STEP teacher acclimated to the school, and provide overall support. The external coach was expected to serve as the content area expert and keep the TST organized, and the administrator was included to assist with making sure the teacher received needed school-based support. Finally, the program director served on each team to ensure the team was functioning in the best interest of the A-STEP teacher. At the beginning of the school year the program director scheduled a meeting with each of the TSTs represented in this study to discuss the role of

each member and what these roles should look like in practice. At this meeting, TST member roles were further clarified and the program director communicated that the approach of the team should be one of support as opposed to evaluation. The program director also communicated that the A-STEP teachers may have very different needs than the other beginning teachers in the building and their support should be based on these needs and the understanding that they have had no formal teacher preparation training.

The function of each TST member varied from the original outline of TST roles and TST member responsibilities outlined in the A-STEP handbook. In some instances, the TST members assumed the roles that were delineated at the outset, in other instances TST members assumed the roles outlined for other TST members, and in some cases the roles assumed by the TST members were redefined based on a variety of different variables including whether or not another TST member was meeting the identified needs of the teacher. What follows, is a look at the themes that emerged for each of the members on the TST in terms of the support that each provided to assist the A-STEP teacher as well as the extent to which this support met the needs of the A-STEP teacher in the development of general pedagogical knowledge.

The Instructional Coach: Business as Usual. For the instructional coaches, their work with the A-STEP teachers was consistent with the support they provided other beginning teachers. In all of the cases, the IC on the TST provided support consistent with how they approached support of any first-year teacher in their building. Aside from participating in the TST meetings, the way they engaged with their A-STEP teacher did not look different than the way they engaged with other first-year teachers (Table 5.1).

Table 5.1: The Instructional Coach: Business as Usual

The Instructional Coach: Business as Usual			
Roles Outlined in A-STEP Handbook	Felicia's Instructional Coach	Michael's Instructional Coach	David's Instructional Coach
<ul style="list-style-type: none"> • Model lessons • Observe, coach, feedback • Instructional resource and strategy support • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Monthly meetings with other first-year teachers • Walk-through observations • Informal conversations • Support based on building Felicia's confidence through conversation and encouragement • TST meeting - October 	<ul style="list-style-type: none"> • Quarterly planning period for 6th grade science teachers • TST meeting - October 	<ul style="list-style-type: none"> • Teacher-initiated contacts • Classroom observations • Moral support • Encouragement • Facilitated self-assessments • Coaching sessions about PBL • Video-taped lessons and coaching sessions • TST meeting - October

For example, Felicia's IC mentioned that she checked in on Felicia when she did classroom observations of her assigned teachers and when she met with all of the first year teachers as a group. Neither Felicia nor Michael regularly mentioned their ICs during the data collection period unless I asked specifically about their interactions. For Michael, his IC typically only met with him during grade level planning meetings, an activity that the IC led for all teachers in his building. While David's IC became more involved as the data collection period progressed, her involvement stemmed from a school-wide observation made by administration indicating a need for intensive coaching of co-teaching pairs. The need for coaching with David and his co-teacher did come up

in David's TST meeting, and the coaching plan included more frequent observations and coaching cycles by the IC. However, the coaching plan was something that the principal had already planned to address school-wide.

While the responsibilities for IC involvement outlined in the A-STEP handbook primarily dealt with modeling, observing, and coaching the A-STEP teacher in their instructional development, and providing classroom management support, this was rarely seen in practice. Nor did ICs model lessons or provide A-STEP teachers with classroom management support. Notably, David's IC presented an exception to this when she engaged in coaching with David and his co-teacher. It is possible that the ICs on the TSTs approached their roles in the manner they did because the instructional needs of the A-STEP teachers were being met by other members of the team. For example, all of the participants received consistent instructional support and feedback from their external coaches. As the external coaches conducted the most classroom observations, they were more familiar with and had more frequent access to the instruction that was provided by the A-STEP teachers and therefore, could speak to gaps in general pedagogical knowledge. While David's external coach provided support in terms of classroom management, content, and general teaching strategies, she typically left specific feedback on PBL instructional strategies to the IC at Campbell since she was not as familiar with that approach. Furthermore, each participants' mentor met the majority of their school-based needs including logistics of general school operations, day-to-day needs, and assisting their A-STEP teachers as they developed a network of support outside of their TST.

The Mentor: In the Trenches. Mentors assumed more day-to-day responsibility than any other TST member (Table 5.2). Therefore, the mentors quickly became the most frequently accessed member of the TST for each A-STEP teacher. One explanation for this is accessibility—each mentor communicated and demonstrated early on that they were there for the A-STEP teacher should they need them. In all cases, the mentors made themselves accessible multiple times a day. They consistently demonstrated that they were invested in the success and learning of their mentees with the way in which they were proactive in their support, anticipating their needs, and touching base with them frequently. During the first few weeks of school, for example, the mentors did not wait for the A-STEP teachers to come to them to express a need. Instead, their contact with the A-STEP teachers was so consistent and frequent, that they provided the bulk of the support for the A-STEP teachers as they began the school year.

Table 5.2: The Mentor: In the Trenches

The Mentor: In the Trenches			
Roles Outlined in A-STEP Handbook	Felicia's Mentor	Michael's Mentor	David's Mentor
<ul style="list-style-type: none"> • Instructional mentor • School procedures, culture, expectations, responsibilities • Model lessons • Weekly observations/ contacts • Two formal classroom observations • Post-observation conferences • Assessment forms • Instructional unit, daily planning, assessment assistance • Classroom organization and management support • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Maintained contact multiple times per day • Assistance with lesson planning • Encourager • Consistent, sustained support • Provided basic resources such as copy code, access to printer, lab materials • Classroom set-up • Set up GradeCam and gradebook • School tour guide • Advocate • Classroom observations • Post-observation conferences • Conversations about classroom management • TST meeting- October 	<ul style="list-style-type: none"> • Maintained contact multiple times per day • Assistance with lesson planning • Consistent, sustained support • Encourager • Emotional support • Provided basic resources such as access to laminator, copier, printer • Help navigating the school • Help with classroom transitions • Help finding a substitute • Classroom set-up • School tour guide • Classroom observations • Post-observation conferences • TST meeting - October 	<ul style="list-style-type: none"> • Informal conversations before, during, and after school • Informal conversations before, during, and after football practice • Consistent, sustained support • Assistance with lesson planning • Confidant • Assistance with co-teacher conflict • Encourager • Classroom observations • Post-observation conferences • TST meeting - October

Another reason for the heavy reliance on the mentors at the beginning of the year was similarity of position. To use a common educational colloquialism, the mentors

were in the trenches with the A-STEP teachers and were the only TST members who were in positions like those of the A-STEP teachers. While the classes they taught were not always the same, their overall job responsibilities were more alike than different because the mentors also held classroom-based teaching positions. So when the A-STEP teachers had questions related to the set-up or day-to-day function of the classroom, the mentor was the most logical source of information. While at the beginning of the year the support the mentors provided was primarily related to how to set up a classroom, their role did shift to providing more pedagogical support as they provided assistance with lesson plans, classroom management and began conducting their required classroom observations. This shift took place as the A-STEP teachers' needs gradually changed from needing encouragement and help setting up a classroom to needing assistance with the task of learning how to teach.

Furthermore, not only did the type of involvement with each TST member vary according to the teacher's needs, the frequency of contact with TST members seemed to be directly related to proximity. In Felicia's case, her mentor was located down the hall from her but would still try to check on her before school, during planning, between classes and after school. Michael's mentor had a classroom next door which made frequent contact throughout the day almost guaranteed. David's mentor taught a class in David's room and coached football with him after school where they could debrief about the events of the day. All of the A-STEP teachers valued the support of their mentors and in each case the mentor was the most influential school-based TST member, perhaps in part due to the frequency of contact they maintained during the first few crucial weeks of

school. Each mentor drew on their own less-than-ideal first-year experiences in their approach which could have increased their empathy toward their A-STEP teacher's situation.

As the year progressed, however, the A-STEP teachers began to realize that the level of support they required from their mentors began to decrease. While they relied heavily on individual members of the TST at first, eventually they began to gain the confidence and knowledge necessary to either function more independently or seek out help from other sources outside of the TST. One such instance involved Felicia seeking out the help of the ESOL teacher in her building to assist with the ESOL students in her classroom. Similarly, Michael engaged the Special Education Coordinator at his school. Both of these examples also illustrate that the type of help they were seeking was very specific to student needs in the classroom and had less to do with general, day-to-day functioning in the classroom.

The Administrator: A Bird's Eye View. While the administrators on the teams did provide some level of support in the form of encouragement, relieving A-STEP teachers of certain administrative duties such as collecting fees and securing substitutes, and contributing in the TST meetings, in large part they did not weigh in heavily on the pedagogical needs of their A-STEP teachers (Table 5.3). Felicia's, administrator indicated that if she presented a definite instructional need, she would defer to the IC in the building. After Michael's external coach and the program director identified summarizing strategies as an area of growth in Michael's lesson planning and instruction, Michael's administrator contributed to his instructional support by telling the TST that

she thought all teachers in the building could benefit from a building-wide focus on summarizing strategies and would suggest to the administrative team that this be the focus in their next monthly faculty newsletter.

