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Retention of Beginning/Novice Teachers Who Sign Out-of-field Waivers

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RETENTION OF BEGINNING/NOVICE TEACHERS WHO SIGN OUT-OF-FIELD WAIVERS

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Heather Dawn Tyler

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To: Dean Michael Heithaus
College of Arts, Sciences and Education

This dissertation, written by Heather Dawn Tyler, and entitled Retention of Beginning/Novice Teachers Who Sign Out-of-Field Waivers, have been approved with respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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The dissertation of Heather Dawn Tyler is approved.

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Florida International University, 2022

DEDICATION

This degree and its body of work are dedicated to my parents who left their home and the life they knew in Jamaica in order to forge a better life for my siblings and me. I also dedicate this work to my husband and daughter who stood by me throughout this journey with encouragement.

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This body of work and the accompanying degree is dedicated to my family and friends. Had it not been for them I would not have accomplished this great feat in the time it was completed. Throughout this process, my family's encouragement and understanding increased the love for them, which I thought was already at its peak. The countless weeknights and weekends that I spent away from them, doing homework, never received a negative comment or a word of neglect. During this process, the words we are with you, or you can do it, or I'm proud of you, were what I heard continuously. For that I thank you and I am forever grateful we are a family.

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ABSTRACT OF THE DISSERTATION

RETENTION OF BEGINNING/NOVICE TEACHERS WHO SIGN OUT-OF-FIELD WAIVERS

by

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Professor Ethan Kolek, Major Professor

Research investigating teacher shortage and teacher retention is well known. There is little research focusing on the retention outcomes of beginning/novice teachers who sign Out-of-Field Waivers. This nonexperimental, quantitative research study was conducted to describe the retention outcomes of beginning/novice teachers in Miami- Dade County Public Schools (M-DCPS), the fourth largest school district in the U.S. The project focused on three academic school years/cohorts (1,037 beginning/novice teachers). Of the 1,037 new teachers, 128 of them signed Out-of-Field Waivers. The results indicated that signing an Out-of-Field Waiver was not associated with leaving the school district, and beginning/ novice teachers hired in schools with higher Accountability Grades were more likely to be retained. Because the majority of schools in M-DCPS are Title I Funded Schools, teachers who sign Out-of-Field waivers were more likely to be placed in Title 1 Funded Schools. However, Non-Title I Funded Schools outperformed Title I Funded Schools in the retention rates of beginning/novice teachers who signed Out-of-Field Waivers (retention rates for Non-Title I Funded Schools = 75.0%; retention

rates for Title I Funded Schools = 66.1%). Teachers who signed Out-of-Field Waivers were more likely to be placed in schools with Accountability Grade of D or F and less likely to be hired in schools with a grade of C than teachers who did not sign Out-of-Field Waivers. Teachers who signed Out-of-Field Waivers and were traditionally prepared were more likely to remain in the profession/school district than those who were alternatively prepared. Women who signed Out-of-Field Waivers were more likely than men to remain in school district/profession. Different from other studies, teachers' race/ethnicity was not associated with retention. Implications for policy, practices, and research are discussed in this study.

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ABBREVIATIONS AND ACRONYMS

ESOL	English for Speakers of Other Languages
ELL	English Language Learner
SPED	Special Education
SWD	Students with Disabilities
ESE	Exceptional Student Education
ESSR M-	Elementary and Secondary School Reform
DCPS	Miami-Dade County Public Schools
FLDOE	Florida Department of Education
MINT	Mentoring and Induction for New Teachers
NCLB	No Child Left Behind
NTC i3	New Teacher Center Investing In Innovation
RQ	Research Question
SQ	Subquestion
WL TFA	World Language
NCTAF	Teach for America
SASS91	National Commission on Teaching and America's Future
TFS92	School and Staffing Survey 1990-91
	Teacher Follow-up Survey 1991-92

Chapter 1: Introduction

Brief Background

Teacher retention is a global concern. The annual exodus of teachers, particularly beginning teachers, has taken a negative toll on the education system. The education profession has experienced attrition of teachers who, had they remained in the profession, had the potential of having great positive impact on students and the field of education, in general. To avoid the continuous excessive loss of teachers it is imperative that the transition into the profession for beginning/novice teachers is effective and efficient. Their decisions to remain in the profession are at times based on their experiences or support received in the first year in the profession (Ronfeldt & McQueen, 2017). It is becoming increasingly difficult for school administrators to retain these individuals (Carr et al., 2017; Lambert 2003; Riggs 1997).

