ABSTRACT

DENEAL, JENNIFER KAY. Politics and Teacher Preparation: A Case Study Inquiry Into the Creation of the North Carolina Residency Approach and the Relationship Between Residency Preparation and Pedagogical Effectiveness. (Under the direction of Dr. Timothy Drake).

Alternative preparation programs, which "provide alternatives to the traditional undergraduate program path to teacher certification" (Darling-Hammond et al., 2002, p. 287) existed in 40 states by 1993 (Wilson et al., 2001). Today, approximately one quarter of new teachers each year enter the profession through an alternative teacher preparation program (Goldhaber et al., 2017). One of these alternative preparation approaches, urban teacher residencies, rose to prominence as a new model for teacher preparation in the early 2000s. Urban teacher residencies provide a more supportive apprenticeship model for teacher preparation.

In 2017, the North Carolina General Assembly ratified Senate Bill 599 into Session Law 2017-189, which made sweeping changes to educator preparation and licensure. Among the changes, the law replaced the Lateral Entry process with the North Carolina Residency License. The legislature also codified more explicit clinical practice requirements into law and created a new one-year residency (NC GS §115C, 2020). Interestingly, the General Assembly provided no public explanation for these changes to the alternative licensure process that had existed in North Carolina since the mid-1980s. Through a mixed methods case study inquiry, this study explores why the General Assembly shifted from an established process to the residency approach and the implementation of that approach.

The study also compares the performance of Residency Licensees on a pedagogical content licensure exam, the edTPA, to the performance of their peers prepared through both Lateral Entry and traditional licensure routes.

Results from a series of qualitative interviews with policy development stakeholders indicate that concerns over student outcomes and teacher shortages, as well as a desire for increased accountability may have contributed to the development of the residency approach. While educator preparation program leaders had some discretion in implementing the law at their institutions, most programs used existing program structures to meet the needs of residency students. Program leaders expressed concerns about additional costs to support residency students and extended licensing options for unqualified teachers. Initial quantitative analyses of edTPA scores between 2016 and 2021 indicate that students prepared through traditional programs are more likely to receive passing (and higher) scores, and are more likely to be rated as “highly qualified” on the edTPA than both Lateral Entry and Residency License teachers.

Keywords: alternative teacher preparation, teacher residency, edTPA, education policy, bureaucratic discretion, multiple streams theory.

Politics and Teacher Preparation: A Case Study Inquiry Into the Creation of the North Carolina Residency Approach and the Relationship Between Residency Preparation and Pedagogical Effectiveness

by
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DEDICATION

Ad majorem dei gloriam

BIOGRAPHY

Jennifer (Jen) DeNeal is an education policy professional with nearly a decade of experience in the field. Jen joined Teach for America following her undergraduate education at Loyola University Chicago and worked for two years as a K-12 music teacher in rural eastern Arkansas. She then moved to North Carolina to pursue a Masters of Public Policy at Duke University. Following graduate school, Jen combined her practical classroom and academic policy backgrounds at the North Carolina Department of Public Instruction. She worked on a variety of projects centered on North Carolina teacher quality for several years before moving to the North Carolina State Board of Education Office as a public policy fellow, focused on writing and revising state education policy. In that role, Jen helped coordinate the launch of the Professional Educator Preparation and Standards Commission and assisted in the revision of educator and principal preparation policies. Jen is currently the associate director for ethics and policy at the University of North Carolina at Chapel Hill where she supports the university's efforts to build a culture of integrity and transparency through healthy policy processes.

When she isn't working on her PhD, Jen is probably singing with the Duke University Chapel Choir, donating blood products to the American Red Cross, or snuggling her adorable American Fox Hound mix, Yodel.

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CHAPTER 1: INTRODUCTION

Background and Context

As drivers of student success, teachers (Dee & Cohodes, 2008; Konold et al., 2008; Rockoff, 2004; Wenglinsky, 2002) play a critical role in determining student outcomes (Chetty et al., 2014). In particular, what teachers know and do factors heavily in their ability to influence student learning and achievement in the classroom. Thus, teacher preparation programs play a vital role in determining the skills and knowledge teachers bring to the classroom and—importantly—whether students will succeed academically (Wilson et al., 2002).

Teacher Shortages

Claims of teacher shortages have existed for years across levels of education (Aragon, 2016; Darling-Hammond, 2000a; Patterson et al., 2003; Zhang & Zeller, 2016), but the most important questions regarding teacher shortages focus on the geographic locations and content areas in which where those shortages occur. Similar to national shortages (Carver-Thomas & Darling-Hammond, 2017), North Carolina teacher vacancies are not evenly distributed. According to the 2019-2020 State of the Teaching Profession in North Carolina report, fourteen districts reported no vacancies on the 40th day of school, while five districts reported vacancy rates ranging from 7.7% to 13.1% (Tomberlin, 2021). The report also found that North Carolina has difficulty recruiting licensed teachers in the areas of mathematics, elementary education, and the education of exceptional children, which is North Carolina's designation for students requiring special education (Tomberlin, 2021). In 2020, the National Center for Education Statistics projected total elementary and secondary school enrollment to increase two percent by 2028 and projected the total number of elementary and secondary teachers to increase by seven percent in the same time frame (Hussar & Bailey, 2020). At first glance, concomitant increases

in both student enrollment and the number of teachers available to instruct those students seems positive; however, the projected two percent nationwide enrollment increase plays out differently in different states. Hussar and Bailey (2020) note that 22 states will actually have lower enrollment in 2028 than they did in 2016, with nine of those states experiencing enrollment decreases of five percent or more.

The unbalanced distribution of students and teachers points to the real challenge underlying the teacher shortage narrative: this single narrative does not account for the variation in students' access to qualified teachers within specific subjects and at specific locations. Since 1990, the U.S. Department of Education has annually published teacher shortage areas by state. Those data indicate persistent shortages in a variety of areas, but gaps in the areas of special education, mathematics, and science are perpetual issues (Cross, 2017). Current evidence is mixed regarding the existence of a growing nationwide teacher shortage, while some note that teacher production is projected to increase, teacher turnover has remained relatively stable since 2004-2005, and the number of schools reporting vacancies and hard-to-staff positions has declined over the past 20 years (Aragon, 2016). Others, however, point to a growing national shortage of tens of thousands of qualified teachers (Sutcher et al., 2016). The U.S. Bureau of Labor Statistics estimated that more than 270,000 teachers would leave the profession between 2016 and 2026 (Torpey, 2018) and the COVID-19 pandemic has undoubtedly exacerbated teacher shortages. According to a 2021 RAND survey, nearly 25% of teachers stated they were likely to leave their jobs at the end of the 2020-2021 academic year (Steiner & Woo, 2021).

It is, however, undeniably clear that differences in teacher shortages persist among districts and states. The increasing national pool of teacher candidates belies the difficulty some states have in aligning their own supply of qualified candidates with the actual vacancies in their

states. In some cases, teacher preparation programs are churning out candidates in already saturated content areas, such as elementary education, while failing to produce sufficient numbers of qualified candidates in more high-needs content areas such as upper grades mathematics and science (Sawchuk, 2013). In addition, teacher preferences also play a role in which areas have teacher shortages. High-poverty, high-minority, low-achieving, urban, and rural school districts often face relatively more challenges with regard to recruiting and retaining qualified teachers than their counterparts (Aragon, 2016). School working conditions and salary, along with characteristics of the areas in which these schools are located can impact a teacher's decision to stay (Tran & Smith, 2020). Boyd et al. (2005) found that teachers tend to prefer jobs near where they were raised and, controlling for distance, tend to select schools in areas similar to their hometowns. Such behavior has the potential to create additional inequities if struggling locales are unable to generate a supply of capable teachers. The unequal distribution of qualified teachers and its disproportionate impact on specific populations and communities creates opportunities for states to implement new strategies targeting the recruitment and retention of effective teachers. States have developed a number of incentives to address teacher shortages, including signing bonuses, loan forgiveness, and salary increases (Brewer, 1996; Lankford et al., 2002). Such strategies are generally developed with the aim of recruiting individuals from an existing pool of teachers, whereas other strategies, including alternative teacher preparation programs, are intended to strengthen the pipeline of qualified individuals from outside education into the classroom (Boyd et al., 2012).

Alternative Teacher Preparation

Prior to the 1990s, most teacher candidates completed traditional, college-based teacher preparation programs (Wilson et al., 2002). Alternative preparation programs, which "provide

alternatives to the traditional undergraduate program path to teacher certification" (Darling-Hammond et al., 2002, p. 287) existed in 40 states by 1993 (Wilson et al., 2001). Today, approximately one-quarter of new teachers each year enter the profession through an alternative teacher preparation program (Goldhaber et al., 2017). Cochran-Smith and Fries (2001) sorted researchers studying teacher preparation into two categories: those who are proponents of professionalization and those who are in favor of deregulation. They define advocates for professionalization as researchers who support consistent approaches to teacher preparation, characterized by a focus on professional development, standards-based instruction, and assessments aligned with professional practice throughout a teacher's career. Cochran-Smith and Fries define advocates for deregulation as researchers who favor a free-market approach, in which candidates who pursue alternative teacher preparation demonstrate their ability through high-stakes standardized teaching assessments (2001).

An important feature of alternative teacher preparation is a lack of standardization across programs. In theory, alternative teacher preparation programs recruit more diverse applicants in terms of age and ethnicity (Wilson et al., 2001), and attract enthusiastic candidates who lack education degrees, but have subject-matter expertise, to the field of teaching, thereby increasing the total number of qualified teachers (Cooperman & Klagholz, 1985). Despite a relatively clear set of goals, the structure varies significantly across alternative teacher preparation programs (Cochran-Smith & Villegas, 2015). In fact, some researchers assert that broad categorical comparisons between alternative and traditional pathways are unhelpful due to the variation among programs in both categories (D. J. Boyd et al., 2009; Grossman & McDonald, 2008; D. C. Humphrey & Wechsler, 2007; Kane et al., 2008). Regardless, important studies have examined the effectiveness of alternative programs, including their effectiveness with respect to student

achievement, the diversification the teacher workforce, teacher retention, self-efficacy, and performance on licensure exams.

Measurements of Effectiveness

Assessing the effectiveness of alternative teacher preparation programs is challenging not only due to their varying structures, but also because of the myriad outcomes that researchers, policymakers, and practitioners may choose to focus on in their analyses.

Student Achievement. Many researchers and policymakers concern themselves first and foremost with the effectiveness of alternatively prepared teachers in the classroom. The results of research on this question are decidedly mixed. Laczko-Kerr and Berliner (2003) found that students with an under-certified teacher experienced the equivalent of approximately two fewer months of instructional time than students with a fully-certified instructor. Others (Boyd et al., 2006; Darling-Hammond et al., 2005; Education Commission of the States, 2005) have also found greater classroom effectiveness among fully-certified teachers than among their alternatively prepared peers, although Boyd et al. (2006) found that these differences seemed to fade over time. Conversely, other researchers (Dee & Cohodes, 2008; Goldhaber and Brewer, 2000; Kane et al., 2008) found little to no effect of alternative teacher preparation on student achievement. Goldhaber and Brewer (2000) pointed to differences in certification types as a primary driver of effectiveness, reporting that teachers without subject-specific certification and those with private school certifications performed less well than their peers with standard, probationary, or emergency licenses. Critics of alternative teacher preparation argue that such teachers harm student achievement through the mediating effect of higher turnover rates (Darling-Hammond, 2007), but in at least one alternative program, namely, Teach For America,

the negative impacts of the higher turnover rate were offset by slightly higher initial classroom effectiveness (Kane et al., 2008).

Diversifying the Teacher Workforce. Of the 3.5 million full-time and part-time public school educators, the vast majority are White (79%) and female (76%) (Irwin et al., 2021). A growing body of research supports the assertion that a diverse teacher workforce confers academic and non-academic benefits on students (Carver-Thomas, 2018). One major goal of some alternative preparation programs is to increase diversity in the teacher workforce, including more male and minority educators (Suell & Piotrowski, 2006). Like student achievement, the evidence of alternative preparation programs' effectiveness at increasing diversity is mixed. Alternative teacher preparation programs do tend to recruit more individuals with advanced degrees who are committed to remaining in the profession (Zientek, 2007) and increase diversity with respect to age and ethnicity (Wilson et al., 2001). Alternative teacher preparation programs are less successful at bringing in the most accomplished candidates (Wilson et al., 2001) and have failed to increase the number of males, mathematicians, and scientists with professional expertise in the classroom (Zientek, 2007). Cohen-Vogel and Smith (2007) argue that alternative preparation programs have not meaningfully changed the composition of teacher candidates, resolved the out-of-field teaching crisis, or effectively drawn qualified teachers to positions at hard-to-staff schools.

Teacher Retention. Recruiting a more diverse teacher workforce is only part of the challenge. It is also important to consider whether alternative teacher preparation programs recruit and train teachers who then stay in education. Despite indicating their desire to remain in teaching (Zientek, 2007), as many as 60% of teachers from fast-track alternative teacher preparation programs leave teaching by their third year (Darling-Hammond, 2000a). School

context and characteristics could play roles in the relatively higher attrition of alternatively prepared teachers. Alternatively prepared teachers are more likely than traditionally certified teachers to work in schools with minimal teacher support (Humphrey et al., 2008), and they often serve large populations of minority and high-need students (Kane et al., 2008; Wilson et al., 2001). Carter and Keiler (2009) point out that the environments in these schools often differ from the teachers' own educational experiences and the experiences of the instructors in their alternative preparation programs.

Teacher Self-Efficacy. Teacher self-efficacy refers to whether teachers feel able to instruct and effect change in their own classrooms (Gordon, 2001) and is related to student achievement and teacher well-being (Barni et al., 2019). Research on teacher self-efficacy is generally qualitative and the findings are derived from teacher surveys or interviews with researchers. On balance, the more consistent preparation and support offered by traditional preparation pathways often results in teachers who are more confident in their practice than those who take a more disjointed route to the classroom (Darling-Hammond et al., 2002). Zientek (2007) found that traditionally prepared teachers were more confident than their alternatively prepared peers in the areas of communicating, planning, and using instructional strategies; however, Suell and Piotrowski (2006) found no significant differences between alternatively and traditionally prepared teachers in their survey about confidence in instructional skills. While findings in this area are somewhat mixed, certification pathway explains only a miniscule fraction (~1 percent) of the variation in teachers' self-efficacy (Zientek, 2007); therefore, policymakers should be careful not to draw firm conclusions from the existing studies.

Licensure Exams. Occupational licensing provides a measure of professional quality in any number of professional fields (Angrist & Guryan, 2008). Teacher licensure exams are used

in most states in the United States and are another measure of teacher quality. Perhaps the most common and well-known exams for teacher licensure are a set of exams known as the *Praxis* series, of which states may choose to require all, none, or some combination for licensure. The tests include a basic skills assessment of content and pedagogy, and a teacher performance assessment that involves direct observation, structured interviews, and documentation prepared by the teacher (Blackford et al., 2012). The edTPA, a newer licensure exam, is structured very differently. The edTPA is a portfolio-based, content-specific test that is more similar to the National Board for Professional Teacher Standards assessment than the traditional question-and-answer *Praxis* I and II exams (Goldhaber et al., 2017). While there is limited literature comparing the scores of traditionally and alternatively certified teachers on licensure exams, Shuls and Trivitt (2015) found that alternatively prepared teachers tended to, on average, score relatively higher on licensure exams.

North Carolina Policy Context

North Carolina was slightly ahead of the national alternative teacher preparation trend. Prior to the 1985-1986 school year, the North Carolina General Assembly directed the State Board of Education to create a process by which the state could hire skilled individuals from outside the field of teaching (NC GS §115C, 2020). The State Board of Education created the Lateral Entry process. Through Lateral Entry, skilled professionals who met certain criteria could, at the request of a school district, become affiliated with an approved teacher preparation program or Regional Assistance Licensing Center (RALC) and receive a plan of study to become certified in their content area within three years (Charlotte-Mecklenburg Schools, n.d.). In the Lateral Entry model, teacher candidates could meet the requirements of their plan of study at any institution(s) of their choosing. Candidates could take one course in one location and another

course at a different location. Beginning with the 2005-2006 school year, individuals pursuing Lateral Entry were required to receive training in behavior management, the education of students with disabilities, and the use of seclusion or restraint in the classroom (NC GS §115C, 2020). Although alternatively prepared teachers represent approximately one-quarter of new teachers nationwide (Goldhaber et al., 2017), the proportion of new teachers in North Carolina on the Lateral Entry pathway has been greater than 30% since the 2017-2018 school year, although the proportion declined during the 2020-2021 school year to 26.5%. Importantly, the attrition rate of Lateral Entry teachers is significantly higher than the overall rate for North Carolina and that for non-Lateral Entry teachers with similar years of experience (Tomberlin, 2019, 2020, 2021, 2022a).

In 2017, the North Carolina General Assembly ratified Senate Bill 599 into Session Law 2017-189, which made sweeping changes to educator preparation and licensure. Among the changes, the law replaced the Lateral Entry process with the North Carolina Residency License. The Residency License is identical to the Lateral Entry license, with one major difference: to qualify for a Residency License, candidates must become affiliated with an approved Educator Preparation Program (EPP) to complete the required training. (NC GS §115C, 2020). The legislature additionally made changes to clinical practice requirements. Teacher candidates had previously been required to complete a minimum 16 week internship, but Session Law 2017-189 created an alternative to the internship in the form of a one-year residency (NC GS §115C, 2020). North Carolina began phasing in new performance assessments for teacher preparation candidates around the same time the Residency License was rolled out. Starting on July 1, 2018, teacher candidates could receive an exemption from the Principles of Learning and Teaching

exam by meeting specified cut scores on the edTPA or PPAT exam, both of which became consequential for licensure on September 1, 2019 (NC State Board of Education, 2021b).

Purpose Statement

Through this research, I aim to describe why the North Carolina General Assembly shifted from the established Lateral Entry process to the Residency License and added an option for educator preparation programs to employ a one-year clinical residency in 2017. Additionally, I compare the performance of Residency Licensees on a pedagogical content licensure exam, the edTPA, to the performance of their peers prepared through both the Lateral Entry and traditional licensure routes.

Research Questions

I use a case study approach and exploratory, descriptive, quantitative analyses to answer the following questions:

1. Why did the North Carolina General Assembly incorporate the teacher residency approach into state statute in 2017?

    1a. What were the North Carolina legislators' and other stakeholders' intentions regarding changing the alternative licensure pathway from the existing Lateral Entry process to the Residency License in 2017?

    1b. What were the North Carolina legislators' and other stakeholders' intentions regarding the addition of a clinical residency as an option for clinical practice requirements?

2. How, if at all, was the implementation of the residency approach for educator preparation aligned with the North Carolina General Assembly's intentions?

    2a. In what ways was the implementation of the Residency License aligned with

the North Carolina General Assembly's intentions?

2b. In what ways was the implementation of the one-year clinical residency aligned with the North Carolina General Assembly's intentions?

3. How do edTPA scores compare between individuals who enter teaching through the Lateral Entry, traditional, and Residency License pathways?

    3a. What was the difference in edTPA performance between teachers prepared through the Lateral Entry and traditional routes before the creation of the Residency License?

    3b. What are the differences in edTPA performance between teachers prepared through the Residency License, traditional, and Lateral Entry routes?

Theoretical Underpinnings

Interpreting this study requires a conceptual understanding of why the residency approach was incorporated in state law and to what extent EPPs have implemented the model. Two areas of theory are particularly helpful in these conceptualizations: policy development and bureaucratic discretion. The multiple streams theory of policy development (Kingdon, 1984) may provide insight into how the residency approach was codified in statute given that the legislature's intention in including the model is currently unknown. As its name suggests, multiple streams theory proposes three streams: *problem, policy,* and *political.* These streams run independently throughout government and occasionally combine to open a policy window through which policy advocates may push their agendas forward (Kingdon, 1984).

Determining how the residency approach ended up in statute answers the first research question in this study but does not address how policy becomes practice. For that, we turn to theories of bureaucratic discretion. Heinen and Scribner (2007) describe bureaucratic discretion

as the degree of freedom available to the individuals who translate policy into practice. The level of discretion available to implementers depends on the trust between policymakers and practitioners (Huber et al., 2001). Despite varying levels of trust, nearly all policies afford bureaucrats some level of discretion (Keiser, 2001). For the purposes of this study, the bureaucrats include the program leaders for North Carolina EPPs who have the ability to implement Residency Licensure programs and to opt to use the one-year residency requirement in place of a more traditional minimum 16 week internship.

Statement of Significance

Understanding how the performance of teachers prepared through the Residency License pathway on the edTPA compared to that of their non-Residency License peers fills an important gap in the teacher preparation literature. Early research on edTPA performance indicates there may be relationships between edTPA scores and both entrance into teaching and early career performance (Bastian, 2018; Goldhaber et al., 2017); however, there has not yet been any analysis of difference in edTPA scores according to preparation pathway. As the Residency License program is very new and limited data exists, there have been no studies reviewing its implementation or effectiveness in North Carolina. This study was performed with the aim of helping policymakers understand the process by which the Residency License came to exist and how well lawmakers' vision for that pathway has been implemented. Identifying problems or issues in the current residency approach will allow legislators to issue technical corrections or additional guidance to further support best practices. Finally, understanding how EPP leaders exercise their discretion in a more prescriptive legislative context expands the current understanding of how bureaucratic discretion theory is applicable to the field of educator preparation. To date, no other study has examined the relationship between bureaucratic

discretion and teacher preparation programs under prescriptive state legislation or in the post-No Child Left Behind (NCLB) context.

Researcher Positionality

My personal experiences intersect with this research on several fronts. Following college, I spent two years as a Teach For America corps member teaching in a rural school district in eastern Arkansas. Although I grew up in a rural area, I moved to Chicago for my undergraduate education specifically because I wanted to experience a different lifestyle. Moving to Arkansas was difficult for two main reasons: first, I had never planned to go back to a rural setting after experiencing the stimulation of an urban area and, second, the community in which I taught in Arkansas was very different from that in my hometown, resulting in culture shock.

Although my educational background was in political science and international studies, my Teach for America placement was in K-12 music. During my first year, I taught general music in grades three through six. I learned very quickly that teaching music is similar in some respects to teaching reading: in order to do so effectively in the lower grades, you need a great deal of both content and pedagogical knowledge. I possessed neither. Throughout my childhood, I sang in choirs and played clarinet in the school band, but I lacked more formal musical training. My pedagogical training consisted of Teach for America's summer "boot camp" and took place in a sixth grade social studies classroom, which had limited transferability to a music classroom. I spent that entire first year feeling like a failure every day. One of the keys to Teach for America's success, in my opinion, is their reliance on extremely motivated, goal-oriented, Type-A personalities to grind through those two years, demanding success from their students and stopping at nothing to achieve their goals. Teach for America's model often produces results, but, for me, it was challenging to persevere through the experience. Teach for America provided

me with a person who was supposed to serve as an instructional coach, but she was responsible for approximately 20 teachers across several communities. She came once each semester, but because I was fairly adept at classroom management and she had no experience teaching music, that was the extent of our relationship. If I had been better at requesting help, she would have provided it, but I lacked the experience to know what questions to ask.

At the end of my first year, I received a "reduction in force" letter explaining that my position had been cut for the next school year. I ended up moving to the high school in the same district to take over the nascent high school choir program. I had a much better second year in many respects. I had more experience with choral singing than teaching elementary music theory, I found my teacher persona, and I had gained enough classroom experience to feel more confident. Moving to a new teaching assignment, however, meant I had to create an entire year's worth of lesson plans from scratch. As I reached the end of my second year, I realized that I had taken my students as far as I could without going back to school for a music degree. At that time, I had to decide whether I would stay a music teacher and commit to getting the education I needed to do it well or if it was time to move on. In leaving, I knew the moderately successful choral program at my school would fall apart in the space of a few years. Although the decision to leave my students and the program I had helped to build was difficult, I ultimately left the classroom to pursue an advanced degree in public policy.

My personal experience with an alternative teacher preparation program gives me insight into how teachers who enter the profession through alternative pathways might feel in the classroom during those early years. It is difficult for me to imagine how my teaching experience might have differed if I had undergone the longer and more consistent preparation in traditional programs. Leaving the classroom after only two years limits my perspective on teaching to that

of an alternatively prepared beginning teacher. I have no concept of what it is like to manage a classroom or plan lessons with 10 or 20 years of experience. Additionally, as a music teacher, I was frequently tapped by the principal to chaperone field trips or other outings because of the perception that my content was somehow less important than that of the core subject areas. I have no personal experience with the pressure core subject teachers feel to "teach to the test." My Teach for America experience certainly impacts this research because it colors my perspective of alternative preparation programs, particularly "fast-track" programs. When I think about teaching, I envision rural classrooms filled largely with non-White students. I have no experience teaching in urban or more privileged schools.

My K-12 policy experiences include a Masters of Public Policy and a combined five years of service at the North Carolina Department of Public Instruction (NCDPI) and North Carolina State Board of Education. Through those experiences, I was steeped in North Carolina-specific educational policy issues and spent considerable time rewriting state policy on teacher preparation after the passage of Session Law 2017-189, which created the Residency License. My insider knowledge of the North Carolina policy landscape allows me access to individuals who can provide more insights into the research questions. Those same experiences could bias my interpretations of the data I collect, so I will use the technique of memoing to address the effects my personal experiences have had on my thoughts about North Carolina education policy. I will also use semi-structured interviews to allow more freedom during interviews for participants to bring up topics and ideas outside of my personal areas of experience.

Definitions

Alternative Teacher Preparation - Alternative Teacher Preparation (also known as alternative certification) is a general term referring to processes and programs that prepare individuals who

hold baccalaureate degrees to become certified teachers. Programs vary widely in terms of length, content, and design and include emergency certification (Heinen & Scribner, 2007).

edTPA - The edTPA assessment is a subject-specific performance assessment and system of support used by U.S. educator preparation programs (Pearson Education, 2021a).

Lateral Entry - Lateral Entry was the primary alternative preparation pathway in North Carolina from 1985-86 through 2017 (NC GS §115C, 2020). North Carolina's Lateral Entry is also known as a "sink or swim alternative licensure program" (Zhang & Zeller, 2016, p. 80).

Out-of-Field - Individuals teaching out-of-field are typically teaching in subjects in which where they hold neither state certification or an academic degree (Seastrom et al., 2004).

Pedagogical Content Knowledge - Pedagogical content knowledge refers to a teacher knowing what to teach, how to teach it, and to which students it should be taught (Shulman, 1986).

Residency License- The Residency License is an alternative teacher preparation pathway in North Carolina established by the North Carolina General Assembly in 2017. It is the current alternative teacher preparation pathway in North Carolina (NC GS §115C, 2020).

Self-Efficacy - In the context of teaching, self-efficacy refers to a teacher's belief in their personal ability to effect change in the classroom environment (Gordon, 2001).

Traditional Teacher Preparation - Refers to a four-year undergraduate program resulting in licensure or certification and a baccalaureate degree (Darling-Hammond et al., 2002).

Conclusion and Organization of Subsequent Chapters

In this chapter, I have outlined the history and provided an overview of alternative teacher preparation in the United States in general and in North Carolina in particular, proposed a set of theories underpinning my current inquiry and outlined the purpose and significance of this research. Chapter 2 reviews relevant literature in the field of teacher preparation and provides a

more detailed explanation of the theoretical and conceptual frameworks. Chapter 3 presents the methodology of the study. Chapter 4 covers the analyses and results, and Chapter 5 presents a discussion of the results and implications of those findings for future research, policy, and practice.

CHAPTER 2: LITERATURE REVIEW

The following chapter details several main areas of the literature related to the effects of teachers on students, leading into the preparation of teachers and the evolution of alternative preparation programs, with special attention paid to fast-track programs and teacher residencies. An in-depth discussion of the effectiveness of alternative programs as quantified by a number of metrics follows, complete with cross-cutting findings regarding alternative programs.

Teacher Practices and Effects

Since the mid-20th century, researchers, policymakers, and educators have focused their attention on three major aspects of teacher education: (1) teacher quality and accountability, (2) an evolving understanding of the science of pedagogy, (3) and the combination of growing social and educational inequities with an increasingly diverse population of students (Cochran-Smith & Villegas, 2015). Mehta (2013) argues that these trends crystallized into a new "policy paradigm" (p. 291) following the 1983 report, *A Nation at Risk*. Key concepts in this new paradigm include educational achievement as a predictor of economic success, educational attainment measured by quantitative tests, the belief that a large number of American schools need reform, and the perception of teachers as the primary drivers of academic outcomes (Mehta, 2013).

Subsequent researchers documented the important influence teachers have on student achievement (Boyd et al., 2006; Dee & Cohodes, 2008). If teachers are, as Darling-Hammond (2000b) argues, the key factor in addressing persistent achievement gaps, it raises important questions regarding differences among teachers. We know not all teachers are equally effective, so how do we determine what makes truly "good teaching?" When reviewing teacher evaluation ratings, Bastian et al. (2018) found that school characteristics played a role in the ratings teachers received. In an attempt to separate the effects of student characteristics on student achievement

from those of teacher practices, Wenglinsky (2002) analyzed the 1996 NAEP mathematics scores for 7,147 eighth grade students and the associated NAEP student, teacher, school, and principal questionnaires. They compared the effect of the teacher quality indicators to the effects of student socioeconomic status and found that the effects of teaching were at least comparable to the effect of student background. Focusing specifically on the effect of teachers on student achievement, Rockoff (2004) analyzed panel data from two school districts in New Jersey. Rockoff observed large differences in teacher quality within schools and noted that a one standard deviation increase in teacher quality correlated to increases of approximately 0.10 of a standard deviation in math and reading test scores. Teacher experience was more strongly related to student achievement in reading than in math, with measurable differences in test scores (approximately 0.17 of a standard deviation) between students with beginning teachers and students with teachers who had ten or more years of experience (Rockoff, 2004). In an analysis of matched panel data from Texas, Rivkin et al. (2005) also found that teacher quality impacted achievement in both mathematics and reading, although they claim that observable characteristics including education and experience explain little of the variation in teacher quality. They address a commonly proposed educational policy, class size reduction, and argue that reducing class sizes by ten students is less effective at improving student achievement than increasing teacher quality by one standard deviation (Rivkin et al., 2005). Harris and Sass (2011) examined statewide K-12 panel data from Florida and found that teacher impacts on student achievement increased as the teacher gained experience. Contrary to popular belief, they found that those experience gains persisted throughout a teacher's career and did not fade after the first few years of teaching (Harris & Sass, 2011). These studies indicate that, in addition to other factors, teacher quality is a central determinate of student achievement.

Teacher Preparation

If we know that teacher practices impact student outcomes, it follows that teacher preparation could play a role in the practices teachers use in classrooms. Teacher preparation consists of two main pathways: traditional and alternative. Traditional teacher preparation programs typically include a four-year undergraduate program resulting in licensure or certification and a baccalaureate degree (Darling-Hammond et al., 2002). Traditional preparation programs produce approximately 70% of all new teachers each year (U.S. Department of Education, 2016). Wilson et al. (2002) argue that teacher preparation programs critically affect the skills and knowledge that teachers bring with them into the classroom. More recent research further supports the assertion that the practices teachers use in the classroom matter when it comes to student outcomes. Konold et al. (2008) found that the effect of teacher behaviors combined with difficulty of lesson plans accounted for 20% of students' scores when their teachers had formal pedagogical training. After accounting for socioeconomic status and classroom size, Wenglinksy (2002) found five variables positively associated with student achievement, the teacher's undergraduate major, professional development in higher-order thinking, professional development in diversity, the use of hands-on learning in the classroom, and the intentional practice of higher-order thinking skills in the classroom. Three of these variables were found to be directly related to teacher preparation. The focus of this dissertation is alternative teacher preparation, but a more general review of the teacher preparation literature suggests that preparation does affect student outcomes, justifying further inquiry into the variety of preparation programs in existence today.

The Evolution of Alternative Teacher Preparation Programs

Prior to the early 1990s, most individuals who wanted to become teachers had to complete traditional, college-based teacher preparation programs to receive their certification (Wilson et al., 2001). Alternative teacher preparation programs or alternative certification programs are "so named because they provide alternatives to the traditional 4-year undergraduate program path to teacher certification" (Darling-Hammond et al., 2002, p. 287). In general, alternative certification pathways decrease the time it takes for an individual to become the teacher of record who is solely responsible for the success of a classroom (Humphrey & Wechsler, 2007). Alternative preparation programs evolved in various states to mitigate teacher shortages and address questions about the quality of the existing traditional programs, including the relatively long period of time prospective teachers needed to invest (Johnson et al., 2005). U.S. states began establishing or expanding policies allowing alternative preparation pathways in the 1980s (U.S. Department of Education, 2016) and 40 states had created some type of alternative preparation program by 1993 (Wilson et al., 2001). Carter and Keiler (2009) note, however, that the rhetoric around alternative preparation established it as a tenet of the school reform agenda and not a stopgap measure to address shortages or fill open positions.

Many individuals in the field of teacher preparation have long held that professionalizing teaching through a consistent approach that includes standards-based instruction and performance assessments throughout a teacher's career is the best way to ensure effectiveness (Cochran-Smith & Fries, 2001). Additionally, they argue that teachers need specific teacher preparation to be successful and that states should increase preparation requirements to ensure that teachers possess the essential skills and knowledge they need to succeed (National Research Council, 2010). *A Nation at Risk* created the foundation for the neoliberal market-based reforms

that permeate education policy today (Mehta, 2013). One aspect of those market reforms deals specifically with the preparation of teachers. Using market principles, one approach to teacher preparation involves lowering barriers to entry such as formal coursework requirements or education degrees so that districts can recruit whoever they want for teaching positions. This idea rests on the assumption that any well-educated person can be an effective teacher (National Research Council, 2010) and that a major goal of many alternative preparation programs is to entice mid-career professionals to change careers and become teachers. Those in favor of the deregulatory approach tend to support alternative preparation pathways that rely on licensure exams to keep ineffective candidates out of the classroom (Cochran-Smith & Fries, 2001).