Table 5.3: The Administrator: A Bird's Eye View

The Administrator: A Bird's Eye View			
Roles Outlined in A-STEP Handbook	Felicia's Administrator	Michael's Administrator	David's Administrator
<ul style="list-style-type: none"> • Assign school-based mentor • Provide supportive resources • One formal classroom observation • Assessment forms • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Walk-through observations • Deferred to IC for any instructional concerns • Casual conversations • Help finding a substitute • Support with receipting money • TST meeting - October 	<ul style="list-style-type: none"> • Support consistent with other first-year teachers • Support with logistics of the school • School-based introductions • Positive and welcoming • Valued Michael as a member of the school community • TST meeting - October 	<ul style="list-style-type: none"> • Walk-through observations • Support consistent with other co-teaching pairs • PBL resources • Encourager • Observations • Instructional feedback • Facilitated planning assistance • Valued David's efforts and growth mindset • TST meeting - October

David's case illustrates an exception to an administrator providing instructional support. In one of his walk-through visits, David's administrator suggested that when circulating throughout the room working with small groups that he position himself so that the entire class remains in view. David's administrator also provided instructional support during the TST meetings by providing PBL resources. However, this type of support from an administrator had more to do with how he approached his role as an

instructional leader in the building in general, than how he approached supporting the development of David's general pedagogical knowledge. Similar to the other administrators, when it came to working specifically with David in the areas the TST identified as a learning focus, he also deferred to the IC. Of the administrators to serve on the TSTs in this study, David's administrator was the only principal. The other TST administrators were assistant principals at their locations. Interestingly, the only principal serving on a TST was also the only administrator who engaged in the pedagogical development of the A-STEP teacher.

Nevertheless, overall there was limited evidence that the administrators engaged in the differentiated support of the A-STEP teachers' development of general pedagogical knowledge. This lack of support was not due to a lack of understanding of the unique needs of a teacher in an alternative certification program. Rather, they viewed their role as primarily administrative and intentionally chose to let others on the TST assist in the development of the A-STEP teacher's general pedagogical knowledge and overall growth as a teacher. Generally, they maintained a bird's eye view of what was going on in the school building as a whole, and relied on or deferred to other TST members to provide the majority of the job-embedded support as the A-STEP teachers learned the pedagogy of teaching.

The External Coach: MVP. The responsibilities of the external coach centered around two main functions: to ensure the TST was functioning to best meet the needs of the A-STEP teachers and to be a means of instructional support for the A-STEP teacher (Table 5.4). Of the external coaches in this study, none of them had full-time

responsibilities either within the A-STEP program or outside of the program. David's external coach taught math part-time for the district in which this study took place, Felicia's external coach taught a class at a nearby college, and Michael's external coach did not work outside the A-STEP program. Additionally, the external coaches served on no more than three TSTs total. Unlike the other members on the TST who had other full-time responsibilities, the external coaches had more unencumbered time to devote to working with their A-STEP teachers within the context of the normal school day. Because of the time they devoted to their A-STEP teachers, the level of engagement they maintained in their work with them, and the consistency with which they maintained contact, the external coach was the most valuable support provided to the A-STEP teachers in this study as it relates to their development of general pedagogical knowledge.

Table 5.4: The External Coach: MVP

The External Coach: MVP			
Roles Outlined in A-STEP Handbook	Felicia's External Coach	Michael's External Coach	David's External Coach
<ul style="list-style-type: none"> • Provide support, assistance, expertise, resources • TST leadership • Liaison between school and program director • Eight classroom visits and post-observation conferences • Assessment forms • School contact each visit • Six open-ended visits • Additional observations, if required • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Encourager • Consistent, sustained support • Classroom management support • Emotional support • Lesson planning support • Instructional feedback • Observations • Post-observation conferences • TST meeting - October 	<ul style="list-style-type: none"> • Encourager • Consistent, sustained support • Classroom management support • Help with non-instructional routines • Instructional feedback and strategies • Instructional accountability • Support with summarizing strategies • Cognitive coaching • Help with interactive student notebooks • Observations • Post-observation conferences • TST meeting - October 	<ul style="list-style-type: none"> • Deferred instruction-specific support to school-based TST members • Content support • Classroom management support • Help with general instructional routines • Instructional feedback and strategies • Observations • Post-observation conferences • TST meeting - October

While the mentors were also very much an integral part of helping the A-STEP teachers begin the school year, the level of involvement waned as the year progressed and as the A-STEP teachers' needs shifted to being primarily instructional in nature. The A-STEP teachers' involvement with their external coaches during the data collection period did not fluctuate as it did with their mentors. Instead, the A-STEP teachers' work with

their external coaches remained frequent and focused. The mentor's primary role during the first nine weeks of school was to ensure their A-STEP teacher was being successfully acclimated to the school environment. As the A-STEP teachers learned the day-to-day operation of the school, developed a routine, and became more confident within that routine, the need to have multiple daily interactions with their mentors lessened.

However, a large part of the role the external coaches served was to assist in the development of pedagogical knowledge, something that cannot be reduced to a routine and mastered in a few short weeks. The process of developing pedagogical knowledge in the case of the A-STEP program and within the context of the TST as a community of practice was highly contextualized within each participant's classroom and generally took place within classroom observation-based conversations. This allowed for authentic feedback—something that each of the A-STEP teachers expressed a need for throughout the data collection period. In several instances within the weekly reflections or during conversations with the A-STEP teachers, they expressed a desire for more observations and more feedback from TST members. This suggests that the development of general pedagogical knowledge was largely dependent on the specificity of the feedback they were able to receive about their classrooms, their instruction, and their areas for growth.

The Program Director: Facilitator. The program director's work with the A-STEP teachers began with the Summer Institute. She also conducted TST training meetings at the beginning of the year. In these meetings she communicated the roles and responsibilities assigned to each TST member. She also planned the sequence of the seminars and other learning activities that would take place throughout the year. This

work set a focus for the encouragement, coaching and development of the A-STEP teachers. The program director also worked with individual A-STEP teachers if necessary. While none of the teachers in this study required her direct intervention, she indicated that she made those teachers and teams needing extra help a priority. She described that in these instances, she did whatever she needed to do to provide support whether that was coaching, meeting with administrators, talking with the A-STEP teacher, or advocating for other supports at the district-level (Program Director, October 10, 2017, p. 2).

While the responsibilities of the program director were primarily focused on the A-STEP program as a whole, she also maintained a presence on each of the TSTs and visited each A-STEP teacher's classroom at least once per semester. She perceived her involvement and focus on the TSTs as performing two main functions (Table 5.5). First, she wanted to ensure that the A-STEP teachers were receiving the instructional and school-based supports needed. Because the external coaches assumed a leadership role on the TSTs, she maintained contact with them and relied on them to keep her informed of what was going on at the school level with each of the A-STEP teachers and with each of the TSTs. Second, she wanted to ensure the A-STEP teachers were able to maintain a reasonable work-life balance. For Felicia, the program director was initially concerned that the grading was becoming a big enough stressor that could cause her to burn out quickly and decrease her satisfaction with the teaching profession. She wanted to make sure that Michael was not isolated socially and, whether it was at work or outside of work, that he had a strong social group with whom he could decompress. While she did

not necessarily advocate for David in this area, the program director was concerned about how the impact of the job was effecting his health and home life. In all three cases, the program director operated under the notion that happy, healthy people make happy, healthy teachers that stay in the profession.

Table 5.5: The Program Director: Facilitator

The Program Director: Facilitator			
Roles Outlined in A-STEP Handbook	Felicia	Michael	David
<ul style="list-style-type: none"> • A-STEP contact person • TST training • Observation • Consult with mentor, instructional coach, external coach, and administrator • TST meeting - October, January, March 	<ul style="list-style-type: none"> • Support based on needs of A-STEP teacher • Classroom observation • Follow-up conversation • Provide encouraging e-mails, relevant articles, inspirational stories • Advocate • TST meeting - October 	<ul style="list-style-type: none"> • Support based on needs of A-STEP teacher • Classroom observation • Follow-up conversation • Provide encouraging e-mails, relevant articles, inspirational stories • Advocate • TST meeting - October 	<ul style="list-style-type: none"> • Support based on needs of A-STEP teacher • Encourager • Classroom observation • Follow-up conversation • Provide encouraging e-mails, relevant articles, inspirational stories • Advocate • Support with co-teacher conflict • TST meeting - October

Ultimately, the A-STEP teacher's needs served as the driving force in how each of the teams functioned. While individual members on each of the TSTs contributed to the A-STEP teacher's learning at differing levels, holistically the team functioned as intended—to provide an added system of support for teaches in an alternative pathway who were faced with the task of learning to teach in practice.