The likelihood of teachers leaving the profession within their first 5 years is between 20% and 40% (Darling-Hammond & Sykes, 2003; Gray & Taie, 2015; Hanushek et al., 1999; Ingersoll, 2003; Ronfeldt & McQueen, 2017). However, in urban school districts, the attrition rate of new teachers is even higher than other school districts. This exodus has caused a fiscal strain on the public-school system; costing individual school districts between $3 million and $6 million, if not more, in a single school year, which includes the recruitment of new teachers. (Synar & Maiden, 2012; Wronowski, 2018).

According to Zhang and Zeller (2016), as a result of the continued teacher shortage, or low teacher retention rates, states were utilizing individuals who did not

participate in a traditional education program in college/university, as teachers (alternative teacher preparation) to fill the vacancies in the teaching profession. This seems to have become more natural in the past 10 years, than it was previously. As of 2004, there were more than 40 State Boards of Education along with the District of Colombia Board of Education that enacted alternative teacher certification programs (Zhang & Zeller, 2016). Although the alternative teacher preparation programs (sometimes known as alternative teacher certification) vary from state to state, this option to closing the teacher shortage gap (especially in hard to staff schools) has become well know and almost tabu, to the point that there are now research from individuals such as Costigan (2005), Ingersol et al. (2012), McKibbin (2001), Mungal (2016), and Zhang and Zeller, who looked at the prevalence of alternatively prepared teachers in the education systems in various areas of the United States and compared the retention rates of alternatively prepared teachers to that of traditionally prepared teachers. These studies, though comparing teacher preparation and retention, do not include those beginning/novice teachers who signed Out-of-Field Waivers.

Statement of Research Problem

Recruitment and retention of teachers is an ongoing problem in the education profession (Wronowski, 2018). Researchers have aggressively studied the issues of recruitment and retention in the K-12 public school system (Carr et al., 2017; Chiong et al, 2017; Coffey et al. 2019; Donne & Lin, 2013; Hong & Hong, 2013; Redding & Henry, 2018; Richards & Templin, 2019; Rogers-Ard et al., 2019; Ronfeldt & McQueen, 2017; Wronowski, 2018). These researchers have suggested various ways to recruit and

retain teachers. Some suggestions included teachers completing out-of-area certification requirements; participating in mentoring and/or induction programs; having beginning/novice teachers sign Out-of-Field Waivers and hiring new teachers from other careers and providing them with assistance in transitioning from their former careers to that of education.

Though many theories of teacher recruitment and retention have been proposed, few have focused on the retention of teachers who sign Out-of-Field Waivers. An Out-of-Field Waiver is an agreement or contract to teach a subject/assignment, of which the teacher has no certification/endorsement or formal training (Nixon et al., 2017; Plessis, 2015). Out-of-Field Waivers, or Out-of-Field Contracts, can be signed by both veteran and/or beginning/novice teachers. For the purpose of this research, the focus will be on beginning/novice teachers who sign Out-of-Field Waivers. On the occasion when veteran teachers sign Out-of-Field Waivers, they are already established in the profession, have a teaching certificate, and are being asked to teach a subject in which they are not certified or endorsed. In this instance, the veteran teacher is responsible for meeting the requirements for obtaining the endorsement or certification in the area of instruction considered out-of-field (e.g. English for Speakers of Other Languages [ESOL], Reading, or Gifted). These teachers have a working knowledge of the school system, the school-site environment, classroom management, and effective, if not highly effective instruction.