Despite the existence of alternative certification programs in many states across the country for the past three decades, there is limited research examining how those alternative programs evolved through state legislative and policymaking processes and why legislators felt they were needed. In their evaluation of program designs and funding incentives for the California intern program, Mitchell and Romero (2010) observe that California's legislature authorized university-based internship programs approximately fifteen years before alternative certification came to national prominence. The California Internship Teacher Preparation programs allowed new teachers participating in the programs to complete much of their teacher preparation coursework and certification requirements during their first one to two years in the classroom. The legislature created a similar program for district-based programs in 1983 and then rolled both laws together in the Alternative Teacher Certification Act (ATCA) of 1993. Importantly, the ATCA provided programs with candidate subsidies, which were increased over the next several years. (Mitchell & Romero, 2010). For the purposes of this research, it is important to note that California legislators included their intentions behind the intern program in

the California Education Code, noting that the program should recruit talented career changers into teaching; alleviate teacher shortages in math, science, technology and English language instruction and in specific geographical regions; and increase the number of minority teachers (2005 California Education Code Sections 44380-44386, 2005). Essentially, the primary motivations driving the California legislature appear to have been the mitigation of teacher shortages in a variety of areas and the desire to bring qualified mid-career professionals into the teaching field.

Many believe that the alternative teacher certification movement began in earnest in New Jersey in 1983 (Feistritzer, 2005). In 1983, the New Jersey Commissioner of Education, Saul Cooperman, led the development and release of a detailed proposal entitled *An Alternate Route to Teacher Selection and Professional Quality Assurance: An Analysis of Initial Certification,* which argued that individuals entering teaching through New Jersey preparation programs were largely deficient, lacking content expertise and standardized training across programs. The report went on to recommend that teacher training focus on the practical education of students, preferably on the job, who met minimum criteria, including possession of a Bachelor's degree and demonstrated subject-matter expertise (Tamir, 2008). Interestingly, the state had historically played a smaller role in education, leaving the education establishment of universities and districts to manage their own affairs. This historical precedent changed drastically when Thomas Kean, a Republican with a long-term interest in education, became Governor (Tamir, 2008). Kean and other state education leaders engaged in a high-profile attempt to implement a large-scale alternative teacher certification program in New Jersey, despite significant resistance from the education establishment. Unlike the legislature in California, state officials in New Jersey

were less concerned with teacher shortages in the state's urban areas and were more invested in moving forward a larger agenda to improve teacher quality (Klagholz, 2000; Zumwalt, 1991).

In 2001, when Congress reauthorized the Elementary and Secondary Education Act as the No Child Left Behind Act, it mandated the presence of "highly qualified" teachers in every classroom and established minimum standards for the determination by states whether a teacher was highly qualified (NCLB, 2002). Fully effective as of 2005-2006 (Laczko-Kerr & Berliner, 2003), these standards included holding a Bachelor's degree, obtaining full state certification or licensure, and demonstrating competency through coursework or state licensure examinations. In addition, there were comprehensive reporting requirements for states on measures of teacher quality (NCLB, 2002). NCLB's inclusion of demonstrating competency as a measure of teacher quality further opened the door for the propagation of alternative preparation programs.

Alternative preparation programs represent a small but established sector of teacher preparation. In 2014, the U.S. Department of Education reported more than 26,000 teacher preparation programs, of which 70% involved traditional routes, 20% were alternative programs based at institutions of higher education, and 10% were alternative preparation programs not based at institutions of higher education (U.S. Department of Education, 2016). Nationally, approximately one-quarter of new teachers are prepared through alternative programs (Goldhaber et al., 2017). The quality of alternatively prepared teachers has always concerned certain stakeholders, but the "highly qualified" language used in NCLB brought questions of teacher quality to the forefront (Laczko-Kerr & Berliner, 2003). When NCLB was reauthorized as the Every Student Succeeds Act (ESSA), the federal government eliminated the highly qualified requirement as it had existed in NCLB and instead required states to create their own definitions of "effective teacher" (Klein, 2018).

Proponents of alternative preparation argue that lowering the barriers to entry into the teaching profession increases the number of qualified teachers and attracts motivated subject-matter experts to the field of teaching (Cooperman & Klagholz, 1985). In theory, this larger pool of teachers increases diversity in terms of age and ethnicity (Wilson et al., 2001) and is better suited to address the needs of an increasingly diverse student population. In reality, there is a great deal of variation in both the teacher preparation policy landscape and in the design of alternative teacher preparation programs. In 2000, Feistritzer and Chester identified ten types of state alternative teacher preparation policies, which ranged from fully developed alternative preparation programs with coursework, supervised teaching, and mentoring requirements to emergency certifications with little to no support (Ruhland & Bremer, 2002).

The National Research Council (2010) noted that little systematic research exists about the structure and content of different alternative preparation programs and that many preconceptions regarding differences in rigor between alternative and traditional programs are not founded in strong research. Johnson et al. (2005) divided alternative preparation programs into two buckets, namely, centralized and decentralized programs, which they categorized based on the varying levels of state oversight across 11 programs in three states. They found that centralized programs had larger applicant pools and were more selective than decentralized programs, but that decentralized programs were better at ascertaining and filling local teacher vacancies. Regarding coursework, centralized programs benefited from economies of scale and were able to provide more specialized content instruction than decentralized programs, but their coursework offerings were often less tailored to the local curricula and context. Clinical experiences, known colloquially as student teaching, also differed between program types. Individuals in centralized programs found their clinical experiences to be less meaningful.

Conversely, decentralized programs tended to provide more meaningful clinical experiences through strong partnerships with local school districts (Johnson et al., 2005). Later research supports the idea that the success of alternative preparation programs depends on the intersection of school context, the background and experiences of teacher candidates, and the design and implementation of the alternative preparation program (Cochran-Smith et al., 2015; Humphrey & Wechsler, 2007). Given the wide variety of alternative program structures, this review will focus on the two program types that appear most commonly in the literature: fast-track programs and teacher residencies.

Fast-Track Programs

"Fast-track" refers to a class of alternative teacher preparation programs in which prospective teachers typically receive a few weeks of training prior to entering the classroom as a full-time teacher (Johnson et al., 2005). The most common structure for these programs includes a small amount of clinical practice, usually occurring over several weeks in the summer, followed by assignment to a classroom of students as the teacher of record along with some type of mentor support and continued coursework (Humphrey & Wechsler, 2007; Johnson et al., 2005; Kee, 2012). In their case studies of seven alternative certification programs (six of which were fast-track programs), Humphrey and Weschler (2007) found the vast majority of those (five of seven) adhered to this same basic structure. For their case studies, Humphrey and Weschler (2007) selected seven programs that varied in terms of the background characteristics of the individuals recruited into the programs and the support provided to the teacher candidates. They conducted interviews with key personnel in each program, including faculty members, support providers, classroom supervisors, and other relevant stakeholders. They surveyed program participants and selected a smaller group of individuals to follow through the first year of the

program by conducting additional interviews and classroom observations. Through these case studies, they identified seven key findings about fast-track programs:

(1) Individuals in these programs reflected the gender composition of the larger teaching profession and also tended to be reflective of the racial diversity present in the local teacher market.

(2) Despite proponents' claims that alternative preparation programs draw mathematicians and scientists out of their fields and into education, only a small portion of program participants were career changers from math and science fields.

(3) Many program participants already possessed teaching experience. In fact, many of the participants in the programs studied noted that teaching had always been their calling. Teach For America participants' motivations were a noteworthy outlier. When surveyed, nearly half indicated they wanted to explore teaching as a profession and another one-third planned to move on to other careers outside education.

(4) While alternative programs moved individuals into the classrooms very quickly, the path to full certification was similar in length to that of traditional programs.

(5) Programs considered the attenuated clinical practice they offered an important part of their programs in conjunction with coursework, which varied by program.

(6) Once placed, the value of participants' practical experiences varied by school context and were rarely managed effectively by the programs.

(7) Finally, all programs recognized the importance of mentoring for beginning teachers, but most programs had little control over the quality of support their participants received (Humphrey & Wechsler, 2007).

The abbreviated training and field experiences often available in fast-track programs frequently means that teachers only receive general information about teaching, which may leave them feeling unprepared for the realities of the classroom. Additionally, the variety of fast-track programs and their equally varied success with regard to the logistics of district relationships, clinical practice, mentorship, and other quality control measures (Humphrey & Wechsler, 2007; Johnson et al., 2005) can result in unequal levels of preparedness and quality in their graduates.

Teacher Residencies

In 2007, then U.S. Senator Barack Obama and U.S. Representative Rahm Emanuel issued a press release announcing the introduction of the Teaching Residency Act arguing:

> Even before new teachers enter our classrooms, we must provide them with the skills and support they need to serve children in high-needs school districts. Teaching Residency Programs would not only strengthen our teachers and schools but would bolster our nation's competitiveness by providing the best possible training to our next generation of leaders (para. 2).

Teacher residencies seek to address some of the weaknesses of fast-track programs by creating a best-of-both-worlds scenario in which teacher candidates are apprenticed to a master teacher for one year of supervised, paid part-time teaching with mentoring support and streamlined coursework (Kee, 2012; Sawchuk, 2011). The concurrent nature of the on-the-job training and coursework should, theoretically, align those components more clearly than student teaching in traditional programs, which typically happens after candidates have completed their pedagogical coursework (Sawchuk, 2011) or during the initial summer training that occurs in many fast-track programs. Residencies also emphasize the importance of the partnership between districts and

the residency program because such programs enable districts to place residents in specific schools and subject areas with the highest need (Woods, 2016).

Some of the earliest urban teacher residencies began in Chicago, Boston, and Denver in the early 2000s, and the model expanded significantly in subsequent years. Residencies gained national attention as a viable model for alternative teacher preparation during the 2008 presidential campaign because President Obama included them in his education plan (Klein, 2008). Since 2009, the federal government has appropriated more than $143 million to establish or expand approximately 26 residency programs (Sawchuk, 2011), necessitating the creation of residency program quality standards by the national support organization, Urban Teacher Residency United (Papay et al., 2012), which is now known as the National Center for Teacher Residencies. Despite growing national interest, however, the "work, decisions, values, and preferred dispositions of urban teacher residencies are beyond public scrutiny and accountability" (Boggess, 2010, p. 88). In North Carolina, the state legislature replaced its existing alternative teacher preparation model with the Residency License during the 2017-2018 legislative session. While teacher residency programs exist across the country, North Carolina appears to be one of the first states to codify a teacher residency model in state statute.

Preparation Pathway Variation

Although blanket descriptors like "alternative" and "traditional" are easy to use, many researchers argue that such distinctions are overly broad and often unhelpful due to the wide variety of programs within these categories (Boyd et al., 2009). When reviewing college-based preparation programs in North Carolina, Bastian et al. (2018) found significant differences in evaluation ratings for teachers who received their initial licensure at different state institutions of higher education (IHEs), which supports the assertion that there is as much variation within

pathways as between pathways (Boyd et al., 2006; Cochran-Smith & Villegas, 2015). Additionally, without more research (a) including subgroup analysis of individuals with similar background characteristics working in similar schools, (b) taking state and local contexts into consideration, and (c) examining the similarities and differences of program structures, it is unhelpful to compare programs, as it might inadvertently create an inaccurate picture of the teacher preparation landscape (Grossman & McDonald, 2008; Humphrey & Wechsler, 2007). Despite these difficulties, important studies have been performed to examine the effectiveness of alternative programs, including their effectiveness with respect to student achievement, the diversification of the teacher workforce, teacher retention, self-efficacy, and performance on licensure exams.

Effectiveness of Alternative Programs

As previously discussed, proponents of alternative preparation programs argue that such programs can attract mid-career professionals with content expertise to teaching, fill hard-to-staff positions, increase diversity in the teaching profession, and ensure students in disadvantaged schools have access to high-quality instruction from licensed teachers (Aragon, 2016; D. Boyd et al., 2012; Cooperman & Klagholz, 1985; National Research Council, 2010; Wilson et al., 2001). To determine whether these alternative programs are living up to their promise, the following section examines the literature on multiple measures of teacher effectiveness and describes how alternatively prepared teachers fare on each metric.

Student Achievement

Among many possible measures of effectiveness, student achievement is perhaps the one that is used most often to measure teacher quality. We know that teacher quality is an important contributor to student success (Boyd et al., 2006; Dee & Cohodes, 2008; Wenglinsky, 2002), but

research has varied over the years with regard to determining how we measure the effect of a teacher on student outcomes. In the early 2000s, researchers looked at the relationship between a teacher's innate academic abilities, generally measured on standardized tests, and student outcomes. Laczko-Kerr and Berliner (2003) stated that measures of verbal ability, while related to student outcomes, were no more predictive than existing measures of pedagogical knowledge or preparation. The Education Commission of the States (2005) found strong evidence of a relationship between a teacher's verbal ability and student achievement, but only moderate evidence of a relationship between a teacher's academic ability and student outcomes. Their recommendation was to interpret state policies centered on teachers' personal abilities with caution (Education Commission of the States, 2005). Given the evidence that teacher preparation has some effect on teacher quality (Wilson et al., 2002), many researchers have focused their inquiries on the relationship between the teacher preparation pathway and student achievement, and their findings have been decidedly mixed.

Due to the myriad ways in which states certify teachers, comparisons between groups are not always straightforward. Goldhaber and Brewer (2000) compared the mathematics and science performance of students assigned to teachers with different certification types including standard, probationary, and emergency certifications in the subject being taught, certifications in fields other than the subjects being taught, and private school certifications. They found that students taught by teachers with any type of certification in mathematics performed better on a 12th grade math test than students of teachers with private school certifications or certifications in fields other than math. The difference between groups was approximately 10% of a standard deviation on the tests. They found similar, but weaker results for science. In a review of the literature, the Education Commission of the States (2005) suggested that fully licensed high

school teachers generally produced students who had better achievement than teachers with emergency certifications or certifications that did not match their assigned courses. Their results suggest that, at least for high school math and science, the method of certification matters less than certification in the appropriate subject matter.

Laczko-Kerr and Berliner (2003) conducted a similar study, focusing on elementary students in Arizona. They assigned the teachers to two groups, which they describe as certified and undercertified. In their definition, undercertified teachers include those with emergency or provisional licenses who have not yet met the state requirements for full licensure. The study found that students assigned to undercertified teachers had the equivalent of approximately two fewer months of instruction than students assigned to certified teachers. Interestingly, Dee and Cohodes (2008) found that subject-qualified middle school teachers were no better at promoting student engagement or comfort with their subject matter than non-subject-qualified teachers. In fact, with the exceptions of math and social studies, there is effectively no benefit conferred by having a subject-qualified teacher at the middle school level. (Dee & Cohodes, 2008).

Studies evaluating the effectiveness of teachers over time have found that teachers who enter the classroom through non-traditional pathways, including Teach For America, can become more effective over time, although some studies tie that improvement to completing coursework and becoming fully certified (Darling-Hammond et al., 2005). Xu et al (2011) noted that students taught by Teach For America teachers, typically located in disadvantaged schools, are better off than they would be without those teachers but that the Teach For America corps members could be even more effective if they have additional pedagogical training. Although others have noted that the difference in gains produced by alternatively prepared teachers compared to traditionally prepared teachers at the beginning of their careers may fade over time as the teachers mature, not

necessarily because the alternatively prepared teachers receive more formal training (Boyd et al., 2006). Clotfelter et al. (2010) note that teachers prepared through North Carolina's Lateral Entry program tend to be slightly less effective than their peers at the beginning of their careers, but that the effects disappear over time. They also note, however, that Lateral Entry teachers leave the profession at high rates and that those individuals who stay are likely more effective than those who leave. Their observation raises another critique of alternative preparation programs which is the concern that high turnover rates associated with alternatively prepared teachers harm student achievement (Darling-Hammond, 2007).

For at least one alternative preparation program, Teach For America, Kane et al. (2008) found a moderate negative effect of high turnover on student achievement. They argue, however, that this negative effect is offset by the slightly higher effectiveness of Teach For America corps members. Glazerman et al., (2006) also found that Teach For America corps members outperformed their peers in mathematics by approximately 15% of a standard deviation, which would seem to support, at least in part, the conclusions Kane et al. reached. Early evidence provides an optimistic picture of the potential impact teacher residency programs could have on student achievement. In a study of the Boston Teacher Residency, researchers found that residency participants performed similarly to other beginning teachers in their first three years. Interestingly though, by their fourth and fifth years, residency teachers were outperforming not only their peers with the same levels of experience, but also teachers with more experience by as much as seven percent of a standard deviation (Papay et al., 2012).

While some researchers have documented both positive and negative effects of alternatively prepared teachers on student achievement, others have found little to no effect of preparation on student achievement. Kane et al. (2008) found that a teacher's initial certification

status had very little impact on student test scores. Additionally, they found little to no difference in the average effectiveness of teachers, regardless of certification status. Similarly, Goldhaber and Brewer (2000) noted that an important finding of their research was that teachers with emergency certifications in mathematics produced student achievement gains that were no worse than those produced by teachers with standard certifications. After a review of teacher preparation pathways in three states, the National Research Council (2010) concluded "that the pathway a teacher takes into the field has little to no effect on the contribution he or she makes to student learning" (p. 41).

Although most studies use student test scores as outcome measures, others have reviewed alternative outcomes as measures of student success. Suell and Piotrowski (2006) noted that alternatively prepared teachers demonstrate similar competencies in the classroom as teachers from traditional programs. Similarly, Glazerman et al. (2006) found no differences between Teach For America and non-Teach For America teachers in terms of student grade promotion, attendance, or disciplinary problems, but they noted that Teach For America teachers were more likely to report student behavioral issues than non-Teach For America teachers. However, Cochran-Smith & Villegas (2015) point to the fact that schools with large numbers of poor and minority students are the most likely to have underqualified teachers, like those participating in Teach For America, which could be related to issues of behavioral reports.

Diversifying the Teacher Workforce

While high student achievement is an expected outcome of all teacher preparation programs, many alternative preparation programs specifically attempt to recruit a more diverse pool of teacher candidates than traditional preparation programs. In addition to improving both the quality and quantity of teachers, increases in the numbers of male and minority teachers were

key goals in alternative preparation programs studied by Suell and Piotrowski (2006). As with student achievement, the evidence regarding this measure of effectiveness is mixed. Cohen-Vogel and Smith (2007) take the dimmest view of alternative preparation programs based on this metric, and, in their analysis of the Schools and Staffing Survey, argue that such programs have not significantly changed the demographic composition of teacher candidates, are ineffective at addressing concerns of teachers teaching out-of-field, and have not generated more candidates for positions in hard-to-staff schools.

Other researchers have found areas of diversification in which alternative programs are gaining ground. Wilson et al. (2002) noted in their review of the literature on alternative teacher preparation that alternative programs tended to attract teacher candidates who were more diverse with regard to age and ethnicity. According to their academic metrics, which included grade point average, however, alternative programs had a mixed track record of attracting the "best and brightest" candidates (p. 199). Most studies agree that alternative preparation programs are better at recruiting teachers who are older and less likely to be white than traditional preparation programs (Humphrey & Wechsler, 2007; Kee, 2012; Zientek, 2007). Kee (2012) found that more alternatively prepared teachers tended to be male, which contradicts findings by Humphrey and Weschler (2007) and Zientek (2007), who both found that alternatively prepared teachers were no more likely to be male than individuals prepared through traditional pathways. Both studies also noted that only a small percentage of teachers coming through alternative pathways were leaving careers in science or mathematics. Humphrey and Weschler (2007) noted that while alternatively prepared teachers were more diverse than the average teaching population, they were not necessarily more diverse than the teacher populations in the districts in which they were teaching. They found that many of the alternatively prepared teachers in their study had prior

teaching experience, and Zientek (2007) observed that alternative program routes allowed younger teachers to avoid traditional pathways. These findings suggest that while alternative programs might succeed in bringing in a slightly different teacher population, they are not necessarily living up to the promise of enticing mid-career professionals into the field of education.

With respect to teacher diversity, residencies again showed initial promise. Graduates of the Boston Teacher Residency Program from 2004-2005 to 2010-2011 were significantly (16 percentage points) less likely to be White, eight percentage points more likely to be African American, and four percentage points more likely to be Hispanic than other novice teachers hired during the same time period (Papay et al., 2012). The veteran teacher population in Boston during this time period was more diverse than its non-residency novice teachers, suggesting that the district had been less successful at recruiting diverse non-residency candidates than it had been in the past. When Papay et al. (2012) compared residency program graduates with the larger Boston Public Schools teacher population, they found that residency graduates were 13 percentage points less likely to be White, slightly more likely to be African American, and almost twice as likely to be Asian or Hispanic, suggesting that the increased diversity in the residency program is meaningful in the context of these changing workforce dynamics.

Teacher Retention

While alternative programs in the aggregate might not be succeeding at increasing underrepresented individuals in teaching, a second, equally important question regarding alternative programs is whether individuals who complete them stay in teaching. One critique of alternative preparation programs is that they are more concerned with recruiting teachers than with ensuring that they stay (Costigan, 2005). As a result, some researchers argue that retention

is a major issue with alternative certification. Darling-Hammond (2000a) points out that data from fast-track alternative certification programs show that nearly 60% of those individuals leave teaching by their third year. Only 11% of Teach For America participants report intending to stay in teaching for ten years, though this aligns with Teach For America's branding as a leadership development program and not one designed to decrease teacher shortages (Humphrey & Wechsler, 2007).

Compounding questions of alternatively prepared teachers' willingness to remain in the profession is the challenge posed by the fact that disproportionate numbers of alternatively prepared and uncertified teachers teach in urban school settings with large minority populations (Wilson et al., 2001). In many cases, those schools also have larger populations of students eligible for free lunches, bilingual education, and special education; a lower percentage of students with passing scores on standardized tests; and lower high school graduation rates (Kane et al., 2008). Carter and Keiler (2009) point out that many of these school contexts are outside of the educational experiences and paradigms of the alternatively prepared teachers. Additionally, it is likely these experiences are also outside of the frame of reference for the faculty members who are charged with preparing these individuals for the realities they will face in the classroom (Carter & Keiler, 2009). Along with higher needs student populations, many of these schools are characterized by a lack of support for teachers, and inadequate support by school administrators is a major challenge commonly reported by alternatively prepared teachers (Ng & Peter, 2010).

While some studies have shown that alternatively prepared teachers are relatively less likely to stay in the classroom, others have shown more promising outcomes. In their review of the Boston Teacher Residency, Papay et al. (2012) found that the five-year retention rate for residency graduates exceeded that of other new hires in Boston Public Schools during the same

period by approximately 20 percentage points. Other studies examining teachers' attitudes about staying in the classroom found that, with few exceptions, traditionally and alternatively prepared teachers demonstrated similar levels of commitment to teaching (Zientek, 2007). In their review of seven alternative preparation programs, Humphrey and Weschler (2007) found that at least half of the participants in five of those programs intended to remain in teaching for at least ten years. They concluded that while these reported intentions would not necessarily translate into retention, they suggested a long-term commitment to the teaching profession among these program participants.

To better understand the retention of teachers who had different preparation pathways, Zhang and Zeller (2016) conducted a mixed methods inquiry in North Carolina that investigated differences in retention between individuals who entered the teaching profession through three pathways: traditional preparation, Lateral Entry, and NC TEACH. NC TEACH differs from Lateral Entry by virtue of the fact that it is a state-wide teacher recruitment program focused on "recruiting, preparing, and supporting high-quality mid-career professionals" (p. 80) who want to become teachers. Participants in the NC TEACH program receive several weeks of training in the summer and support throughout their first year of teaching, including 12 semester hours of graduate education (Zhang & Zeller, 2016). Researchers conducted 60 interviews with initially licensed first-year and second-year teachers in North Carolina and gathered data on nine variables that the researchers hypothesized could be related to retention. The three preparation pathways were approximately equally represented in the study sample. They conducted three follow-up sessions with participants over the next seven years to track teacher retention. To supplement the qualitative interview data, the researchers also calculated retention percentages and used logit modeling to estimate the likelihood of retention based on preparation type.

Overall, they found that teachers prepared through Lateral Entry were much more likely to leave the classroom in both the short and longer term. Teachers prepared through NC TEACH and traditional pathways had similar retention in the first three years, but traditionally prepared teachers were more likely to still be teaching at the seven-year follow up. Through the qualitative interviews, the researchers determined that the career plans voiced by teachers in their first year of teaching were completely unrelated to their ultimate decisions to stay or leave the teaching profession. In reviewing both the quantitative and qualitative results, including the participants' demographic characteristics, they concluded that teacher preparation explained approximately one-quarter of the likelihood of teacher retention (Zhang & Zeller, 2016).

Teacher Self-Efficacy

As defined by Gordon (2001), teaching self-efficacy is a teacher's confidence in their own ability to enact change in the classroom. Self-efficacy relates to a teacher's ability to effectively influence academic outcomes such as student engagement and achievement, and their own well-being in the school climate (Barni et al., 2019). It is logical to predict that a teacher's preparation could influence how comfortable that teacher is with regard to the daily tasks and challenges inherent to the profession. Supporters of traditional teacher preparation argue that individuals prepared through alternative programs have less teaching efficacy and feel underprepared for the classroom (Darling-Hammond et al., 2002). Substantial research exists supporting this assertion.

Darling-Hammond et al. (2002) found that teachers who completed a formal teacher preparation program felt better prepared to teach than individuals who received preparation coursework at a variety of institutions. The latter is a common model adopted by many alternative programs. Zientek (2007) took a more in-depth look at this topic and compared the

confidence of traditionally and alternatively prepared teachers using several different metrics. They found that traditionally prepared teachers were more confident in their ability to plan, communicate, and use instructional strategies in the classroom. They noted that none of the novice teachers felt confident when answering the questions related to multiculturalism or the accurate measurement of student learning. To examine the differences in feelings of preparedness between alternatively and traditionally certified teachers, it is important to account for possible differences due to selection bias based on the types of individuals who end up in each program. Kee (2012) used propensity score matching with a sample of approximately 1,700 first-year teachers drawn from the 2003-2004 National Center for Education Statistics' Schools and Staffing Survey, a nationally representative cross section of teachers drawn every four years. In this sample, approximately 28% of the first-year teachers had completed an alternative certification pathway. Using propensity score matching allowed the researcher to sort teachers from each pathway with similar background characteristics into groups, thereby reducing (though not eliminating) the effects of selection bias. Through this analysis, they found that alternatively prepared teachers tend to feel less prepared than their traditionally prepared peers. The study identified summer field experiences with few students, short days, and a focus on either remediation or enrichment activities as contributing to teachers' feelings of being poorly prepared for the normal school environment (Kee, 2012).

While no researchers have concluded that alternatively prepared teachers feel more prepared than traditionally prepared teachers in the classroom, Suell and Piotrowski (2006) were unable to find any differences between teachers prepared through different pathways on their survey of teachers' confidence in their instructional skills. Somewhat more interesting is the research suggesting that the preparation pathway is likely not a significant factor affecting

teachers' sense of efficacy (Unruh & Holt, 2010). In fact, Zientek (2007) argues that a teacher's path to certification only explains approximately *one percent* of the variation in teaching efficacy. It seems likely that the variation within pathways explored earlier in this chapter drives the impact teacher preparation programs have on teacher self-efficacy.

Licensure Exams

Occupational licensing exists in many fields to provide an easily understandable measure of professional quality to individuals both inside and outside of the profession (Angrist & Guryan, 2008). In education, teacher licensure exams measuring field-specific knowledge, and pedagogical skill such as the *Praxis* series or the National Teacher Examination are useful for assessing a teacher's qualifications (Blackford et al., 2012; Ingersoll, 2019). In the United States, the most commonly used teacher licensure tests are the *Praxis* series (Shuls & Trivitt, 2015), comprising three assessments, namely, a test of basic skills, tests on content and pedagogy, and a performance assessment that involves an observation, interviews, and documentation prepared by the teacher. States that use the *Praxis* series can choose to use any combination of these assessments as licensure requirements (Blackford et al., 2012), and state policymakers set the cut scores to determine how much knowledge teachers must demonstrate (Shuls & Trivitt, 2015).

The results of research on the relationships among teacher preparation, licensure exams, and teacher quality are mixed. Clotfelter et al. (2010) found that licensure exams were predictive of student test scores, particularly in algebra and geometry. Some studies have indicated that alternatively prepared teachers outperform traditionally prepared teachers on licensure exams (Shuls & Trivitt, 2015; Wilson et al., 2002), though licensure exams appear to be unrelated or weakly related to student achievement. For example, when controlling for *Praxis* scores and college selectivity, Xu et al., (2011) found that the higher student achievement gains of students

taught by Teach For America corps members were significantly reduced. Wenglinsky (2000) also found a relationship between licensure exams and background characteristics. They noted that teachers who attended private institutions of higher education, were in programs with greater percentages of traditional students and were taught by more diverse faculty had higher content and pedagogy *Praxis* scores. Based on these findings, one critique of these licensure exams is that they serve as a barrier to entry into the teaching profession (Angrist & Guryan, 2008) by focusing exclusively on knowledge and failing to assess the skills and practices teachers must demonstrate every day (Mehta & Doctor, 2013).

Shuls and Trivitt (2015) argue that there are legitimate reasons indicating that those who score higher on *Praxis*-style licensure exams would make better teachers: *Praxis* tests measure content and the authors expect that individuals with more content expertise would be better at providing instruction in that area. Licensure exams are also general measures of intelligence, and the authors assume that smarter people make better teachers. In their study, they tie teacher licensure scores from the Arkansas Department of Education to student achievement data in grades 3-8 from 2004-2008. Arkansas has employed licensure exams since the 1980s, but it only began using the *Praxis* series in 2000. Therefore, the authors normalized the test scores for the entire period for which they had scores to compare teachers with more and less experience. They linked teachers to specific grades in schools with administrative data, used value-added modeling to calculate the average value-added for school grades and then created a model to measure the effects of teacher test scores and certification type on student achievement. They found that alternatively certified teachers scored, on average, higher on licensure exams than traditionally prepared teachers, but the traditionally prepared teachers tended to perform slightly higher on measures of student achievement. However, there was significant variation among teachers in the

same pathway, which is consistent with other literature reviewed in this chapter. The authors also suggest that a test that measures the full range of a teacher candidate's abilities, rather than simply knowledge, would likely have greater predictive power (Shuls & Trivitt, 2015).

Unlike the *Praxis* series, which, with the exception of the *Praxis III*, focuses almost exclusively on knowledge, the edTPA addresses the application of knowledge in actual classrooms (Mehta & Doctor, 2013). The edTPA is a subject-specific performance assessment in which teachers create a portfolio that includes video footage, examples of student work, and lesson plans. It is similar to the National Board for Professional Teacher Standards assessment (Goldhaber et al., 2017; Mehta & Doctor, 2013). While there is not yet a great deal of research comparing edTPA performance by teachers prepared through different pathways, Goldhaber (2017) explored the possible relationships among edTPA performance, employment, and teacher effectiveness. Using administrative data from the State of Washington, the author examined the edTPA scores from 2,362 teacher candidates who took the assessment during the 2013-2014 academic year. He employed a logit model to determine the probability a candidate would enter the Washington public school system and value-added modeling to examine the predictive value of edTPA scores on teacher value-added data. Goldhaber (2017) found that edTPA scores were highly predictive of whether a teacher candidate would enter the Washington public school system, but the results were less clear regarding the predictive power of the edTPA for teacher effectiveness. When the author distilled the edTPA scores down to a pass/fail metric, the test was slightly more predictive of teacher effectiveness in reading, but not at all in math. Finally, an interesting finding from that study is that Hispanic teacher candidates were three times more likely to fail the edTPA after it became a requirement in Washington than non-Hispanic white candidates (Goldhaber et al., 2017). While edTPA research is still evolving, it is possible that the

performance-based nature of the assessment will render it a better predictor of teacher quality than standard licensure exams.

Cross-Cutting Findings

Certain themes regarding alternative teacher preparation including out-of-field teaching, program design, and the importance of mentoring, appear repeatedly throughout the literature in relation to multiple measures of effectiveness. Given their prominence in the literature, these subtopics each warrant their own section below to facilitate a more in-depth review of how they impact our understanding of alternative teacher preparation.

Out-of-Field Teaching

The first cross-cutting finding relates to out-of-field teaching. Researchers define out-of-field teaching as teachers teaching subjects for which they are not completely qualified. In these cases, the teacher is generally not unqualified to teach, but the subject they are assigned to teach is misaligned with their credentials (Ingersoll, 2019). Central to this analysis is the fact that alternatively prepared teachers are significantly more likely to end up teaching out-of-field than their traditionally prepared peers and are therefore disproportionately affected by the unique challenges of out-of-field teaching (Van Overschelde & Piatt, 2020). In defining what makes teachers highly qualified, the federal NCLB attempted to limit out-of-field teaching (NCLB, 2002), but out-of-field teaching has persisted, particularly in low-income school districts (Peske & Haycock, 2006). Perhaps due to the understanding that out-of-field teaching is a problem not easily solved by legislation, the most recent authorization of the Elementary and Secondary Education Act, ESSA, requires that ineffective or out-of-field teachers be equitably distributed among lower and higher income children and between White and non-White children (ESSA, 2015). Researchers note that this change has resulted in an increasing rate of out-of-field

teaching. Van Overschelde and Piatt (2020) discovered that students in Texas are much more likely to be learning from out-of-field teachers under ESSA than they were under NCLB.

Out-of-field teaching presents problems for classroom practices (du Plessis, 2015), student achievement (Clotfelter et al., 2010; Dee & Cohodes, 2008), and teacher retention (Donaldson & Johnson, 2010; Ingersoll, 2019; Patterson et al., 2003). Through a series of qualitative interviews, observations, and document analyses, du Plessis (2015) discovered that out-of-field teachers are less likely to engage in in-depth content discussions with students. Additionally, because they are more likely to lack pedagogical content knowledge, many out-of-field teachers engage in lower quality instructional practices (du Plessis, 2015). Likely as a result of the pedagogical problems associated with out-of-field teaching, students taught by out-of-field teachers experience less academic growth (Clotfelter et al., 2010). In comparing student performance relative to out-of-field teaching, researchers have found that students at all achievement levels benefit from taking classes with in-field teachers, whereas all students were negatively affected by taking classes taught by out-of-field teachers (Dee & Cohodes, 2008). In addition to the challenges out-of-field teaching poses for classroom practice, teachers assigned to out-of-field classes often suffer from increased stress (Donaldson & Johnson, 2010), low morale, and decreased commitment to their jobs (Ingersoll, 2019). These teachers are more likely to leave their out-of-field roles (Donaldson & Johnson, 2010; Patterson et al., 2003). Interestingly, Donaldson and Johnson (2010) found that in-field science teachers were actually at slightly higher risk of resigning than their out-of-field peers, perhaps due to these in-field teachers leaving to pursue more lucrative careers in the sciences.