The Role of the Cohort

While the focus of this study was to examine teacher learning through the structure of the TST as a community of practice, that the cohort as a community of practice surfaced in the data analysis as being influential in the experiences of the participants. Echoing the findings of Cuddapah and Clayton (2011) cohorts can serve as “...a powerful resource for alternatively prepared novices teaching in urban schools” (p. 63). Each participant in this study mentioned either the benefits of interacting with members of the cohort or a desire to interact with the cohort more frequently. This was evident when Felicia stated:

It's fun to -- it's fun and helpful to get together for our A-STEP meetings. They're informative, but it's also nice to see my peers share their experiences and kind of see how they're doing. It'd be fun to have more time or opportunity to do that, but I know we're teaching so much it's not easy to fit in more. But it would be fun to have a chance just to get together with them and bounce ideas off of each other.

(Exit Interview, November 10, 2017, p. 2)

Similarly, David articulated:

David: Honestly I would've had more to do -- I would've had us do more social stuff in the beginning to get to know everybody a little bit better... but I think you get that initial kind of bonding -- some kind of initial bonding experience where everyone has to do something together and you have to work together, I think would help us out a lot. Like a breakout session or something like that.

Researcher: What has your contact been with other cohort members?

David: I've tried to reach out to a couple of them. I don't know, I've talked with Amy several times just because we're both coaches, and it's kind of like hey, how have you been handling this? How have you been handling that? Are you doing okay with balancing the load?

Researcher: Yeah, it's a lot.

David: ... I reached out to John a couple of times, just to say hey, how are you doing? I know that you're at one of our feeder schools. Wondering how your year's going, because I know how our kids are. So, you know, had some contact, but not a whole lot with most of them.

Researcher: Okay. How important do you think that the cohort model is...?

David: I think it gives you a sense of community and belonging that you wouldn't get from say, like [other alternative certification programs], where you're a bunch of different people, but you don't really get to know each other, because you're not always together. Whereas we do everything together as a cohort... (Exit Interview, November 15, 2017, p. 6).

Michael also valued the cohort, but indicated that while interaction with the cohort was preferable, more contact with any first year teacher would be helpful.

Michael: ...yesterday it was great. It was nice seeing the other A-STEP teachers, as always. I've mentioned that before. It's good to be

around other first-year teachers. I'm not getting that so much, and so it's hard to get the -- emotional may not be the right word, but just the general support of another first-year teacher.

Researcher: Okay...you think being around your cohort more or being around any first year teacher more...?

Michael: It probably -- if you gave me the option of any first-year teacher versus the cohort, I would absolutely pick the cohort, but I think another first-year teacher would just be nice. The only other first-year teachers in the building are another A-STEP teacher, who I don't get to see much because we're on different planning periods and she's on the opposite end of the building, and then one other girl from Pennsylvania. And so like when we talk, it's good, but it is also nice just to hear from other people who come from a similar background and are teaching similar subjects (Exit Interview, December 1, 2017, p. 1).

All three participants stated interacting with other cohort members or first-year teachers was beneficial. While they did not indicate that they were depending on the cohort for instructional feedback, they did value the comradery and expressed the desire to have more informal interactions with the cohort.

Learning Activities within Communities of Practice

Wenger (1998) contends that we all belong to multiple communities of practice simultaneously and that much of our learning occurs within these social interactions in

practice. While the expressed purpose of this study is to investigate the learning that occurred within the TST as a community of practice, participants in this study mentioned interactions with the cohort and the learning activities that they participated in with their cohort most frequently (Table 5.6).

Table 5.6: Learning Activities within Communities of Practice

Learning Activities within Communities of Practice		
Felicia's Learning Activities	Michael's Learning Activities	David's Learning Activities
<ul style="list-style-type: none"> • Summer Institute • Monthly seminars • Interactions with the cohort • TST support and feedback • Classroom observations set up on her own • Learning labs 	<ul style="list-style-type: none"> • Summer Institute • Monthly seminars • School-based professional development • Interactions with the cohort • TST support and feedback • Informal conversations with TST members • Post-observation coaching 	<ul style="list-style-type: none"> • Summer Institute • Monthly seminars • Week-long PBL training in the summer • TST support and feedback • Learning Labs • The struggle • Regular self-reflection • Informal conversations with TST members • Post-observation coaching • Video-taped lessons and reflection • Planning session with the IC

Participants mentioning learning activities within the cohort most frequently could be due to several factors. First, the cohort served as the primary community of practice in the study as it began in the Summer Institute before many of the TSTs had been formed. It is in this community of practice that the more formal, structured learning activities occurred. Additionally, the three-week Summer Institute provided a

concentrated amount of time for the cohort to become fully established as a community of practice.

Second, participants did not automatically think of the interactions with their TST as being learning activities:

Researcher: What...learning activities have you participated in through the A-STEP program...do you think influenced you the most in terms of your development as a teacher? Is there something specific that sticks out...?

Felicia: Are you including interactions with members of my cohort -- or not my cohort, my --

Researcher: Support team?

Felicia: Support team.

Researcher: Yeah, any of that.

Felicia: So definitely interactions with my support team... (Exit Interview, November 10, 2017, p. 1)

When clarification was made, however, the first of several influential learning activities Felicia identified included her TST.

Third, much of the work that took place within the TST did not always directly involve the A-STEP teacher. This left them largely unaware of the full scope of the TSTs function and impact on their learning, including conversations between TST members without the A-STEP teacher's knowledge. For example, TSTs sometimes held meetings without the A-STEP teacher to determine areas of growth for the A-STEP teacher and/or

areas of focus for the TST to assist with the identified areas of growth. David only noticed the extent of this involvement during the member checking process when he indicated that he felt the need to write thank you notes to his TST because he was unaware of how much was going on behind the scenes (Email Correspondence, January 11, 2018).

The majority of the learning activities mentioned by the A-STEP teachers were either activities that took place within the cohort as a community of practice or within the TST as a community of practice, each meeting a variety of different needs. What follows, is a look at the activities within each of these communities of practice that proved influential across cases.

Learning Activities within the Cohort. Each participant in this study perceived the formal learning activities offered to the cohort through the A-STEP program differently. However, they all maintained that the learning labs provided one of the most beneficial learning activities during the first nine weeks of school. The learning labs enabled the A-STEP teachers to observe other teachers in another school teach the same subjects they taught. In her exit interview Felicia recalled how important the learning labs were to her initially: “I really enjoyed the classroom visits at the other schools. That's continued to be helpful. I've continued to draw upon things that I remember seeing there,” (Exit Interview, November 10, 2017, p. 2). Similarly, David identified the learning labs and the half-day seminar in October as the most influential learning activities because they addressed topics that were timely and relevant. In his exit interview he stated, “The learning lab, and to be honest, the half-day professional

developments that we do really have hit me, all the ones that I've attended have been very -- not only timely, but content specific they're very good for what I've been needing,” (Exit Interview, November 15, 2017, p. 1). While Michael did not find the learning labs to be as applicable to his situation he did agree that observing teachers teach the same content as him would be beneficial. He expressed a desire to see more interactive science demonstrations and labs (Exit Interview, December 1, 2017).

The other formal learning activity that seemed to benefit all three participants was a half-day seminar that addressed how to ensure they were meeting students' IEPs and 504s. This was an area of concern for all three participants and they all agreed that the information was timely given they were beginning to be involved in IEP meetings. In both of these cases, the content that was addressed was very specific and delivered outside of their own teaching practice.

The cohort structure itself, while an intentional aspect of the program, was beneficial, albeit somewhat under-utilized. Use of a cohort model is wide-spread in traditional and alternative pathways to supplement quality induction and mentoring efforts (Cuddapah & Clayton, 2011). Furthermore, some research suggests that the cohort structure benefits participants by providing a supportive community of peers (Mandzuk, Hasinoff, & Seifert, 2003; Peterson, Benson, Driscoll, Narode, Sherman, & Tama, 1995). This also surfaced with the A-STEP teachers in this study, as evidenced by the participants' desire to have more interactions with the members of their cohort. For example, in his exit interview, Michael stated, “I think it would be cool to have time to sit and kind of -- I don't really get good planning time with the other teachers here, but if I

had like planning time with A-STEP teachers again periodically, I think that could be fun to collaborate on different activities and something like that,” (Exit Interview, December 1, 2017, p. 5). Felicia shared a similar sentiment in the following conversation that took place during her exit interview:

Felicia: It's fun to -- it's fun and helpful to get together for our A-STEP meetings. They're informative, but it's also nice to see my peers share their experiences and kind of see how they're doing. It'd be fun to have more time or opportunity to do that, but I know we're teaching so much it's not easy to fit in more. But it would be fun to have a chance just to get together with them and bounce ideas off of each other.

Researcher: Would you say the times that you guys meet as a cohort, would you say that just touching base with your peers is just as important as the content that's covered in some cases?

Felicia: Yeah, probably in a way. Definitely in that first one, where you just feel so overwhelmed and coming back together is almost like seeing your summer camp buddies. But just knowing you're not alone out there, and it's going to be okay, and hang in there. (Exit Interview, November 10, 2017, p. 2)

While not the primary focus of this study, participants viewed the cohort as a feature of the program that was influential in their support and learning.