In the case of beginning/novice teachers signing Out-of-Field Waivers, they agree to complete all requirements and receive certification and/or endorsement in a new

instructional field while struggling to survive as a newly employed teacher. Depending on the instructional area, these newly employed teachers must complete all requirements within 1 to 3 years. This adds to the stress of becoming effective in their certified content area(s), managing the classroom, and learning a new discipline or specialization as a beginning/novice teacher.

At this time, it is not known what if any teacher experiences or demographics or school characteristics might be associated with the success of beginning/novice teachers who sign Out-of-Field Waivers. Teacher demographics (Hughes, 2012; Kohli, 2019; Wronowski, 2018), teacher preparation programs (Burnstein et al., 2009; Donaldson & Johnson, 2010), teacher induction programs (Brown, 2003; Carr et al, 2017; Ronfeldt & McQueen, 2017; Sowell, 2017), and school characteristics (Hughes, 2012; Shaw & Newton, 2014; Torres, 2018), are associated with teacher retention in general. However, very little has been studied about how teacher and school characteristics might be associated with the retention of beginning/novice teachers who sign Out-of-Field Waivers.

As with other large urban school districts, Miami-Dade County Public Schools (M-DCPS), the fourth largest school district in the U.S. hires a large number of new teachers each year. According to the M-DCPS Statistical Highlights 2015-2016, (which is the last year of teacher data that I used for this study), M-DCPS employed 18,520 teachers, who taught 356,480 students in 465 schools in 2016. Because of the difficulty in filling vacant positions in some areas, principals sometimes hire early career teachers for positions outside of their certification/endorsement and ask them to sign Out-of-Field

Waivers in order to be employed. Due to there being limited research available on the retention of beginning/novice teachers who signed Out-of-Field Waivers, I explored the retention outcomes of beginning/novice teachers who signed Out-of-Field Waivers in M-DCPS.

Purpose of the Study

The purpose of this nonexperimental, quantitative study was to describe the retention outcomes of beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS. I sought to compare the differences between beginning/novice teachers who signed Out-of-Field Waivers and those who did not, along with any differences in retention between these subgroups. I also sought to understand differences between subgroups (e.g. women and men) of beginning/novice teachers who signed Out-of-Field Waivers in M-DCPS. In order to have a nuanced understanding of these teachers' retention, the study considered factors that may have been associated with retention of these teachers including teacher characteristics, and school characteristics.

Research Questions

I sought to answer the research questions (RQ):

RQ1. What are the retention outcomes of beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS?

The specific subquestions (SQ) are:

SQ1.1 What percentage of Out-of-Field beginning/novice teachers remain in the profession for a minimum of 3 years?

SQ1.2. Do Out-of-Field beginning/novice teachers who sign Out-of-Field Waivers with different characteristics differ in their retention rates?

SQ1.3. Do Out-of-Field beginning/novice teachers have different retention rates depending on their particular school characteristics?

RQ2. How do beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS differ from those who do not sign Out-of-Field Waivers?

The specific subquestions are:

SQ2.1. Do Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers differ in their three-year retention rates?

SQ2.2. Do Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers differ in their characteristics?

SQ2.3 Are Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers hired in different schools?

SQ2.4. Is signing an Our-of-Field Waiver a predictor of teacher retention for beginning/novice teachers?

Statement of Significance

The results of this study will provide policymakers with information that will aid in addressing teacher shortages in various academic areas across the school district. The findings will shed light on the characteristics of beginning/novice teachers who sign Out-of-Field waivers, and whether beginning/novice teachers who signed Out-of-Field Waivers are more or less likely than their counterparts to remain teaching in M-DCPS.

The findings should aid policymakers in locating or understanding possible problem or success areas, school demographics, or geographical areas, where beginning/novice teachers who sign Out-of-Field Waivers should be replicated or revamped. Furthermore, this study provides policymakers with particular areas where focused attention and support should be provided for beginning/novice teachers who sign Out-of-Field Waivers. These results may aid the policymakers of M-DCPS in probing deeper into the recruitment and retention practices, identify areas of improvement, and formulate plans to bridge the gaps between recruitment and retention of its beginning/novice teachers who sign Out-of-Field Waivers.