Program Design

Despite the well documented variation in alternative preparation programs already discussed in this chapter, researchers have identified several program design elements that seem to improve alternatively prepared teachers' experiences. Program design is especially important not only because of its ability to impact teacher effectiveness but also because the features and characteristics in individual programs are more easily changed or modified than the characteristics of the school sites where teachers complete their clinical practice (Kee, 2012). Boyd et al. (2008) noted that, despite a large number and variety of programs, the overall curricula and structure of elementary teacher education programs were more similar than they were different, which implies that the implementation of effective programmatic elements is feasible across programs.

Pedagogical Instruction. One key difference between traditional and alternative preparation programs is the focus of programmatic coursework. In traditional preparation programs based at colleges, candidates generally spend more time studying pedagogy or learning about development (Boyd et al., 2008). Despite this structural difference in programs, researchers have identified extensive pedagogical instruction that includes instructional strategies, lesson planning, and coursework on curricula as being particularly important for alternatively prepared teachers (Wilson et al., 2001; Zientek, 2007). In a study about feelings of preparedness among alternatively certified teachers, Kee (2012) recommended that preparation programs focus the coursework for alternatively prepared teachers on instructional methods, especially adapting curricula for different types of learners, learning theory and pedagogy, and understanding developmental psychology, to ensure teachers feel more prepared when they begin teaching. In addition to increasing feelings of preparedness, alternatively prepared teachers who

have more opportunities to focus on the routines of the classroom tend to, on average, be more effective during their first year of teaching (Boyd et al., 2009).

Field Experiences. Researchers disagree on the level of classroom experience alternatively prepared teachers bring into their programs. In their review of seven popular alternative preparation programs, Humphrey and Weschler (2007) found that more than 60% of participants in five of the programs had prior classroom experience, which conflicts with Kane's (2008) assertion that traditionally prepared teachers typically have supervised student teaching experiences whereas alternatively certified individuals normally have little classroom experience. In a subsequent study, Humphrey et al. (2008) noted that alternative preparation programs should intentionally recognize their candidates' prior classroom experience as an asset. Regardless of how much prior classroom experience alternatively prepared teachers possess, it is clear that programs place their candidates into schools with the assumption that those candidates' prior knowledge and experiences coupled with intensive preparation provided by the program qualifies them to teach students (Cochran-Smith et al., 2015).

Researchers investigating teacher preparation have studied how field experiences (otherwise known as clinical teaching or practice) impact teachers once they enter the classroom as teachers of record. Kee (2012) found that even a few weeks of clinical practice result in stronger perception of preparation than no clinical practice. They also found that longer clinical practice corresponded to stronger feelings of preparedness, and concluded that alternative preparation programs should offer the longest field experiences they can afford (Kee, 2012). The length of the field experiences, while important, is not the only factor preparation programs should consider when designing their approach to clinical practice. Wilson et al. (2002) pointed out that teachers' field experiences are more meaningful and result in greater learning when the

teachers' activities during the field experience are focused and structured. Along with structured experiences of sufficient length to be meaningful to prospective teachers, alternative preparation programs should ensure that these field experiences focus on the development and integration of content-specific pedagogical practices (Friedrichsen et al., 2008).

Partnerships. In addition to strong pedagogical instruction and meaningful field experiences, strong partnerships with school districts are an essential component of successful alternative preparation programs. Humphrey et al. (2008) found that the most effective alternative programs place their students in schools with strong leadership, a positive culture, and enough resources to succeed. Partnerships among school districts, preparation programs, and other support organizations can provide a rich context in which programs can meet specific community needs (Heinen & Scribner, 2007) and ensure that they are able to determine which school cultures are most conducive to clinical practice placements. Strong partnerships with local districts not only enhance the quality of clinical practice but also set the stage for an employment pipeline from the preparation program into local vacancies (Johnson et al., 2005).

Importance of Mentoring

At the beginning of their careers, teachers from both alternative and traditional preparation programs face a period of time during which they are less effective than they will be later in their careers (Foote et al., 2011). Strong partnerships with local school districts can support the transition prospective teachers make from their preparation programs into classrooms. While clear expectations, recognition, encouragement and feedback benefit all teachers, these types of supports are especially important for beginning teachers (Tran & Smith, 2020). Alternatively prepared teachers face the challenge of learning how to teach at the same time that they are actually teaching students (Unruh & Holt, 2010). Due to their lack of

experience and training, new teachers from alternative preparation programs may not know how to effectively manage their classrooms and teach (Foote et al., 2011). While these challenges occur once teachers are placed in jobs and are no longer technically in alternative preparation programs, Costigan (2005) argues that alternative preparation programs should address the experiences and thinking processes of new teachers during the first few years of teaching. The support provided by new teacher induction programs, particularly mentoring, effectively provide alternatively prepared teachers the support and on-the-job training they need to succeed (Carter & Keiler, 2009; Unruh & Holt, 2010).

School-based support systems are particularly important for developing alternatively prepared teachers' sense of teaching efficacy and professional fulfilment (Unruh & Holt, 2010). The existing literature on teacher support strongly indicates such systems are critical to teacher retention (Carter & Keiler, 2009). Effective alternative preparation programs select mentors carefully, ensuring that those individuals have the time and ability to collaborate on lesson planning with new teachers, share resources, and conduct multiple observations with opportunities for new teachers to receive constructive feedback (Humphrey et al., 2008). Shared content expertise between mentors and mentees is beneficial but not necessary for a successful mentoring relationship. At times, the mentor's role is less about content knowledge and more about the provision of general support regarding issues of classroom management and the navigation of school or district bureaucracies (Foote et al., 2011).

Unfortunately, if mentoring programs are not carefully managed, issues like infrequent contact between mentors and new teachers can compromise the effectiveness of this type of support (Humphrey et al., 2008). When program personnel and school-based staff do not work collaboratively, the support offered by both create bureaucratic obstacles for new teachers rather

than creating a coherent learning environment (Foote et al., 2011). Most alternative preparation programs have little control over the mentoring that occurs in schools, so the quality of mentoring teachers receive is variable (Humphrey & Wechsler, 2007). When implemented well, mentoring support is exceptionally beneficial for both alternatively prepared teachers and the experienced teachers who mentor them. New teachers can provide their mentors with support regarding new educational technologies and insights into changing student demographics. Successful mentoring relationships address "both the cooperative needs of veteran teachers and the instructional support needs of new teachers" (Tran & Smith, 2020, p. 99).

At this point in the chapter, we have explored the foundational literature regarding the importance of teachers and teacher preparation, including an overview of two types of alternative preparation programs: fast-track programs and teacher residencies. We have reviewed the impact of the teacher preparation pathway on a wide variety of outcomes, including student achievement, the diversification of the teacher workforce, teacher retention, teacher self-efficacy, and licensure exams and examined the special relevance of out-of-field teaching, program design, and mentoring.

As the topic of this dissertation is the residency approach in North Carolina, it is important to include a summary of teacher residencies at this point. Teacher residencies have attempted to address some of the weaknesses of fast-track programs through extended paid clinical practice under the supervision of a mentor teacher during which the teacher candidates participate in streamlined coursework (Kee, 2012; Sawchuk, 2011). Early evidence of the effectiveness of teacher residencies has indicated that there are potentially positive impacts on student achievement, teacher diversity, and teacher retention (Papay et al., 2012) During the 2017-2018 legislative session in North Carolina, the legislature replaced its existing alternative

teacher preparation model with a Residency License and gave EPPs the option to require a one-year residency or a minimum 16 week internship. While residency programs exist across the country, North Carolina appears to be one of the first states to codify a residency approach in statute, warranting further inquiry into the lawmakers' reasoning and the effects of their actions.

Theoretical Underpinnings

Two main bodies of theory, namely, policy change theory and bureaucratic discretion, provide the foundation for the conceptual framework outlined later in this chapter. The following section highlights the key literature in these areas and is followed by an explanation of the overarching conceptual framework for this dissertation.

Multiple Streams for Policy Development

To better understand the perceptions and intentions behind North Carolina lawmakers' decision to add the residency approach to the sweeping teacher preparation reforms present in SL 2017-189, it is helpful to begin with a discussion of policy change theory and to consider how such a theory may or may not apply to the North Carolina context. The remainder of this section will focus on one major contemporary theory of policy making, that is, multiple streams, and how this theory could help explain the emergence of the residency approach in North Carolina.

John Kingdon, the father of multiple streams theory, once commented, "it seemed to me that we knew something about how issues were decided, but that we knew much less about how they got to be issues in the first place" (Kingdon, 1984, p. vii). This line of thinking, along with questions about how and when ideas become policy issues, and how policy agendas are decided, led to the development of the multiple streams theory of policy change (Kingdon, 1984). The multiple streams approach to policy change has three distinct components: (1) it focuses more on agenda-setting than policy choice or implementation, (2) it builds on organizational research

theory known as garbage can decision-making, and (3) it highlights the tension between order and activity in policy making (McLendon et al., 2015). As its name suggests, multiple streams theory comprises three streams: problems, policies, and politics (Kingdon, 1984). The *problem stream* includes circumstances or conditions that policymakers interpret as problems or issues. The *policy stream* contains ideas that individuals in policy communities (referred to as specialists) have generated over time. Finally, the *political stream* encompasses the dynamic changes, both planned and unplanned, to the political landscape (McLendon et al., 2015). According to Kingdon (1984), these streams generally flow independently of one another throughout the government, which can result in solutions searching for problems. Kingdon refers to this state as the "policy primeval soup" (Kingdon, 1984, p. 123) in which policy ideas float around, occasionally bumping into one another and sometimes coalescing together to open a policy window, allowing policy advocates to mobilize attention around their preferred policy issues and solutions. The multiple streams theory describes a policy environment prone to "rapid, sometimes unpredictable change" (McLendon et al., 2015, p. 51). The multiple streams theory translates well to education policy, postulating that policy changes are most likely to happen when existing policy solutions are tied to issues of concern for politicians during dynamic political moments such as election years or major shifts in public opinion (McLendon et al., 2015). Important for the present study is the fact that other researchers have applied Kingdon's framework to education policy processes (Shaw, 2019; Lewis & Young, 2013; Young et al., 2010; Houlihan & Green, 2006; Stout & Stevens, 2000). In a multiple state analysis of reading policy development, Young et al. (2010) found that applying the multiple streams framework helped explain the agenda-setting process, even in different states. They also found that the type of issue and advocacy by state governors could influence the application of Kingdon's model

from the federal to the state context (Young et al., 2010). Kingdon's three streams could explain the apparently random appearance of the North Carolina residency approach. I use these three streams, *political, policy,* and *problem,* to develop a policy development interview protocol. The interview questions were crafted to elucidate how independent actions and circumstances within each stream may have culminated in the opening of a residency approach policy window. In evaluating the interview responses, I integrate Kingdon's model into my coding and analysis.

Bureaucratic Discretion

Understanding how the residency approach was codified in state law is necessary to comprehending lawmakers' perceptions of and possibly intentions toward teacher residencies in North Carolina, but it provides very little insight into the ways in which Session Law 2017-189 was translated into actions and programs throughout the state. To gain a deeper understanding of how policies translate into practices, we now turn to the idea of bureaucratic discretion. In the context of policy implementation, discretion relates to the degree of freedom available to the individuals who translate law or policy into programs and practices (Heinen & Scribner, 2007). This "space between the rules" (Hawkins, 1986, as cited in Heinen and Scribner, 2007) can vary depending on how policy actors write laws and policies. The theory of bureaucratic discretion begins with the assumption that legislators care about how laws are eventually implemented by bureaucrats. If legislators have an interest in seeing their preferred outcomes, it could benefit legislators to let agencies develop policies, since individuals in agencies generally have greater subject-matter expertise than legislators and could craft policies that are more likely to get legislators the outcomes they desire (Huber et al., 2001). Broad discretionary space for bureaucrats can foster new and innovative implementation practices, but can also create an environment that allows external pressures at odds with the program mission to influence

implementation (Heinen & Scribner, 2007). The degree of delegation from lawmakers to bureaucrats often depends on the trust between them. If legislators trust the implementing agencies, they tend to delegate more broadly. When that trust decreases, legislators write more prescriptive laws in an attempt to reduce implementation discretion (Huber et al., 2001). Session Law 2017-189 tends toward this more prescriptive category of laws, particularly with respect to educator preparation and licensure. In fact, the Residency Licensure section of NCDPI's General Licensure Requirements policy lists the first requirement for this license type as "meets all of the following requirements as stated in GS 115C-269.15 270.20(5) and GS 115C-269-15(b)" (NC State Board of Education, 2021a). Due to the prescriptive nature of the statute, the state education agency simply referenced the requirements specified in law and did not rewrite them in the policy. Even in this situation, organizational decision makers still retain some degree of discretion (Heinen & Scribner, 2007). Because it is nearly impossible for lawmakers to craft perfectly controlled laws, individuals at the program implementation level can still exercise varying levels of discretion through their interpretation of the law and policies (Keiser, 2001).

The existence of bureaucratic discretion generates one obvious question: who are the bureaucrats? Forty years ago, Michael Lipsky (1980) popularized the idea of the street-level bureaucrat who interacts directly with the public and exercises discretion "over significant aspects of citizens' lives" (Lipsky, 1980, p. 4). For Lipsky, street-level bureaucrats include large proportions of public employees, particularly in fields like public education, public health, public safety, and welfare. He notes that more dynamic work environments that do not lend themselves to prescribed or standardized modus operandi create more room for these street-level bureaucrats to exercise discretion (Lipsky, 1980). Although Lipsky envisioned street-level bureaucrats as the individuals delivering public services to citizens, his conception of the street-level bureaucrat

also translates to the context of education. Much of the existing education literature with respect to bureaucratic discretion focuses on teachers as street-level bureaucrats and examines student outcomes in areas like discipline, gifted assignment, and academic achievement (Grissom et al., 2015; Grissom & Redding, 2016; Keiser et al., 2002; Rocha & Hawes, 2009). While teachers provide direct services to the public, who take the form of students and parents, the metaphor extends to educator preparation program leaders. Heinen and Scribner (2007) applied the theories of bureaucratic discretion and the street-level bureaucrat to understand why five alternative certification programs in Missouri developed in different ways. They determined that, while NCLB created an urgent need for highly qualified teachers, the broad state-level regulations for how programs could meet that need allowed for substantial variability among programs. Importantly, the state-level regulations were intentionally minimal to allow innovation. In that wide discretionary space, some program leaders struggled to balance production efficiency (producing teachers quickly to fill vacancies) and teacher effectiveness (Heinen & Scribner, 2007). In their study, Heinen and Scribner evaluated a policy context with broad regulations from the state agency. As noted above, North Carolina's Session Law 2017-189 was written in a prescriptive way, limiting educator preparation program leaders' choices with regard to their Residency License programs. While the North Carolina General Assembly wrote Session Law 2017-189 in a way limiting discretion and NCDPI translated those laws into state policies with some additional modification, EPP leaders do have some discretion in how they specifically design their programs, including whether they choose the minimum 16 week internship or one-year residency for candidates' clinical practice, and whether they offer a Residency License program. These program leaders work to "interpret and implement state policies within their unique contexts while also attempting to ensure fidelity of implementation"

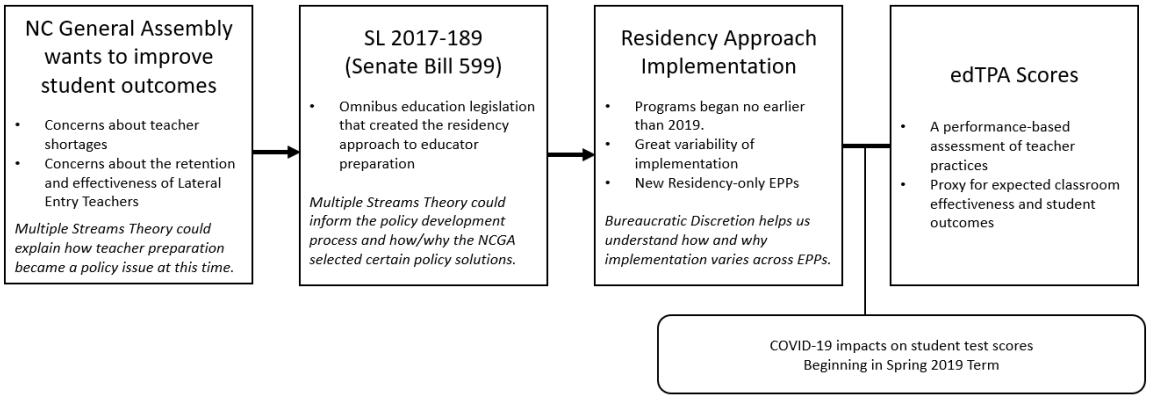
(Heinen & Scribner, 2007, p. 6). My interview questions for program leaders were crafted to enable me to determine how these leaders interpreted their own levels of discretion when implementing the residency approach. I also investigate their perceptions of legislative intent to see if and how those perceptions impacted their behavior when building and implementing their individual programs.

Estimating the degree to which educator preparation program leaders have wielded the discretion available to them is crucial to understanding how the implementation of the residency approach in North Carolina aligns with the perceptions and expectations of legislators. Additionally, understanding how program leaders exercised their discretion in a more prescriptive legislative context expands the current understanding of how bureaucratic discretion theory is applicable to the field of educator preparation. To date, no other study has examined the relationship between bureaucratic discretion and teacher preparation programs under prescriptive state legislation or in the post-NCLB context.

Conceptual Framework

When the North Carolina General Assembly created the residency approach during the 2017 legislative session, it did so without any public explanation of its reasoning or intent. The purposes of this dissertation are to clarify the intent behind the residency language in SL 2017-189, whether that intent has been borne out in the implementation of the residency approach across the state, and if and how, teacher performance on the edTPA varies by preparation pathway. To better contextualize these questions and the analytical approaches described in Chapter 3, it is helpful to review the conceptual model in Figure 1.

Figure 1: North Carolina Residency Approach Conceptual Framework.



The conceptual framework begins with the assumption that the North Carolina General Assembly wants to improve outcomes for students in North Carolina. The generalized national concern regarding teacher shortages combined with worries pertaining to the effectiveness and retention of Lateral Entry teachers may have encouraged the legislature to seek policy solutions to teacher preparation as an avenue to ultimately improving student outcomes. Kingdon's theory provides a plausible explanation for how the legislature decided to take a residency approach as one potential solution to the issues facing North Carolina. Urban teacher residencies have existed for nearly 20 years, and the model has been on the national radar since former President Obama's first presidential campaign (Emanuel & Obama, 2007; Papay et al., 2012). The existence of a policy solution (teacher residencies) predating a policy problem aligns well with the primeval soup metaphor Kingdon uses (1984). Senate Bill 599 emerged during the 2017-2018 legislative session, which followed the 2016 general election in which Republicans maintained a veto-proof majority in the General Assembly; this could have provided important context for Kingdon's *political stream*. One area in which Kingdon's framework may provide greater clarity is in how teacher preparation first became an issue on the agenda. Whatever factors and circumstances led the General Assembly to action during the 2017-2018 legislative

session, the result was Session Law 2017-189. The three streams model's explanatory strength for Session Law 2017-189 is that the model focuses more on agenda setting than policy choice or implementation (Kingdon, 1984). It is currently unclear what problem the legislature was trying to solve that led them to select the residency approach.

The 2019-2020 school year was the first opportunity North Carolina EPPs had to fully implement residency approaches at their institutions. After the passage of SL 2017-189, the North Carolina educator preparation landscape opened up to new out-of-state providers, many of which were entirely online, that offered Residency License-only programs. While it is too early to evaluate these programs' impact on the overall educator preparation landscape, it seems likely that their introduction may have influenced the ways in which other programs implemented the residency approach. Although Session Law 2017-189 is quite prescriptive, residency programs across the state developed independently in specific educational contexts, providing the perfect opportunity to use bureaucratic discretion to understand how program leaders interpreted the "space between the rules" (Hawkins, 1986, as cited in Heinen and Scribner, 2007) of the law, resulting in a variety of program designs across EPPs.

Although I postulate that the legislature's overarching goal was to impact student outcomes, I determined that an overt measure of student success would be difficult to achieve for this dissertation. The COVID-19 pandemic forced school districts in North Carolina to shift to remote instruction during the spring of 2019. Throughout the pandemic, testing schedules have been interrupted, and value-added scores for teachers have been unavailable for the past two school years. Instead, I use edTPA scores as an indicator of a teacher's likely future effectiveness in the classroom due to the focus of the edTPA on pedagogical practice. In 2018, the Education Policy Initiative at Carolina found positive and statistically significant relationships between

edTPA scores and the early-career performance of teachers as measured by both value-added and principal-rated evaluation metrics (Bastian, 2018). Therefore, if a teacher can score well on the performance-based edTPA, it is reasonable to assume that same teacher might be effective at producing improved student outcomes.

Conclusion and Organization of Subsequent Chapters

This chapter established the central importance of teachers to student success and explored the origins and evolution of alternative teacher preparation programs. Although measuring the effectiveness of alternative teacher preparation pathways is murky, I have examined the extant literature on the topic and derived several ideas and themes that have particular application value in the field of alternative teacher preparation. Finally, I reviewed theories that provide structure to the conceptual framework guiding the development of the present study. In the next chapter, I will explore the methodological foundations of the research. Chapter 4 outlines the results of the inquiry and Chapter 5 includes a discussion of those findings, applications for theory and practice, and conclusions.

CHAPTER 3: METHODOLOGY

Introduction

Given the relative newness of teacher residencies as a teacher preparation pathway, rigorous academic literature on teacher residencies is limited and generally focused on programs in urban areas (Kee, 2012; Papay et al., 2012; Sawchuk, 2011). As discussed in the previous two chapters, North Carolina appears to be one of the first states to codify the residency approach in state statute. Accordingly, this dissertation uses a case study methodology to explore the inclusion of the residency approach in the North Carolina law, the implementation of the approach, and potential differences in edTPA scores according to teacher preparation pathways. Case study research is particularly well suited for the in-depth investigation of a contemporary phenomenon in its original context (Yin, 2018), and is therefore ideal for this dissertation. This chapter begins with a general overview of case study research, followed by my specific research questions and a more detailed explanation of my analytical approach.

Case Study Research

Yin (2018) argues that the prevalence of non-research case studies (i.e. teaching and popular case studies) without clearly defined methodological procedures undermines the popular understanding of case study research as a rigorous research method. Case study research is a method of inquiry that is well suited for the in-depth investigation of a phenomenon, particularly when the boundaries of the phenomenon are not obvious (Yin, 2018). Specifically, research questions focusing on the "how" or "why" of a specific phenomenon over which the researcher has little to no control are ideal candidates for exploration via case study research.

The case study research mode of inquiry is different from a research conception of "case studies," which refers to methodology and "cases," which are the units of analysis (Yin, 2018).

The structure of case study research also varies widely depending on the phenomenon in question and researcher preferences. Case studies can include single or multiple cases and can be either holistic or composed of embedded units of analysis (Yin, 2018). The unit of analysis must be carefully defined and is typically a system or system of actions (Tellis, 1997). A case cannot be an entirely abstract idea and must be an actual phenomenon with " a concrete manifestation" (Yin, 2018, p. 31). A case must also be bounded (Merriam, 1998; Smith, 1978; Stake, 1995) so that the researcher can understand the scope of data collection and separate data pertinent to the case from data in the surrounding context (Yin, 2018). Case study research should draw attention to the uniqueness of the individual cases, while encouraging the understanding of larger processes or ideas. This "analytic generalization" (Yin, 2018, p. 37) is based on either (1) the theoretical concepts the researcher employs in the design of the case study or (2) new concepts arising during the case study itself (Yin, 2018).

Perhaps due in part to the wide range of questions that are well suited for case study research and the lack of consensus around its specific research protocols, experts in the field have identified several types of case studies. Yin (1993) originally identified three types of case studies: exploratory, descriptive, and explanatory. *Exploratory* case studies are designed to determine the research questions or methods of inquiry for a future study, which may or may not be a case study. *Descriptive* case studies seek to describe a particular phenomenon in its natural context. *Explanatory* case studies seek to explain how a particular condition came about or why a specific sequence of events did or did not happen (Yin, 2018). Stake (1995) added three further types: *intrinsic,* in which the researcher has a personal interest in the case; *instrumental*, which is similar to explanatory in that the case is used to explain something beyond the easily observable; and *collective*, which is the study of a group of cases. Merriam (1998) proposed another set of

cases: particularistic, descriptive, and heuristic. *Particularistic* case studies focus on one specific event and are particularly well suited for addressing practical problems. *Descriptive* case studies provide a thick description of a specified phenomenon and can be longitudinal. According to Merriam, thick description encompasses "the complete, literal description of the entity being investigated" (Merriam, 1998, pp. 29–30). Finally, *heuristic* cases are investigated to increase understanding of the defined case (Merriam, 1998). Regardless of the type of case a researcher chooses to explore, one distinctive feature of all cases is that they generally include many points of interest, highlighting the importance of developing strong theory to guide the research design, data collection, and analysis and the critical need to employ rigorous research procedures including the use of multiple data sources with triangulation (Yin, 2018).

Although single case study designs are common, Yin (2018) argues there are only five appropriate rationales for selecting and using a single case study: (1) a critical test of existing theory, (2) unusual or extreme phenomena, (3) common cases, (4) revelatory cases, and (5) longitudinal cases. Within a single case, the analysis can be holistic or embedded. Holistic case studies have one unit of analysis, whereas embedded case studies have secondary or subunits of analysis that may be quantitative or qualitative as long as they are within the bounds of the original case (Yin, 2018). Multiple case studies can also contain holistic or embedded analyses, but the rationales for conducting a multiple case study are different from those for conducting single case studies. When researchers select multiple case study designs, they should do so with replication, not sampling in mind (Yin, 2018). The application of sampling logic, that is, attempting to establish the prevalence of a phenomenon, is flawed in multiple case studies for two reasons: (1) case studies are not a methodologically appropriate means of determining prevalence, and (2) each case would need both the specific phenomenon and its context, which

would require a large number of cases and result in a superficial analysis of each case (Yin, 2018). Both single and multiple case study designs have advantages and disadvantages. Yin (2009) notes that one risk inherent in single case studies is that the case turns out to be something other than what the researcher was initially pursuing. Hamilton and Corbitt-Whittier (2013) disagree that such a shift constitutes a risk; they view the social construct of reality as more fluid and therefore argue for a strong degree of flexibility in the application of case study methods. Yin (2018) also argues that the use of multiple case studies allows direct replication and avoids the possibility that a single case is, in fact, not unique. His critique of single case designs seems to center around potential skepticism from other researchers regarding the case study researcher's ability to conduct more complex empirical work.

Criteria for rigorous and effective research designs, including construct validity, internal and external validity, and reliability, have been well established over the years (Kidder et al., 1986). While Yin (2018) argues these attributes generally apply to case study research, he notes that methodological rigor is a frequent and sometimes justified target of case study critics. Construct validity refers to using the correct research procedures to address the questions being asked and is often a challenge in case study research (Yin, 2018). Critics argue that case study research frequently fails to specify rigorous procedures and that data collection methods are oftentimes subjective and biased by the researchers' own judgements (Flyvbjerg, 2006; Ruddin, 2006). Yin (2018) argues that researchers can mitigate these critiques by using multiple sources of data, establishing clear documentation, and sharing a draft case study with the participants.

Internal validity is generally only a concern for explanatory case studies, which are those attempting to link causes to effects. In case studies, researchers make inferences about the nature of events every time an event happens that is unobservable, leading to concerns about the

validity of the inferences. To counteract such criticism, Yin (2018) suggests using analytic tactics such as pattern matching, explanation building, logic modeling, and addressing rival explanations. In empirical research, external validity often refers to the notion of generalizability. In case study research, the focus is not on statistical generalization but analytic generalization, as discussed earlier. External validity derives, in part, from the design of the research questions. If case studies lack important "how" or "why" questions, it can be challenging to perform analytic generalization (Yin, 2018). The construction of well-designed research questions rooted in larger theoretical concerns can help mitigate issues with external validity.

Reliability refers to the ability of future researchers to replicate the research processes and achieve the same results, and the goal of ensuring reliability is to minimize errors and biases. In case study research, the opportunity to study the same exact case multiple times is rare, but researchers can attend to issues of reliability by documenting their procedures, writing a case study protocol and maintaining a case study database such that a future research could, theoretically, replicate the case study (Yin, 2018). Such methodological critiques are informed by a more positivist perspective on empirical research and are not universally agreed upon. In their application of case study research to education, Hamilton and Corbitt-Whittier (2013) argue that these conceptions of validity "are too simplistic for educational settings" (p. 7).

Research Questions

Using case study research, I sought to answer the following research questions:

1. Why did the North Carolina General Assembly incorporate the teacher residency approach into state statute in 2017?

1a. What were the North Carolina legislators' and other stakeholders' intentions regarding changing the alternative licensure pathway from the existing Lateral Entry process to the Residency License in 2017?

1b. What were the North Carolina legislators' and other stakeholders' intentions regarding the addition of a clinical residency as an option for clinical practice requirements?

2. How, if at all, was the implementation of the residency approach for educator preparation aligned with the North Carolina General Assembly's intentions?

    2a. In what ways was the implementation of the Residency License aligned with the North Carolina General Assembly's intentions?

    2b. In what ways was the implementation of the one-year clinical residency aligned with the North Carolina General Assembly's intentions?

3. How do edTPA scores compare between individuals who enter teaching through the Lateral Entry, traditional, and Residency License pathways?

    3a. What was the difference in edTPA performance between teachers prepared through the Lateral Entry and traditional routes before the creation of the Residency License?

    3b. What are the differences in edTPA performance between teachers prepared through the Residency License, traditional, and Lateral Entry routes?

Research Design

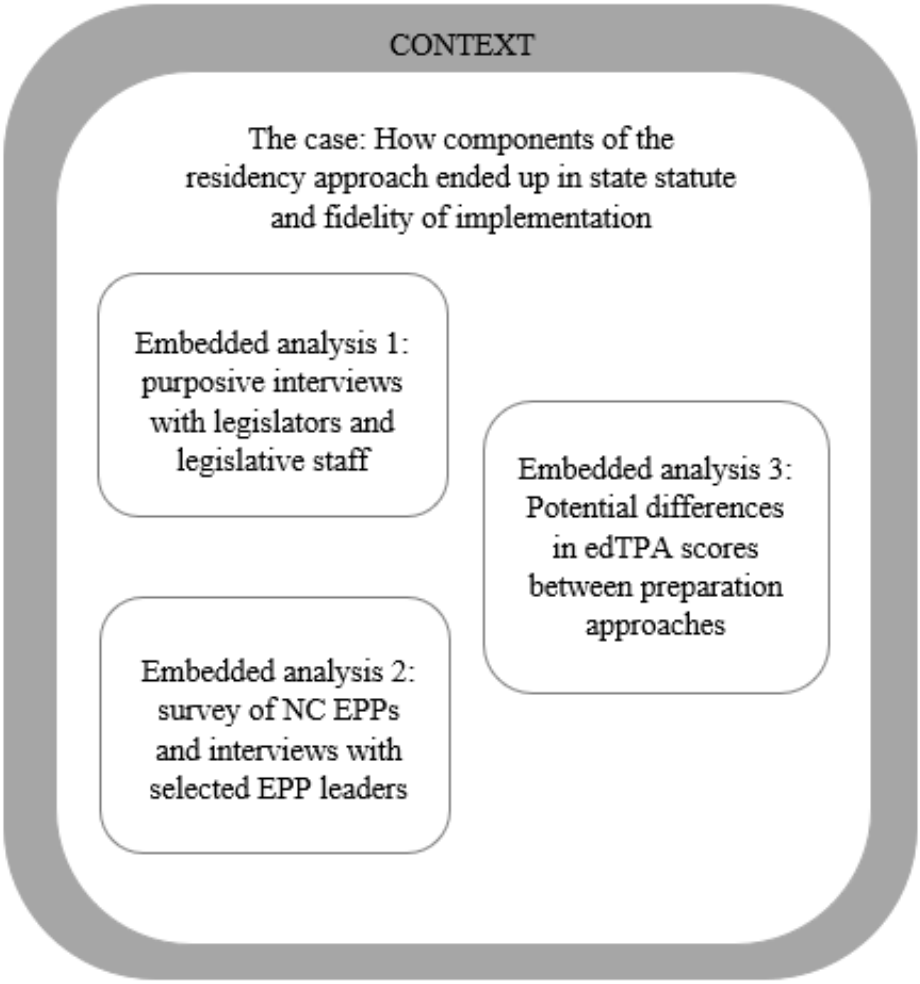
In educational research, the purpose of conducting case studies is to discover, document, and generate insight leading to understanding (Stenhouse, 1979), or, as Yin (2018) puts it, "If you needed to know 'how' or 'why' the program had worked (or not) you would lean toward a

case study" (p. 11). My main research questions are "how" and "why" questions, and are therefore well suited to case study inquiry. For my study, I used an embedded single explanatory case study design to better determine how aspects of teacher residencies, particularly the language of "residency," were codified in North Carolina state statute during the 2017-2018 legislative session. Of Yin's (2018) five rationales for using a single case, the *common case* made the most sense for this study. A single case study approach for a common case is intended to capture the processes and conditions surrounding normal phenomena with the goal of providing more information about the social or theoretical processes underpinning these everyday activities (Yin, 2018). On the surface, the development, debate, and ratification of Senate Bill 599 into Session Law 2017-189 appeared normal and regular, qualifying it as a common case and potentially providing insight into the theoretical structures supporting regular educational lawmaking in the state.

For the purposes of this study, the "case" was the 2017 inclusion of the residency approach into North Carolina state statute and how the implementation of the approach by North Carolina EPPs in the intervening years has potentially impacted performance on teacher licensure exams. As previous research indicates the strong need to bound a case study (Merriam, 1998; Smith, 1978; Stake, 1995; Yin, 2018), I bounded my inquiry by focusing specifically on the residency components of Session Law 2017-189. It is omnibus legislation, which provided more context for the case, including the development of the Professional Educator Preparation and Standards Commission (PEPSC) (NC GS §115C, 2020), but that was not the phenomenon in which I was interested. For the question of implementation, I focused my inquiry specifically on the implementation of residency approach components: the option of a Residency Licensure pathway, the use of one-year residencies for clinical practice, and the existence of full residency

programs mirroring the original urban teacher residencies. I was not interested in exploring other content or pedagogical aspects of alternative or traditional teacher preparation programs, nor was I interested in the personal experiences of teacher candidates in residency pathways.