Learning Activities within the Teacher Support Team. The activities that occurred within the TST as a community of practice most often fell into one of three categories: 1) activities that sought to meet the basic needs of the A-STEP teachers 2) activities that sought to meet the emotional needs of the A-STEP teachers and 3) activities that sought to meet the instructional needs of the A-STEP teachers. These needs were generally met in a strict order: basic, emotional, and then instructional. When various needs were presented simultaneously, the TST helped the A-STEP teacher tackle basic needs first, then moved to the emotional needs and finally, their instructional needs.

Within the TST, members met basic A-STEP teacher needs by being proactive in their attempts to prepare the A-STEP teachers to fulfill their teaching duties by equipping them with the procedural knowledge necessary to carry out the day-to-day responsibilities of teaching. When helping meet the emotional needs of the A-STEP teachers, the TST provided encouragement and assisted with conflict resolution on behalf of or in collaboration with the A-STEP teacher. Lastly, engaging in coaching to develop pedagogical knowledge and providing a means of accountability for the A-STEP teacher's practice served to begin to meet instructional needs.

Meeting basic needs. In many cases TST members anticipated the basic needs of an A-STEP teacher even before the teacher was aware of—or had the opportunity to communicate—a need in this area. In most cases, these needs involved procedural tasks that teachers needed to complete in order to fulfill their teaching duties. For example, Felicia's mentor was focused on keeping her abreast of what was coming so as to avoid her being "blindsided" (Mentor Collaboration, September 19, 2017). He did this by

making sure she was aware when progress report grades were due, by introducing her to key personnel in the building that could provide assistance to her, and by recalling his own needs when he was in an alternative certification route. Felicia's administrator also anticipated that the first year teachers in the building would need specific preparation for Spirit Week and held a meeting with them to prepare them for what to expect as well as what was expected of them. Michael's mentor provided "resources and lists" to help him navigate the first week of school (Week 1 reflection, August 25, 2017). She also assisted with very specific logistics such as showing Michael how to laminate, copy and print, and how to walk to the students to lunch before they arrived for the first day of school. TST members also anticipated needs by giving the A-STEP teachers a tour of their building, introducing them to other faculty members, showing them how to set up gradebooks and communicating the expectation of how many major and minor grades should be included in a final grade among many others.

Naturally, some situations arose that the TST members could not have anticipated. In these cases, they met the A-STEP teachers' basic needs by fielding questions, putting the A-STEP teacher in contact with other resources within the building, or finding an answer for them. Both Felicia and Michael needed help navigating the substitute search process. Their mentors, and in Felicia's case her administrator, were instrumental in helping to meet this need when it was presented. Felicia needed assistance with getting lab fees turned in after the due date and David frequently needed to debrief about the happenings of the day with his mentor either before or after football practice each day. In all of the instances mentioned above, whether proactive or reactive,

the need was both quite basic and dealt with issues that were procedural in nature. None of these instances had any direct bearing on the A-STEP teacher's instruction; rather, these were very basic needs that needed to be met outside of any specific pedagogical needs or concerns.

Meeting emotional needs. TST members met A-STEP teachers' emotional needs two main ways: encouragement and conflict resolution. Beginning a career for which you have had little formal training can be a daunting task. As a result, the A-STEP teachers in this study demonstrated a need for a high level of encouragement as they gained the knowledge and experience needed for confidence in their practice. For example, when David reflected on his program experiences during his exit interview, he said:

David: So I mean my team has been great. I couldn't ask for a better group of people to be around. My co-teacher, even though we had our issues in the past, we've overcome those, and we've become stronger as a unit because of that. And I couldn't do this without them.

Researcher: What do you think [the support team] gives you that you need the most?

David: Reassurance...and support.

Researcher: That you can do it, you can figure it out?

David: Yeah, you can do it, you can figure it out, you're smart enough,

you're good at what you do, you've got it down pat, and you've just got to trust yourself. (Exit Interview, November 15, 2017, p. 2).

David needed encouragement in very specific ways and related to a variety of areas, some instructional and some related to his inherent ability. His development as a teacher depended on the encouragement he received through specific feedback, both positive and constructive. Felicia also benefited from very specific encouragement from her TST members. Her entire TST identified building confidence as her primary area of growth at the beginning of the data collection period. Table 5.7 provides specific examples of how each of Felicia's TST members aimed to build her confidence either in their approach to working with her or through direct communication.

Table 5.7: Confidence-Building Efforts for Felicia

Confidence-Building Efforts for Felicia	
Teacher Support Team Member	Confidence-Building Efforts
Instructional Coach	<p>"Yeah, it's just been how is planning going, collaboration with other chemistry teachers, how are you feeling with classroom management, just asking her questions about how she feels like she's doing." (IC Collaboration, September 18, 2017, p. 1)</p> <p>"I think it's a reassurance that everything's okay and all of us are learning and it's going to be--every year you learn and you don't get everything right every year. And I think that's just reassuring for her." (IC Collaboration, September 18, 2017, p. 2)</p>
Mentor	<p>"I think you're doing great and I'm -- like I said, I'm proud of you and you hang in there." (Post-observation Conference, October 10, 2017, p. 3)</p> <p>"I think you're doing a great job and like I said, even from the beginning of the year to now, I think the</p>

	classroom management's getting better, I think you're more confident in front of the classroom. And I'm proud of you.” (Post-observation Conference, October 10, 2017, p. 7)
Administrator	“I've gone in a couple of times just to informally observe her, walk by a lot, just to see how it's going. And so far it looks like she's doing a good job.” (Administrator Collaboration, August 18, 2017, p. 1)
External Coach	<p>“I think your strategy is effective. I think what you're showing them to convert from one to another, I think that's very effective.” (Post-observation Conference, September 13, 2017, p. 7)</p> <p>“And getting them to give you feedback so that you can find out where they are. I think you do a good job of that. Recognizing students' misconceptions and making corrections. You can get them to talk enough for you to figure out why they got the wrong answer. That's good.” (Post-observation conference, October 4, 2017, p. 6)</p>
Program Director	<p>“You are very advanced. At this time what you're coming into, everybody's talked about all your strengths. I mean, that's really what we spent all that time talking about was how fabulous you are in content, in pedagogy, and interrelationships with kids, everything that you look for in an outstanding teacher”. (TST Meeting, October 17, 2017, p. 20)</p> <p>“It's a delight to watch you”. (TST Meeting, October 17, 2017, p. 20)</p>

As illustrated above, some of the encouragement and confidence-building efforts provided by the TST were provided in the form of direct conversations with Felicia, while others were indicative of approaches that certain TST members took in helping to building her confidence.

In terms of conflict resolution, various members of the TST took on a protective role of the A-STEP teacher, and at times served as an intermediary. For example, Felicia's mentor showed concern for her stress over lesson planning when he communicated that "the only thing that has been bothering me for her is those lesson plans that have been piling up on her (Mentor Collaboration, September 19, 2017, p. 2). By mentioning it to me, he hoped I might be able to talk to other members on the TST to address that concern. He also made a point to intercede on Felicia's behalf when it came to spending her own money on classroom supplies:

Mentor: And you did use some of your money for that. That's the kind of stuff, too, that you can use your student money for...

Felicia: And I didn't realize until, I think Eric sent an email...I can't get reimbursed in hindsight from that...I didn't have the P-card, so I can't --

Mentor: You -- well, we can go --

Felicia: I kept all the receipts.

Mentor: You have all the receipts? All right, we'll go to Mary...I'll go with you, and we'll talk to Mary...Or if I can get down there sixth period, I'll talk to Mary. She may be able to work something out for you. All right? So if you kept the receipts, she may be able to go back and let you use those receipts against that. But usually the way you have to do it is you have to... (Mentor Post-Observation, September 19, 2017, p. 8)

The mentor's self-correction of "You -- well, we can go --" and then ultimately his last self-correction indicated that *he* was planning to go on his own planning period, was a powerful indicator of his intent to serve as her intercessor whenever possible as a means of support to her (Mentor Post-Observation, September 19, 2017, p. 8).

Another example of how TST members functioned as intercessors was when the administrator on the TST intervened and found a substitute for Felicia for the A-STEP professional development days. Additionally, the program director brought the topic of grading to the attention of the TST in their meeting to ensure Felicia wasn't becoming overwhelmed with the task of grading. Michael and David's TST members also assumed this protective, almost parental stance as well. For example, in the first post-observation conference with Michael, his mentor stated, "It's kind of like when you graduate this year into your next year, I'm just going to be like the little proud mama on the side, 'look, there's my little mentee'" (Mentor Post-Observation, September 6, 2017, p. 6). David's mentor also assumed a protective stance in terms of the professional relationship he and his co-teacher had developed. In the TST meeting he made the following comment to the rest of the TST describing the issue with David and his co-teacher:

Mentor: ...do I need to step in and say something, or do you feel like you can handle this? To just kind of put that ball back into his court, and he said he actually preferred for him to want to handle it versus going into -- and he did. And now, when he's feeling that animosity again, he comes to me and says, what can I

do?...They've worked out for the most part, but it's still -- I still see a struggle. (TST Meeting, October 10, 2017, p. 8)

A primary focus of that meeting was for the TST to devise a plan to assist David's co-teaching partnership and at the mentor's request, all of the school-based members became intercessors on some level to help David as they assumed different roles of support. The administrator provided PBL material related to the co-teaching partnership and the IC started meeting with the two of them and engaging in some heavy coaching sessions. This stance appeared to be specific to the TST members and did not translate to other non-TST members at the schools.