Delimitations/Assumptions of Study

This study has several delimitations that are important to acknowledge. One such delimitation is that I analyzed only 3 hiring years of data (2013-2014, 2014-2015, and 2015-2016) in this study. There is a possibility that the retention rate of beginning/novice teachers and those newly hired teachers who signed Out-of-Field Waivers from school years not included in this study may yield different results. Although it was my original intent, I was not able to make comparisons involving mentorship programs in the M-DCPS induction program, or any other comparisons relating to induction programs as M-DCPS did not begin collecting official data for its induction program until after the 2015-2016 School Year. Furthermore, there are other factors likely associated with teacher retention (including, but not limited to induction, mentorship, salary, working conditions, etc.) that were not available in the existing administrative data that I analyzed. Data I used had been previously collected by M-DCPS and were used for internal proceses and

reporting to the state and federal governments, so I was not able to examine these potential factors in this study.

Definitions

Alternative Teacher Preparation: Participants in this program are those who did not graduate with an education degree. However, they achieved certification utilizing and alternative pathways, whether (a) simply passing the specific subject area exam(s), along with education coursework postgraduation; or (b) participating in a preparation program after graduation (such as Teach for America or Teaching Fellow), taking the required subject area exam(s) and achieving passing score(s). All, no matter the preparation pathway, must eventually apply for and receive the Florida Educator's Certificate.

Out-of-Field beginning/novice teacher: Any teacher hired to teach full-time, is within their first year of the teaching profession, has a teaching certificate, and has signed an agreement to teach a subject or area they have had no formal training or no certification/endorsement to teach, with the understanding that they will complete all requirements for certification.

School Accountability Grades: Grades that are assigned by the Florida Department of Education (FLDOE) utilizing an intricate formula of calculating State-mandated assessed areas (Florida Standards Assessment, End of Course Exams, Percent of student body tested, and Graduation Rates) depending on the school's grade configuration (Elementary, K-8 Center, Middle, or High School), and a points-system. For more detailed definitions, specific language, and School Accountability Grade

calculation see Guide to Calculating School and District Grades (based on school year), published by the Florida Department of Education (fldoe.org).

Specialization: Refers to any area in which the Department of Education deems an individual meets the minimum criteria to gain a Professional Educator Certificate or Endorsement.

Teacher retention: Used when describing my results to mean that beginning/novice teachers have remained in the profession for a minimum of three years after the hiring year(s) of the 2013-2014, 2014-2015, and/or 2015-2016 school year.

Teaching out-of-field: Can be described as teaching a subject area that the teacher has not received formal training and credentialed state certification or endorsement. Ingersoll (2002) and Price (2017) described teaching out-of-field as, "teachers assigned by administrators to teach subjects which do not match their training or education" (p. 103). Additionally, Ingersoll and Gruber (1996; as cited by Caldis, 2017), stated: "teaching out-of-field …a situation where teachers are required to teach a subject(s) for which they have no specialization, i.e., the subject(s) they are teaching is not what they studied as part of their teacher training at either minor or major level" (p. 13). An additional definition of out-of-field, which is similar to others is that of du Plessis, Carroll and Gillies (2017), which is, Qualified teachers assigned to teach subjects and year levels for which they are not qualified. It includes trained teachers who teach outside of their area, such as teaching math although they were qualified as science teachers. This also includes LOTE teachers (language other than English) who have, for example, French,

German, Mandarin, or Spanish as a mother tongue, but are not qualified/certified teachers. (p. 88)

Title I Funded schools: Schools that receive additional Federal Funding due to 75% or more of the student body receiving free or reduce-priced lunches in school. *Non-Title I Funded* schools are those schools that do not have 75% or more of their student body receiving free or reduce-priced lunches. Thus, no additional Federal Funding is provided to those schools.

Traditional Teacher Preparation: For the purposes of this study, those individuals who are considered to have participated in a traditional teacher preparation are the individuals who majored in education courses in college/university and graduated with a teaching degree (whether Early Childhood Education, Elementary Education, English Education, Special Education, or another field) passing the required subject area exam(s) and applying for the Florida Educator's Certificate.