Figure 2: Visual Representation of Case Design.



The larger case included three embedded subunit analyses: (1) legislative perceptions of educational issues leading to the development of the residency approach, (2) an analysis of the residency landscape in North Carolina EPPs, and (3) potential differences in edTPA scores among teachers who pursued different preparation pathways (see Figure 2). The embedded analyses exemplify the mixed methods approach inherent in my case study design. While the

overarching research design is a case study, concepts from mixed methods research design provide a helpful way to think about the data collection and eventual integration. Case study research is well suited for mixed methods data collection because the case study framework involves “intensive and detailed qualitative and quantitative data collection about the case” (Fetters et al., 2013, p. 2138). In mixed methods research, “the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study” (Tashakkori & Creswell, 2007, p.4). Mixed methods is increasing in popularity as an analytical approach for many reasons, including (1) the investigation of complex problems within a single study, (2) the simultaneous maximization of the strengths of quantitative and qualitative approaches and minimization of the weaknesses of both, (3) the potential use of multiple tools and worldviews, and (4) practically, an increase in the probability of finding a publishable result (DeCuir-Gunby & Schutz, 2017). In this case, the embedded analyses employ both qualitative (embedded analyses 1 and 2) and quantitative (embedded analysis 3) data collection and analysis.

The first embedded analysis targets the perceptions of North Carolina legislators and their legislative staff regarding the inclusion of the residency approach in Session Law 2017-189. The legislative intent behind including the residency approach in state statute was previously unknown. Interviewing key legislators and advisors provided me with the opportunity to better understand why they created the residency approach and their goals for its implementation. The goal of the second embedded analysis was to examine differences in implementation between programs using the theory of bureaucratic discretion (Heinen & Scribner, 2007; Huber et al., 2001; Keiser, 2001) to understand why programs evolved differently. Originally, I also intended to categorize North Carolina EPPs based on how they have incorporated the residency model

framework into their own programs, providing both a program-level analysis of where different residency components exist and a more holistic picture of how implementation is playing out statewide. Due to the wide variety of nuance in the definitions of residency approaches constructed by programs, I determined that such a categorization was not achievable in the present study. The third embedded analysis is related to the outcomes of the legislative action. The inclusion of edTPA scores allows a preliminary view into whether the adoption of the residency model impacted teacher quality. Without knowing the legislature's specific intentions, one might assume that they hoped to see increased teacher effectiveness as a result of their actions. I chose to include elected officials, legislative staff, and EPP leaders in my sample of individuals to interview to gain insight into the development and implementation of the Residency License and the one-year clinical residency. I excluded professors in EPPs and teacher candidates currently enrolled in preparation programs from my analysis. Undoubtedly, the perspectives of both these groups would have shed light on more nuanced aspects of the residency implementation. I determined, however, that such an inquiry would dramatically increase the scope of my current questions, and ultimately make the study unfeasible.

Data Collection

Embedded Analysis 1: Policy Development (RQ 1)

Interviews. For the first embedded analysis, I used purposive sampling (Guest et al., 2013) to target key members of the North Carolina General Assembly and their staff who were deeply engaged in the development of Senate Bill 599, which was eventually ratified as Session Law 2017-189. The bill's initial sponsor and his staff were a logical starting point for inquiries into the inclusion of the residency model. The bill eventually went to a conference committee, that was composed of six legislators from both the Senate and House of Representatives. These

individuals were responsible for compiling all amendments, making edits, and determining the final status of the bill. As such, I theorized that they or their staff might have insights into the rationale for the inclusion of the residency approach. After conducting Google searches to identify legislative aides during the period in question, I contacted all the aforementioned legislators and their staff, with the exception of one former representative who died before the data collection period. Unfortunately, many of these individuals either refused to participate or did not respond to multiple requests for interviews, including the bill's sponsor and his staff. One former legislator, "Dakota," who had served multiple terms in the legislature agreed to an interview. Over a period of several years in the General Assembly, Dakota was a member of and chaired a variety of committees focused on diverse policy issues. They had a particular interest in education and were well-positioned to answer questions about the politics of education in North Carolina and the development of Senate Bill 599. I also secured an interview with one individual, "Monroe," with who worked closely with the bill sponsor in a consultative role during the creation of Senate Bill 599. Monroe possessed nearly two decades of teacher preparation expertise as a professional educator, a member of national accrediting teams, and as a participant in various state and national education policy bodies. Note that the names I use for interview participants throughout this dissertation are pseudonyms.

In both of those interviews, I used snowball sampling, which takes advantage of participants' networks and knowledge to identify other potential participants with insight into a given topic (Guest et al., 2013) and other relevant participants (i.e., current and former staff members with knowledge about this specific bill). Unfortunately, their recommendations did not result in any additional interviews, as the identified individuals declined to participate. My interviews consisted of the provision of a brief description of the study and confirmation of their

informed consent prior to the beginning of each interview. I then virtually conducted semi-structured interviews with each participant, using Zoom's built-in recording and transcription features to record the interviews. Semi-structured interviews allowed me to ask not only the questions written on the interview protocol but also improvised prompts or follow-up questions based on the participant responses (Hardon et al., 2004; Rubin & Rubin, 2005). I developed questions for the policy development interview protocol (see Appendix A) using the major categories from Kingdon's multiple streams theory (Kingdon, 1984). The key purpose of this embedded analysis was to learn why the legislature behaved in this specific way. Kingdon's approach allowed me to divide the interview based on the major theoretical streams and identify the behaviors in each stream that may have led to the opening of the residency approach policy window. Although legislative actors were the primary targets of these interviews, key stakeholders, such as the content area expert I interviewed, provided important insights into the development of Senate Bill 599.

To supplement the interviews in embedded analysis 1, I reviewed a number of documents related to Senate Bill 599, including versions of the bill throughout its development, proposed amendments, bill summaries, and conference reports. My intent was to search for any major changes to or commentary about the residency approach throughout the development of the bill. The confirmatory nature of this analysis allowed me to search for specific references to the residency approach and apply a deductive rather than an inductive orientation to my analysis (Guest et al., 2013). The text of these documents provided insights into the transformation of Senate Bill 599 into Session Law 2017-189 that were unlikely to arise in interviews given the omnibus nature of the bill and years that have passed since its ratification.

Embedded Analysis 2: Educator Preparation Program Implementation (RQ 2)

Document Analysis. To better assess how North Carolina EPPs are implementing the residency approach, I conducted a confirmatory document analysis on the 2019-2020 EPP Annual Reports issued by NCDPI for all EPPs in the state. EPPs submit reports for their Bachelor's degree, graduate degree, and school administrator programs. The Bachelor's degree reports generally include information about the clinical practice and internships, which allowed me to review whether the programs had implemented a one-year residency in place of the previously existing minimum 16 week internship. There is some overlap in the way NCDPI categorizes these reports, with some alternative preparation programs (i.e., Teachers of Tomorrow and Pathway to Practice) listed as Bachelor's degree programs, so I reviewed all of the 2019-2020 annual reports to ensure each program's correct categorization. The graduate-level programs generally include the attainment of Master's degrees and can double as Residency License programs. I was not interested in the school administrator reports for this study because the residency approach is specific to teacher rather than, school administrator preparation. The original goal of this document analysis was to create a categorization of programs in North Carolina that could be updated annually as the reports are released (usually in December or January of each year). As the 2020-2021 reports were not released in time for their inclusion in this dissertation, I limited my review to the 2019-2020 school year, which was the first year most EPPs could implement any of the residency requirements.

Interviews. Originally, I intended to purposively sample EPP program leaders based on both the EPP Annual Report document analysis and initial findings or recommendations from the legislative interviews. I realized, however, when reviewing the Annual Reports, that there was such a degree of variability among program types that contacting all program leaders at the

twenty EPPs with residency programs during the 2019-2020 academic year that enrolled at least one student was the best approach. I used public EPP contact information from NCDPI to identify program leaders at each institution and contacted them via email. Nine program leaders agreed to participate, and I eventually reached one other participant through snowball sampling, yielding a total of ten program leader participants across the state. The EPP leaders I interviewed represented decades of expertise and experience. Most also possessed advanced degrees in teacher education. A majority of the participants had been classroom teachers, school and/or district leaders prior to their roles in educator preparation programs. Nearly half of the EPP leaders had 30 or more years of experience in education with experiences spanning multiple states and preparation programs.

Table 1: EPP Program Participant Information.

Program	EPP Leader Pseudonym	Program Type	IHE Type	Carnegie Classification - Basic
EPP 1	Elliot	IHE	Public	Doctoral Universities: High Research Activity
EPP 2	Jordan	IHE	Private	Doctoral/Professional Universities
EPP 3	Reese	IHE	Private	Doctoral/Professional Universities
EPP 4	Sutton	IHE	Public	Doctoral Universities: High Research Activity
EPP 5	Kris	IHE	Public	Doctoral Universities: High Research Activity
EPP 6	Jessie	IHE	Private	Master's Colleges & Universities: Small Programs
EPP 7	Emerson	IHE	Public	Master's Colleges & Universities: Larger Programs
EPP 8	Kelly	IHE	Public	Master's Colleges & Universities: Medium Programs
EPP 9	Marley	LEA	N/A	N/A
EPP 10	Parker	IHE	Private	Baccalaureate Colleges: Arts & Sciences Focus

Basic information about the programs these leaders represent and the pseudonyms I used for each EPP leader are presented in Table 1. My sampling intent was to gain "maximum variation" (Guest et al., 2013, p. 50) through these interviews, selecting a variety of programs that represent brick and mortar institutions, online-only programs, larger and smaller programs, and programs in various locales that have embraced the residency approach. Of the ten interviews, nine were with participants based at Institutions of Higher Education (IHE) and one was with a participant based out of a local education agency (LEA), which is fairly representative of the breakdown of programs in the 2019-2020 academic year. In that year, of the twenty EPPs claiming to offer residency pathways, 17 were based in IHEs, two in LEAs, and one was a "residency-only," all-online program. Unfortunately, the administrators of that program did not respond to interview requests, therefore, "residency-only" programs are not represented in this sample. All of the IHEs were not-for-profit four-year institutions, but there was substantial variation in the basic program type, with varying levels of research intensity and degrees granted (*The Carnegie Classifications of Institutions of Higher Education*, n.d.).

I virtually conducted semi-structured interviews with each participant, using Zoom's built-in recording and transcription features to record the interviews. Given the ambiguity present in many of the EPP Annual Reports, I used these interviews to ascertain more information about the structure and intent of these programs and asked program leaders to explain why they structured their programs in specific ways. Additionally, I asked what they thought the legislature what trying to achieve with the residency approach to better understand how they, as Lipsky's (1980) street-level bureaucrats, perceived the legislative intent and how that perception may have influenced their specific program designs. A copy of the program leader interview protocol is available in Appendix B.

Embedded Analysis 3: edTPA Score Comparison (RQ 3)

edTPA. Beginning September 1, 2019, North Carolina required teacher candidates to pass a content-specific pedagogical assessment as a condition for licensure (NC State Board of Education, 2021b), meaning that prospective educators were required to take and pass the appropriate assessment to become licensed in the state. Prior to the fall of 2019, teacher candidates could choose to take either the edTPA or PPAT assessment, and starting July 1, 2018, a passing score on either the edTPA or PPAT assessment exempted a teacher candidate from having to take the Principles of Learning and Teaching (PLT) *Praxis* licensure exam (NC State Board of Education, 2021b). Beginning September 1, 2019, both the edTPA and PPAT assessments became consequential for licensure. While EPPs can choose to prepare their candidates for either test, most of the programs in North Carolina chose to focus on the edTPA. Depending on the content area, edTPA assessments have 13, 15 or 18 rubrics, which are scored individually and summed to calculate the candidate's final score (Pearson Education, 2021b). While Pearson Education, the edTPA vendor, publishes recommended performance standards, states are free to adopt their own cut scores. I requested teacher candidates' edTPA scores from NCDPI from 2017-2018 through 2020-2021. My request began with the 2017-2018 school year because that is the first year in which the NCDPI published recommended minimum passing scores for the edTPA even though the assessment was not yet a licensure requirement (NC State Board of Education, 2021b). NCDPI provided me with additional edTPA data from the 2016-2017 school year. In sum, the NCDPI edTPA data reflects test scores from 2016-2021, capturing three years prior to when the edTPA became consequential for licensure.

Sample Characteristics. The data file from NCDPI included 7,237 observations of edTPA scores between 2016-2021. Other variables in the dataset are listed in Table 2. Prior to

consequentiality, 3,179, 407, and 28 teacher candidates prepared via the traditional, Lateral Entry, and Residency License pathways took the edTPA exam. Between September 1, 2019, and early August 2021 when NCDPI ran the data, an additional 1,911, 291, and 674 teacher candidates prepared via the traditional, Lateral Entry, and Residency License pathways took the edTPA. More details about the characteristics of the teacher candidates in these groups are included in Chapter 4. The edTPA was not required until the fall of 2019, so not all candidates prior to that time period took the assessment. That, and other concerns are discussed more in the Data Analysis section of this chapter.

Table 2: List of Variables from NCDPI.

Name	Description
Taker ID	Unique identifier of the test taker. If an individual took multiple tests, the Taker ID stayed constant for all tests taken.
Gender	Gender of test taker (male/female)
Ethnicity	Denotes Hispanic/Non-Hispanic Origin
Race	Race of the test taker. Categories included: African American American Indian/Alaskan Native Asian Hispanic/Latino Native Hawaiian/Pacific Islander Two or More Races White A person is only associated with a specific race if that individual identifies 100% with that race. Persons associated with more than one race are classified as “two or more races”
EPP Code	Numeric code of EPP where coursework is/was taken
EPP Name	Name of EPP where coursework is/was taken
Traditional	Flag for traditional preparation program (0/1)
Residency	Flag for residency preparation program (0/1)
Lateral	Flag for lateral entry preparation program (0/1)
Rubric	Number of rubrics for the test (13/15/18)
Test Name	Name of the test taken
Test Date	Date test was taken

Table 2 (continued).

Test Score	Total edTPA score for all rubrics
Pass/Fail	Denotes whether total score was pass/fail/incomplete. Minimum passing scores were set by NCDPI from 2017 forward.

Data Analysis

Embedded Analyses 1 and 2: Policy Development and EPP Implementation

Since both embedded analyses 1 and 2 used the same types of qualitative inquiry (semi-structured interviews and document analysis), I applied similar analytical techniques in both cases. Thematic analysis was well suited for embedded analyses 1 and 2 because it "goes beyond counting explicit words or phrases" (Guest et al., 2012, p. 10) and focuses on broader themes emerging from the data. Thematic analysis focuses more on "what" participants say, rather than "how" participants speak or the words and grammatical structures participants use (Riessman, 2008). In the context of this research, thematic analysis allowed me to look for themes of policy development in embedded analysis 1 and themes of bureaucratic discretion in embedded analysis 2. The use of thematic analysis for this study was both interpretivist and positivist. The interpretivist nature of much qualitative research leads us to look for deeper meaning and interpretations of texts rather than one objective reality, whereas the positivist tradition is rooted in the idea that interpretations and findings should be grounded in observed data (Guest et al., 2012). I used the theoretical and conceptual frameworks from Chapter 2 to guide the thematic analysis. The conceptual framework is also inherent in my research questions and helped me organize the entire analysis, identify important contextual conditions and construct possible explanations (Yin, 2018). The overarching goal of this thematic analysis which was guided by theory was to generate explanations for why and how the residency approach ended up in state statute and how its implementation is proceeding in North Carolina EPPs.

My data analysis procedures loosely followed Braun and Clarke's (2006) phases of thematic analysis including transcribing, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and finally producing the report. I used Zoom's built-in transcription feature to generate initial transcripts of the interviews. I discovered, however, that Zoom's technology is somewhat inaccurate; therefore, I reviewed and revised the transcripts while listening to audio recordings of each interview. I used verbatim transcription, meaning that the words in the typed transcripts were as exact a replication as possible of the audio-recorded words (Poland, 1995). I transcribed each audio recording within 48 hours of each interview, following the recommendation of McGrath et al. (2019), who suggested that transcription should occur as quickly as possible after the interview. Personally reviewing and re-transcribing the audio for accuracy, while time-consuming, immersed me in the data and helped me ensure that my findings were consistent with the experiences of the participants (Creswell & Poth, 2018). Throughout the interview stage of my research, I used reflective memoing after each conversation as a tool to capture interesting ideas and concepts from the interviews. I also used memoing to reflect on my own thoughts and observations about the interviews and to minimize the effect of my personal experience in my analysis (Given, 2008). To illustrate this effort, an excerpt of one my first interview memos is included below:

> **1/15/22, 4:15 p.m.** Reading through the transcript today, I see a lot of information that is less related to my topic. Finding the balance between respectful listening and getting the information I need is definitely still an area of growth for me…Some of the impetus perhaps comes from people out in the field saying that Lateral Entry teachers were not being prepared well and weren't doing a good job in schools. The interviewee did note a lot of noise in what legislators hear. And I found it particularly interesting that their take

> is that legislators run from education whenever possible because it's complicated, controversial, and unlikely to help fundraising.

At first, my memos focused more on specific content from each interview and how I felt I had performed as an interviewer; however, my process for thinking about how I related to the participant and the interview content evolved over time. The following is an example:

> **1/19/22, 11:45 a.m.** I thought their perspective on how the Residency License lightens the load for the licensees and LEAs was really interesting. I remember being a beginning teacher, so their comments about how beginning teachers get overwhelmed just with what they have to do in the classroom and forget they have to complete coursework to convert their licensure really resonated with me. I hadn't considered how much the Residency License takes the effort away from individuals and LEAs and puts quite a bit more on the EPPs to manage the candidates. Seems obvious now, but it hadn't occurred to me before this interview.

I used qualitative analysis software, Atlas.ti version 9, to analyze the data. Following Saldaña's (2013) two-cycle coding framework, I used open coding in my first cycle to segment data from the interviews into digestible bites of descriptive codes, emotion codes, process codes, and "in vivo" codes taken from the words of my participants (Glaser & Strauss, 1967). The first cycle of coding resulted in approximately 33 codes from the policymaker interviews and 55 codes from the implementation interviews with EPP leaders. Following the first cycle of coding, I reviewed my initial codebook to determine whether codes I had previously identified were relevant to my research question and eliminate codes with limited applicability in the context of this research. I eliminated five codes with limited applicability from the policymaker interviews and an additional seven codes from the EPP leader interviews resulting in 28 codes and 48 codes,

respectively. After revising my initial coding scheme, I completed the second cycle of coding (Saldaña, 2013). The intent of the second cycle of coding was to create pattern codes that combine information from the first cycle to form more meaningful and useful units of analysis (Miles et al., 2019). My theoretical frameworks, namely, multiple streams theory (Kingdon, 1984) and bureaucratic discretion (Heinen & Scribner, 2007; Huber et al., 2001), formed the springboard for the generation of themes in the second cycle. I combined the 28 unique policy-related codes into nine themes which correlated to each of the major streams: *problem, policy,* and *political.* In the EPP leader interviews, I grouped the 48 codes into nine distinct themes related to the North Carolina educational context, determinants of bureaucratic discretion, and institutional responses to discretion. These themes are discussed in greater detail in Chapter 4 (See Appendix C for codebook excerpts).

Embedded Analysis 3: edTPA Score Comparison

I conducted exploratory analyses using Stata. In exploring the data, I discovered 35 duplicate observations. These observations were exact duplicates of all fields (test score, date, content area, taker ID, etc.), and all originated from the same EPP. I concluded that these 35 observations were sent from the EPP to NCDPI in error and chose to drop them from the analysis. There were also many records with duplicate taker IDs, but these correctly represented multiple test attempts by the same person and so I retained them in the dataset. Importantly, all of the individuals labeled as Lateral Entry were affiliated with an EPP. As a result, they are not representative of the entire Lateral Entry population which tends to be divided between individuals who are affiliated with EPPs and those who are working independently with a RALC to complete a program of study. Those in the latter category were likely less inclined to pay to take the edTPA before it became consequential for licensure.

I found a small number of edTPA scores attributed to residency programs prior to 2019, which was the first year Residency License programs began. According to NCDPI, these records likely indicate reporting errors from the EPP. As a result, I relabeled all Residency License records prior to 2019 as Lateral Entry records. Although September 1, 2019, was the date on which the edTPA became consequential for licensure, it is possible that a few Residency License programs were active in the spring or summer prior to consequentiality. Given the uncertainty as to whether these records represent "real" Residency License candidates, I evaluated findings regarding pre-consequentiality Residency License candidates with caution. I performed several variable transformations to create a final dataset that was ready for analysis. Once my data were clean, I separated my analytic approach into two segments: descriptive data analysis and regression modeling.

Descriptive Data Analysis. When testing my data for normality, I discovered that the test score variable displayed kurtosis, but histograms of the data indicated that the tails were heavy on both sides of the distribution. Visually, the histograms looked very similar to a normal distribution. Given a total sample of more than 7,000 observations, I relied on the central limit theorem assumption that the sampling distribution for the mean of my sample would approximate a normal distribution (Kwak & Kim, 2017). For the demographic comparisons and other categorical outcomes (e.g., pass rates, highly qualified), I used ANOVAs with Bonferroni corrections due to the robustness of ANOVAs with respect to violations of normality. ANOVAs are, however, sensitive to outliers (Osborne & Overbay, 2019), and my initial normality tests established that the test score variable had outliers on both tails. To ensure that these values were not biasing the ANOVA estimates, I created a new variable that was the natural log of the test score variable to pull extreme values back toward the center of the distribution. I ran the

ANOVAs described below using both the original and logged test score variables and found no appreciable differences in the significance of the results.

Demographic Characteristics. I first examined potential differences in demographics among candidates in various program types before and after the edTPA became consequential for licensure. Prior to the consequential date, programs could choose to require their students to take the edTPA, but not all did. Lateral Entry candidates who were not affiliated with a specific EPP were unlikely to take the edTPA because it was not required of them and the edTPA costs $300. Due to these factors, I believed there could be differences in demographic characteristics between candidates who attempted the edTPA before and after the consequential date. Additionally, I separated test takers into "completers" (individuals who took and passed the edTPA at least once) and "noncompleters" (individuals who received incomplete or failing scores on the edTPA and never re-took the test). For my demographic analyses, I used ANOVAs with Bonferroni corrections to compare completers from each pathway prior to consequentiality, completers from each pathway after consequentiality, noncompleters from each pathway prior to consequentiality, and noncompleters from each pathway after consequentiality.

Pre-Cut Score Performance. Prior to the 2017-2018 academic year, NCPDI did not publish official edTPA cut scores and the test was not consequential for licensure. During this same period, the Residency License did not exist in North Carolina. An overarching question from the alternative preparation literature is how individuals prepared through alternative pathways perform in the classroom compared to traditionally prepared teachers ((Dee & Cohodes, 2008; Education Commission of the States, 2005; Glazerman et al., 2006; Goldhaber and Brewer, 2000; Laczko-Kerr & Berliner, 2003; National Research Council, 2010; Wilson et al., 2002). To evaluate differences in edTPA scores between Lateral Entry and traditional

candidates in the period prior to the creation of the Residency License, I used ANOVAs with Bonferroni corrections stratified by the number of rubrics. I divided edTPA tests into three categories based on the number of rubrics in each test to ensure that the differences in scores were real differences and not artifacts of a test having more or fewer rubrics

Post-Cut Score Performance. North Carolina State Board of Education policy requires that teacher candidates attempt the required assessments during their first year of teaching and pass those assessments before or during their second year of employment (NC State Board of Education, 2021b). This means that some candidates take the edTPA multiple times. First-time pass rates could indicate the overall preparation and confidence programs instill in their candidates. Additionally, while some programs cover the cost of the edTPA for their students, others are unable to do so and pass the cost of the test onto their students. Passing the edTPA the first time is important to ease the potential financial burden on teacher candidates. NCDPI created edTPA cut scores after several years of studying North Carolina-specific edTPA test score data. EPPs report licensure exam pass rates in their Annual Reports, and it is a key metric of interest for state policymakers. Therefore, I chose to use pass rates rather than scale scores for this analysis. To gauge first-time pass rates, I created a variable identifying those individuals who passed an edTPA test on their first attempt and then ran another set of ANOVAs with Bonferroni correction comparing the first time pass rates for teacher candidates before and after the edTPA became consequential for licensure. I used the same approach on the entire dataset to calculate overall pass rates for all three program types before and after edTPA consequentiality.

For the overall pass rates, I was particularly interested in comparisons between Lateral Entry and Residency License candidates. Although the edTPA was not required for licensure prior to the fall of 2019, there were still many individuals from all three pathways taking the

edTPA in the time before consequentiality. Since the test was not a state requirement, individuals who took the assessment prior to 2019 did so volitionally or at the behest of their EPP and therefore introduce selection bias into this analysis. I already argued that the Lateral Entry population in this dataset is very likely not representative of the larger Lateral Entry population due to the former population's affiliation with an EPP. I also believe that Lateral Entry teachers who took the edTPA prior to consequentiality did so because they expected to do well. To test that theory, I compared the performance of Residency License and Lateral Entry candidates to each other and the traditional candidates. Although this not a strictly equivalent comparison, it is potentially still useful for state policymakers. If the intent of the Residency License was to increase the effectiveness of alternatively prepared teachers, the general Residency Licensure population should compare well to what may represent the best of the Lateral Entry population. I was originally interested in exploring differences between candidates who were affiliated with EPPs based in established universities or local education agencies and those affiliated with newer, online-only models of EPPs, which gained ground in North Carolina following the passage of SL 2017-189. Unfortunately, the edTPA test data had fewer than 20 observations of individuals in the newer online-only programs. I maintain that it would be interesting to explore differences in both the types of students who choose these programs and the outcomes between these and more traditional EPPs in the future when those data are available.

State Board of Education policy also sets "highly qualified" edTPA scores, which are several points higher than the passing scores. In 2021, the legislature created salary supplements for highly qualified North Carolina educator preparation program graduates based in part on edTPA scores (2021 Appropriations Act, 2021). Although the law seems to indicate that only graduates from traditional programs qualify for highly qualified salary supplements, I was

interested to see whether there were differences among programs in their ability to generate "highly qualified" edTPA candidates. I generated an indicator for scores in my dataset achieving or exceeding the "highly qualified" categorization and used the same ANOVA/Bonferroni approach to calculate differences in the ability to produce "highly qualified" edTPA scores among licensure pathways. For this analysis, I included only the time period after the edTPA became consequential. I theorized that the consequential nature of the tests combined with the salary increase incentive would encourage candidates to achieve the higher scores.

Regression Modeling. I used two modeling approaches to evaluate different outcomes across programs: ordinary least squares (OLS) and logistic regression. For both approaches, I ran models for three periods of time: (1) the non-consequential period before NCDPI released cut scores, (2) the non-consequential period during which NCDPI cut scores were available, and (3) the period during which the edTPA was consequential for licensure. Both the OLS and logistic regression models contained the same group of covariates that consisted of indicator variables for traditional preparation, Lateral Entry, and Residency License; race, gender, and indicator variables for 13 and 18 rubric edTPA tests. I included year fixed effects to account for non-linear differences in test scores in different years. I ran both sets of models with and without EPP fixed effects to demonstrate the difference in outcomes when controlling for the effects of individual programs over time. Given the diversity of program designs and sizes, I believe there could be EPP-specific policies, practices, or design elements beyond the legislative and regulatory requirements associated with the residency approach. EPP fixed effects allow me to make more accurate comparisons while controlling for these potential differences in programs.

For the OLS regressions, I standardized the edTPA scores with a mean of zero and standard deviation of one to facilitate more accurate comparisons across content areas and test

types. All regression models included clustered standard errors at the EPP level to account for heteroskedasticity across EPPs. Although this dataset is not technically panel data, it does contain multiple observations for candidates who attempted the edTPA more than once. Multiple observations for the same individual affiliated at the same institution over time introduce the possibility of unexplained variation within an EPP correlated to time, justifying the use of clustered standard errors. While it is interesting to evaluate program type by the differences in test scores on the edTPA, the results are not immediately useful to policymakers. A more policy relevant question is "how does traditional, Lateral Entry, and Residency License preparation impact edTPA pass rates?" Since the edTPA is consequential for licensure, I wanted to understand how preparation impacted a candidate's ability to pass the edTPA. I used logistic regression modeling to determine differences in the probability of passing the edTPA based on pathway. The outcome for the logistic regressions was an indicator variable reflecting whether an edTPA test attempt was a pass or not. I ran the logistic regressions with standard errors clustered at the EPP level and calculated probabilities from the log odds produced from the model. As NCDPI had released "highly qualified" cut scores, I used a similar logistic regression to predict the likelihood of an individual receiving a "highly qualified" score based on their preparation pathway. In this model, the outcome variable was an indicator of whether a score met the "highly qualified" criteria or not. All other covariates remained the same, and I ran the model using clustered standard errors. See Appendix D for a list of all model specifications.

Data Integration

Data integration refers to the process of combining quantitative and qualitative data in one study (DeCuir-Gunby & Schutz, 2017). Although there are a variety of ways in which data can be integrated, I chose an *explaining* approach (Creswell, 2015). I used EPP leader interviews

to make inferences about edTPA scores and the edTPA scores to provide insight into whether the overall intent behind the residency approach appears to have been realized. At the data interpretation and reporting level, I chose a contiguous narrative approach (Fetters et al., 2013), discussing the quantitative and qualitative results separately in Chapter 4 and then pointing out connections and relationships of importance to the research questions at hand.

Reliability and Validity

As discussed earlier in this chapter, Yin (2018) identified four criteria for evaluating the quality of case study designs: construct validity, internal validity, external validity, and reliability. To address construct validity, or the concern that my findings would be too subjective, I used multiple data sources including interviews with legislative and EPP stakeholders from a variety of programs and perspectives and, quantitative edTPA scores. Additionally, I shared a draft of my qualitative analysis with all interview participants and invited their feedback to ensure that my findings matched their experiences. One way to improve internal validity is to address other possible explanations for an event. I explicitly asked legislative participants for their intent and then additionally asked EPP directors what they thought the legislature was trying to achieve to generate possible rival explanations. I address the results of those inquiries in Chapter 4. The goal of case study inquiry is to result in analytic, rather than statistical generalizations (Yin, 2018), and one way to increase the odds of creating meaningful analytic generalizations is the development of "how" or "why" research questions that allow for the possibility of finding analytic generalizations that could apply beyond the current case. All three of my research questions address "how" or "why" issues and the first two are particularly well suited to analytic generalizations related to theories of policy development

and bureaucratic discretion. In addressing reliability, I documented my quantitative analysis procedures carefully and used analytic memoing for my qualitative data.

For quantitative analyses, internal validity generally refers to the central validity of the system or study design whereas external validity is more concerned with generalization (Lund, 2021). This study contains a few threats to internal validity. I have already discussed the fact that the Lateral Entry group is not likely representative of the entire population. Additionally, individuals who took the edTPA prior to consequentiality likely did so volitionally or at the behest of their EPP, introducing selection bias into the sample. Finally, all of the results presented in Chapter 4 are descriptive and not causal which means that I cannot rule out the possibility of an unknown variable besides preparation pathway impacting edTPA outcomes. Although my data represent a census of North Carolina edTPA scores between 2016-2021, I believe the quantitative findings have limited generalizability outside of this specific context. This study only includes five years of data and the edTPA was not required for the first three years of the sample, which limits the usefulness of a comparison between these years and other contexts. With more years of data in the future, a similar study could generate results which could be compared to edTPA outcomes from alternative preparation programs in other states.

Study Limitations

I completed this study independently which is a limitation on the study's qualitative component. As the sole investigator, I collected and coded all of the qualitative data. Ideally, a team of investigators would code transcripts independently and conduct tests of inter-coder reliability to protect against bias in coding. A second limitation of the study is the relative newness of the Residency License. Given the limited implementation time frame and consequent small number of program completers, I could not implement a quasi-experimental design.

Another limitation of this study is the small number of legislative stakeholders who were willing to be interviewed. Unfortunately, I was not able to interview either the bill sponsor or the person who served as his legislative aide during the development of Senate Bill 599. Although I feel that I have a good understanding of the larger policy landscape in which Senate Bill 599 emerged, I am unable to say anything specific about the motivations or intentions of the primary driving force behind the bill. The passage of time is a potential limitation of this study. If I had been conducting this research during the actual creation of Senate Bill 599, it is possible that more legislative stakeholders would have been willing to participate in interviews. In the intervening years, many of these individuals have moved on to other roles and one died. While these findings are a good first step to understanding the North Carolina residency approach, they are preliminary and should be interpreted with care.

Conclusion and Organization of Subsequent Chapters

In this chapter, I have reviewed case study inquiry and discussed its effectiveness as a methodology for this specific investigation into the development and implementation of the policy regarding the residency approach in North Carolina. I have additionally discussed my quantitative and qualitative data collection and analytical strategies. The next chapter discusses the results of my findings and Chapter 5 provides a discussion of those results and their implications for policy and practice.

CHAPTER 4: RESULTS

Introduction

This chapter begins with a discussion of the thematic analysis of interviews with policymakers and document analysis regarding the development of Senate Bill 599. It continues with an investigation into the findings of the thematic analysis for EPP leader interviews and document analysis of EPP Annual Reports around the implementation of the residency approach, and then reviews the quantitative evaluation of North Carolina edTPA scores from the past five years. The chapter concludes with the integration of the quantitative and qualitative results.

Research Question 1: Policy Development

The following section includes findings from a thematic analysis of in-depth interviews with two policy development stakeholders and a confirmatory review of official documents related to the development of Senate Bill 599 into Session Law 2017-189. I have grouped these themes according to Kingdon's (1984) three streams: *problem*, *policy*, and *political*.

Thematic Analysis: Problem Stream

During the interviews with a former legislator, Dakota, and educator preparation content expert, Monroe, I sought to understand what problems policymakers were trying to solve by adopting the residency approach. I asked them to identify significant issues in education over the past five to ten years and then consider what they hoped to achieve by changing the Lateral Entry process to the residency approach. Although both participants identified several broader education issues, three main areas of concern were particularly relevant to the development of the residency approach: teacher shortages, student outcomes, and concerns about teacher preparation. During our conversations, the first two areas were eclipsed by the larger issues they described regarding teacher preparation.