Meeting instructional needs. While I expected to collect the majority of my data on how the TST was meeting the instructional needs of the teachers, this was not the case. Upon analysis and reflection of the data, I believe this was due to the timing of the data collection period occurring during the first nine-week grading period of the A-STEP teachers' first year in the classroom where much of the focus was on getting acclimated to the school and working through the initial shock of all that teaching involves. Hence, TST members almost always met A-STEP teachers' basic and emotional needs in advance of instructional needs. For example, when Felicia's external coach observed her teach a lesson on lab safety during the first week of school, the post-observation feedback primarily centered around encouraging Felicia rather than engaging in coaching. Once the A-STEP teachers began to become more comfortable in front of their students and more comfortable with the daily routine, the TST members gradually engaged in more

direct instructional coaching. At that point the instructional needs of the A-STEP teachers were primarily met through classroom observation and coaching.

The first area in which the A-STEP teachers demonstrated a need for coaching was with lesson planning. In all of the cases, the A-STEP teachers planned with other teachers in the building that were not on their TST. Other teachers in the building did not fully grasp the needs of teachers coming through an alternative pathway. In each case, members of the TST intervened to offer more specific coaching in the area of lesson planning. One example occurred with David's planning team. Their planning sessions typically left David with an unclear vision of how each PBL unit should be implemented. David's administrator suggested that the IC sit in in some of their planning sessions so that they could assist David further unpack each unit as needed, coaching him through what the plans should look like in practice.

Similarly, both Felicia and Michael had less than ideal situations in terms of planning. At first, Felicia's assistance with planning consisted of veteran teachers giving her their lesson plans. Like David, as a new teacher with no teaching experience or training in planning, she was at a loss in how to unpack and deliver the plans she was gifted. Ultimately Felicia's mentor partnered her with another teacher in his second year of teaching who was able to provide some level of coaching through the lesson planning process. After having conversations about the lesson plans, Felicia arranged to watch this teacher teach some of the plans they had unpacked together. Eventually, she was able to contribute to the lesson planning by working collaboratively with him. Without the intervention of various TST members coaching the A-STEP teachers through the process

and implementation of the lesson plans, they likely would have continued to struggle in this area.

The TST members also engaged in coaching with the A-STEP teachers about classroom management and general pedagogical practices. These coaching sessions typically followed a classroom observation of the A-STEP teacher. All of the A-STEP teachers in this study valued the post-observation coaching process as it was the only way they got feedback on their practice from veteran teachers. While at first Felicia was uncomfortable with an outsider in her room, she later communicated that having people observe and coach her was a valuable learning activity: "...having people come in and do evaluations, provide feedback, help out with challenges I was experiencing in the classroom, telling me what seemed to be working well from an outsider's perspective," was influential to her learning about teaching (Exit Interview, November 10, 2017, p. 2). Similarly, Michael indicated that he appreciated the frequency of classroom visits by TST members as well as the reflection process that occurred after each observation (Exit Interview, December 1, 2017, p. 3). Due to the frequency of coaching visits by the TST members, the A-STEP teachers had a sense of accountability. TST members looked for them to implement the suggestions and strategies from their work together. This was a necessary component of their learning, and one that sought to mitigate their lack of knowledge for practice as teachers in an alternative pathway.

Wenger (1998) posited that learning is not just an accumulation of skills and information, but a process of becoming. In each of the cases in this study, whether the learning activities took place within the TST serving as a community of practice or

outside the TST, A-STEP teacher learning cannot be reduced to a series of conversations, activities, supports or experiences. Rather, all of the conversations, activities, supports and experiences combined represent a process by which each A-STEP teacher engaged in becoming a teacher.

The Importance of Knowledge in Practice

The quotations I chose to include to begin each participant's section in chapter four were extracted from a conversation with each participant about advice they would give their pre-Summer Institute selves. Each of these quotations captured the essence of their perception of the importance of knowledge in practice. Because the participants did not come to teaching through a traditional pathway that prepared them through knowledge for practice, they relied heavily on knowledge constructed in practice as they gained experience in their own classrooms. While Felicia acknowledged that first nine weeks was difficult, she realized in retrospect that she experienced learning about teaching at a faster rate than if that learning had occurred in a traditional classroom setting. She explained by using the following analogy:

Felicia: Yep. I think it's more challenging, probably a steeper learning curve, but I think you probably learn faster. An analogy might be when you're learning a foreign language in a classroom versus going to a different country where they speak another language, not knowing anything.

Researcher: You don't have a choice.

Felicia: And you have no choice and you're just figuring it out and

stumbling along until -- and I think you learn at a much faster pace.

(Exit Interview, November 10, 2017, p. 5)

During this conversation, Felicia made a comparison between learning a foreign language through immersion versus in a classroom setting. The stakes are higher when learning a new language through immersion or learning to teach through knowledge in practice.

The options in either of these scenarios are to acquire the skill and continue in that environment or fail to acquire the skill or remove yourself from the environment if that is feasible. Felicia explained that like learning a language through immersion, relying on knowledge in practice as the means by which one learns to teach leads to not only a steeper learning curve, but also acquisition of knowledge at a faster rate. Her survival in the classroom depended on acquiring skills related to classroom management, how to motivate students, effective instructional strategies, etc.

Just like having someone who provides support in language acquisition while immersed in an authentic context serves to enhance the learning experience, the TST provided support in teaching while immersed in an authentic context that enhanced the A-STEP teachers' rate of knowledge acquisition. Felicia's TST members guided her learning by providing immediate feedback based on her teaching. Because of the support team that was in place to aide in the development of pedagogical knowledge in practice, Felicia was able to practice strategies and get feedback from experienced educators.

David also valued the idea of developing knowledge in practice. In fact, he indicated that he found value in the struggle. Felicia had anticipated a struggle and even mentioned several times throughout the data collection period that she anticipated it

taking a full school year before she began to feel more confident in herself as a teacher. David, on the other hand, while he valued a struggle, did not anticipate the level of struggle he would experience. He had this to say about how he felt about teaching at the culmination of the Summer Institute:

...it kind of gets you pumped up about it. I kind of came into school, kind of with an attitude like yeah, I've got this. I know people that...came in here and they've gone...what am I going to -- I've got to do this, I've got to do that. And I came in here like Superman (Exit Interview, November 15, 2017, p. 3).

David quickly realized the importance of knowledge in practice and also seemed to realize how valuable feedback from his TST members was in supporting his learning. This was evident in the frequency and intensity at which he sought out feedback, engaged in conversations about his teaching, and invited others to watch him teach and then provide feedback on ways he could improve.

The contrast of how David perceived himself at the beginning of the school year compared to how he perceived himself at the end of the data collection period was both enlightening and humorous. What follows is a portion of my conversation with David about advice he would give his pre-Summer Institute self:

David: How profane can I be on here?

Researcher: What?

David: How profane can I be on here?

Researcher: You can say whatever you want to.

David: I don't care what you think you know, you don't know shit.

Researcher: Okay.

David: You're walking into a world that is completely different than anything you can imagine, and you have no idea.

Researcher: And so what would you tell him?

David: Buckle up. Because it's coming, and you've got to be ready for it, because it's going to be ready for you (Exit Interview, November 15, 2017, p. 7).

Only after he had spent several weeks in the classroom, did David realize that there are certain aspects of teaching that are best learned in practice that even his substitute teaching experience had not adequately prepared him for. Felicia communicated a similar sentiment when she stated:

I just don't think I had a good sense of what a 50-minute class entailed and what was a reasonable amount of -- so that's been huge. And so I've had my first two days -- two days that I've gone home and haven't had any work to do that night. And I've had two weekends now that I didn't do any work (Exit Interview, November 10, 2017, p. 6).

In this statement, Felicia indirectly communicated the amount of time she was spending on planning and school work. When she made this comment, she noted that thus far in the program she had only experienced two weekdays and two weekends with no school work. Like David, Felicia's prior experience with teaching did not prepare her for teaching in the high school classroom. In both cases, knowledge in practice was necessary.

While David was very confident going into the school year, Michael and Felicia both experienced anxiety that began to lessen as the year went on.

Researcher: Okay. What advice would you give your pre-Summer Institute self, knowing what you know now?

Michael: Calm down. I think there was a lot of anxiety going into the school year, and in a way the anxiety was nice, because it kept me motivated to get something done every day. But at the same time, I still don't know what's coming every morning that I get here. I mean I have a plan, but there's just going to be things you can't control, and if you just calm down and allow yourself a breath before you tackle something that you've got to be flexible with, it's going to be fine. Trial by fire doesn't always burn you. (Exit Interview, December 1, 2017, p. 6)

Michael's last comment indicated that his experience was difficult, but not all-consuming. His comments above also reiterated the notion that regardless of the amount of preparation someone has prior to entering the classroom for the first time or prior to entering a classroom on any given day, there will always be "things you can't control" or things that you will have to learn as you go.