Summary

The next four chapters will delve into my research and respond to the aforementioned research questions and subquestions. Chapter 2 is dedicated to Literature Review associated with teacher retention, specifically teacher shortage in general; the growth in the Exceptional Student Education/Special Education population and increased teacher shortage; the growth of the population of students participating in the ESOL Programs, the need to retain teachers in in this area; Recruitment and Retention, in general; teacher preparation; and teacher and school characteristics in relation to teacher retention; teacher shortage in socioeconomically disadvantaged schools (Title I/Non-Title

I Funded Schools); and teacher shortage associated with schools academically performing (School Accountability Grade). Chapter 3 focuses on the research methods of this non-experimental, exploratory, quantitative study. Chapter 4 provides details the findings of the bivariate and logistic regression analyses that answer my two research questions and sub-questions. Chapter 5 discusses these results, suggests implications of the results for M-DCPS and the field of education, and provides recommendations for retaining beginning/novice teachers who sign Out-of-Field Waivers.

Chapter 2: Literature Review

Introduction

In Chapter 2, I reviewed major studies on different aspects of teacher retention. I began by discussing teacher shortage, in general. Then I examined areas within the teaching profession that have expressed shortages, such as Special Education (SPED) and ESOL. I then turned my attention to recruitment and retention of teachers, teacher preparation programs, school characteristics associated with teacher recruitment, teacher characteristics associated with teacher retention, teaching out-of-field, and Out-of-Field Waivers. Finally, I discussed studies focused on teacher retention related to school characteristics, focusing on studies of retention related to school type (e.g. primary or secondary), socioeconomic conditions (e.g. Title I Funded schools), and school performance.

Teacher Shortage

Teacher recruitment, retention, and turnover have been studied by numerous researchers, such as Coffey (2019), Donne and Lin (2013), Ovenden-Hope et al. (2018), Richards and Templin (2019), Rogers-Ard et al. (2019), Shen (1997), Swanson and Mason (2018), Wronowski (2018), and Young (2018), to name a few. Administrators sometimes struggle with hiring and retaining teachers who have the potential to be or have proven to be effective or highly effective instructors. The relentless publications of research documenting teacher shortage have flooded the education profession. This large amount of information gives school-site administrators the impression that there is, in fact, a teacher shortage. In particular, there are geographical areas, in which instructional

candidates may be limited in numbers, which may at times have administrators feeling desperate to have their schools fully staffed. Often, principals believe they have little or no choice but to hire personnel without teaching credentials or adequate teaching preparation if the candidates are deemed to have the potential of being effective teachers (Burnstein et al., 2019). This is usually done when an administrator, with no qualified applicants, deems the candidate has the potential to teach the students effectively.

The likelihood of pupils in urban schools having teachers who are beginning/novice or uncertified are double to that of students in nonurban schools (Au & Blake, 2003; Burnstein et al., 2009; National Commission on Teaching and America's Future, 2003; Wronowski, 2018). This happens quite often in large and urban school districts such as M-DCPS, with high poverty rates and underperforming or needy (also known at times as hard-to-staff) schools, and sometimes in rural schools because of their remoteness and at times, limited resources (Ingersoll, 1998; Ingersoll & Curran, 2004; Ingersoll et al., 2004; Nixon et al., 2017; Robinson, 1985). For example, researchers such as Esch et al. (2005), Ingersoll (2001), and the Stanford Research Institute (2003) indicated that 20% of the teachers in California did not have the required criteria for teaching. With such large numbers of under or unqualified teachers in the neediest schools, these researchers believed those schools have become dysfunctional.

However, according to Young (2018), the United States Department of Education revealed there is no overall shortage of teachers, it is a matter of teachers' location (p. 17). Further, according to Young (2018), the appearance of teacher shortage is attributed to the fact that some teachers prefer working in specific areas more so than other areas.

However, Young did not state whether there are enough teachers available to be assigned to each classroom in the United States.

Though teacher shortage negatively impacts schools and their environments, no matter their sizes, locations, or economic circumstances, Young (2018) stated that there are higher levels of teacher shortage in areas with a high percentage of families who are considered to be economically disadvantaged. These areas tend to be large cities and rural/remote areas. Hence the appearance of teacher shortage in the United States.