Teacher Shortages. Dakota identified teacher shortages as a major concern for General Assembly members. “We’re desperate for teachers. We hear it everywhere we go.” Monroe agreed that “after teaching fellows [ended in 2011], two years, three years later, we ended up [with] some campuses [that] had almost 50% declines in their population. …overall, there was like a 21% decline in teacher prep enrollment.” Monroe further noted that the “recruitment and retention of beginning teachers is a big issue, obviously it is.” The confluence of both declining student test scores and increased difficulty staffing classrooms led policymakers to evaluate the effectiveness of teacher preparation more closely.

Student Outcomes. Closely related to issues of teacher shortages are concerns about student outcomes. “Legislators want better out[comes].” How legislators define outcomes extends to both academic and workforce preparedness:

> We were all frustrated with the fact that our NAEP scores had been going in the wrong direction. PISA scores are going in the wrong direction…We’ve got people in our ear, businesspeople, all the time complaining about how poorly prepared new hires are.

Overall, Dakota’s main concern seemed rooted in the performance of students on standardized tests and their preparation for the workforce. Their perspective was that everything we do in education should be evaluated based on whether that action improves student performance and outcomes. Further, they seemed in indicate that the current education landscape was broken in many ways and needs to be reformed: “What matters is outcomes for kids. So, what can we do to turn this mighty ship?”

Concerns About Teacher Preparation. As a teacher preparation approach, the Lateral Entry process appears to have been chaotic. Commenting on the process teacher candidates had to endure, Monroe stated:

> My problem with the Lateral Entry program as it existed in North Carolina was, you had this pathway where an individual received a three-year license, and then went to a regional center, and the regional center worked off this kind of antiquated worksheet where they said you need these six things…to be a teacher, and it was an ed psych course, it was a methods course…it was a special ed course. …it was a disconnected set of requirements as opposed to a comprehensive preparation program. So, I didn't have to align myself with any particular program, what I could do was say, 'Well, I'm going to take this course at a community college. I'm going to take this course at this for-profit online provider. I'm going to take this course at a state university.' Now I've got three different programs, who all have a very particular way in which they have thought about preparing teachers, because any teacher preparation program that's accredited has a conceptual framework. …And so, these lateral folks never got that model…or that comprehensive approach. They got this disconnected set of experiences.

An overarching issue with the Lateral Entry process, as Monroe pointed out, was that "no one was accountable for you," meaning that teacher candidates were largely on their own.

Monroe noted, however, that they still believed strongly in the principles underlying alternative teacher preparation: "I see there's tremendous value in bringing second career professionals into classrooms, giving them good pathways." Although the Lateral Entry process did provide a pathway into teaching for individuals without education backgrounds, the disjointed nature of their preparation called into question the effectiveness of teachers prepared via the Lateral Entry pathway. As Monroe stated: "Some of the data…basically showed that the least effective teachers in the State of North Carolina were Lateral Entry-prepared… not necessarily those who were Lateral Entry inside of an IHE…they were…housed at a RALC, a

regional center." While Dakota did not comment on the specifics of the Lateral Entry process that were problematic, they noted that "we had groups of teachers railing against Lateral Entry because they didn't go to teaching school." Dakota went on to question the very premise that teacher education programs are useful for the application of teaching in today's K-12 classrooms:

> School for what purpose? School for the purpose of school? School for the purpose of education? Or school for the purpose of life? This is not the 20th Century, this is the 21st Century. This is certainly not the 19th Century. And the teachers that are very proud to say—and I'm happy for them—'Well I've been teaching for 35 years.' Well, let me think about that. You've been teaching for 35 years, so you were taught by someone well over 35 years ago who perhaps had been teaching for 35 years who was taught by someone that perhaps was taught how to teach in the 1800s!

Monroe conceptualized the larger issue within educator preparation as being not outdated methods, but rather the lack of standardization between programs; such standardization would ensure that all teachers are prepared to the same levels of rigor and effectiveness. "There wasn't a consensus around teacher preparation…And so we have to think about like, what [does]…the kind of scope and sequence of teacher preparation look like?" The idea that most programs had similar elements including core courses, methods courses, field experiences, and student teaching, but that the delivery of these components could vary substantially between programs creates a scenario in which some teachers are better prepared for the classroom than others. Those differences in preparation are particularly problematic when there is a disconnect between the preparation and the context in which teacher candidates eventually work. Monroe argued that this standardized scope and sequence, which supports teacher mobility and recruitment, must

also be supplemented with local context. “If I’m preparing teachers at NC State, for example…[and] the majority stay in that localized Wake County…what happens when kids go to northeastern North Carolina? Have they really been prepared for that context?” Given policymaker concerns about teacher shortages, however, one might argue that any teacher in a classroom—even one lacking in local context or standardized preparation—is better than no teacher. Monroe pushed back against the idea that even poorly prepared teachers are a service to students with their assertion that “Maybe you’re doing a disservice because you’re preparing bad [math] teachers who are providing poor instruction…and they’ve got 30 kids a semester…so they’re [teaching] 60 kids a year for five years…that’s 300 kids now who had subpar mathematics instruction.” Overarching policymaker concerns about the content and quality of teacher preparation may have prompted them to search for policy solutions.

Thematic Analysis: Policy Stream

In Kingdon’s conception of the policy primeval soup, “some ideas survive and prosper [and] some proposals are taken more seriously than others” (Kingdon, 1984, p.123)

Existing Policy Solutions. To get a sense of the teacher preparation policy ideas floating around in North Carolina’s policy context, I asked policymakers to consider solutions to the issues they identified earlier in the interview other than the adoption of the residency approach. While Dakota responded to this question with many insights into the political thinking of legislators (discussed in more detail later in this chapter), Monroe identified several policy solutions to poor teacher quality and shortages that had been implemented over the years:

> The first one certainly was teacher preparation, traditional teacher prep, and then you have things like [the] Teaching Fellows Program…which, you know, ran for 20 years, and then was eliminated by the General Assembly. And people can, you know, there are

> lots of theories about why that happened right? I think there was also this idea that 'well we could fund things like Teach for America,' right? That serves a local population, so we invest funds there. There were…[and] continue to be some of these grow your own programs, whether it's…Troops to Teachers, [it] could also be TA to Teacher. So those existed in some small numbers. And then lastly, I think probably the most impactful was the Lateral Entry option in North Carolina.

The various policy solutions, which Monroe articulated well, align closely with Kingdon's point about ideas coming and going, with some taken more or less seriously. Teaching Fellows, which the General Assembly eliminated in 2011 after more than two decades did, in fact, reappear a few years later in 2017. Importantly, Monroe identified Lateral Entry as one of the most important programs in addressing teacher shortages, likely due to its size. All of the other programs mentioned tended to be smaller and targeted to very specific populations of individuals who wanted to teach.

Residency Approach. In thinking about how North Carolina worked its way to adopting the residency approach as it now exists, Monroe commented on the nature of innovation: "I have this belief that innovation is about successive approximations—you keep getting better and better and better." One clear advantage to the residency approach is the increased accountability of EPPs for teacher candidates. Recall that in the Lateral Entry model, teacher candidates moved through the preparation process with limited oversight and institutional accountability, "whereas now for every beginning teacher, someone is accountable for that person." Monroe continued on, saying "For me, that's what it's about. It's about the accountability for the performance of that individual." Increased accountability could, theoretically, improve the performance of teachers

prepared through the Residency License over that of teachers prepared through Lateral Entry because, as Monroe explained:

> The Residency License said, 'you have to affiliate with one institution.' And then that institution will prepare you, will provide you with a pathway to full licensure and then it became this partnership between the individual, the employing LEA, and the IHE, whereas in the old [Lateral Entry] model, it was basically 'individual, LEA, RALC maybe' or it could have just been 'individual, RALC.'

When I questioned these participants about the origin of the residency approach, neither could definitely confirm it. Dakota remembered being "told that this was being implemented in other states." Monroe commented that the bill sponsor "had a draft bill when I came in and I kind of looked it over with them. I'm not positive, but I think they were looking at Texas for a number of different things." In a close review of the Texas Education Code, I did discover a residency program. Interestingly, the Texas Teacher Residency program, established in 2013 by H.B. 1752, more closely mirrors the original urban teacher residencies in that it requires participants to complete Master's level coursework while completing an apprenticeship under the direction of a mentor teacher (Title 2. Public Education, 2021). The existence of this program alone is not compelling evidence that North Carolina borrowed the language of residency from Texas. Other EPP language in the Texas Education Code unrelated to the residency approach, however, tells a very different story. Entire sections of North Carolina Senate Bill 599 including: accountability for educator preparation programs, risk factors for educator preparation programs, the risk assessment model, sanctions, EPP report cards, and reports of alleged violations regarding educator preparation programs are nearly identical to similar sections in the Texas Education Code. The Texas Legislature wrote most of these sections into Texas Education Code between

2009 and 2013, however, the section on EPP accountability programs was ratified in June of 2017 (Title 2. Public Education, 2021), which was approximately the same time that similar language in Senate Bill 599 was working its way through the legislative process in North Carolina. It is possible that the accountability system language emerged closer to 2017 and that the North Carolina bill sponsor learned of it at around the same time that he became aware of the more prescriptive Texas legislation. As Dakota surmised "I have a feeling that he probably went to a conference someplace and somebody gave him this idea and he said, 'You know, that's a good idea. We're going to do that.'"

It seems likely the sponsor also learned of the language of residency at approximately the same time and decided to include it in the North Carolina statute, even without fully incorporating a more comprehensive teacher residency program. In discussing this question with Monroe, they commented that there was never "any real connection between true residencies and the term Residency License." They added that the legislature's approach to just incorporating the language of residency "creates some confusion around what a residency looks like." Although the General Assembly did not create a true teacher residency through Senate Bill 599, Monroe maintained hope that one could eventually develop:

> North Carolina will eventually get to a residency model, but you have to have all these other things in place. …you have Teaching Fellows, so you have a scholarship program. We have TA to Teachers…that's funded. So, we have a way now to fund the…residency. We have models [which are]…entirely online, [with] competency based education…probably the missing part is some kind of on-the-ground supervision that connects the three. …but you have the new teacher support program. So, we have all of these things, but we haven't yet figured out how to put them all into one thing…so five

years from now when it happens, you're going to look back and you're going to go, '…this is exactly what we were talking about.' All the pieces were there but nobody saw. Although the component parts of a true teacher residency may currently exist in North Carolina, the development of the full model will require substantial investment and political support.

Thematic Analysis: Political Stream

In this analysis, "political" encompasses the colloquial Washington use of that word and refers to "electoral, partisan, or pressure group factors" (Kingdon, 1984, p. 152). Kingdon argues that the political stream flows independently of the problem and policy streams, but is certainly not exogenous to the policy making process (Kingdon, 1984). Several key themes within Kingdon's factors emerged from the interview responses: legislative attitudes, internal and external influencers, and an overarching desire for educational accountability.

Legislative Attitudes. Dakota stressed the importance of understanding how legislators think and the environment in which they find themselves making decisions. In one particularly blunt statement, they noted that "legislators do not understand the education process, quite frankly." They went on to explain that the myriad levels of policy involvement (federal, state, local) combined with mixed messages they hear from constituents result in a great deal of confusion regarding best practices in education. Legislators rarely possess education backgrounds. In the current North Carolina General Assembly, Dakota noted that "there are several former teachers…[but] there's one active teacher in the General Assembly and he's in the House." Two additional challenges legislators face in addressing education issues Dakota explained are that (1) education is rarely a consensus issue and (2) education is not an effective fundraising space. Dakota expounded on these issues, explaining that "40% of people think you are [an]…idiot, no matter what decision you make. It's just who is in that 40% changes all the

time. In fact, in education it's more like 60%." They continued on pointing out that "it costs a lot of money to run for office and most of us can't afford to fund that out of our own pocket," which then prompts legislators to focus more intently on issues with greater fundraising potential.

The fast-paced environment in which legislators must act presents another challenge to effective educational policymaking. Dakota explained this as follows:

> In North Carolina, legislators are elected for a two year term. …That means they've got two years to show their constituents that they have an impact. They've got to do something. Two years is not a long time. …So, we legislators are in a rush to see action. We know we should know better of course…You don't turn the mighty ship of state…nor certainly the mighty ship of the Department of Public Instruction, or, or even a single school on a dime. …we lack a strategic view.

This expedited environment focuses legislators' attentions on areas in which they can demonstrate their effectiveness to their constituents. Dakota identified the internal policymaking structure of the General Assembly as another challenge to rigorous policymaking due to the sheer number of issues to which legislators must attend. "We're trying to be all things to all people. …They're all your issues. And you've got 'I got another committee meeting in five minutes. I gotta go. …The system we have, frankly, doesn't embrace a lot of questions."

Political Influencers. Central to understanding the political stream is knowing who the players are in any given situation. Dakota separated key players into internal political players and external forces. The chairs of various committees and Senate leaders featured prominently in the discussion of internal political players. Describing the Senate Pro Temp at the time, Dakota commented "If it's education, he's either for it, or it's dead." They also pointed to the involvement of outside organizations impacting the General Assembly's actions. Contextually,

the relationship between teachers and the legislature had soured by the time Senate Bill 599 was being developed. Dakota explained that "the loudest voice was NCAE [North Carolina Association of Educators], and it was all confrontation…the blood between NCAE and the leadership was so bad." It is unclear how this negative relationship may have influenced the development of the residency approach, but it could have played roles in other aspects of Senate Bill 599. Other stakeholders, many of whom represented the business community, were also influential in the legislature. Dakota noted that their "strong opposition to Lateral Entry was [that it was] deleterious to education outcomes for the business community. And they had some very sympathetic followers in the General Assembly."

Speaking specifically about the residency approach, Dakota was less clear on who may have been at the table: "Who did [the bill sponsor] listen to? Most of us don't know who he listened to." Given the stronger connection between teacher candidates and IHEs in the residency approach, I wondered whether a strong IHE lobby might have influenced the bill's development. Monroe noted that "there probably were some outside actors lobbying to open North Carolina up to alternative providers," but they were unaware of a movement within North Carolina IHEs supporting a residency approach. Monroe adds credibility to the theory that the development of Senate Bill 599 happened largely within one legislator's office: "I think it was a much smaller contingency of people than people realize…It wasn't like this huge groundswell that led to all these things. [The bill sponsor] had a lot of power."

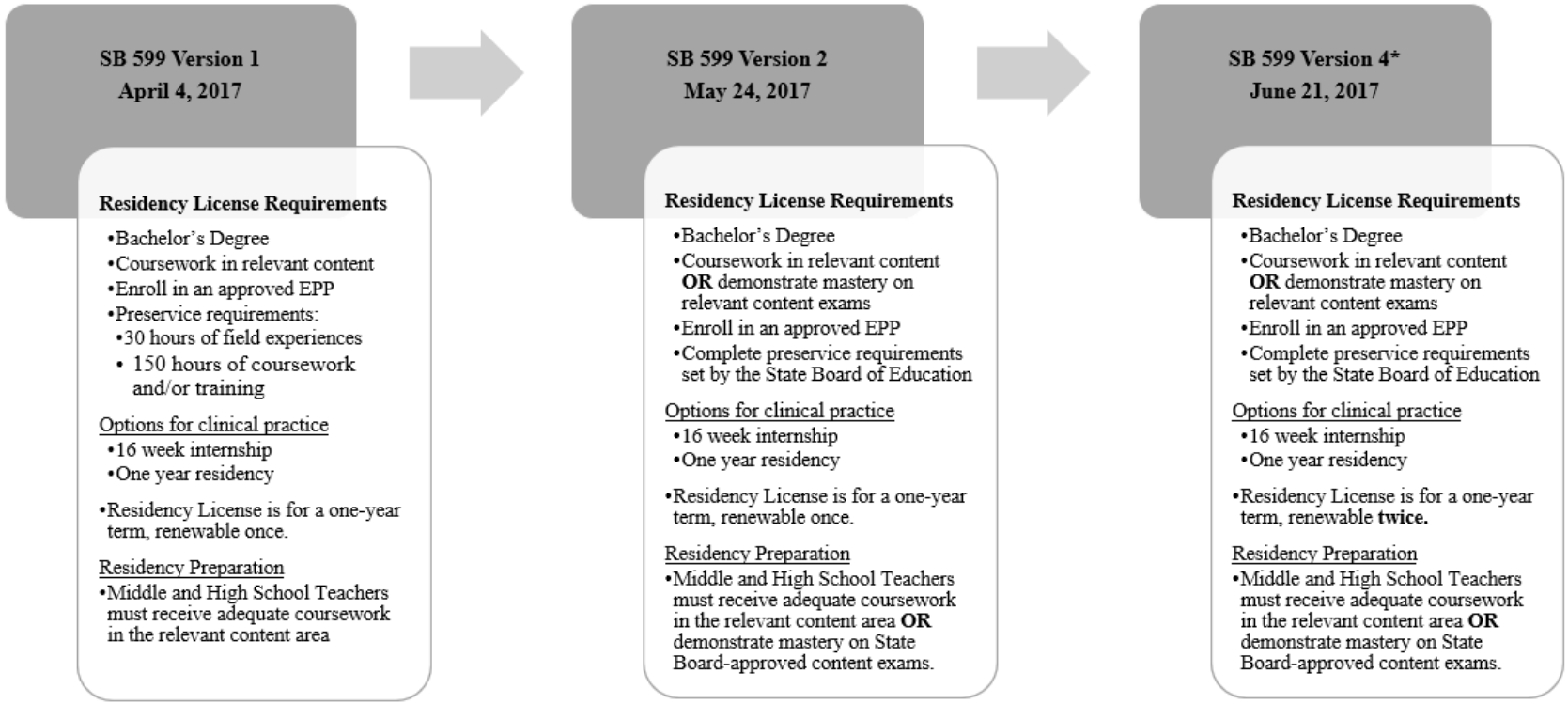
Desire for Accountability. One interesting finding in the political stream was Dakota's framing of educational accountability as a partisan issue. During our conversation, Dakota noted that the prescriptive nature of the legislation was driven largely by this desire for accountability:

> And the one last piece which is something that sells very well with the majority party. What are the accountability measures so that we know we're getting what we're paying for? …The derivation of 599 was as much political as it was education.

Confirmatory Document Analysis

The purpose of this document analysis was to note changes to the residency components of Senate Bill 599 throughout its development that might provide insight into the intent behind the residency approach. Figure 3 contains a visual representation of the modifications described in this section. Senate Bill 599 was filed in the Senate on April 4, 2017, and evolved through five versions in the Senate chamber before advancing to a conference committee and finally being signed into law on July 27, 2017. In its original version, the bill laid out two familiar options for clinical practice: an internship lasting a minimum of 16 weeks or a clinical residency lasting at least one year. One important requirement in this version of the clinical residency, however, was the additional requirement that a resident complete at least 30 hours of field experiences and 150 hours of coursework and/or training prior to the start of the residency. This requirement would have created a barrier to transitioning into a Residency License for mid-career professionals because it would have been very difficult for a working professional to complete 180 hours of observation and training while working a nonteaching job prior to receiving a Residency License. Additionally, in the original version of the bill, individuals who wanted a Residency License were required to have completed coursework relevant to the requested licensure area. Both of these requirements changed in the next version of the bill. The training, coursework, and observation requirements were replaced with less prescriptive language requiring Residency License candidates to complete preservice requirements determined by the State Board of Education. Through its licensure policy, the State Board of Education determined that the

Figure 3: Timeline of Senate Bill 599 Residency Component Modifications.



*Versions 3 and 5 of SB 599 did not include substantive changes to the residency components.

Residency License teachers must receive 10 days of professional development (~80 hours), only five of which must be completed during the preservice period (NC State Board of Education, 2021a). The requirement for Residency License candidates to possess coursework in their planned area of licensure was modified to allow individuals to meet the requirement either through content area coursework or by demonstrating mastery on State Board of Education-approved content exams in the licensure area.

Another residency-related change that occurred over the course of the evolution of bill related to the content preparation of middle and high school teachers. In the original version, EPPs were required to provide adequate content coursework for these individuals. Beginning with the second version of the bill, published on May 24, 2017, students in clinical residency programs could instead demonstrate content mastery in these areas by passing relevant, State Board of Education approved content-area exams. One other interesting note about the Residency License is that it was originally only renewable once, which would have made the Residency License period two years as opposed to the three years for licenses obtained through the Lateral Entry pathway. By the fourth edition of the bill, in the latter half of June 2017, the Residency License language changed to reflect its final state as a one-year license, renewable twice. None of the four proposed amendments to Senate Bill 599 related to the residency components and neither did the conference committee report. Although the residency approach signaled a significant change in the North Carolina alternative teacher preparation landscape, the substance of this program seemed to be of relatively little debate during the evolution of Senate Bill 599. Other areas of the bill, particularly the composition of the PEPSC, seemed to generate more controversy and discussion. The relatively minor edits to the residency components seem to have been geared toward making the residency approach as easy and streamlined as possible.

Summary of Findings. While these two interviews provide some insights into policymakers' priorities, the question of what exactly they hoped to accomplish through the residency approach remains unanswered. Based on their responses, I theorize that their interest in improving student outcomes, reducing teacher shortages and, perhaps most importantly, increasing EPP accountability, were important factors in the creation of the Residency License. The confirmatory document analysis indicates that the Residency License was not a primary

discussion topic for legislators during the development of Senate Bill 599 and the changes to the Residency License appear to have been intended to streamline the residency approach.

Research Question 2: Implementation of the Residency Approach

The following section includes findings from a confirmatory document analysis of the 2019-2020 EPP Annual Reports and a thematic analysis of in-depth interviews with ten EPP leaders related to the implementation of the residency approach in North Carolina.

Confirmatory Document Analysis

The original goal of this analysis was to create a categorization of EPP residency programs that educator preparation stakeholders—including policymakers, program leaders, LEAs, and prospective students—could use to better understand the options available in North Carolina. In theory, such a categorization could be updated annually as programs submit their reports. Upon closer examination, however, it became clear that there are significant issues in the current reporting structure that preclude the adoption of such an approach at this time. In evaluating 85 Bachelor's and Master's reports from 2019-2020, I found 40 institutions claiming to have residency pathways for teacher preparation. The vast majority of those programs did not include any residency-specific information in their annual reports. The lack of specificity regarding residency programming in these reports likely stems from two sources: the variable structure of residency programming and the structure of the reports themselves. For those that did include information, residency pathway descriptions included fully online processes, routes through Masters of Art in Teaching (MAT) programs, and a variety of combinations with existing Bachelor's programs. In some cases, individuals pursuing a Residency License could choose from multiple pathways within one institution. The complexity introduced by such

variability in programs is exacerbated by a report structure that was clearly originally designed with the Lateral Entry process in mind.

Under the Lateral Entry process, EPPs were not necessarily responsible for individual teacher candidates unless someone chose to become fully affiliated with a program. Otherwise, candidates could come and go, taking classes in a more piecemeal fashion. The requirement to become affiliated with an EPP inherent in the residency pathway means that EPPs are now accountable for those individuals. The Bachelor's reports provide a space for programs to indicate whether they offer Residency License pathways, but they do not ask any questions about the pathway. Most institutions respond to the prompts in the report with descriptions of their traditional undergraduate pathway requirements, even while indicating that they have students completing a residency pathway. The Master's level reports do not ask about residency pathways at all, despite many institutions using their existing MAT structures as residency pathways.

In the program applicant and completer sections, the inclusion of traditional, residency, graduate, and licensure only pathways creates the potential for the incorrect reporting of statistics. In some cases, the only residency pathway is through the MAT, leading to a lack of clarity about how these candidates should be reported. The lack of residency-specific prompts on the annual report templates leaves the inclusion of such information to the discretion of the EPP, and many choose not to report. Of the 40 programs stating that they offered a Residency License pathway, approximately half provided no specific information about the program requirements. The officially published 2019-2020 report for one institution included the phrase "Data has not been entered" for three separate fields. The largely unchanging structure and apparent lack of quality control of the annual reports potentially indicates that their completion is more of a compliance exercise than a meaningful means of ensuring accountability. In theory, the inclusion

of the same fields over time allows for the longitudinal tracking of EPPs. In practice, many existing programs simply copy and paste their responses from the prior year. Senate Bill 599 requires the State Board of Education to create publicly available report cards for EPPs. In compliance with that requirement, NCDPI created a virtual EPP Dashboard that facilitates comparisons between EPPs on important accountability metrics including teacher evaluation, student growth, and candidate satisfaction, and measures for candidate selection and completion, candidate knowledge and skills, and contribution to NC teaching needs. While the EPP Dashboard enables more straightforward comparisons of outcomes between EPPs, it does not include specific information about the structure of programs and different pathways. Therefore, robust and clear EPP Annual Reports play an important role in helping educator preparation stakeholders understand the available preparation options in North Carolina.

Thematic Analysis – North Carolina Education Preparation Policy Context

The names used throughout this section are pseudonyms. A complete list of EPP leader pseudonyms is available in Chapter 3. As part of the warm-up for each interview, I asked participants to describe what they think are the most significant issues in education during the past five to ten years. My intent was to gain an understanding of how both policymakers and EPP leaders view the overall education policy landscape in North Carolina. While EPP leaders listed several broader issues including increasing rates of poverty, shifting legislative and societal expectations for education, and decreasing teacher morale, one issue, namely, teacher shortages, stood out as particularly relevant to the implementation of the residency approach.

Teacher Shortages. The overarching challenges associated with teacher shortages seems to come in two forms: fewer prospective teachers entering preparation programs and current teachers leaving the field. As one EPP leader opined, “our undergraduate programs are drying

up." Although the experience was not universal, multiple EPP leaders observed that their programs were seeing fewer and fewer applicants. Marley commented, "we don't have the traditional pool that we usually did. You know, it's not there and it is declining rapidly." Kris noted that the growth of their residency program was far outpacing that of the undergraduate program, resulting in a division of candidates that was "half and half." An additional challenge is the fact that not all of those in a preparation program stay in the classroom. Speaking about the current Residency License program in their district, Marley explained that "usually we lose 10 teachers, this year we've lost more." Emerson agreed that their Residency License students "sometimes…don't want us to renew" and were choosing to leave the program altogether. Four of the ten EPP leaders explicitly emphasized the importance and difficulty of recruiting diverse candidates into the teaching profession. Discussing the need for the teaching profession to reflect the students in the schools, Reese commented that "we are tremendously lacking in diversity in our program so that's a big issue of looking at students of color, first gen college students." Kris argued that "students of color have lots of choices and [teaching] is just not attractive."

Fewer people in educator preparation programs coupled with more vacancies in districts means districts that have traditionally been able to count on their local preparation program for new teachers are often left with unfilled vacancies. As Parker explained:

> Literally every day I get either an email or a call from a principal saying 'I need, I need, I need,' and that is heartbreaking because I have…no one to send them. Yeah, a lot of my folks that are going to graduate in May already have accepted jobs…so when people are calling me in December and my December grads were hired by October, sorry, like, I don't have anybody.

Compounding the issue of fewer people in educator preparation programs is the reality that the turnover of current teachers leaves many classrooms empty. Marley emphasized that "teachers [are] dropping like flies these days." Emerson pointed to stressful working conditions as one motivation behind seasoned teachers' decisions to retire. In thinking about how the COVID-19 pandemic has changed teachers' decisions to stay or leave, Parker reflected that:

> As the pandemic has stretched us even thinner…we're seeing a lot more exodus of the profession, which is scary. We have very few of, you know, the 'over 30 years' that we used to have in the building that can really help mentor. Aren't there. We're seeing buildings where the vast majority of folks are beginning teachers and that that changes things. We're also seeing teachers that are just saying 'I'm done. I'm done.'

While the stress of teaching in virtual, hybrid, and in-person modalities during a global pandemic has likely contributed to attrition, multiple EPP leaders highlighted financial concerns regarding both current teacher pay and the cost of becoming a teacher as barriers.

Financial Concerns. Half of the EPP leaders talked about teacher pay in conjunction with teacher shortages. "People aren't coming for something that they're not ultimately going to be paid for." EPP leaders at several institutions noted that the overall cost of becoming a teacher contributes to shortages because prospective teachers know they can make more money in other fields and receive a better return on their educational investment. "Of course, I think we've got a great program, but for someone deciding to go…that's an intentional choice financially." Another EPP leader at a private institution noted that prospective teacher candidates must invest in four years of education, forgoing income they could make during their student teaching semester and paying the cost of licensure testing. They added "when you look at the salary coming out, it doesn't match up. It's not like you can go…'that first year, I'll make it up.' You're

not making anything up." Issues related to the cost of becoming a teacher are not limited to private institutions. One EPP leader at a public institution confirmed that at least five to seven percent of their candidates fail to complete the program due to financial constraints. "They're trying to become teachers, but…they can't afford to be a teacher, and when they graduate, they won't be able to afford what they've already paid in terms of tuition and expense of becoming a teacher." Added to the up-front costs of becoming a teacher, the elimination of Master's pay prevents some current teachers from pursuing further education, and long waits between legislative increases are pushing veteran teachers to leave the profession. As Reese explained, "Graduate programs have completely dried up…or they're leaving the classroom because they haven't made an additional amount of money because of the lack of pay raises." Jessie put it succinctly: "until teachers get paid more money, we're not going to have more people in education…that's the bottom line."

"A Patchwork Quilt." Prior to the development and implementation of the residency approach, Lateral Entry served as the alternative educator preparation pathway in North Carolina. Under Lateral Entry, prospective teachers did not have to become affiliated with a single preparation program to complete their requirements, which is a policy that nearly all EPP leaders interviewed described as problematic:

> There was a lot of shopping around…you could drive up and down 40 and shop. I'll go to NC State and take this online, but during the summer I'm in Greensboro, so I'll take this, and I'll jump over to Bennett, and I'll jump to Elon…"

EPP leaders asserted that this disconnected approach led to Lateral Entry teachers feeling isolated. While the flexibility of Lateral Entry may have been convenient for students, Kris noted that students "just sort of found these courses…so it wasn't really a developmentally building

program." Parker commented that it allowed students to "go years before…that classroom management course. And anybody who's taught know that's day one. You don't get classroom behavior right, forget teaching the content." The RALCs also had discretion in what they accepted for a student's program of study, leading to even more variability and confusion:

> Parker: "All that coursework they ended up having to redo…"
>
> Interviewer: "The RALCs weren't able to look at their transcripts and say 'Oh, you've already taken methods and all this content stuff?'"
>
> Parker: "So it depended on the RALC…some RALCs would go back retroactively and take some…[and] some wouldn't, because, you know, it was kind of the Wild West.

According to the EPP leaders, the structure, or the lack of same, in Lateral Entry produced candidates who were often unprepared and less likely to remain in the classroom. "It was a disservice to everyone involved…because not only were they building the plane as they were flying it, they didn't even have a full set of blueprints." In Marley's view, "Lateral Entry walked in with nothing." Since Lateral Entry teachers could complete coursework during the three-year period of their license, verifying compliance remained largely a burden on the district or the teachers themselves. Jessie noted that overwhelmed Lateral Entry teachers would come into their office "in the middle of their second year, or the beginning of their third year panic-stricken because this idea of getting these classes had slipped off their radar screen." If Lateral Entry teachers failed to complete those requirements during the three-year period, they could not remain in the classroom. The dual challenges of teaching while trying to cobble together individual preparation experiences led Jordan to comment that "basically, Lateral Entry didn't work. The retention rate for Lateral Entry teachers…was very, very low." Jessie clarified, however, that Lateral Entry teachers who chose to become affiliated with their program had

higher levels of retention than Lateral Entry teachers working through the regional centers. Elliot confirmed this view, adding that Lateral Entry routes "were not equal. They were separate, and not equal."

Legislative Intent. It is within this wider educational context of teacher shortages and concerns with the Lateral Entry process that the General Assembly created Senate Bill 599. To better understand how EPP leaders perceived this legislation and the motivations behind it, I asked all of the EPP leaders what they thought the legislature was trying to achieve by changing the Lateral Entry process to the Residency License and by explicitly stating the clinical practice requirements—including the addition of the one-year residency—into the law.

One overarching theme of their responses has to do with the language of residency itself. Although none of the EPP leaders knew for sure where it originated, many suspected it had roots in the medical field. "You're going to find everything in our teacher prep programs is moving to the medical language…I don't say 'student teaching' anymore, it's clinical practice or clinical internship and residency." EPP leaders were also quick to point to key differences between medical residencies and the North Carolina residency approach, including the lack of supervision and support. Reese commented that no medical resident "is on their own…somebody is watching them like a hawk," but that university supervisors for their residency program were realistically only able to visit residency students three or four times in a semester. Emerson contrasted the difference between medical and teacher residencies as follows:

> There [are] some really systematic ways of supporting teacher residency students really akin to…a medical residency. …So, they're shadowed, they're mentored. You know, we turn [residency students] loose and give them a roster and the paycheck and give them all the rights and responsibilities of every other teacher in that building and hope they float.

When specifically considering why the legislature replaced the Lateral Entry process with the residency approach, a majority of EPP leaders asserted that the legislature was trying to partially or fully resolve problems associated with Lateral Entry. Two EPP leaders thought the main focus might be to "create a more cohesive pathway." Others claimed the focus might lie more with improving the quality of alternatively prepared teachers, and still more thought the legislature might have wanted to make it easier to become a teacher. Several interviewees highlighted the importance of teacher retention and pointed to Lateral Entry's failing in that regard. One EPP leader proposed a theory that the General Assembly was interested in expanding the field of educator preparation providers, with a particular eye toward community colleges as the next frontier of educator preparation. When I asked what that might mean for existing EPPs, they responded "that will either make us innovate or it's going to shut some of us down." Despite that one individual's reservations about the legislature's motivations, the EPP leaders generally attributed good intentions to the General Assembly. As Jordan commented, "I think they want what we all want: good teachers in the classroom. …And I think they realized what we were doing wasn't working and so we had to do something different."

Aside from the switch to the Residency License from Lateral Entry, the other major residency approach-related change in Senate Bill 599 was the explicit outlining of clinical practice requirements for educator preparation programs. EPP leaders generally agreed that this change likely stemmed from two motivations: bringing consistency to field experiences and providing prospective teachers with more time in the classroom. Multiple EPP leaders noted the lack of consistency between EPPs regarding student teaching. Emerson commented that "some people were all over the place...they may have been student teaching five or six weeks before the legislation." Parker commented that "six weeks is enough to almost figure out what might be

happening." Prior to Senate Bill 599, some EPPs split up student teaching assignments into shorter durations to provide teacher candidates with exposure to diverse settings. Parker acknowledged the good intentions behind such practices but argued that "nine weeks here and nine weeks here…you don't get the value of sustained teaching." This seems to have been at the heart of the requirements, at least for these EPP leaders. Kelly believed that the legislature was trying to create the best-prepared teachers, which necessitated that they have practical experiences rather than only academic experiences. Jessie thought the legislators wanted student teachers to "have the full experience of what it means to be a teacher," and Jordan agreed that the "authentic full experience" makes teachers less likely to be "disillusioned with things they didn't know about" and more likely to "be successful and stay in the position."