For Felicia, David, and Michael, acquiring pedagogical knowledge in practice was more influential than the knowledge for practice activities such as the Summer Institute and monthly seminars. These knowledge for practice activities were provided intermittently and many, like those in the Summer Institute, were provided before A-

STEP teachers had the opportunity to build any type of schema for what they were learning. So while knowledge of practice was helpful for the A-STEP teachers, acquiring pedagogical knowledge in practice was essential to their learning. Furthermore, this knowledge in practice was enhanced by the support of the TST. As each participant articulated, some of the things they learned throughout the data collection period were best learned in the classroom. Each participant alluded to aspects of their learning that they did not anticipate. This is likely in large part *because* of their lack of knowledge of practice. Therefore, this lack of knowledge of practice and reliance on knowledge in practice was mitigated by the support of the TST. If acquiring knowledge of practice was helpful for the A-STEP teachers and acquiring knowledge in practice was essential, the TST served as the vital component for how the A-STEP teachers acquired pedagogical knowledge in practice.

CHAPTER SIX: CONCLUSIONS AND IMPLICATIONS

In this research study I sought to explore how teachers construct knowledge in practice within the established support structure of the Teacher Support Team as a community of practice. My aim was to understand how job-embedded professional development and support offered through the TST in the A-STEP program influenced teacher learning within the first nine weeks of the school year. The findings presented in Chapter Five of this dissertation point to several considerations within alternative teacher preparation that are worthy of further discussion.

The results of this research suggest that alternatively prepared teachers can only perform their functions well to the extent to which they have acquired knowledge for practice and knowledge in practice. As critics of alternative certification argue, this knowledge acquisition cannot take place to the detriment of the learning of the students in our classrooms. In this way, the arguments of scholars like Darling-Hammond (2010), Boyd, Dunlop, Lankford, Loeb, Mahler, O'Brien & Wyckoff (2012), Cohen-Vogel & Smith (2007), Darling-Hammond, Chung & Frelow (2002), and Kee (2012), are entirely justified. However, arguing that this practice is not best for students does not address the issue for which alternative pathways were created. The fact remains that, these pathways currently produce approximately 20 percent of the nation's teachers each year (Woods, 2016). In addition, these alternative pathways certify teachers in some of the hardest-to-fill content areas making these pathways what some might consider a necessary evil in the recruitment of teachers. As such, the support teachers in alternative pathways receive

as they acquire knowledge in practice can be a mitigating factor for the knowledge of practice they lack when they enter the classroom.

In this chapter, I discuss implications of the current research within the fields of alternative certification, teacher support, and job-embedded professional development. It is at this intersection of the research-base in these three areas that this study makes a significant contribution to the field.

Rethinking Support for All Teachers

Mentoring and induction supports for novice teachers entering the field—the current go-to method for addressing teacher retention—is a topic that has received a great deal of attention over the last several years, both in the literature and in policy. For example, in the state in which this study took place, both mentoring and induction supports are mandated for all first-year teachers. Each first-year teacher must receive one year of mentoring from a state-trained mentor. In addition, each district in the state is responsible for providing additional induction supports beyond assigning a state-trained mentor to each first-year teacher. Smith and Ingersoll (2003) maintain that providing a helpful mentor, common planning with other teachers in the same content area, regularly scheduled collaboration with other teachers, an induction program, a seminar for beginning teachers, regular and supportive communication with an administrator, and a reduced number of course preps are supports that have been found effective in increasing retention rates, particularly if these supports are offered collectively.

Despite the recommendations offered and policies implemented to provide mentorship and induction supports for new teachers, teacher retention remains a

nationwide concern. Perhaps this is due to the fact that in practice new teachers working in hard-to-fill geographic and content areas are “less likely to have even three conversations with their mentors by the spring of their first year about any of the core tasks of teaching,” (Kardos & Johnson, 2010, p. 3). This, along with evidence presented in this study, suggest that mentorship alone is not the key to the support and retention of new teachers. Cuddapah & Clayton (2011) takes this a step further by stating, “...one-on-one mentoring relies on a solitary bond between mentor and novice, placing much at stake on the success of a single relationship” (p. 64). Induction and mentoring cannot be reduced to the mere assignment of a mentor to a new teacher.

The dichotomous realities Cuddapah & Clayton (2011) present beg the question—if we know what is needed to significantly increase teacher support and retention, why are we not providing it? I contend that it is a matter of not knowing *how* and/or not having the resources to provide the supports mentioned within the school context. Educators in the United States do not have a grasp on how to provide all of the supports above simultaneously in practice. This calls for school districts and educational administrators to rethink the way these supports are offered for all new teachers, including pre-service teachers in traditional teacher preparation programs and novice teachers in alternative pathways.

Support for Pre-service Teachers. A major focus of the current study is using multi-member teams to provide support for teachers. There is currently a gap in the literature on using multi-member support teams for the support of teachers whether they are pre-service or in-service, traditionally prepared or alternatively prepared. While

Smith and Ingersoll (2003) do not advocate for multi-member support teams specifically, their research does acknowledge the need for a multi-faceted approach to support for new teachers as a way to increase teacher retention. Other research that alludes to this type of support can be found in the research on teacher residencies. For example, Godwin, Roegman & Reagan (2016) suggested that pre-service programs move away from the traditional student teacher-cooperating teacher dyad and move toward, "...mentee teams where gaps in subject matter knowledge might be filled collectively by a team that includes the general education teacher," (p. 1221). In another study, Dennis (2016) suggested that utilizing a quad-model for clinical practice that included the resident, mentor teacher, partnership resource teacher, and a content coach was an effective model to increase retention in one teacher residency program.

Typically teacher residencies are programs that are developed as a partnership between a school district and a college or university with the intent to fulfill the school district's teaching vacancies with teacher residency completers (Guha, Hyler, & Darling-Hammond, 2016). Most teacher residencies offer a one-year residency in which the resident works alongside a veteran teacher while also working through a prescribed curriculum that is intentionally integrated into their teaching practice. Programs also offer early-career support to residency completers throughout their first several years of teaching. While the research base is still in the early phases, the research that exists suggests that the retention rate from these programs is much higher than non-residency retention rates (Guha, Hyler, & Darling-Hammond, 2016).

It is not yet clear from the research the extent to which multi-member support teams play into the success of these residency programs. However, the literature that does exist points toward the need for a multi-faceted approach to support (Smith & Ingersoll, 2003). The research also recommends that pre-service programs begin to move away from an over-reliance on the mentor-mentee dyad and toward multi-member teams for pre-service teachers (Godwin, Roegman & Reagan, 2016). This research, along with the results from the current study, suggests that multi-member support teams can enhance the experience of pre-service teachers and may lead to increased retention rates. School districts wanting to increase the retention rate of teachers in their district would be well-served to establish partnerships with colleges and universities and begin providing support that utilizes multi-member teams for support of pre-service teachers in their student teaching experiences.

Support for Teachers in Alternative Pathways. Some of the supports offered through the TST to the participants in this study are similar to the supports traditionally prepared teachers receive in their teacher preparation programs. For example, the opportunity to observe other teachers typically occurs through multiple practicum placements in teacher preparation programs. Student teachers receive feedback on lessons delivered and classroom management strategies implemented from their cooperating teacher and their university supervisor during student teaching placements. Teachers in alternative pathways lack these experiences altogether. While opportunities to observe others teach or receive feedback and coaching from a multi-member team are

beneficial for any new or pre-service teacher, they are essential for the teacher in an alternative pathway.

As illustrated in this study, teachers tend to be lumped into one of two categories—first-year teachers or non-first-year teachers—in terms of how they are viewed and how they receive support. This categorization does not allow for differences in background, experience or preparation. Nor does it allow for a differentiated approach to support for new teachers. All teachers need to be supported as they are becoming acclimated to their teaching role. Individual teacher differences should be taken into account when determining the types and the intensity of supports needed, as well as the types of contributions the new teacher could provide to others. The pathway by which a teacher enters the profession should be one of the factors taken into account. In many cases teachers in alternative pathways are older, experienced, and have had successful careers in other fields. If utilized, this could provide opportunities for these new teachers to share their expertise by contributing relevant, real-world application of content. It would also help these new teachers to feel like they are a contributing member of the learning community within their school.

In sum, extant literature along with the research from the current study, suggests that multi-member support teams make sense for all teachers, whether they are in traditional pathway pre-service programs or in alternative pathways. All in-service teachers need opportunities to observe the teaching of others, work alongside veteran teachers, and receive support that goes beyond a single mentor-mentee relationship. Therefore, we must advocate for induction into communities of practice where a multi-member support

team structure serves as a community of practice whenever possible, and new teachers are given the opportunity to benefit from the expertise of others as they develop knowledge in practice.