Teachers leave for myriad reasons ranging from lack of support from peers and/or administrators, inadequate salary, student discipline problems, not enough time to work with students, and receiving extra assignments, whether requested or not (Shaw & Newton, 2014; Young, 2018). For instance, Shaw and Newton (2014) found that teachers who believed their principals exhibited a high level of servant leader characteristics had a high level of job satisfaction. Shaw and Newton discovered there appeared to be a positive relationship between the teachers' intention to remain in the education field (or their school) and their perception of principals being servant leaders. The teachers (200 of the 234 participants) who indicated that they intended to remain at their schools were satisfied with their jobs and scored their principals at high levels on the servant leader instrument. Conversely, those who intended to leave their work locations, and were not satisfied with their jobs, did not provide high marks for their principals as servant leaders.

Garcia-Torres (2019) focused on distributed leadership, professional collaboration, and teachers' job satisfaction. Garcia-Torres found that no matter the location of the school or the socioeconomic status of the students in the school, if

teachers are given leadership opportunities, become a part of the decision-making process, are given opportunities to collaborate with each other and feel supported by their administrators, the likelihood of them being satisfied in their jobs, becoming committed to the students, school, and the profession are high.

Young (2018) found that teachers have a higher annual turnover rate than other occupations. Young stated that there are many reasons for the high turnover rates, which in turn may cause a teacher shortage. The cited reasons for teachers exiting the profession were teachers feeling unsupported by the administrators, inadequate salary, and poor student discipline. Some teachers who left the profession stated they did so because they felt they had little to no impact on school policies, unmotivated students, or issues with class-size compliance. Others mentioned inadequate preparation times, insufficient professional growth opportunities, not feeling safe, or minimal if any support from the communities in which they taught (Young, 2018).

Focusing on student achievement and retaining effective teachers, Young (2018) stated that schools with high student achievement had better teacher retention percentages than schools with low student performance. However, sanctions against schools with low student achievement was found to have affected teacher turnover negatively in these schools. Young did not state, however, whether the teachers who showed a preference of remaining in high-performing schools, were the reasons for students' high performance, based on their teaching skills and rapport with the students, or did the students in these schools already demonstrate a propensity toward high academic achievement.

In her conclusion, Young (2018) provided recommendations for hiring and retaining quality teachers. The hiring and retention processes are not to be taken lightly. They are complicated, difficult, and extremely important tasks that affect the school environment, as well as local and global communities, for years to come. A teacher's effectiveness, or lack thereof, can positively or negatively impact student achievement. Ensuring that teachers are fully qualified and certified in the areas in which they teach, along with minimizing teacher movement in subject-area or grade-level taught, providing opportunities for growth, and helping them to master their craft, empowers the teachers to want to remain in the profession.

Teacher Shortage in Areas of Relevance in M-DCPS

In the studies discussed above, researchers focused on the broad issues of teacher shortage and/or retention, rather than investigating teacher shortage for specific specialization or academic areas. In light of the lack of clarity about the overall issue of whether there is a shortage of teachers, some researchers have focused their attention on teacher retention and/or shortage in specific specializations or academic areas. For example, Swanson and Mason (2018) fixed their attention on the problem of teacher shortage in the world languages area. According to Swanson and Mason, global leaders have been concerned about this area of teacher shortage and have been calling attention to the issue since World War II. After almost 75 years of teacher shortage in this area, there is still a need for more concerted efforts to recruit and retain world language teachers (Swanson & Mason, 2018).

Exceptional Student Education/Special Education

One area that has seen tremendous growth in student population and the need for qualified teachers, in the past 10-15 years, has been that of Special Education (SPED). The Department of Education in 2008 reported that in the U.S. there were approximately 6.8 teachers of SPED for every 100 students ranging in age from 6-21 years (Donne & Lin, 2013, p. 43). The number of students participating in the various SPED programs have grown (Donne & Lin, 2013, p. 43). With these increases comes the need to increase and retain the number of effective teachers trained to provide students who participate in the SPED programs, the much-needed services.