Thematic Analysis – Determinants of EPP Discretion

As discussed in Chapter 2, bureaucratic discretion can otherwise be conceptualized as the "space between the rules" (Hawkins, 1986, as cited in Heinen and Scribner, 2007) in which policy implementation and program development often occur. In the case of the residency approach, there are several factors that contributed to the levels of discretion EPPs felt they had to design and implement residency approaches: the text of the law, institution-level factors, and attitudes and behaviors of the state education agency.

Legislative Requirements. Throughout the interviews, the EPP leaders demonstrated a strong knowledge of the specific text contained in Senate Bill 599, including knowledge of how the law changed over its multiple iterations. I frequently heard phrases like "the law doesn't require that" or "we have to meet the legislative requirements." EPP leaders also identified several issues stemming from the language of the law. Chief among those issues was the idea that residency candidates must become affiliated with an educator preparation program. Elliot

noted that “little differences in the language can be really important, like affiliated versus enrolled.” This question of what affiliated actually means has been challenging for many of the EPP leaders. For individuals who finish their coursework but have not yet passed licensure tests, the current legislation requires they remain affiliated with an EPP. As Kelly points out, “this causes a problem because our institutional structures aren’t built on affiliation. They’re built on ‘register and pay for a course.’”

Other logistical issues from the legislative requirements surrounded the new, more explicit clinical practice requirements. Multiple EPP leaders noted that 16 weeks is longer than the average college semester. EPP leaders discussed having to figure out how to fit in a full 16 weeks and bring students back to campus before official start dates. “Our students have to come back on campus before housing is really ready to accept them. …They come back earlier than everybody else, so that created a little bit of a problem for us to work through.” Moreover, as Elliot pointed out, the legislature “didn’t actually define what they meant by a week.” Additionally, the language in Senate Bill 599 requiring EPPs, where practicable, to ensure students see the beginning and end of a school year is basically impossible for EPPs based at institutions of higher education. As Parker explained, “realistically, no [candidate in an] EPP is going to see the end of the year because our semester ends in May…schools don’t end until June.” Jessie pointed out that secondary candidates doing their student teaching in the fall could see the end of a semester, but that neither they nor any K-6 candidates would ever see the end of a school year.

In thinking about why these laws were written in a way that is not only possibly ambiguous but also at times creates outright confusion, interviewees blamed the fact that legislators are rarely education experts and that they are frequently trying to solve what they

perceive as problems. Several EPP leaders postulated that legislators had heard from districts and candidates about the lack of preparation inherent in the Lateral Entry process and asserted that the more prescriptive legislation could have resulted from their desire to improve the quality of people's experiences. Elliot commented that legislators don't "hear from the people who are happy and satisfied" and further added that legislation often "gets written for the least common denominator." When discussing the "hot mess" of sorting out candidate affiliations for licensure testing purposes, Marley commented that "some things were left that [the legislature] didn't think about because they're not in it." Others agreed that the legislature's approach to using the language of residency without creating a true North Carolina teacher residency likely stemmed from a lack of knowledge. As Elliot summarized, "I think they probably knew enough to know that there are these residency models and maybe didn't understand exactly what that meant because legislators are not teacher educators. That's not what they do."

EPP-Level Factors. Compounding the challenges posed by the text of the legislation are EPP-level factors including the diversity of institutions and the presence of various accountability stakeholders. For the EPPs based at institutions of higher education, differences in culture can create challenges with regard to working with stakeholders outside of the higher education environment. In discussing cultural differences between K-12 and higher education, Elliot explained that:

> School districts and higher ed are…very different institutions that work in different ways and have different timelines. …[in a] school district you turn on a dime, right, it's like, 'I want this done…you do it today'…IHEs don't work like that.

The daily operational realities at IHEs also impact programs' abilities to support residency students. The law requires programs to supervise students, but Kris highlighted one problem

EPPs face in complying. “We're not really designed to send faculty out in the school to supervise a bunch of people who are employed. You know, our faculty don't get tenured for doing that.” Even within the culture of higher education, different institutions take a multitude of approaches to teacher education. Parker noted that sending faculty to support students in school environments is “a huge part of our work and tenure process.” When discussing their Residency License program, Kris disclosed that they conduct everything at the undergraduate level but that many of their fellow institutions situate the Residency License within MAT programs. Differences in approaches to clinical practice abound as well. While most programs are more standardized in this respect following the codification of Senate Bill 599, EPP leaders still expressed concerns about the ambiguity of the requirements:

> “But now that it's 16 weeks…we do that semester one, the students are going one day a week so that's they're getting 12 weeks—12 days in or 14 days in—so that's two weeks, and then you know we have a 15 week semester. So, I feel like we're covered but, um, and like who's monitoring that? Where's the 16 week police?

The last question in the previous quote leads to another element bounding EPP leaders’ discretion as they consider how best to implement the residency approach: accountability. Most of the EPP leaders mentioned both external accrediting bodies and NCDPI as sources of accountability that influenced and sometimes constrained their programmatic choices.

Several EPP leaders mentioned the new EPP Dashboard and accountability measures as influencing their choices, particularly regarding testing. Reese commented on the specificity of the accountability model regarding licensure testing, saying, “we're included in an accountability model that is going to ding us every time one of those students fails the edTPA or fails the *Praxis* II.” Jessie emphasized that “we cannot afford a lot of people failing these tests, you know,

because then it affects our ability to keep an approved program." For at least one EPP leader, state-level accountability measures were not a major concern:

> To become an EPP in North Carolina is pretty simple. You simply fill out a little thing that says what you're going to do and then you do it and supposedly in three years they're checking on your students' progress. But since we haven't had any test scores in about two and a half years, there really hasn't been any checking going on with that. So, no accountability.

This person's opinion that there was no state-level accountability for EPPs, however, put them in the minority. In addition to state-level accountability measures, EPPs must also contend with requirements from national accrediting bodies. When discussing clinical practice requirements, Kelly specifically referenced accreditation:

> Interviewer: Why, for your undergraduate students, did you structure the program the way that you did?
>
> Kelly: Of course, you know, the biggest reason is because we must do that to remain accredited. When you do your accreditation reports they ask you, 'where are the hours? Where are the early field experiences? And what are these field experiences designed to help the students achieve?'

Parker added that accreditation requirements also restrict programs' choices of field placements. "It takes an inordinate amount of time to make sure that your students [have] a place with teachers who meet the guidelines for our accreditors. We can't just put them anywhere…and it takes us weeks." Taken together, state and external accrediting requirements limit program leaders' discretion by requiring emphasis on specific elements of program design or performance that are formally measured. As Emerson summarized:

> Accountability measures just seem all consuming and I could sit around and talk about that all day with my staff to make sure that we keep our head above water and maintain our program approval status and stay in good standing with the State of North Carolina, and our national accrediting bodies.

The State Education Agency. While the legislation itself was more prescriptive, the interpretation of Senate Bill 599 from the state education agency (NCDPI) was much more fluid and delegated down to the EPPs. From the outset of the residency approach, EPP leaders commented on confusing or simply nonexistent communications from NCDPI. Jordan commented that "we didn't hear about it until...you know, 'we're phasing out Lateral Entry and we were going to do something different' and then this is what…was different." Marley commented "I don't think there was a really clear communication from the state to the districts to the educators. It's like, all of a sudden, boom, this is it. This is what we're doing." They also noted that the lack of communication created challenges in bringing local stakeholders on board. "There wasn't a ramp into the residency to educate everyone, so it was a little bit difficult." Following the implementation of the residency approach, ongoing communication challenges have created issues for EPPs. In one case, Kelly described problematic LEA practices likely stemming from misunderstandings between NCDPI and the districts:

> The state department did not intend that the Residency License be the first thing. …But what's happening is the school districts are recommending them to us, whether they have the courses or not…so we have people who are at the end of the three years of the Residency License, now they're trying to get the permit to practice or the Emergency License, and they probably don't qualify.

These communication challenges likely had some impact on the design and implementation of the residency approach as EPPs worked to transition their programs based on whatever information they had at any given point in time. A clearer determinant of discretion originating from NCDPI was certainly their more hands-off approach to program design. Several EPP leaders commented on the broad discretionary power given to them by NCDPI to develop their programs and make decisions about specific requirements as they saw fit. When asking for clarification on terminology and points of law, Emerson referenced a conversation in which NCDPI "pretty much said…we're not going to take away your authority based on our interpretation of the legislation." Reese emphasized that they are much more careful in their program decisions, saying "We dot our i's and cross our t's because of a lack of structure that the Department of Public Instruction refuses to give…their interpretation…is that we get to do whatever we want to, and they're not going to mandate." Kris noted that the law requires EPPs to supervise residency programs but clarified that supervise "is a very loose term. They left that interpretation up to each EPP." EPP leaders did agree, however, that the lack of mandates from NCDPI creates useful flexibility that allows them to design programs that are best suited for their situations and students. The abundance of flexibility, however, created anxiety for at least one EPP leader who commented "When you come back…if you ask the state questions, licensure questions, 'That's up to the EPP.' And then you're like, gosh, are we breaking laws? Are we following the right thing?"

Occasionally, the advice EPP leaders received from overworked employees at the state level was less than helpful. When one EPP leader raised the issue of how residents who finished their coursework would remain affiliated with a university while finishing testing requirements, one high-level NCDPI employee reportedly responded "'Oh, well, can…the

universities…change their timelines?' What? What do you mean? Extend their graduation date? …and then they were like, 'We just thought that universities would keep them enrolled until they passed their tests.'" Reese noted that the guidance regarding EPP flexibility does not seem to be universally understood within NCDPI:

> We send [residents] to the Department of Public Instruction for licensure, and someone in licensure doesn't understand that we have the flexibility to count an accounting course as a math course…we get pushback. And that just happened last week.

EPP leaders pointed to a lack of staffing in the Educator Preparation and Licensure departments as a major challenge to getting support and structure from NCDPI. When speaking about the issuance of Residency Licenses, Kris commented, "I just found out yesterday they're 17 weeks behind on issuing licenses. So, we have people who are almost done with our program before they get their license. I'm not bashing them—they're way understaffed." EPP leaders did speak highly of the individual NCDPI staff members who are working hard to meet demands, but they recognized that what currently exists simply is not sufficient. As Emerson summarized:

> I wish that our North Carolina Department of Public Instruction was better resourced to be able to really support EPPs. …I just need more resources and support. I sometimes need technical assistance. …So, we have increased accountability, and we're pulling back on the amount of supports that you have available to you, but you're still being held to this standard.

Thematic Analysis: Institutional Responses to Discretion

With the space between the legislative, accrediting, and state agency rules in which EPPs could operate more fully explored, my discussions with EPP leaders transitioned to how they, as

Lipsky's (1980) street-level bureaucrats, wielded their discretion and created, to the best of their ability, programs that remained faithful to what they perceived to be the legislature's intent.

Programmatic Changes Related to the Residency Approach. I asked EPP leaders to consider how, if at all, the switch from Lateral Entry to the Residency License changed their programs. Nearly all programs had to cope with the use of "affiliate" in the legislative text through creative problem-solving. In some cases, programs do not allow candidates to begin their official residency or student teaching until they pass all applicable content tests. Other EPPs have created special courses that residents can take (with or without paying for them) to stay officially affiliated. On the front end of the residency approach, some institutions struggle to manage application cycles with residents. As Elliot explained:

> When you get hired, you have to affiliate with a program…one of the complications of that has to do with the start date. …the school district wants to hire them, they want to hire them right now, but they have to affiliate with us it's like 'well they can't affiliate with us because it's, you know, October 15 and we're in the middle of the semester.' So, you know, they, I mean, they can affiliate with us in the middle of semester not taking the course until the next semester but we have…application deadlines and like review processes and…it's not as simple as just like you have to be accepted.

Jessie also found this balance difficult and commented that trying to explain the nuances of program admissions to the legislature was not always easy. "You know, we're not trying to be deceitful. This person has been admitted…has a plan of study…it's all we can do."

Approximately half of the programs did not see any meaningful changes to their programmatic offerings as a result of the Residency License requirements. Elliot acknowledged that "maybe in a perfect world, it should have" but that the reality of accreditation requirements

and the suitability of existing program structures resulted in very little change. A common theme among the EPPs whose programs did not change with the Residency License was that they all had relatively robust Lateral Entry programs in which students could choose to complete all of their requirements at one EPP. “The transition to the Resident [sic] License was not difficult because we already had a number of Lateral Entry students who were choosing to be recommended by [us], rather than through the Regional Alternative Licensing Centers.” Parker argued that they decided not to create a separate pathway for residency students because “We know this works. We know these teachers are successful. We need to do and honor what's best.” For EPPs that did undergo changes, the differences generally related to support and resources.

Residency Means More Support. A resounding theme throughout these interviews was that the Residency License process provides significantly more support to candidates than Lateral Entry. In the past, Lateral Entry students often bounced between programs, which meant that the burden of supporting those students fell to districts rather than EPPs. Residency students pose a new challenge for some EPPs as they create support systems for these students. Emerson acknowledged that:

> It's made us put in some supports that we probably didn't have, because we were used to supporting laterals who were kind of jumping around more, [and] we were supporting undergraduates in this very traditional way. …And so, it's really made us be more creative…the way we approach them pedagogically is very different than the way we approach an undergrad.

Marley also approved of the greater support available to residency teachers than to those coming through Lateral Entry because “you've got support for those people that that really need it, that want to do this. And a lot of them are career changers—education is their passion. But

before they didn't have anybody to support them through it, and they couldn't handle it." In describing the support previously available to Lateral Entry teachers who chose to complete all of their requirements at one institution, Jessie concisely observed that "the residency model does not leave that to chance."

Additional testing in the form of the edTPA or PPAT is another area that has received increased support and attention from EPPs. While both tests are options, most of the EPP leader's programs in this study use the edTPA. EPP leaders were split on their opinions of the edTPA assessment, but they all agreed that preparing candidates to pass the edTPA requires significant support. Kris explained that preparing students to pass the edTPA is " a really big, heavy lift for our faculty." One EPP leader felt strongly that the edTPA was "a nightmare" due to the time and focus it takes away from students' clinical practice. They pointed to "how much time we…devote [to edTPA] in their clinical when they should be completely focused on student teaching and learning all the twists and turns of being a teacher." Other EPP leaders disagreed and saw the edTPA as an important tool that supports the construction of reflective skills. "I think that it's truly moving new teachers from a position of thinking of activities and things to do in the classroom to…disciplining our thinking about what teaching means." The EPP leader acknowledged that edTPA puts a lot of pressure on candidates, but pushed back against criticism of the edTPA saying, "I think that if a person comes out of successfully understanding edTPA, they're [mentally] entering the profession at about the sixth or seventh year of teaching…that's a huge expectation, and possibly an unrealistic expectation." Still other EPP leaders found the edTPA perfectly reasonable. As one EPP leader said, "edTPA is planning, teaching, and assessing…And yeah you do have to be able to write some coherent sentences. I would think we would want teachers to do that."

Multiple EPP leaders expressed a sense of responsibility for residency students that was less present during the Lateral Entry years. Jordan emphasized that "our residency teachers are connected to us. They know us. We have a relationship with them." Sutton expounded on these benefits saying "once you associate with the program, then you have the wraparound supports of advising and the faculty who are, you know…if you're going from one class to the next, faculty talk. So, there's a better awareness of the students." Similarly, Reese noted that "We're very responsible to the students and we watch for them. We work with them when they're failing a course. And, you know, we just participate and provide that cycle of support."

***Additional Costs of Residency*.** EPPs highlighted that the additional support that is so beneficial in the residency approach also represents additional costs to their programs. In evaluating what they could realistically manage given the resources available, one EPP decided to shut down several residency licensure areas. "We are no longer accepting applicants in middle grades and secondary. We just didn't have enough applicants to justify offering the classes. You know, I can't offer a class for one student." Reese acknowledged that the Residency License has "impacted us financially. It's impacted us timewise. It's impacted us really relationship-wise." The law requires EPPs to invest more into their residency students; as a consequence, programs are wrestling to figure out how to pay for the additional needs. Only a few of the program leaders I interviewed said that their programs were able to provide stipends to school-based supervisors and others wished they had the resources to do more. As Sutton surmised, "It snowballs in terms of resources, like the need for resources to support a model like that, but it also snowballs in terms of, well no, it comes down to resources."

Clinical Practice Changes Related to the Residency Approach. All but one of the program leaders I spoke with denied that they had changed their clinical practice requirements as

a result of the adoption of the residency approach. The one program leader who noted a change to their program's clinical practice requirements effectively codified what had been standard practice. As Parker explained:

> We have always tried to do that year-long placement. We got more formal about it and made it so that when we talk to teachers in the fall, what we used to do is kind of do that 'you've had a great experience in the fall…don't you want to keep them in the spring?' Now we pitch it as a year-long placement. So, I think we became more formal about that.

One interesting aspect of Senate Bill 599 was its language around clinical practice requirements. In section 115C-269.25(d): Clinical Practice Requirements, it mandates EPPs to require clinical practice in the form of one of the following: a minimum 16 week internship or a one-year residency. If one reads the definitions section of Senate Bill 599 closely, it seems clear that the General Assembly only ever intended the one-year residency to be available to individuals pursuing a Residency License. Section 115C-269.35, however, is more ambiguous. My own initial reading of this section led me to believe that EPPs could incorporate a one-year residency into their traditional programs. I discovered I was not alone in my interpretation. When questioned about whether they considered using a one-year residency for traditional students, EPP leaders' responses were unsurprising. Some examples are as follows: "Yeah, not really.," "We did not.," "I think we talked about it for about 10 minutes." Several EPP leaders commented that they liked the idea of a residency for traditional students, but lacked the capacity or resources to implement one. Emerson said that "it was a great idea conceptually, but you…have to have money to make it work." Throughout the ten EPP leader interviews, only Kris provided an alternative interpretation to the statute that the one year residency was only ever

intended for individuals pursuing the Residency License, and, upon closer review, I believe they actually had the correct interpretation.

Aside from the firm requirements that EPPs offer clinical practice in the form of the 16 week or one-year clinical residency, the law is more flexible about the details. It allows student teaching to take place over two semesters and only requires "to the extent practicable" that students experience the beginning and end of the school year. (NC GS §115C, 2020). Even though only one program leader noted changes to their program's clinical practice requirements as a result of the residency approach, I observed a great deal of variability in existing student teaching practices, as reflected in the statement "Oh, it varies based on program." Within traditional undergraduate programs, the time students spend in field experiences varies based largely on content area and grade level. Jordan acknowledged that "…secondary K-12, because of the content load on the college of arts and sciences side, that limits them a little bit." In other words, secondary candidates often spend more time in their content courses and take the education-specific courses later in their academic careers, reducing their time in the field. Eight of the program leaders described their undergraduate clinical practice requirements as "year-long" experiences, which may also have contributed to the confusion surrounding whether they considered implementing a one-year residency for traditional candidates. In the traditional year-long experience, students generally complete a high-level methods course in one semester, during which they spend one or two days per week in a classroom, before beginning their official student teaching rotation that lasts for 16 weeks in the following semester, most often in the same classroom. In theory, these students get to see an extended period of time in one classroom, unless there are issues with the placement. Even within this model, there is variability in how

often students are in the classroom during the semester in which they take the methods course, with estimates from this set of interviews ranging from 50 to 150 hours.

Several EPP leaders described a phenomenon in which their MAT students often decide not to do traditional student teaching and instead take a residency job immediately after finishing their MAT coursework. The reasoning for most of these individuals is that the choice between 16 unpaid weeks of teaching versus receiving a full salary and benefits with a residency job is really no choice at all. Curious as to whether taking the residency job effectively restarted the clinical practice and required these individuals to complete a full one-year residency, I asked how that worked. One EPP leader explained that their MAT candidates can immediately convert their Residency License to an Initial Professional License after completing only the 16 weeks of "student teaching" required for the MAT, as they had then officially completed their MAT, even though they were technically residents and teachers of record by that point. This is in sharp contrast to the people who take a job, become affiliated with an EPP, and then must spend at least one year completing their supervised residency as a teacher of record before they are eligible to convert their license. It is, as the EPP leader described, "a nice little loophole."

Thematic Analysis: Overall Perceptions of the Residency Approach

Sixty percent of the EPP leaders demonstrated knowledge of the existence of teacher residencies as models for educator preparation outside of the North Carolina context. While these individuals had generally positive feelings toward the North Carolina residency approach, they recognized that North Carolina has not truly created teacher residencies. Elliot pointed out that "the terminology is the same, [but] it's not really the same thing at all." Even those individuals without the background knowledge about teacher residencies acknowledged that North Carolina's approach is missing some key ingredients. Using medical residencies as a point of

reference, Reese opined that "it's only words because…medical residency…infer[s] that I'm giving you tremendous support." Kris agreed, commenting that:

> I think we just sort of transitioned Lateral Entry into something that's a little more controlled but not really. As opposed to making that what might be considered a real residency program, like people hear that [and] they think medical school. …And ours is basically on the job training.

In speaking about the potential for a residency approach in North Carolina, Kelly reflected, "when we first started dipping our toe in the water, I was really excited about what that would mean, but it hasn't really ironed out the way that the model's, you know, conceptualized."

Despite the sometimes contentious debates often generated from educational policy changes and the fact that the North Carolina residency approach is not a true teacher residency, EPP leaders' perceptions of the residency approach were overwhelmingly positive. One of the main benefits several EPP leaders identified is that the residency approach is more rigorous. In comparing the Residency License with Lateral Entry, Parker argued that residency is "still incredibly difficult, because you're building the plane while you're flying it." Marley argued that residency is "way more rigorous than Lateral Entry" but that they see that as a benefit because "it is a little bit harder…but it also is helping them see what education is about, and if it's not for them, then they figure it out quickly and they move on." In addition to the increased rigor, EPP leaders acknowledged the importance of the salary and benefits residency candidates get as a key feature of the program. "When the residency program opened up, we started to see a surge in people now wanting to come back and become teachers because of the pay that they were able to get." It is possible that the salary and benefits combined with support and backing from an EPP

will entice people back into teaching who were less likely to succeed in the Lateral Entry process.

On balance, EPP leaders seemed to agree that the residency approach was better for teacher retention than the Lateral Entry model. Jessie pointed to higher retention rates of Lateral Entry candidates who completed coursework at one institution rather than through the RALCs as a positive sign regarding Residency License pathway retention. They argued that the requirement to become affiliated with a single institution allows residents "to feel a part of that program. …[and] the networking that happens with that is advantageous for retention of teachers in the profession." Marley agreed that residency has the potential to boost retention in North Carolina. Speaking to their early program outcomes, they said "our retention is higher than through the old Lateral Entry from what we're seeing, you know, it's still fairly new. But we do seem to have a better retention rate." Jordan also pointed to anecdotal evidence of better residency retention as a promising sign:

> All of our residency teachers who've completed our program are still in the classroom. Now that's not a lot of years' worth of data because the residency program hasn't been in existence that long. But if that's the measure of success, you know, keeping them in the classroom and being successful in that environment, then I would have to say that residency is doing better than Lateral Entry.

Thematic Analysis: Hopes and Concerns for the Future

Overall, EPP leaders were hopeful for the future. Jessie reaffirmed their belief in the importance of public schools as "vital to our democracy, our ability to facilitate and cultivate the values of being a citizen in the world." They also contended that educator preparation is "in a really good place with…vibrant candidates out there looking to be in higher education [and] also

the guidance of how, really, to prepare people to be good teachers." Elliot shared a similar optimism about alternative but rigorous pathways into teaching and strongly restated the importance of "finding routes for folks…so that they can come in, in a way that is different, but not necessarily less rigorous." On the topic of rigor, a recent legislative action to create a new licensure category called the Limited License, did raise concerns.

In July of 2019, the legislature created a new license called the Limited License which is only valid in one specific LEA for a three-year nonrenewable term. This license is generally for people and have Initial or Residency Licenses who have not met their testing requirements to convert to full Continuing Professional Licenses (NC GS §115C, 2020). The very existence of the Limited License calls into question some of the General Assembly's motivations in establishing the more rigorous Residency License. Under the old Lateral Entry process, an individual could receive a Permit to Teach, which was valid for one year and renewable once, and then receive a Lateral Entry License, which was valid for three years, which together permit a total of five years in the classroom without full licensure. Interestingly, if a teacher failed to convert their Lateral Entry License at the end of three years, that person had to wait three additional years before they could try the Lateral Entry process again. Elliot noted that the process for Residency License teachers was similar to the old Lateral Entry model:

> Now you can do a year under a Permit to Teach, and you can do a year under an Emergency License, and then you can do three years on the Residency License. So, really you could be teaching for five years and not technically be qualified.

Beginning in 2019 after the legislature created the Limited License, a candidate who failed to convert a Residency License could, at the request of the employing LEA, receive a Limited License, that would be valid for three years in that specific LEA. As a result, this person

could, theoretically, teach North Carolina children for *eight years* without being fully licensed. Kelly theorized that, “I think DPI expected everybody to get finished in three years, and now it's got these loopholes that keep these people in front of our children.” Later in that same conversation, they made the chilling observation, “imagine your whole school is made up of these people.” Some believe that the Limited License is a response to LEAs not wanting to let “good teachers” who just cannot pass the licensure tests go. As one EPP leader explained:

> I think a lot of the legislation comes from those stories: here's Mrs. Jones. She's been this community leader. She loves children. She's connected to her church. She really wants to be a teacher and you've thrown up all these roadblocks to her.

It is odd that the same legislature that specifically called for the use of licensure exams as proxies for content mastery rather than college-level coursework for Residency License teachers would then create a pathway allowing those teachers who are unable to pass the exams to stay in the classroom. The Limited License seems in direct contravention to the increased accountability inherent in the residency approach. Kris described the apparent lack of accountability as a function of North Carolina’s teacher shortages but asked the critical questions: “Do you have a profession? Or do we have two professions: one when there's not a shortage and when there is a shortage?” While the balance between filling classrooms and maintaining high standards is certainly challenging in the current climate, student outcomes should be at the center of the debate. As Parker eloquently summarized:

> If we are truly committed to making schools equitable powerful places for children, it starts with how we educate teachers. And that means we can't take shortcuts. …and I understand it's a balancing act and at the end of the day you need an adult in the

> classroom. But when we…say ‘this is good enough because of…’ what we're really doing is selling children short.

Summary of Findings. EPP leaders see the Residency License as an improvement over Lateral Entry. They believe it will result in better-prepared teachers who stay in the classroom. Multiple EPP leaders also discussed the impact of heightened accountability from both NCDPI and external accrediting bodies on their programs. If my theory about legislative intent from the first part of this chapter is accurate, then the implementation of the residency approach appears to be reasonably well aligned with the legislature’s intent.

Research Question 3: edTPA Score Comparisons

The following section addresses multiple descriptive and regression analyses intended to illuminate group differences in North Carolina edTPA scores between the years 2016-2021.

Descriptive Data Analysis

I begin with an exploration of the characteristics of individuals in each pathway to address research question 3: “How do edTPA scores compare between individuals who enter teaching through Lateral Entry, traditional, and Residency License educator preparation pathways?” Prior to September 1, 2019, a few individual programs required candidates to complete the edTPA (A. Sioberg, personal communication, January 10, 2022), but the state did not require the test for licensure and there were no state-level negative consequences for obtaining failing scores or simply not taking the exam. Once the edTPA became a licensure requirement, many more individuals took the test, and it is logical to assume that attitudes toward the tests and candidates’ preparation by their programs were different than when the test was not a licensure requirement. Although the majority of Residency License programs began during the 2019-2020 academic year, EPPs reported a small number of Residency License completers prior

to the fall of 2019. It is possible that a few EPPs got their Residency License programs up and running quickly. Alternatively, these records could indicate errors in the data EPPs reported to NCDPI. Therefore, any demographic or performance data for Residency License programs prior to the fall of 2019 should be interpreted with caution.

Test Taker Demographics Prior to Consequentiality

Table 3 lists the demographic comparisons for all edTPA test takers prior to September 1, 2019, when the edTPA became consequential for licensure. There is only one record per teacher candidate. Individuals marked as "completers" may have made multiple test attempts during this time if they did not achieve a passing score the first time or if they were pursuing multiple licensure areas. In all program pathways, completers prior to the fall of 2019 were largely female. A majority of completers in all program pathway areas identified as White, although Lateral Entry completers were significantly less likely to be White and more likely to be African American or Asian than traditional candidates. Residency License candidates were also less likely to be White and more likely to be African American or Asian than traditional candidates, but the small number of Residency License completers prior to the fall of 2019 (n=17) is likely too small to enable the detection of any statistically significance differences between the Residency License pathway and the other pathways. While most teacher candidates who attempt the edTPA eventually receive a passing score, there is a subset of individuals who took the edTPA and received only incomplete or failing scores. The population of noncompleters tended to have a higher proportion of male candidates than the population of completers, but there were no statistically significant differences in the gender of noncompleters between licensure pathways. Compared with noncompleters in the traditional pathway, the Residency License and

Table 3: Mean Demographic Comparisons of Test Takers Prior to September 1, 2019.

Prior to Consequentiality (September 1, 2019)						
	Completers			Noncompleters		
	Traditional	Lateral Entry	Residency	Traditional	Lateral Entry	Residency
n	2,693	294	17	592	119	12
Female	0.863 (0.344)	0.839 (0.368)	0.824 (0.393)	0.786 (0.410)	0.773 (0.421)	0.917 (0.289)
White	0.891 (0.312)	0.747*** (0.435)	0.706 (0.470)	0.812 (0.391)	0.546*** (0.499)	0.417** (0.515)
African American	0.062 (0.242)	0.164*** (0.371)	0.235 (0.437)	0.129 (0.335)	0.395*** (0.491)	0.333 (0.492)
Asian	0.010 (0.100)	0.034** (0.182)	0.059 (0.243)	0.017 (0.129)	0	0.0833 (0.288)
Hispanic/Latino	0.264 (0.161)	0.038 (0.190)	0	0.025 (0.158)	0.042 (0.201)	0
American Indian/Alaskan Native	0.003 (0.055)	0.007 (0.082)	0	0.007 (0.082)	0	0
Native Hawaiian/Pacific Islander	0.0004 (0.0193)	0	0	0	0	0
Two or More Races	0.007 (0.084)	0.010 (0.101)	0	0.010 (0.100)	0.017 (0.129)	0.167 (0.389)

***=p<.001,**=p<.05

Note: ANOVAs with Bonferroni corrections were used to test for significant differences between groups.

n represents the teacher candidates taking edTPA assessments. For teachers who took more than one test, only the most recent test was included for the demographic analysis. Teachers who passed multiple content tests were only counted once.

Lateral Entry non-completers were much less likely to be White and the Lateral Entry noncompleters were more likely to be African American. All twelve of the Residency License candidates who took and failed to pass the edTPA prior to the consequential date took the test in 2019 and had not attempted the test again by August of 2021.

Test Taker Demographics After Consequentiality

The 2019-2020 academic year marked the beginning of many Residency License programs and the phasing out of Lateral Entry, as well as the initiation of consequentiality of the edTPA. Table 4 contains the mean demographic comparisons for edTPA test takers after September 1, 2019. The total number of Lateral Entry completers declined, while the Residency License completers increased substantially. While it appears that traditional program completers declined during this time, it is important to remember that the post-consequentiality period for the purposes of this study is approximately one year shorter than the pre-consequentiality period, which means that the number of traditional completers is not an exactly equivalent comparison. Completers after the consequential date remained overwhelmingly female and those completers from both the Residency License and Lateral Entry programs were significantly less likely to be White and significantly more likely to be African American than the traditional pathway completers. The demographics of the noncompleters following the consequentiality date (these noncompleters had not successfully passed the edTPA at any point prior to August 2021) shows a decrease in Lateral Entry candidates and a corresponding increase in Residency License candidates that are similar to the changes seen in the completer group. Of the 170 Residency License candidates in this noncompleter group, 143 had attempted the edTPA at least once between September 1, 2019, and August 2021 and they may plan to take or have already taken the edTPA since NCDPI extracted the data for this analysis. The only demographic category in

Table 4: Mean Demographic Comparisons of Test Takers After September 1, 2019.

After Consequentiality (September 1, 2019)						
	Completers			Noncompleters		
	Traditional	Lateral Entry	Residency	Traditional	Lateral Entry	Residency
N	1,855	271	553	122	26	170
Female	0.852 (0.355)	0.839 (0.368)	0.804 (0.397)	0.775 (0.419)	0.692 (0.471)	0.692 (0.463)
White	0.851 (0.356)	0.687*** (0.465)	0.688*** (0.464)	0.592 (0.494)	0.462 (0.508)	0.438 (.0498)
African American	0.082 (0.274)	0.213*** (0.410)	0.243*** (0.430)	0.317 (0.467)	0.423 (0.504)	0.491*** (0.501)
Asian	0.141 (0.118)	0.026 (0.160)	0.218 (0.146)	0	0	0.011 (0.108)
Hispanic/Latino	0.035 (0.183)	0.060 (0.237)	0.029 (0.168)	0.05 (0.219)	0.115 (0.326)	0.053 (0.225)
American Indian/Alaskan Native	0.008 (0.090)	0.004 (0.061)	0.005 (0.074)	0.033 (0.180)	0	0
Native Hawaiian/Pacific Islander	0.002 (0.040)	0	0	0.008 (0.091)	0	0.006 (0.077)
Two or More Races	0.009 (0.093)	0.011 (0.105)	0.013 (0.112)	0	0	0

***=p<.001,**=p<.05

Note: ANOVAs with Bonferroni corrections were used to test for significant differences between groups.

n represents the teacher candidates taking edTPA assessments. For teachers who took more than one test, only the most recent test was included for the demographic analysis. Teachers who passed multiple content tests were only counted once.

which these programs differed significantly was the race of the noncompleters. The Residency License completers were significantly more likely to be African American than traditional program completers. There were no statistically significant differences between Lateral Entry and the Residency License pathways or between those in Lateral Entry and traditional programs.