Rethinking the Structure of the TST

A focus of this study was to determine the ways in which the TST as a community of practice enhanced the experience of the A-STEP teachers. While the TST did enhance the experience and learning of each of the A-STEP teachers in this study, it did not fully develop into a community of practice during the first nine-weeks of school. Each TST only met collectively twice, once at the beginning of the school year for TST training and once at the end of the first nine-week grading period, to discuss the progress of the A-STEP teacher. Rather, most of the interactions the A-STEP teachers had with their TST were on an individual basis. Based on the theoretical framework outlined in Chapter Two and the characteristics of communities of practice presented, the work of individual TST members with the A-STEP teachers in practice did not constitute the development of, "...a shared repertoire of resources," (Wenger, 2006, p. 1). There was certainly evidence of a shared interest in and passion for the support of the A-STEP teacher as most TST members were interested in individually helping the A-STEP teacher develop knowledge in practice. But while the intent was for the TST to develop into a community of practice, this did not happen during the first nine weeks of school. Perhaps as the school year continues and as more formal TST meetings take place, the TST will develop into a fully functioning community of practice as defined in Chapter Two.

Nevertheless, the TST structure in this study still presents an example of how the multi-faceted support Smith & Ingersoll (2003) promote can be accomplished in practice. In the current study, the TST, made up of a combination of school-based and external members was instrumental to the learning of the A-STEP teacher even though it did not fully function as a community of practice. The multi-member TST did take the burden off of any one individual thereby circumventing the issue of an over-reliance on teacher success being solely dependent on the “success of a single relationship” (Cuddapah & Clayton, 2011, p. 64). Further, the TST allowed for each member to serve as an expert or first line of contact in a variety of different areas. The external TST members in this study consisted of a representative from the program that could assist with program-related concerns and an external coach whose primary responsibility was to provide extensive instructional coaching to guide the pedagogical development of the A-STEP teacher. These external team members proved to be vital in A-STEP teacher development.

The school-based members met a variety of classroom management, instructional, and routine, daily needs. While all of these supports are necessary, not all members were instrumental in providing these supports. For example, not all members of the TST were consistently engaged at the same degree throughout the data collection period. Therefore, if certain TST members are not as involved in the pedagogical development of the A-STEP teacher, or do not provide altogether different support to A-STEP teachers than other first-year teachers in their building, is their inclusion on the TST really necessary? How should the TST operate in practice?

Much of the program director's role was specific to the implementation of the A-STEP program. For example, the program director was responsible for program recruitment, the application and admittance process, Summer Institute training, curriculum provided during the seminars, and the certification process. None of these responsibilities pertain to the function of the TST. The roles that were specific to the TST included TST member training, A-STEP teacher observation, TST meetings, and behind-the-scenes work including consulting with the mentor, instructional coach, external coach and administrator on each team to ensure the A-STEP teacher was receiving the supports needed. Because I am recommending a multi-member team approach to support for all teachers, the program director role would look much different when not considered within the A-STEP context. Instead, the role of the program director should focus on the training and professional development of TST members and the other TST responsibilities should be shifted to the administrator.

While it is important that administrators ensure opportunities for the support and development of all teachers in the building, it is not crucial that they provide this job-embedded support directly. Instead, the role of the administrator should be focused on establishing an awareness of the needs of the teachers in the building, assigning appropriate supports and resources including mentors and coaches, and ensuring that the supports assigned are being carried out in practice. As such, the inclusion of the administrator on the TST should be to oversee the TST.

One member that was underutilized on the TST was the instructional coach. In each of the cases in this study, there was no distinction in the type of support offered to

the A-STEP teacher than that offered to all new teachers in the building. One possible explanation for this is the IC role was less incentivized than most of the others on the TST. If the ICs are expected to provide more support to A-STEP teachers than other first-year teachers, they should be compensated accordingly. In this study, the specific roles the ICs were expected to fulfill were carried out by other members of the TST who were more incentivized. For example, ICs were expected to coach, model and observe the A-STEP teachers, but the external coaches were fulfilling those roles in practice. If the resources are not available to compensate the IC for the type of sustained and focused support expected, the role of the IC and that of the external coach should be combined into one coaching role that is assumed by an external team member. The combined coach role should be assumed by an external member because the external coach is the member on the team with the most unencumbered time. This allowed external coaches to be in the A-STEP teachers' rooms frequently and allowed them to be able to provide timely feedback through post-observation conferences, both of which are important considerations in terms of coaching effectiveness.

All of the teachers in this study heavily relied on their mentor as their first point of contact. One contributor to the success of this role in practice was proximity and similarity of position. In all of the cases in this study, the mentors were located in close proximity to the A-STEP teacher. This allowed for ease of accessibility and frequent contact throughout the day that also contributed to "just in time" learning about the day-to-day responsibilities of a teacher and the overall operations of the school (Lieberman, 1996, p. 52). In addition, all of the mentors in this study were also full-time teachers.

This provided a similarity of position that made a significant impact on the role and value of the mentor in each of these cases. Certain job responsibilities were parallel such as when grades were due, how and when to receipt money, how and when to turn in lesson plans, and how to access resources within the school building. Due to the similarity of position, mentors were able to guide A-STEP teachers through these situations by working alongside them.

In sum, a multi-member support team should be considered best practice for the support of all new teachers and pre-service teachers and essential for teachers in alternative pathways. Over-reliance on any single member is a detriment to the overall function of the TST and the overall development of the new teacher. The support the TST provides should be consistent and in response to the needs of the new teacher. The multi-member team should consist of a minimum of three members—an administrator to oversee the TST, an external coach whose primary role is to provide coaching and support to new teachers and a mentor who is in close proximity and in a similar position as the new teacher. In addition, a program director should provide training and ongoing professional development to the TST in differentiated support and coaching for new teachers within a job-embedded context.

Rethinking Learning Activities for Teachers in Alternative Pathways

Ultimately the job-embedded learning activities that benefited the A-STEP teachers most are those that made practice public, whether it was in the form of being observed, observing others, or simply by engaging in conversations about their practice. These activities enabled the A-STEP teachers to have access to what Lieberman (1996)

called “just in time” learning in which problems of practice could be solved immediately and in community with others (p. 52). In the case of teachers in an alternative pathway, making practice public is one way to assist in the development of general pedagogical knowledge. Because they have not had frequent access to teaching made public, such opportunities must be provided as a way to guide their development. This took place in the A-STEP program in two main ways: through A-STEP teachers observing other teachers during the learning labs and through direct classroom observations by the mentors, external coaches, and other TST members.

All of the participants in this study indicated that they valued observing and being observed, as well as engaging in conversations about teaching. Additionally, they either continued to draw on their experiences observing other teachers in action, or they expressed a desire to have another opportunity to observe teachers teaching content and students similar to their own. Having the learning labs within the first month of school allowed the A-STEP teachers to gain just enough experience to begin to know what they should be looking for when observing another teacher’s practice. In this study, these observations were done at centrally located schools for ease of accessibility. Because the learning labs took place at a schools other than their own, the A-STEP teachers were required to take a full day off for professional development. A more efficient option so early in the school year, is for the TST to arrange for the new teacher to observe other teachers within their own school. This would allow the new teacher to get into classrooms to observe earlier in the school year and more frequently. It would also be beneficial for the mentor or coach on the TST to sit in on the observation and to debrief

afterward. This would enable the mentor or coach to guide reflection on the lesson and discuss application to the new teacher's classroom. While Felicia set up something very similar on her own, the other two A-STEP teachers lacked an experience in which they observed other teachers in their building for the purpose of their own professional development, and none of the A-STEP teachers were able to engage in observations where one-on-one reflection followed. While observing other teachers at the same school earlier in the year and more frequently would allow for more opportunities to make practice public, full-day learning labs held at a different school can also provide a powerful learning experience for teachers to observe teaching in new and different contexts. Because of this, school-based learning labs should be implemented in addition to the full-day learning labs that took place in this study.

Direct observations of the A-STEP teachers also made teaching practice public. Typically these observations were done by the mentor or external coach. While other TST members also conducted observations, in each case external coaches were the TST members that observed with the most consistency and engaged in greater levels of coaching and discussion following the observations. The level at which the external coaches engaged with the A-STEP teacher was a key factor in A-STEP teacher learning. Therefore, coaching as a learning activity for teachers in alternative pathways should be a common practice.

Bearing in mind some of the challenges of coaching identified by educational researchers, a call for increased interactions cannot come at the expense of the quality and consistency of these interactions. One challenge of coaching is the idea that

spreading coaches too thin only serves to decrease the ability of the coach to make a significant difference in the professional development of the teacher (Neufeld & Roper, 2003). Two of the three external coaches in this study were recently retired educators whose only responsibility with the school district was serving in capacity of an external coach. Training and utilizing retirees in this way is one way to ensure teachers in an alternative pathway have access to a TST member that is not spread too thin with other job-related responsibilities. In addition, using retirees who have already left the classroom does not contribute to the teacher shortage like pulling teachers from classrooms to serve as external coaches would. Instead, school districts are utilizing the experience of the retirees to focus on retention of new teachers without perpetuating the shortage of teachers.