Group Differences

The rest of this section will explore analyses addressing the sub-questions to RQ 3:

3a. What was the difference in edTPA performance between Lateral Entry and traditionally-prepared teachers before the creation of the Residency Licensure?

3b. What was the difference in edTPA performance between teachers prepared through the Residency License, traditional, and Lateral Entry pathways?

For 2017-2018, NCPDI released the recommended edTPA cut scores for the EPPs and candidates to use to gauge their performance. Depending on content area and level, edTPA exams have differing numbers of scoring rubrics. The NCDPI cut scores for each rubric were as follows: 13 rubrics: 32 points, 15 rubrics: 38 points, and 18 rubrics: 45 points (NC State Board of Education, 2021b). Table 5 contains the average edTPA scores by rubric number and program type prior to the release of the NCDPI cut scores. As the Residency License did not yet exist in North Carolina prior to the fall of 2017, average edTPA scores only exist for traditional and Lateral Entry teacher candidates. Only ten teacher candidates took a 13-rubric edTPA exam during that time period. There is no statistically significant difference between traditional and Lateral Entry teacher candidates in 13 or 18 rubric edTPA scores. The smaller sample sizes and larger standard errors make interpretation more difficult, but it is noteworthy that the mean differences between these groups are small. For the 15 rubric tests, there are statistically significant differences between traditional and Lateral Entry candidates, with traditional

Table 5: edTPA Average Scores by Rubric Number and Program Prior to September 1, 2017.

Number of Rubrics	Traditional	Lateral Entry	Residency License
13	33.71 (6.80) *n=7*	32.67 (3.79) *n=3*	N/A
15	45.11** (6.05) *n=597*	42.91** (6.97) *n=81*	N/A
18	53.32 (7.47) *n=90*	53 (8.38) *n=22*	N/A

***=p<.001,**=p<.05
Note: ANOVAs with Bonferroni corrections were used to test for significant differences between groups.

candidates scoring approximately two points higher. The difference is statistically significant; however, it is unlikely to be practically significant because NCDPI eventually set a cut score of 38 points, well below the means for both of these groups. It is unsurprising that the means for each of these groups are above the eventual NCDPI cut scores because NCDPI used the early scores of North Carolina teacher candidates to determine the eventual cut scores released in the fall of 2017.

Table 6: First-Time Pass Rates with NCDPI Cut Scores Prior to Consequentiality.

	Traditional	Lateral Entry	Residency License
n	1,989	201	17
DPI Cut Score Pass Rate	0.734 (0.442)	0.626** (0.485)	0.531 (0.507)

***=p<.001, **=p<.05
Note: ANOVAs with Bonferroni corrections were used to test for significant differences between groups.
n represents the number of tests passed on the first attempt. Teachers could take and pass more than one test if they were pursuing licensure in multiple areas.

Also relevant to the comparisons between programs are the overall and first-time pass rates for each program type prior to consequentiality (see Tables 6-9). I used the NCDPI-recommended cut scores to determine whether a candidate passed or failed the edTPA exam. It is important to remember, however, that prior to September 1, 2019, the edTPA could not

negatively impact a candidate's licensure. The *n* represents the number of edTPA tests taken rather than the number of candidates in each program type because teachers can pursue licensure in multiple content areas and therefore could, theoretically, take and pass multiple edTPA assessments on their first attempt. There was a statistically significant difference in edTPA pass rates between traditional and Lateral Entry candidates during this time period using the NCDPI-recommended cut scores (fall of 2017 through the summer of 2019), with a pass rate for candidates in the traditional pathway that was nearly 11 percentage points higher than that of Lateral Entry candidates.

Although the state did not require the edTPA for licensure during this period, some programs did require passing edTPA scores, meaning that some proportion of the teacher candidates potentially took the test multiple times to achieve a passing score. These multiple attempts are reflected in the overall pass rates (see Table 7). There were no statistically significant differences in first-time pass rates between candidates in the Residency License pathway and candidates in the other two program types during this period, likely due to the comparatively small number of Residency License candidates taking the edTPA prior to 2019. Unsurprisingly, the overall pass rates are higher than the first-time pass rates for all programs; however, it is interesting to note how few teacher candidates received a passing score on a subsequent attempt. Only 13 Lateral Entry teachers and 102 traditionally prepared teachers managed to pass the edTPA after their first attempt. All Residency License candidates who received a passing score did so on their first try. The small number of teachers attempting the edTPA multiple times might be reflective of the fact that it was not consequential for licensure during this period. Both Lateral Entry and the Residency License had significantly lower overall pass rates ($p<.001$ and $p<.05$, respectively) than candidates coming through traditional pathways.

Table 7: Overall Pass Rates with NCDPI Cut Scores Prior to Consequentiality.

	Traditional	Lateral Entry	Residency License
n	2,097	214	17
DPI Cut Score Pass Rate	0.817	0.735**	0.567**
	(0.387)	(0.442)	(0.504)

***=p<.001, **=p<.05
Note: ANOVAs with Bonferroni corrections were used to test for significant differences between groups.
n represents the total number of tests passed during this time period.

Beginning with the 2019-2020 academic year there are dramatic increases in first time pass rates for all programs (see Table 8). The statistically significant difference between traditional and Lateral Entry candidates disappears, although the differences in pass rates between Residency License candidates and both traditional both traditional (p<.001) and Lateral Entry (p<.05) remain significant.

Table 8: First-Time Pass Rates with NCDPI Cut Scores After Consequentiality.

	Traditional	Lateral Entry	Residency License
n	1,736	247	505
Consequential Pass Rate	0.801	0.735	0.634***
	(0.399)	(0.442)	(0.482)

***=p<0.001, **=p<0.05
Note: ANOVAs with Bonferroni corrections were used to test for significance between groups.
n represents the number of tests passed on the first attempt. Teachers could take and pass more than one test if they were pursuing licensure in multiple areas.

In the first year of most North Carolina Residency License programs (2019-2020), the pass rates on the edTPA were significantly lower for candidates in the Residency License pathway (63.4%) than for those in traditional programs (80.1%) and those in legacy Lateral Entry programs (73.5%). In terms of the overall pass rates after consequentiality (see Table 9), all programs experience large increases, with traditional and Lateral Entry completers approaching 90% pass rates and Residency License completers nearing 80%. The differences in pass rates between Residency License candidates and both traditional (p<.001) and Lateral Entry (p<.05) candidates remained significant.

Table 9: Overall Pass Rates with NCDPI Cut Scores After Consequentiality.

	Traditional	Lateral Entry	Residency License
n	1,859	278	553
Consequential Pass Rate	0.889	0.883	0.783***
	(0.314)	(0.322)	(0.412)

***=p<.001, **=p<.05
Note: ANOVAs with Bonferroni corrections were used to test for significant differences between groups.
n represents the total number of tests passed during this time period.

State Board of Education policy sets "highly qualified" edTPA scores several points higher than the passing scores. The current NCDPI highly qualified scores for each rubric are as follows: 13 rubrics: 42 points, 15 rubrics: 48 points, and 18 rubrics: 57 points (NC State Board of Education, 2021b). Table 10 includes the proportions of candidates with "highly qualified" edTPA scores stratified by licensure pathway during the period after the edTPA became consequential for licensure. The *n* represents the number of tests, rather than the number of candidates. I restricted the analysis to this time period because the consequential nature of the test likely meant that EPPs intentionally prepared candidates to succeed on the exam, and the addition of salary supplements in 2021 might have provided an extra incentive for people to score as high as possible rather than simply to pass the test. Traditional programs produce the highest proportion of "highly qualified" scores approximately 20% of the time. Lateral Entry programs produce "highly" qualified scores approximately 17.5% percent of the time, but there is no statistically significant difference between these two pathways. Individuals in the Residency License pathway achieve "highly qualified" scores only about 12.7% of the time, which is substantially and significantly ($p<.001$) lower than traditional programs. Although there is a difference in the proportion of "highly qualified" scores between the Residency License and Lateral Entry programs, it is not statistically significant.

Table 10: Proportion of Highly Qualified edTPA Scores by Program Type.

	Traditional	Lateral Entry	Residency License
n	421	55	90
Highly Qualified edTPA Score	0.201	0.175	0.127***
	(0.401)	(0.380)	(0.334)

***=p<.001, **=p<.05
Note: ANOVAs with Bonferroni corrections were used to test for significance between groups.
n represents the number of test scores meeting the "highly qualified" score threshold.

Regression Modeling

To better understand how different preparation pathways impact outcomes, including test scores and the likelihood of receiving a passing or "highly qualified" score on the edTPA, I performed a series of regressions. The following section includes multiple models exploring the relationships between preparation pathways and various outcomes, controlling for a number of explanatory variables.

Ordinary Least Squares (OLS) Models

Table 11 contains the results from three main regression models comparing among preparation pathways' standardized edTPA scores from all rubrics during three periods of time, namely, (1) the non-consequential period prior to the issuance of cut scores for the 2017-2018 academic year by NCDPI, (2) the period of time when the edTPA was not consequential for licensure but the NCDPI-issued cut scores were available, and (3) the period after September 1, 2019, when the edTPA became consequential for licensure. All models include year fixed effects, and each model is estimated with and without institution-level fixed effects. In Model 1, the Residency License indicator variable is excluded because no Residency License programs existed in North Carolina during that period of time. There is no statistically significant difference in standardized test scores between candidates in the traditional and Lateral Entry pathways prior to the introduction of the NCDPI-recommended cut scores. Test scores for

individuals who identify as “more than one race” and African American are significantly lower than those for White candidates in Model 1, even after controlling for differences between institutions. The coefficients of the dummy variables for the 13 and 18 rubric test types are statistically significant, but these distinctions are not likely to be practically meaningful. Both of these variables are explaining candidate performance relative to the 15 rubric indicator, which I intentionally excluded to avoid collinearity. It makes sense that scores on the 13 rubric exam would be lower and scores on the 18 rubric exams would be higher than those in the reference category. Since the type of exam, however, is related to the overall scores and odds of passing (discussed later in this chapter), they are retained in the model.

The time period represented in Model 2 is approximately the academic years 2017-2018 and 2018-2019. During this time, a small number of individuals took the edTPA and were coded as Residency License candidates by their EPPs. In Model 2, both the Lateral Entry and Residency License coefficients are negative. When controlling for institution-level effects, both coefficients become statistically significant, and the effect of the Residency License becomes less negative, although the effect for the Lateral Entry pathway becomes more negative. On average, prior to edTPA consequentiality, Residency License candidates performed approximately one-third of a standard deviation (-0.36) worse on the edTPA than did the traditional candidates. Lateral Entry candidates performed approximately 0.22 of a standard deviation lower than did traditional candidates. The low number of Residency License candidates during this time period (n~30) makes it very difficult to draw conclusions about the efficacy of the early Residency License programs. Women tended to score slightly higher (0.32 of a standard deviation) on the edTPA than men. African American and American Indian students both tended to score worse than their White counterparts, but the low enrollment of

American Indian students across programs casts some doubt on the practical significance of this finding.

Table 11: OLS Regression Models of edTPA Scores Compared to Traditional Pathways.

	Model 1 Non-Consequential before NCDPI Cut Scores		**Model 2 Non-Consequential after NCDPI Cut Scores**		**Model 3 Consequential**	
EPP Fixed Effects	N	Y	N	Y	N	Y
Lateral Entry	-0.19	-0.04	-0.18	-0.22**	-0.03	-0.13**
	(0.11)	(0.09)	(0.12)	(0.09)	(0.08)	(0.06)
Residency License	--	--	-0.58***	-0.36**	-0.12	-0.21**
			(0.12)	(0.12)	(0.13)	(0.10)
Female	0.18	0.12	0.32***	0.32***	0.20**	0.24***
	(.10)	(0.08)	(0.05)	(0.05)	(0.05)	(0.05)
African American	-0.25***	-0.24***	-0.45***	-0.40***	-0.39***	-0.33***
	(0.05)	(0.03)	(0.12)	(0.08)	(0.05)	(0.03)
American Indian	0	0	-0.63**	-0.67**	-0.17	-0.15
			(0.19)	(0.22)	(0.10)	(0.11)
Asian	0.42**	0.18	-0.05	-0.08	0 .16	0.03
	(0.14)	(0.18)	(0.14)	(0.10)	(0.10)	(0.10)
Latinx	-0.06	-0.00	-0.12	-0.13	-0.10	-0.08
	(0.09)	(0.09)	(0.07)	(0.07)	(0.09)	(0.07)
More Than One Race	-0.72**	-0.89**	-0.15	-0.13	0.49**	0.43**
	(0.26)	(0.29)	(0.18)	(0.12)	(0.15)	(0.13)
13 Rubrics	-1.55***	-1.60***	-0.93**	-0.91**	-1.28***	-1.35***
	(0.08)	(0.06)	(0.42)	(0.41)	(0.15)	(0.14)
18 Rubrics	1.23***	1.51***	1.26***	1.17***	1.50***	1.20***
	(0.10)	(0.09)	(0.09)	(0.03)	(0.06)	(0.05)
Constant	-2.16	-4.36	-0.27	-0.19	-0.33	-3.27
	(0.17)	(0.21)	(0.07)	(0.05)	(0.08)	(0.09)
R^2	0.2316	0.3004	0.1759	0.2722	0.2248	0.2768
n	799	799	2,874	2,874	3,087	3,087

***=p<.001, **=p<.05
Note: Standard errors are clustered at the EPP level.
n represents the number of tests attempted in each period.
The dependent variable for these regressions is a standardized variable of all edTPA test scores.

Model 3 represents the time after the edTPA became consequential for licensure (from September 1, 2019, to the present day). After controlling for institution-level effects, both the Residency License and Lateral Entry coefficients improve slightly from Model 2, although they

remain negative, indicating that candidates in these pathways still perform slightly worse, on average, than their peers in traditional pathways. Female students still outperform male students by approximately one-quarter of a standard deviation on average. The negative difference between African American students and White students remains significant, the statistically significant difference between students identifying as "more than one race" and White students reappears, and the negative coefficient for American Indian students loses its significance. Overall, these OLS models indicate that, all other conditions remaining the same, candidates who are White, female, and from traditional pathways tend to score higher on edTPA exams than African American candidates and candidates identifying as more than one race in both the Lateral Entry and Residency License pathways.

To compare the performance of Residency License and Lateral Entry candidates to each other, I ran an additional set of OLS regressions (see Table 12) on standardized edTPA scores using Lateral Entry as the comparison group, including all previous covariates, and clustering standard errors at the EPP level. For this analysis, I included the models that cover the periods during which the Residency License existed. When comparing Lateral Entry candidates to Residency License candidates without controlling for EPP fixed effects, Residency License candidates underperform in the non-consequential period. When accounting for differences between programs through EPP fixed effects, however, the statistical differences between these two pathways disappear.

Logistic Regression Modeling

edTPA Pass Rates. Table 13 contains the results of three logistic regression models with and without fixed effects that are aligned with the time periods in the OLS regression models in Table 11, which compare the pass rates between candidates in different program types. In

logistic Model 1, candidates from Lateral Entry programs initially seem less likely to pass the edTPA than traditional candidates, but the difference disappears when controlling for EPP fixed

Table 12: OLS Regression Models of edTPA Scores Compared to Lateral Entry Pathways.

	Model 1 Non-Consequential after NCDPI Cut Scores		**Model 2 Consequential**	
EPP Fixed Effects	N	Y	N	Y
Traditional	0.18	0.22**	0.03	0.13**
	(0.12)	(0.09)	(0.08)	(0.06)
Residency License	-0.40**	-0.14	-0.15	-0.08
	(0.16)	(0.13)	(0.09)	(0.08)
Female	0.32***	0.32***	0.20**	0.24***
	(0.05)	(0.05)	(0.05)	(0.05)
African American	-0.45**	-0.40***	-0.39***	-0.33***
	(0.12)	(0.08)	(0.05)	(0.03)
American Indian	-0.63	-0.67**	-0.17	-0.15
	(0.19)**	(0.23)	(0.10)	(0.11)
Asian	-0.05	-0.09	0.16	0.03
	(0.14)	(0.10)	(0.10)	(0.07)
Latinx	-0.12	-0.13	-0.10	-0.08
	(0.07)	(0.07)	(0.09)	(0.07)
More Than One Race	-0.15	-0.13	0.48**	0.43**
	(0.18)	(0.12)	(0.15)	(0.13)
13 Rubrics	-0.93**	-0.91**	-1.28***	-1.35***
	(0.42)	(0.41)	(0.14)	(0.14)
18 Rubrics	1.26***	1.17***	1.50***	1.21***
	(0.09)	(0.03)	(0.06)	(0.04)
Constant	-0.45	-0.03	-0.30	-3.40
	(0.09)	(-0.07)	(0.07)	(0.10)
R^2	0.1759	0.2722	0.2248	0.2768
n	2,874	2,874	3,087	3,087

***=p<.001, **=p<.05
Note: Standard errors are clustered at the EPP level.
n represents the number of tests attempted in each period.
The dependent variable for these regressions is a standardized variable of all edTPA test scores.

effects. Even after controlling for EPP fixed effects, individuals identifying as “more than one race” were nearly 45% less likely to pass the edTPA than their White peers prior to the introduction of the cut scores by NCDPI in 2017. The coefficient for Latinx candidates is

statistically significant in Model 1. Controlling for EPP fixed effects Latinx candidates are approximately 7.5% percent less likely to receive a passing score than White candidates,

Table 13: Log Odds of Pass Rates with Traditional Programs as the Comparison Group.

	Model 1 Non-Consequential before NCDPI Cut Scores		**Model 2 Non-Consequential after NCDPI Cut Scores**		**Model 3 Consequential**	
EPP Fixed Effects	N	Y	N	Y	N	Y
Lateral Entry	-0.70**	-0.21	-0.31	-0.45**	0.22	-0.24
	(0.34)	(0.29)	(0.25)	(0.20)	(0.28)	(0.35)
Residency License	--	--	-1.29***	10.17***	-0.36	-0.72**
			(0.19)	(1.03)	(0.35)	(0.36)
Female	0.11	-0.08	0.58**	0.66***	0.43**	0.55**
	(0.27)	(0.17)	(0.19)	(0.19)	(0.17)	(0.16)
African American	-0.26	-0.17	-0.89***	-0.88***	-0.83***	-0.69***
	(0.27)	(0.33)	(0.25)	(0.19)	(0.16)	(0.12)
American Indian	0	0	-0.64	-0.67	-0.23	-0.27
			(0.38)	(0.55)	(0.41)	(0.47)
Asian	0.26	-0.43	-0.12	-0.19	2.00**	1.77**
	(0.73)	(0.45)	(0.39)	(0.35)	(0.82)	(0.84)
Latinx	0.62**	0.91**	-0.23	-0.26	-0.39**	-0.36
	(0.29)	(0.34)	(0.16)	(0.18)	(0.17)	(0.19)
More Than One Race	-1.58***	-2.46***	-0.42	-0.29	0	0
	(0.41)	(0.30)	(0.43)	(0.42)		
13 Rubrics	-1.84***	-2.24***	-0.69	-0.77	-0.94**	-1.18**
	(0.42)	(0.30)	(0.56)	(0.59)	(0.44)	(0.42)
18 Rubrics	-0.05	0.71**	0.21	0.13	1.61**	0.97
	(0.18)	(0.34)	(0.29)	(0.13)	(0.70)	(0.83)
Constant	-1.99	-1.72	-1.24	-10.32	1.47	1.39
	(0.36)	(0.16)	(0.20)	(1.05)	(0.24)	(0.34)
Pseudo R^2	0.0322	0.1059	0.0343	0.1305	0.0578	0.0874
n	797	754	2,874	2,868	3,061	2,973

***=p<.001, **=p<.05

Note: The table displays the log odds for each variable. Standard errors are clustered at the EPP level. n represents the number of tests attempted in each period.

although the very small number of Latinx candidates in this model means that this result should be interpreted with caution. Residency License programs did not exist prior to 2017, so they are not included in this model. When controlling for EPP fixed effects, candidates who attempted 18

rubric exams were approximately seven percent less likely to pass than candidates attempting 15 rubric exams. Also interesting in Model 1 is the fact that candidates attempting a 13 rubric test were significantly and substantially less likely (34.7% without EPP fixed effects and 40.3% with EPP fixed effects) to receive passing scores than individuals taking a 15 rubric test. Upon further investigation, I discovered there are only thirteen test scores for any 13 rubric edTPA during this time period, which could explain the large differences.

Logistic Model 2 represents the time between NCDPI releasing recommended edTPA cut scores and September 1, 2019. Without controlling for EPP effects, candidates from the Residency License pathway are nearly 26% less likely to pass the edTPA than traditionally prepared candidates. When including the EPP fixed effects, however, Lateral Entry candidates become significantly less likely (approximately 6.5%) to pass than traditional students, but the effect for Residency License candidates reverses dramatically and they become 19.5% more likely to pass the edTPA than traditional candidates. Given the small number of residency candidates from a limited number of programs (and the potential for reporting errors on the part of the EPP), it is unwise to extrapolate from this finding, particularly because the effect for Residency License programs reverses again after edTPA consequentiality. Women are approximately 10% more likely to receive a passing score than men in both versions of Model 2. Without controlling for EPP fixed effects, African American candidates are approximately 16% less likely to receive a passing score than their White counterparts, but the effect of being African American lessens slightly to 14% when institutional effects are considered.

After the edTPA became consequential, the difference between candidates in Lateral Entry and traditional programs is no longer statistically significant, possibly because Lateral Entry was phasing out at this point and fewer candidates in that pathway were attempting the

edTPA. The coefficient indicates a significant difference between candidates in the Residency License pathway and those in the traditional pathway, with Residency License candidates approximately nine percent less likely to pass the edTPA during the consequential period when including EPP fixed effects. The 13 rubric tests again become statistically significant, and candidates attempting 13 rubric edTPA exams are 18% less likely to receive passing scores when including EPP fixed effects. Controlling for EPP fixed effects, the effect of being female is still positive, and women are approximately seven percent more likely to pass the edTPA than men. The disparity in pass rates remains between African American and White candidates, with African American candidates nine percent less likely to pass the edTPA than White candidates. With and without EPP fixed effects, candidates who identified as Asian were approximately 11% more likely to receive a passing score than White candidates during the consequential period.

To directly compare pass rates between Residency License and Lateral Entry candidates, I ran an additional set of logistic regressions using Lateral Entry as the comparison group, including all of the same covariates, and clustering standard errors at the EPP level. For this analysis, I examined only the periods during which the Residency License existed. The results of these logistic regressions are shown in Table 14. During the non-consequential period for which there were NCDPI-recommended cut scores, the same odd finding regarding Residency License candidate pass rates exists when comparing them with Lateral Entry candidates as was seen in the previous logistic regressions. Without EPP fixed effects, Residency License candidates are nearly 19% less likely to receive a passing score than Lateral Entry candidates. However, controlling for when EPP fixed effects, the probability reverses and Residency License candidates are 19.5% more likely to pass than Lateral Entry candidates. Again, it is likely that the small number of Residency License candidates during this period could be causing these

effects. In the consequential period, Residency License candidates are less likely than Lateral Entry candidates to receive passing scores on the edTPA both with and without EPP fixed effects (seven percent and six percent, respectively). While this finding would appear to conflict with findings from the OLS models which yielded no statistically significant difference in scores between Lateral Entry and Residency candidates, it is possible that both groups achieved scores

Table 14: Log Odds of Pass Rates with Lateral Entry as the Comparison Group.

	Model 1 Non-Consequential after NCDPI Cut Scores		**Model 2 Consequential**	
EPP Fixed Effects	N	Y	N	Y
Traditional	0.31	0.45**	-0.22	0.24
	(0.25)	(0.20)	(0.28)	(0.32)
Residency License	-0.98**	10.63***	-0.58**	-0.48**
	(0.31)	(1.04)	(0.18)	(0.24)
Female	0.58**	0.66***	0.43**	0.55**
	(0.19)	(0.19)	(0.17)	(0.16)
African American	-0.89***	-0.88***	-0.83***	-0.69***
	(0.25)	(0.19)	(0.16)	(0.12)
American Indian	-0.64	-0.67	-0.23	-0.27
	(0.38)	(0.55)	(0.41)	(0.47)
Asian	-0.12	-0.19	2.00**	1.77**
	(0.39)	(0.35)	(0.82)	(0.84)
Latinx	-0.23	-0.26	-0.39**	-0.36
	(0.16)	(0.18)	(0.17)	(0.19)
More Than One Race	-0.42	-0.29	0	0
	(0.43)	(0.42)		
13 Rubrics	-0.69	-0.77	-0.94**	-1.18**
	(0.55)	(0.59)	(0.44)	(0.42)
18 Rubrics	0.21	0.13	1.61**	0.97
	(0.29)	(0.13)	(0.70)	(0.83)
Constant	0.93	-10.77	1.69	1.15
	(0.17)	(1.05)	(0.20)	(0.32)
Pseudo R^2	0.0343	0.1305	0.0578	0.0874
n	2,874	2,868	3,061	2,973

***=p<.001, **=p<.05

Note: The table displays the log odds for each variable. Standard errors are clustered at the EPP level.

n represents the number of tests attempted in each period.

near the NCDPI-recommended cut scores, with Lateral Entry candidates achieving scores that exceed the cut scores often enough to cause a statistically significant difference in the overall pass rates.

Table 15: Log Odds of "Highly Qualified" edTPA Scores Beginning Fall 2019.

	Highly Qualified – edTPA Consequential	
EPP Fixed Effects	N	Y
Lateral Entry	-0.07	-0.38**
	(0.19)	(0.17)
Residency License	-0.18	-0.33**
	(0.27)	(0.15)
Female	0.25	0.35**
	(0.16)	(0.17)
African American	-0.86***	-0.71***
	(0.18)	(0.14)
American Indian	-0.91	-0.47
	(0.60)	(0.66)
Asian	0.27	-0.07
	(0.39)	(0.42)
Latinx	0.01	0.02
	(0.25)	(0.23)
More Than One Race	0.74	0.64
	(0.43)	(0.40)
13 Rubrics	-1.24**	-1.35**
	(0.42)	(0.42)
18 Rubrics	0.29**	-0.44***
	(0.13)	(0.08)
Constant	-1.94	-0.83
	(0.20)	(0.175)
Pseudo R^2	0.0288	0.0686
n	3,083	3,067

***=p<.001, **=p<.05

Note: The table displays the log odds for each variable. Standard errors are clustered at the EPP level.

Highly Qualified. Table 15 contains the final logistic regression model, which estimates the odds of receiving a "highly qualified" edTPA score given the program type and other characteristics. The table contains scores from only the edTPA consequential period because

North Carolina required the test for licensure and the legislative salary supplements likely provided an additional incentive to attain the "highly qualified" scores that did not exist for candidates taking the test prior to consequentiality. I estimate the impacts of various characteristics on "highly qualified" scores with and without EPP fixed effects. Achieving a "highly qualified" edTPA score is less likely for both Lateral Entry (4.3%) and Residency License candidates (4.6%) than from traditional candidates. Women are approximately 4.5% more likely than men to achieve "highly qualified" scores. African American candidates' probability of achieving a "highly qualified" score remains approximately 8.5% lower than that of their White peers. Candidates are also less likely to achieve "highly qualified" scores on the 13 rubric (12.7%) and 18 rubric (5.5%) tests than the 15 rubric tests. The 13 rubric tests are in the World Languages and Classical Languages content areas and the 18 rubric tests are in Elementary Education. It is possible that the differential pass rates for 13 rubric tests and "highly" qualified rates for both 13 and 18 rubric tests indicate areas of improvement for EPPs.

Summary of Findings. Overall, traditional candidates tended to significantly outscore both Lateral Entry and Residency License candidates before and after consequentiality. Traditional candidates were also more likely to receive highly qualified scores. Although there was no significant difference in edTPA scores between Lateral Entry and Residency License candidates, the predicted pass rates for Lateral Entry are slightly higher.

Data Integration

This chapter has explored the creation, implementation, and early outcomes of the North Carolina residency approach from three angles: policymaker perceptions and experiences, EPP leader perceptions and experiences, and edTPA scores, pass rates, and "highly qualified" designations. It is both surprising and reassuring that the policymakers and EPP leaders

interviewed for this study agree on many important areas. Both groups desire a robust and effective alternative preparation pathway into teaching. The general consensus from both policymakers and EPP leaders regarding Lateral Entry is that it was not working. The edTPA analyses in this chapter support that assertion. Teachers prepared through traditional pathways consistently outperformed individuals entering teaching through Lateral Entry on the edTPA both before and after consequentiality. While EPP leaders were better positioned than legislators to articulate specifically why Lateral Entry was less effective, this brings up another point of agreement, which is that legislators are not education content experts. The legislators have a general desire to improve education, but lack the specific knowledge regarding how to do so.

Regarding the broader education policy landscape, it was clear through these interviews that both sets of stakeholders care deeply about student outcomes in North Carolina. Policymakers, however, tended to weigh student outcomes based on visible metrics like NAEP and PISA assessments more heavily than teacher outcomes, with the exception of teacher vacancies that led to shortages. Policymakers also maintained a strong focus on accountability for both student and EPP outcomes. EPP leaders bristled at some of the accountability language because they saw increases in accountability without corresponding increases in funding or support needed to improve programs. While EPP leaders also care deeply for North Carolina's public school students, their first priority and their duty is to *their* students who are current and prospective teachers. Ultimately, both groups want the same thing, namely, excellent public schools, but their perspectives are slightly different. These differences are most evident in the differing emphasis each group places on the issue of teacher pay. For EPP leaders, teacher pay is an immediate priority. They see it as a non-negotiable issue that needs to be addressed as soon as possible to enable the state to attract and retain talent. The policymakers I interviewed, on the

other hand, rarely mentioned teacher pay. In fact, Dakota explicitly mentioned their dislike of the fact that the only thing they ever hear from teachers is 'when will you pay me more?' Their preference was to solve *policy* problems that directly affected children. Monroe did note that teacher pay is a problem, but they contextualized it within a much larger set of issues that "go beyond teacher pay." If EPP advocacy for better teacher pay is to succeed, EPPs will need to frame it as an urgent policy priority with tangible benefits for children that can be measured in outcomes that matter to the legislature.

While the interviews provide some insights into policymakers' priorities, the question of what exactly the legislature hoped to accomplish through the creation of the residency approach and the explicit statement of clinical practice requirements remains unanswered. I can theorize that their interest in improving student outcomes, reducing teacher shortages and, perhaps most importantly, increasing EPP accountability were important factors affecting the creation of the residency approach. If so, the implementation of the residency approach appears to be reasonably well aligned with the legislature's intent. EPP leaders have strong positive feelings toward residency and see it as an improvement over the Lateral Entry process. They believe that the residency approach will result in better-prepared teachers who stay in the classroom. As of yet, the edTPA scores do not seem to support that. First-time and overall Residency License candidate pass rates were significantly lower than those of both Lateral Entry and traditional candidates and after the edTPA became consequential for licensure.

Regarding edTPA scores, traditional candidates tended to significantly outscore both Lateral Entry and Residency License candidates before and after consequentiality. Candidates from traditional pathways were also more likely than candidates from both Lateral Entry and Residency License pathways to achieve "highly qualified" scores on the edTPA. In a direct

comparison of scores among candidates from Lateral Entry and Residency License pathways while controlling for institutional effects, there was no statistically significant difference between the two. While there were no statistically significant differences in scores between Lateral Entry and Residency License candidates, the predicted pass rates for Lateral Entry candidates are slightly higher than those for Residency License candidates. This perhaps indicates that both groups score near the NCDPI-recommended cut scores, but that the Lateral Entry candidates surpass the cut score just often enough to result in a significant difference in the pass rates.

The underperformance of Residency License candidates compared to Lateral Entry candidates would appear to conflict with the perceptions of the EPP leaders I interviewed who felt that the Residency License represented a vast improvement in preparation over the patchwork quilt of Lateral Entry. This discrepancy between my quantitative and qualitative findings may stem from the sample of Lateral Entry teachers included in this study. Recall from Chapter 3 that all of the Lateral Entry teachers in this sample had an affiliation with an EPP, meaning they were likely not representative of the entire Lateral Entry population in which many candidates complete their plans of study independently and through multiple institutions. According to several of the EPP leaders I interviewed, Lateral Entry teachers who affiliated with certain programs had better preparation experiences and outcomes than teachers who completed their requirements multiple places. It is possible that the affiliation of Lateral Entry teachers to EPPs in this sample biased the Lateral Entry estimates upward resulting in nearly identical overall pass rates among Lateral Entry and traditional candidates (88.3% and 88.9%, respectively), with Residency License pass rates lagging approximately 10% behind the other pathways after the edTPA became consequential.

It is important to note, however, that many of the benefits EPP leaders lauded about the residency approach may not appear on the edTPA. Both policymakers and EPP leaders discussed teacher shortages as a critical issue. At this point, it is too early to tell whether retention rates for Residency License teachers will be better than those for Lateral Entry teachers and more comparable to those of traditionally prepared teachers, although early anecdotal evidence from several EPPs is promising. Due to the ongoing effects of the COVID-19 pandemic, it is currently impossible to compare student outcomes, in the form of test scores, or teacher outcomes, in the form of EVAAS ratings, for Residency License teachers.

A recurring theme throughout the quantitative results was that individuals pursuing both Residency Licensure and Lateral Entry tended to be more diverse than individuals in traditional pathways. Candidates pursuing Residency Licensure are similar to the Lateral Entry teachers of the past in that they are significantly less likely to be White and significantly more likely to be African American than traditional candidates. It is too soon to tell, however, whether the residency approach will be more effective at diversifying the teaching profession than the Lateral Entry approach. Discussion surrounding which students decide to enter teaching and how student demographics vary by pathway did not emerge during the qualitative interviews. It is important to note that the quantitative analysis for this study was not complete prior to the qualitative interviews. If I had the results of the quantitative results prior to the qualitative data collection period, I would have asked EPP leaders specific questions on demographic differences between pathways to better understand their perspectives on this topic. Given the fact that two of the EPP leaders explicitly mentioned the lack of diversity in the teaching profession as a concern, I suspect that they and other EPP leaders would have been able to provide interesting insights regarding teacher demographics in relation to teacher preparation.

Conclusion

This chapter has explored the findings of two sets of qualitative interviews and document analyses through the lens of various theoretical constructs. Additionally, the chapter reviewed the findings of a set of quantitative analyses, including descriptive statistics and predictive regression modeling. Finally, the chapter concluded with an integrative explanation of how these qualitative and quantitative results combine together in the larger context of the North Carolina residency approach. Chapter 5 will discuss how these results fit into the existing teacher preparation literature, propose several recommendations for policymakers, and suggest directions for future research.

DISCUSSION

Introduction

This chapter begins with a brief review of the qualitative and quantitative study findings and continues with a discussion of how the findings intersect with the existing literature. It then presents the theoretical contributions of the study. The chapter concludes with recommendations for policymakers and directions for future research.

Review of the Study

The purpose of this study was to describe why the North Carolina General Assembly shifted from the established Lateral Entry process to the Residency License and added an option for educator preparation programs to employ a one-year clinical residency in 2017. Additionally, the study explored potential differences in performance on the edTPA between candidates in different licensure pathways. Throughout the research, I hoped to answer three main questions:

1. Why did the North Carolina General Assembly incorporate the teacher residency approach into state statute in 2017?
2. How, if at all, was the implementation of the residency approach for educator preparation aligned with the North Carolina General Assembly's intentions?
3. How do edTPA scores compare between individuals who enter teaching through the Lateral Entry, traditional, and Residency License pathways?

Unfortunately, I was unable to determine the specific motivations behind the General Assembly's decision to shift from the Lateral Entry process to the residency approach. Results from qualitative interviews with a former legislator and a content area expert involved in the policymaking process indicate that both teacher shortages and issues with the chaotic Lateral Entry process may have been high priorities for legislators. The former legislator identified a

strong desire for accountability in the majority political party at the time with regard to both student and teacher outcomes, which plausibly led to the explicit statement of clinical practice requirements in state law. The desire for accountability makes even more sense when one considers that a substantial portion of Senate Bill 599 was not focused on the Residency License, but was instead primarily aimed at designing accountability systems and oversight for educator preparation programs. Regarding clinical practice requirements, the policymaker interviews did not shed much light on the legislative intent behind this specific change, but the EPP leaders perceived that the likely legislative intent was to increase the consistency and quality of field experiences. They postulated that legislators likely heard from disgruntled teachers or school leaders who found that new teachers were unprepared for the classroom. The origin of the idea for a North Carolina residency approach remains a mystery. Similarities in Texas Education Code and Senate Bill 599 would suggest that the language of residency may have come from Texas. The fact that Texas's program is a true teacher residency whereas North Carolina's approach is more of a rebranding and tightening up of the Lateral Entry process, however, casts some doubt on that hypothesis.

If the legislature's intent was to create a more rigorous, streamlined process with greater accountability that would lead to better student outcomes, the implementation of the residency approach shows some promise. EPP stakeholders almost universally regard the Residency License pathway as a more difficult yet more supportive pathway than the Lateral Entry process. Early anecdotal evidence from these programs indicates that Residency License teachers may have higher retention rates than teachers licensed through the Lateral Entry process. The explicit statement of clinical practice requirements had minimal impacts on many of the EPP programs included in this study, likely because they were already meeting a majority of the requirements

that were codified into law. Programs that had been less stringent with their clinical practice requirements, however, found themselves in a more standardized and defined environment. Many of the program leaders I interviewed pointed to longstanding practices of placing students in “early and often” field experiences that culminated in yearlong combinations of clinical internships and student teaching. Despite the variety of programs in the state, the clinical practice and course sequences for traditional educator preparation programs were very similar. The standardization of programs likely relates to the external program accreditation requirements to which EPPs are beholden. To the extent that all EPPs now provide more consistent clinical experiences for students that showcase the importance of sustained teaching at different times throughout the school year, the implementation seems well aligned with the legislature’s intent.

I found differences in edTPA scores between candidates in various licensure pathways during the periods of time before and after the edTPA became consequential for licensure in North Carolina. Prior to edTPA consequentiality, only 62.6% of Lateral Entry candidates received passing edTPA scores on their first attempt, while 73.4% of traditional candidates achieved passing scores and the difference was statistically significant. The difference in overall pass rates prior to consequentiality narrows this gap, with the Lateral Entry candidate pass rate increasing to 73.5% and the traditional candidate pass rate increasing at a slightly lower rate to 81.7%. During the non-consequential period, there were statistically significant differences in edTPA scores between traditional and Lateral Entry teachers. The predicted probability of passing the edTPA was also not significantly different between these two groups when controlling for institution-level fixed effects.

During the consequential period and after the creation of the Residency License, the statistically significant differences in both first-time and overall pass rates between Lateral Entry

and traditional candidates disappear. Residency License candidates, however, are significantly less likely than candidates in both other pathways to receive passing scores. Compared to traditionally prepared candidates, both Residency License and Lateral Entry candidates received lower edTPA scores by approximately 0.21 and 0.13 standard deviations, respectively. In a direct comparison of edTPA scores between Residency License and Lateral Entry candidates, there was no statistically significant difference when controlling for institutional fixed effects. Regarding predicted pass rates, there was no statistically significant difference between traditional and Lateral Entry candidates, but Residency License candidates were 9 percent less likely to receive a passing score than those prepared through traditional routes. Compared to Lateral Entry candidates, Residency License candidates were six percent less likely to receive a passing score. Although this seems to conflict with the OLS model showing no statistically significant difference in scores, it is possible that both groups receive similar scores but that Lateral Entry candidates achieve scores exceeding the cut score often enough to make a difference in the pass rates. Traditional candidates are significantly more likely than both Lateral Entry (5.9%) and Residency License candidates (6.6%) to receive edTPA scores categorized as "highly qualified."

Implications

North Carolina's alternative teacher preparation landscape conforms to and confirms the findings of the existing literature in a variety of areas. The following sections discuss the practical and theoretical findings of this study in relation to the existing literature.

Features of Alternative Preparation Programs

Consistent with the existing literature (Wilson et al., 2001; Zientek, 2007), candidates in North Carolina's alternative pathways are more diverse than those in the traditional programs, but the profession is still very White and female. In the pre-consequentiality period, candidates in

both the Lateral Entry and Residency License pathways were also more likely to be Asian American than were candidates in the traditional pathways. Although one of the goals of many alternative teacher preparation programs is to increase the diversity of the teaching profession (Suell & Piotrowski, 2006), some argue that these programs have not meaningfully succeeded (Cohen-Vogel & Smith, 2007). Given that the demographics of the current Residency License candidates appear similar to those of past Lateral Entry teachers, it is unclear whether the residency approach will be more effective at diversifying North Carolina's teacher workforce. Senate Bill 599, however, opened the door for non-degree residency-only programs provided by for-profit entities to operate in North Carolina. Given the differences in structure between these programs and existing EPPs, it is possible that the non-degree residency-only programs could shift the demographics of the teacher population once they are more established.

An interesting feature in the quantitative findings is that differences between licensure pathways lose or gain significance when controlling for EPP fixed effects. Without the fixed effects, the models effectively compare all scores to one another as if they were not clustered within institutions where the candidates receive their preparation. In that scenario, there are differences between preparation pathways. When accounting for those institution-level effects, however, many of the differences between pathways disappear, indicating that there may be differences in the quality of preparation candidates receive at different institutions. This is consistent with previous studies indicating that there is as much variation within as between preparation pathways (Boyd et al., 2006; Cochran-Smith & Villegas, 2015). In 2018, one study found measurable differences in evaluation ratings for teachers prepared by different institutions in North Carolina's public university system (Bastian et al., 2018). The findings of this study further support the idea that there are measurable differences in quality between EPPs.

Lower retention of alternatively prepared teachers is a traditional argument against such programs (Darling-Hammond, 2000b). Perceptions of North Carolina policymakers and EPP leaders aligned with the findings of a 2016 study highlighting the lower retention rates of Lateral Entry candidates than of traditional candidates and teachers prepared through a comprehensive program in which candidates were affiliated with a single institution (Zhang & Zeller, 2016). Analyses of teacher retention in urban teacher residencies indicates that individuals prepared through such residencies are significantly more likely to stay in the classroom than other alternatively prepared teachers (Papay et al., 2012). The North Carolina residency approach falls somewhere between more established alternative preparation programs and a true teacher residency. Although it is much too early to determine whether Residency License candidate retention rates will be higher than those for Lateral Entry candidates, EPP leaders were optimistic and believed that the increased supports available to Residency License teachers will positively affect retention. Another aspect of increasing retention and the overall effectiveness of alternative preparation programs is the quality of mentoring available to students. EPP leaders' descriptions highlighted criticality of enhanced supervision and mentoring in the residency approach for the new teacher experience. The findings of this study align closely with the importance of quality mentoring stated in the existing literature (Carter & Keiler, 2009; Foote et al., 2011; D. Humphrey et al., 2008; Tran & Smith, 2020).

A 2015 study found that alternatively prepared teachers generally outperformed their traditionally prepared counterparts on licensure content exams except on measures of student achievement (Shuls & Trivitt, 2015). The findings of this study would, at a glance, appear to contradict those conclusions. This study consistently found that traditionally prepared candidates outperformed their alternatively prepared peers from both the Lateral Entry and Residency

License pathways on the edTPA. Prior studies, however, tend to use content examinations such as the *Praxis* series which are fundamentally different from the edTPA. While the edTPA is a subject-specific assessment, it focuses on a portfolio of work centered on planning, teaching, and assessing (Goldhaber et al., 2017). The edTPA is neither a measure of student outcomes nor content knowledge, so it is difficult to place this study's findings within the existing literature. The practical nature of the edTPA could perhaps give individuals with traditional preparation backgrounds an advantage. Several of the EPP leaders noted that the edTPA highlights new teachers' ability to reflect critically on their practice. Strong critical reflection skills could be related to teachers' senses of self-efficacy in the classroom, with more reflective teachers experiencing greater self-efficacy. The existing literature has generally concluded that traditionally prepared teachers experience stronger teaching self-efficacy than alternatively prepared teachers (Darling-Hammond et al., 2002; Kee, 2012; Zientek, 2007). Other research has found possible relationships between edTPA scores and early career performance (Bastian, 2018), but it is too soon to tell how that relationship might manifest in North Carolina.

Alternative Preparation Policy Development

As outlined in Chapter 2, the process by which state legislatures codify alternative preparation processes into law is not widely studied. This inquiry adds to the literature regarding the development of policy pertaining to state-level alternative preparation programs. Similar to the State of California legislature in the early 1980s, the North Carolina General Assembly seemed concerned with teacher shortages. Unlike the California legislature, North Carolina representatives did not state their intent in the law, but it seems likely that increasing accountability and addressing teacher shortages were high on their list. In the policy creation sense, North Carolina legislators' approach to introducing residency has some similarities to the

approach adopted in New Jersey. In both cases, state-level officials engaged in direct policy change work without extensive support (and in New Jersey's case with direct opposition) from the educational establishment (Klagholz, 2000; Zumwalt, 1991). The findings of this study seem to align with Kingdon's (1984) conceptualization of the policy development streams. What legislators conceived of as problems (i.e., teacher shortages and disappointing student outcomes) were addressed through ideas in the policy stream (i.e., teacher residencies) that almost certainly predated the legislators' distillation of the problems in North Carolina. The political stream is, in fact, a critical component of the policymaking process. (Kingdon, 1984). In North Carolina, the legislation appears to have originated with a small coalition of legislators, indeed stemming almost exclusively from the office of one legislator with powerful supporters in the leadership. The rapid journey of Senate Bill 599 from a bill filed on April 4, 2017, to a bill fully ratified by both houses on June 30, and then a law signed by the governor on July 27 of the same year provides additional evidence supporting the notions that powerful people backed the bill and that the political stream has central importance for policymaking. This study on the development of the North Carolina residency approach provides insights into how a political party can, at the state level, enact sweeping educational reforms with little to no argument from external stakeholders or the minority party, even when the minority party holds the governorship.

Theoretical Contribution

The North Carolina residency approach creates an interesting case for the application of bureaucratic discretion to educator preparation program leaders. The General Assembly wrote SL 2017-189 so prescriptively that NCDPI directly incorporated the language into policy. Such a prescriptive approach would seem to indicate a lack of trust between legislators and preparation programs (Huber et al., 2001). The limited areas for discretion allowed EPPs dealt primarily with

the supervision of residents, appropriate coursework, and to a certain extent, the structure and sequence of field experiences for traditional programs. Seemingly at odds with the legislature's prescriptive legislation, NCDPI intentionally granted more discretionary power to EPPs in the design and implementation of the residency approach. Interestingly, despite this discretion, many EPPs have chosen to integrate the residency approach into existing programs and structures at their institutions rather than develop new programs. Those EPPs that have created new residency structures tended to be EPPs that lacked structured approaches to Lateral Entry and have built programs that look much like the approaches that already existed at other institutions. The lack of more innovation with regard to residency in North Carolina is consistent with Heinen and Scribner's assertion that broader discretionary space allows innovation (Heinen & Scribner, 2007). Given the highly prescriptive nature of SL 2017-189, it seems likely that the space in which NCDPI granted discretion to EPPs was simply too small for meaningful innovation.

Nelson (1982) described high-profile events as possible catalysts for change in public organizations. Existing work on bureaucratic discretion in educator preparation identifies NLCB and the need for highly qualified teachers as catalysts for change (Heinen & Scribner, 2007). In the North Carolina context, the catalyst for change was the codification of SL 2017-189. Unlike the highly qualified requirement in NCLB, the North Carolina residency approach lacks a clear motivation and desired outcome for preparation programs, which may have also contributed to the North Carolina EPP response, which was to modify existing processes and programs rather than use the discretionary power afforded them by NCDPI to develop more innovative programs. Overall, the findings of this study confirm observations previous researchers (Heinen & Scribner, 2007; Huber et al., 2001) have made on the nature of bureaucratic discretion in educator preparation through the lens of North Carolina's more prescriptive legislative environment.

Recommendations for Policymakers

The findings of this study support several policy recommendations for both NCDPI and the General Assembly to consider. These recommendations, if implemented, could improve the efficiency and the effectiveness of current processes and position North Carolina to become a leader in teacher residencies in the future.

North Carolina Department of Public Instruction

Increase NCDPI Capacity. Multiple EPP leaders noted that chronic understaffing at NCDPI negatively impacts the support available to them and the larger licensure process. Leaders at the department should prioritize filling vacant positions in the Licensure Department to help staff address the large and problematic license application backlog.

Report Residency Metrics. As discussed in the EPP Annual Report document analysis, there is currently a lack of structure for EPPs to use when reporting details of their residency programs. NCDPI staff should revamp the annual report templates, working with EPP leaders if needed, to ensure that the EPP Annual Reports present readers with a clear understanding of the residency programs available in North Carolina. Additionally, the annual State of the Teaching Profession report should be edited to include Residency License as a separate reporting category. The final 2019-2020 report reported specific numbers and data for Lateral Entry teachers, but only briefly mentioned the Residency License as an upcoming pathway that would eventually replace Lateral Entry. By 2019-2020, there were teachers in schools working under Residency Licenses who should have been included in the report. In a draft version of the 2020-2021 report released on March 2, 2022, NCDPI combined Lateral Entry and Residency License teachers into one category called “lateral entry” for the purpose of reporting teacher attrition and mobility. While it is true that both pathways represent alternative certification in North Carolina, the

qualitative and quantitative findings of this study indicate there are differences between pathways. If, as several EPP leaders suggest, retention rates are different for teachers prepared through the Residency License pathway than the Lateral Entry pathway, it is important for NCDPI to distinguish between these pathways and report retention rates separately on the official report discussing teacher attrition and mobility in North Carolina.

North Carolina General Assembly

Revise NC General Statute §115C. The policymaker interviews indicated that there was a desire on the part of legislators to update portions of the law that originated in Senate Bill 599. Based on the findings of this study, legislators should coordinate with EPP leaders—perhaps through the PEPSC—to identify and clarify points of confusion. Portions of §115C-269.25 regarding clinical partnerships presented a particular challenge for this study and might be excellent candidates for technical correction. The General Assembly could also eliminate or further restrict access to the Limited License. At its monthly meeting in March 2022, the North Carolina State Board of Education heard a presentation with updates regarding the Limited License. In the presentation, Dr. Thomas Tomberlin explained that 1.2% of North Carolina teachers hold a Limited License, but that the distribution is not uniform and that the rate of teachers going onto Limited Licenses is increasing. 86% of the teachers whose Limited Licenses were set to expire on June 30, 2022, had not even attempted to pass the licensure exams keeping them from full licensure during the three years of their Limited License. In performance comparisons between Limited License holders and teachers on initial professional licenses in their first three years of teaching, Tomberlin noted that the Limited License holders performed slightly worse, but that the differences in effectiveness were difficult to interpret. While the balance between maintaining high expectations and filling empty classrooms is delicate, it is not

clear that the Limited License is the answer. As Tomberlin commented during his presentation, "the resource that has been granted to [teachers] is time, and it's not clear to me that's the exact right resource they need…I don't think time is solving our problem here" (Tomberlin, 2022b). If LEAs wish to keep teachers who are not fully qualified, the legislature should require, at a minimum, the LEAs to articulate the measures in place to help those teachers achieve full certification, and provide evidence of those teachers' effectiveness in the classroom despite their failure to meet the requirements for certification.

Explore Opportunities for True Teacher Residencies. The General Assembly should explore or direct the State Board of Education and PEPSC to explore opportunities for a true teacher residency program. Multiple institutions of higher education in North Carolina have created small, federally funded, teacher residencies through Teacher Quality Partnership (TQP) grants. Texas, which supplied much of the accountability language used in Senate Bill 599, has a statewide teacher residency grant program. The legislature could request lessons learned from these institutions and consider how existing structures in North Carolina could support a high-quality teacher residency program. Legislators could also look to a particularly innovative approach in Tennessee, where one school system has partnered with an IHE to create the first teacher residency program that is registered as an apprenticeship with the U.S. Department of Labor (Schwinn, 2022). Their unique approach allows the state to take advantage of millions of workforce development funding available from the federal government (Vereen, 2021).

Directions for Future Research

This dissertation adds to the academic understanding of alternative preparation program policy development and illustrates the workings of bureaucratic discretion in educator preparation by exploring the creation of the North Carolina residency approach. There are,

however, several areas of interest future researchers should consider investigating to add to the current understanding of this particular policy issue.

This study analyzed the development of the residency approach through the lens of Kingdon's (1984) multiple streams theory. Given the strong probability that at least some of Senate Bill 599 came directly from the Texas Education Code, a future study might analyze the residency approach policy development using policy diffusion theory and inter-state aspects of policy adoption (McLendon et al., 2015). In policy diffusion theory, a policy innovation is any policy new to the area in which it is being adopted, regardless of how many other states or locales have already adopted that policy (Walker, 1969). In their early studies, Berry and Berry (1990, 1992) found that a state's choice to adopt a policy innovation is more heavily influenced by the actions of bordering states than by those of non-contiguous states. Although Texas is not North Carolina's neighbor geographically, one could argue that the North Carolina General Assembly and Texas Legislature are neighbors when it comes to political ideology.

edTPA scores were likely the best outcome measure to use in this study given the lack of student test scores and reliable teacher evaluation ratings due to the ongoing challenges posed by the COVID-19 pandemic. edTPA is, however, only an intermediate measure. Future researchers should evaluate the effects of different preparation pathways on student outcomes such as end-of-course and end-of-grade tests, teacher value-added data, teacher evaluation ratings—particularly North Carolina educator evaluation standards 4 and 5 to measure pedagogy and reflection—as well as longer term measures like teacher retention. An additional consideration related to the edTPA is the fact that some institutions not only required the edTPA before it was consequential for licensure but also covered the cost of taking the exam. In fact, some

institutions still pay for their students to take the edTPA. EPPs that pay or do not pay for edTPA costs might achieve different test scores or pass rates.

The current study examined the development and implementation of the residency approach through the eyes of legislators and EPP leaders. A future study should include the perspectives of school leaders who supervised both Lateral Entry and Residency License teachers over the years. Their perspectives would offer helpful insights into the on-the-ground performance of teachers from different pathways and a more direct assessment of how the switch from Lateral Entry to the Residency License impacts student outcomes. Future research should also explore the impact of residency-only programs on the overall educator preparation landscape. Many of these organizations entered the North Carolina landscape following the passage of Senate Bill 599 and may have contributed more innovative ideas to the Residency License pathway than the existing brick and mortar institutions. They might also have a greater impact on diversifying the teacher workforce. Future researchers should also consider the impact of high-profile bodies including the North Carolina DRIVE taskforce and PEPSC on educator preparation policies. The PEPSC is of particular interest because it was also created by Senate Bill 599 as both an accountability body and a voice for EPPs, which had previously been excluded from many state-level policy conversations. Although such an investigation was outside the scope of the present study, the PEPSC is inextricably tied to educator preparation policy. Additionally, the DRIVE taskforce is working to propose new and innovative alternative pathways into (and out of) the teaching profession. While both organizations are still relatively new, I suspect that recommendations from these group will have a strong influence on the redesigning and redefining of the North Carolina educator preparation landscape for many years.

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APPENDICES

Appendix A: Policy Development Interview Protocol

During the 2017-2018 legislative session, the North Carolina General Assembly passed Senate Bill 599 (eventually ratified into SL 2017-189). SB 599 included two changes I'm interested in learning more about through this interview: it changed Lateral Entry (the alternative teacher preparation pathway in North Carolina since the mid-1980s) to the Residency License (which means candidates must affiliate with a single EPP), and it provided preparation programs with the option to do a one-year residency instead of the traditional student teaching model.

My study aims to learn more about the origins of these changes and why the legislature decided to include them in SL 2017-189, how the implementation is proceeding and potential impacts of these changes on the edTPA performance of teachers prepared in North Carolina.

Module 1: Warm Up/Problem Stream

What is your current professional role? How long have you been in this role? What were you doing before this?

During the past 5-10 years or so, what would you say are the significant issues in teacher preparation?

Module 2: Policy Development

<u>Policy Stream</u>

Thinking about possible solutions to these issues over the past 5-10 years, what approaches or programs in teacher preparation have been proposed in the state?

Specifically regarding SB599, the two changes I mentioned earlier – the Residency License and the option for a one-year residency instead of a traditional 16-week student teaching period.

What were the origins of these specific ideas?

> Prompt: How did these ideas come about/where did they come from?
> Prompt: can you tell me more about that?

Which states, if any, did North Carolina look to when considering this residency language?

> If yes: How did North Carolina adapt or include those ideas/language?

<u>Political Stream</u>

Thinking back to 2017, what was going on that brought teacher preparation to the top of the policy agenda?

Prompt: How did the political landscape at the time influence teacher preparation legislation?

Possible reword for bill sponsor and staff: What prompted you/your office to prioritize SB 599 back in 2017?

Policy Entrepreneurs

Who do you think were the most influential policy actors in North Carolina teacher preparation when this bill was passed?

For specific actors: what was that actor's role in getting the bill passed? What was their stance on the bill?

Module 3: Legislative Intent

What did you hope to achieve or accomplish by changing the Lateral Entry process to Residency Licensure?

Prompt: you'll recall this means that teacher candidates now need to affiliate with a single educator preparation program. Why do you think that matters?

I have a similar follow up question: what did you hope to achieve or accomplish by creating the teacher residency option as a replacement for the 16-week internship?

Module 4: Snowball Recommendations

In thinking about how Senate Bill 599 came into being a few years ago, who else would you recommend I speak to about the development of this policy and the residency language specifically?

The next phase of my interviews deals with implementation of these residency approaches (the Residency License and one-year residencies for teachers). Which educator preparation programs would you recommend I speak to?

Module 5: Cool Down

What else about teacher preparation or residency approaches to teacher education would you like to tell me that we haven't already talked about?

Appendix B: Implementation Interview Protocol

During the 2017-2018 legislative session, the North Carolina General Assembly passed Senate Bill 599 (eventually ratified into SL 2017-189). SB 599 included two changes I'm interested in learning more about through this interview: it changed Lateral Entry (the alternative teacher preparation pathway in North Carolina since the mid-1980s) to the Residency License (which means candidates must affiliate with a single EPP), and it provided preparation programs with the option to do a one-year residency instead of the traditional student teaching model.

My study aims to learn more about the origins of these changes and why the legislature decided to include them in SL 2017-189, how the implementation is proceeding and potential impacts of these changes on the edTPA performance of teachers prepared in North Carolina.

Module 1: Warm Up

What is your current professional role? How long have you been in this role? What were you doing before this?

During the past 5-10 years or so, what would you say are the significant issues in teacher preparation?

What do you know, or have you heard, about teacher residencies as a model of teacher preparation?

Module 2: Residency Licensure

How do you think the switch to the Residency License from Lateral Entry affects teacher candidates?

Prompt: can you explain what you mean by that?

How, if at all, has the Residency License changed your program? Enrollment?

What do you think the legislature was trying to achieve by changing from Lateral Entry to the Residency License?

Module 3: Clinical Practice Internships/Residencies

In your own words, please describe your clinical practice requirements for your traditional (undergraduate) preparation program?

Why did you choose to structure them this way?

(If 16-week model): Did you consider changing to a one-year residency? Why or why not?

(If one-year model): Why did you implement the one-year residency for your students? How has this affected your program?

What do you think the legislature was trying to achieve by requiring either the 16-week internship or one-year residency?

Module 4: Snowball Recommendations

In thinking about the implementation of these residency approaches (the Residency License and one-year residencies for teachers). Which other educator preparation programs would you recommend I speak to?

Prompt: Why these programs?

Cool Down

What else about teacher preparation or residency approaches to teacher education would you like to tell me that we haven't already talked about?

Appendix C: Codebook Excerpts

Category	Theme	Code	Description	Sample Quote
Problem Stream	Teacher Issues	Teacher Quality	Generic category for references to teacher quality or effectiveness	"teacher prep and teacher quality, in my view, are the battle fronts. We are spending way too much money doing things, other things, that do not enhance teacher prep into teacher quality. "
		Teacher Shortage	References to teacher shortages in North Carolina	"we're desperate for teachers. We hear it everywhere we go."
		Teacher Pay	References to teacher pay as a problem	"certainly salary issues with education is compared to similarly degreed professionals. teachers earn less than others."
		People disliked Lateral Entry	Describes comments from stakeholders that Lateral Entry was problematic	"we had groups of teachers railing against lateral entry because they didn't go to teaching school"
	Teacher Prep Issues	Lateral Entry was Chaotic	Descriptions of North Carolina's Lateral Entry process describing a confusing or chaotic state	"And so these lateral folks never got that model right? or that comprehensive approach. they got this disconnected set of experiences. "
		Outdated/Disorganized Teacher Preparatic	General references to issues in formal teacher preparation programs	"there wasn't a consensus around teacher preparation, either in North Carolina or nationally about what preparation of teachers actually looks like"
		Lack of Accountability	Lack of accountability, particularly surrounding educator preparation	"No one was accountable for you"
	Student Issues	Students are unprepared	General sentiment that students are not academically prepared to succeed	"Legislators want better out(comes), they want to see. Look, we've got a lot of jobs unfilled. We've got people in our ear, businesspeople, all the time complaining about how poorly prepared new hires are."
Political Stream	Lobbying/Relationships with Legislature	Other Stakeholders/Influencers	Stakeholders with an interest in teacher preparation (excludes EPPs, teachers, school districts)	"Also recognize that there were some other dynamics at play. You had some organizations that were inserting themselves in the education process that had not heretofore really had much of a...had not played much of a role."
		Teacher-Legislature Confrontation	References to conflict between the NCGA and teachers	"what we have is a confrontational relationship between the state of North Carolina (i.e. the legislature) and the teachers. How's that good for anybody? "
	Accountability	Desire for accountability	Specific to legislative desire for greater accountability in education	"And the one last piece which is something that sells very well with the majority party. What are the accountability measures so that we know we're getting what we're paying for?"
	Legislators' Attitudes	Legislators must act quickly/immediately	References to short timeframes in which legislators must act	"So, we, legislators are in a rush to see action. We know we should know better of course; we all know you can't do that. You don't turn the mighty ship of state or nor certainly the mighty ship of Department of Public Instruction or, or even a single school on a dime. "
		Legislators don't understand education	Describes quotes talking about how legislators lack education subject matter expertise	"Legislators do not understand the education process, quite frankly."
		Education is not a consensus issue	References to political or constituent conflict re: education issues	"In fact in education it's more like 60% of the people think you're the stupidest person ever walked the face of the earth, but it changes."
Policy Stream	Residency	Residency Approach	References to "residency" or the residency license	"And so like the residency stuff. I do think North Carolina will eventually get to a residency model but you have to have all these other things in place."
		New Accountability	Describes the creation of new accountability measures	"Whereas now for every beginning teacher. Someone is accountable for that person. For me, that's what it's about. it's about the accountability for the performance of that individual. And so every pathway now in the state has an accountability for the people in which they are preparing."
		Other States	References to how North Carolina adopted policy ideas from other states	" I was told that this was being implemented in other states."
	Innovation	Innovation	Describes the process of innovation; how innovation affects teacher preparation/quality	"And so I have this belief about innovation is about successive approximations – you keep getting better and better and better."
	Existing Solutions	Alternative teacher prep	Describes solutions for issues identified in the problem stream in North Carolina prior to the residency approach	"I think we saw there are lots of solutions right? so the first one certainly was teacher preparation, traditional teacher prep and then you have things like Teaching Fellows Program – state sponsored Scholarship Program – which, you know, ran for 20 years..."

Category	Theme	Code	Description	Sample Quote
Background	Current Educational Challenges	sig issues: changing requirements	references to changing legislative or policy requirements	" the changing legislation that tends to put handcuffs on what we do"
		sig issues: k-12 expectations	general issues related to content expectations, changing nature of education, etc.	"curriculum expectations for K-12 students, as indicated exclusively in standardized test kinds of elements. I sometimes think pacing guides things like that are a detriment to teachers"
		sig issues: lack of diversity	referencing the lack of teacher diversity	"diversifying the profession is certainly a very big issue"
		sig issues: lack of pay	references to low or not enough teacher pay	" until teachers get paid more money, We're not going to have more people in education, you know that's the I think the bottom line"
		sig issues: lack of respect	refers to teachers being disrespected	"I would say, the lack of respect, and when I think about respect I mean from our community and children, the children that we serve."
		sig issues: poverty	general description of societal poverty as an issue for education	"the poverty gaps in our society are increasing, obviously, and that is impacting what's going on in our schools,"
		sig issues: teacher shortages	references to teacher shortages or people not entering education	"we have a huge shortage"
		becoming a teacher is expensive	costs associated with becoming a teacher	" It is really expensive to become a teacher, and that's something that I don't think a lot of people understand"
	Lateral Entry	lateral entry retention	discussion of lower LE retention rates	" the retention rate for lateral entry teachers as I am, as I know, I don't have any specific statistics, but as I know it was very, very low."
		lateral entry unprepared	references to LE teachers not being prepared, being overwhelmed, etc.	" the way I look at it as lateral entry walked in with nothing."
		patchwork quilt lateral entry model	descriptions of the LE structure	"there was a lot of shopping around, okay because you could drive up and down 40 and shop."
	Perceived Legislative Intentions	legislative intent - RL	general responses to RL legislative intent prompt	"So I think, I mean I think they want what we all want: good teachers in the classroom. "
		leg intent RL subcode: language of residency	answers addressing where "residency" came from	"Why they choose to use that language? I don't know I suspect it has to do with a year-long. "
		leg intent RL subcode: medical residency/language	any references to medicine/medical residencies	"you're going to find this everything in our teacher prep programs is moving to the medical language, you notice I don't say “student teaching” more, it’s clinical practice or clinical internship and residency,"
		legislative intent - clinical practice	general responses to the clinical practice legislative intent prompt	" but I do think that was a consistency. I think if they put it in there for student teaching that it was in there for residency and people were getting sort of equal times"
	SB 599 Challenges	"affiliate"	in vivo code for variations on "affiliate"	"And now that affiliation has grown from you have to affiliate with them not only for the courses but until you pass the licensure test,"
		logistical complication	generally unforseen logistical issues stemming from 599	" when you get hired you have to affiliate with a program upon being hired, one of the complications of that is that has to do with the start date. "
		mismatched end semester dates	references to differences between LEA and IHE end dates	"it's not fully the end of the school year because our semester ends and late April/early May and school those ‘til June, "

Appendix D: Regression Model Specifications

OLS Regression Modeling of edTPA Scores

(1) Comparisons to traditional preparation programs

$$Test\ Score_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Lateral\ Entry} + \psi_i + \upsilon_i + \chi_i + \varepsilon_i$$

$$Test\ Score_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Lateral\ Entry} + \psi_i + \upsilon_i + \chi_i + \omega_i + \varepsilon_i$$

(2) Comparisons to Lateral Entry preparation programs

$$Test\ Score_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Traditional} + \psi_i + \upsilon_i + \chi_i + \varepsilon_i$$

$$Test\ Score_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Traditional} + \psi_i + \upsilon_i + \chi_i + \omega_i + \varepsilon_i$$

Where test score represents continuous edTPA test scores, β_1 is an indicator variable for Residency License pathway, $\beta_2$is an indicator for Lateral Entry or Traditional preparation, ψ_i is a vector representing test year, edTPA consequentiality and the presence or absence of NCDPI cut scores, υ_i is a vector representing whether the test had 13- or 18-rubrics. χ_i is a vector of demographic characteristics, ω_i represents EPP fixed effects, and ε_i is the error term.

Logistic Regression Modeling of Pass Rates

(1) Comparisons to traditional preparation programs

$$Pass_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Lateral\ Entry} + \psi_i + \upsilon_i + \chi_i + \varepsilon_i$$

$$Pass_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Lateral\ Entry} + \psi_i + \upsilon_i + \chi_i + \omega_i + \varepsilon_i$$

(2) Comparisons to Lateral Entry preparation programs

$$Pass_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Traditional} + \psi_i + \upsilon_i + \chi_i + \varepsilon_i$$

$$Pass_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Traditional} + \psi_i + \upsilon_i + \chi_i + \omega_i + \varepsilon_i$$

Where Pass represents an indicator variable for whether a score was either a “pass” or “fail” and all other variables’ meanings remained the same as in the above models.

Logistic Regression Modeling of "Highly Qualified" Rates

(1) Comparisons to traditional preparation programs

$$HQ_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Lateral\ Entry} + \psi_i + \upsilon_i + \chi_i + \varepsilon_i$$

$$HQ_i = \beta_0 + \beta_1^{Residency} + \beta_2^{Lateral\ Entry} + \psi_i + \upsilon_i + \chi_i + \omega_i + \varepsilon_i$$

Where HQ indicates whether a score qualified as "highly qualified" or not and all other variable meanings remain the same.