A second challenge of coaching is ensuring immediacy of feedback and opportunities to conference following an observation, a lack of which can also weaken the effectiveness of the coaching relationship (Neufeld & Roper, 2003). Providing a member on the TST whose role is focused on coaching and assisting with the development of general pedagogical knowledge increases the likelihood that these post-observation conferences occur in a timely manner. Schools that hire teachers in an alternative pathway can also utilize other members of the TST to cover classes in order for these immediate conversations to take place.

A third challenge that should be considered in the current context is the amount of time it takes for teachers to fully master instructional strategies (Neufeld & Roper, 2003). Therefore, there needs to be not only an increase in the interactions between external

coaches and the alternative pathway teacher, but also for external coaches to work with the alternative pathway teacher for at least two years, as in the case of the mentor. In states where more than one induction contract can be given, this option can be utilized to give the alternative pathway teacher an additional year before undergoing formal evaluation to advance to professional certification. Pairing the alternative pathway teacher with an external coach for a longer period of time would allow for more opportunities to make practice public and provide a benefit to teacher learning.

Rethinking the Structure of Alternative Pathways

For many years, the use of a cohort model in both traditional and alternative pathways has been used to supplement mentorship and induction efforts as well as provide learning community supports for beginning teachers (Cuddapah & Clayton, 2011). In a cohort structure, participants typically move through a predetermined set of coursework in a specified sequence (Mandzuk & Hasinoff, 2002; Sapon-Shevin & Chandler-Olcott, 2001). Cohorts have the potential to benefit participants by offering a supportive community of peers (Mandzuk, Hasinoff, & Seifert, 2003; Peterson, Benson, Driscoll, Narode, Sherman, & Tama, 1995), although the quality of that support is dependent upon several factors including the personalities and interactions of the cohort members (Radencich, Thompson, Anderson, Oropallo, Fleege, Harrison, & Gomez, 1998). Barring the work of Cuddapah & Clayton (2011), there have been few insights contributing to our understanding of how cohorts of solely novice teachers can serve as a resource to support each other in an alternative pathway. Their research pointed to the value of the cohort in providing a third space in which teachers could discuss doing the

work of teaching, supporting making meaning of their experiences in the classroom, and providing a forum in which teachers could embrace their new identities as teachers as well as develop a sense of belonging within the cohort as a community of practice (Cuddapah & Clayton, 2011).

One limitation identified in the research that applies to the cohort in the current study deals with the apprehension participants can feel related to revealing personal challenges within in district-sponsored professional development activities (Meyer, 2002). Such is the case with the A-STEP cohort as the program itself and all the professional development provided by to the participants is in-district. When cohorts are situated in this context, it could inhibit teachers from discussing any vulnerabilities, critiques, questions or challenges within the group. This warrants a closer look into the dynamics and function of the A-STEP cohort to determine the extent to which these findings apply in the current context.

Another potential limitation was addressed by Johnson and Kardos (2002) as they pointed out that all-novice learning communities can serve to perpetuate misconceptions as the knowledge-base of these novice members is often lacking substantially. They go on to say that there may be certain things that are best learned in an expert-to-novice or one-on-one mentoring situation. This highlights the need for rethinking how alternative pathways are structured to include a variety of different learning communities with which a new teacher can identify and engage.

Much like the way a multi-member support team can complement the support of new teachers in a way a single mentor cannot, new teacher cohorts also have the

propensity to contribute to a more multidimensional induction experience that can positively impact new teacher learning (Cuddapah, 2011). Like the cohort in this study, Cuddapah (2011) found that a cohort structure, “shifted the notion of competence and expertise, and the possibilities of peer mentoring as a vehicle for novice support emerged,” (p. 73). In addition, she indicated that the cohort, “invited novices to take pedagogical and expressive risks in a group context,” (p. 73). Clayton (2007) maintains that this sort of risk-taking may prove more important than conceptual change in impacting novice practices. The participants in this study certainly all expressed a certain level of comfort in the cohort, they valued the interactions they shared as a means of support and they communicated a desire to have more contact with their fellow cohort participants.

Future Research

While this study attempted to understand how a multi-member teacher support team can enhance the experience of teachers in their first nine-weeks of school in an alternative certification program, this study also highlighted the need for several areas of future research. During the first nine-weeks of school, the participants’ needs primarily centered around basic and emotional needs. Only toward the end of the nine-week grading period did their needs begin to move toward instructional needs. Future research could explore how people shift from basic and emotion needs to instructional needs. Do people shift out of basic and emotional needs at different times? In what ways does a multi-member support team aide in this process? Do traditionally prepared teachers make the shift to work focused on instructional needs sooner than those in an alternative

pathway? Ultimately, these and other questions could be answered by replicating the study and looking at a full school year instead of just the first nine-weeks.

Other research could explore if and how a multi-member support team develops into a fully functioning community of practice over a longer period of time. Because the current study focused on the first nine-weeks of school with the TST meeting only twice, the TST did not become a community practice. In addition, it was evident that toward the end of the nine-weeks the A-STEP teachers began to rely less on the mentors for support. Future research could explore if this continues through the end of the year, or if the A-STEP teachers need for mentor support fluctuates depending on the time of the year.

Finally, the motivation of the TST members is an area that should be explored. While not a focus of this study, it seemed that the level of compensation each TST member received could be related to their level of commitment on the team. It would be informative to determine the motivation for the involvement of each TST member and how they perceive their role on the TST.

Conclusion

A large part of my current role with the school district in this study consists of recruiting new teachers. Serving in this capacity immerses me in the struggle to find teachers to fill vacancies for one of the top fifty largest districts in the nation. Subsequently, I am acutely aware of the realities of the teacher shortage. While the district does have some high poverty schools, some rural schools, and some urban schools, I generally have an easier job filling vacancies because the district itself is not a hard sell because it is an appealing place to live. People want to work for the district and

the city is continuing to grow. In the state in which this study took place, there are many traditional preparation programs that have a history of producing quality teacher candidates to the profession. However, the recent trend indicates that our state continues to produce less teacher candidates than we have openings. Recent data suggests that for the 2015-2016 school year, state-wide there were three times as many teacher vacancies as teacher candidates graduating from in-state colleges and universities (Garret & Hallman, 2017). The number of vacant teaching positions at the beginning of the current school year in which this study took place represented a 16% increase from the year before (Garret, 2018). As a result, our district has changed its recruiting practices to seek out not only traditionally prepared in-state teaching candidates, but also traditionally prepared out-of-state teaching candidates, those from alternative pathways, as well as international candidates.

The teacher shortage trends nationwide are not altogether different or more promising than those represented in the state-level data. Even with more students entering four-year colleges and universities, the number of those enrolling in education programs continues to decline. In a recent report by the U.S. Department of Education National Center for Education Statistics (2017) it was reported that, “In fall 2015, total undergraduate enrollment in degree-granting postsecondary institutions was 17.0 million students, an increase of 30% from 2000, when enrollment was 13.2 million students,” (p. 1). In contrast, while overall college enrollment is up, the National Education Association (2016) reports that enrollment in education programs is at its lowest in 45 years.

In a recent article addressing the decline of those choosing education as a career pathway it was reported that, “In a 2016 national survey of college freshmen, the number of students who say they will major in education has reached its lowest point in 45 years. Just 4.2% intend to major in education—the typical first step to becoming a teacher—compared to 11% in 2000; 10% in 1990 and 11% in 1971,” (National Education Association, 2016). Unfortunately, it will continue to remain a challenge to produce teachers from a traditional pathway when college students choosing education continues to decline, and we will continue to have more vacancies than there are eligible college graduates to fill those vacancies if we do not also retain teachers once they have entered the profession. While one could identify several issues worthy of our collective attention as possible factors contributing to this data such as the professionalism of the teaching profession, retention rates, the impact of high-stakes testing and accountability, and all of the other issues that funnel into the data represented above, the purpose of the current study was to drill down and determine how we can best support those teachers who are entering our classrooms without traditional preparation as a result of an increased need for and a decreased supply of viable teacher candidates.

As districts across the nation work to fill a growing number of teaching vacancies by hiring teachers from alternative pathways, it is imperative that districts meet their learning needs. While the issues of filling teacher vacancies is multi-faceted and should be examined from multiple perspectives including using teacher residencies as a way to fill vacancies with quality candidates, we must also address the reality that there are teachers currently in classrooms from alternative pathways that must have support

structures in place to meet their needs as they become acclimated to their teaching role. If hiring teachers from alternative pathways who lack traditional training is a practice used by districts as a way to address local hiring demands, it is ultimately incumbent upon the school districts to ensure that these teachers have access to supports to help mitigate their lack of knowledge for practice. There will inevitably be voids in the knowledge and practice of candidates from alternative pathways that would have been filled had they taken a traditional route into education—voids that must ultimately be filled in other ways including those presented in this study. By rethinking how support can be provided through multi-member teams, induction into multiple communities of practice, and a cohort structure, we can begin the mitigation process whereby we provide teachers in alternative pathways access to the supports necessary for them to grow and thrive in K-12 classrooms.

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