This has proven to be a difficult feat. SPED programs have become a critical shortage area, and that has not changed in recent years. Teachers of SPED are two times more likely to exit the profession within their first 3 years than other teachers, with almost 50% expected to depart within their first 5 years in the profession (Donne & Lin, 2013). Though states and school districts have begun creating induction and/or mentoring programs for beginning teachers, in general, induction or mentoring programs for teachers of SPED, specifically, are few and far between. Along with mandating that K-12 schools establish and apply mentoring programs for novice teachers, including Special Education Teachers, in 1987, the Pennsylvania Department of Education established mandates that universities that offer teacher preparation programs must participate in novice teacher introduction professional development activities (Donne & Lin. 2013). However, the plans and activities were left to the discretion of the universities. In the state of Florida, Section 1012.98(11), Florida Statutes require that the Florida Department

of Education provide school districts with models of established successful induction and mentoring programs and trainings sessions for all beginning teachers. School districts then interpret, create, and enact their individual induction programs with approval from the Florida Department of Education.

English for Speakers of Other Languages

Liu and Ball (2019), Heineke (2018), and Hanson and Yoon (2018) have conducted studies on various areas of the United States and the employment of teachers of English language learners. One commonality in these studies has been the increase in the number of students in the public-school systems, whose primary language is not English (Hanson & Yoon, 2018; Heineke, 2018; Liu & Ball, 2019). A second commonality is that schools are having great difficulties keeping up or ahead of the increased enrollment of students who are English language learners. The increased enrollment of students speaking languages other than English does not equate to the employment of certified/endorsed teachers prepared to provide adequate instructions for this population of students. According to Heinekie (2018), it is difficult to hire English language development teachers in Arizona due to the challenge in the instructional environment (sometimes three grade levels in one classroom setting), rising demand for more teachers, and the high turnover rate associated with the complexity and demands of the classroom settings. Because of these challenges, the State of Arizona has partnered with Teach for America (TFA) to place corps members (beginning/novice teachers), who are considered "highly qualified" into the English language development classrooms with the "minimum requirements of a bachelor's degree, intern teaching certificate, and

provisional Structured English Immersion [SEI] endorsement," (Heineke, 2018, p. 78) in the hopes of combating this teacher shortfall.

Hanson and Yoon (2018) found that during the 2016-2017 School Year, approximately 25% of the schools in Idaho with an enrollment of 25 or more students who are English language learners did not have a teacher certified/endorsed in this specialization to provide them with academic instructions. For those schools that were fortunate to have a teacher certified/endorsed in teaching English language learners, particularly in high need areas, the teachers found their workload increasing with the increased enrollment of English language learners. These examples illustrate why school administrators and beginning/novice teachers find themselves agreeing to sign Out-of-Field Waivers in order to provide services for the growing population of English language learners. At the same time, this hiring practice helps to equalize the workload for those already considered overextended due to a large number of English language learners they are attempting to provide with adequate instructions. The addition of instructional staff, even with the signing of Out-of-Field Waivers, helps to provide satisfactory instructions for students who are English language learners and at the same time, fulfill state mandates.

Need for and Requirements of Teachers

The need for teachers is not standard, (i.e. every school is not in need of a teacher or has a vacancy at the same time). At some point in time, a school will be in need of instructional personnel. The need for teachers is based on the school district, school level, or a specific school. At the elementary school level (age 3–Grade 3, Pre-K–6; K–6,

depending on the certification obtained by the teacher), teachers are not necessarily hired for a core content/subject, as they are certified to teach all content/subject and elementary grade levels, except the foreign languages (if they are not proficient in the language offered at the school-site). At the elementary level, unless the teacher is responsible for special area classes (i.e. Art, Music, Physical Education), and/or Special Education, the teacher is expected to be able to effectively teach all core subjects/specialized subjects. School districts are hiring teachers specifically to teach foreign languages, art, music, and physical education for Grades 2–6. Thus, when hiring core content teachers for the elementary grades, the school administrators make the decision as to the grade level, and/or subject placement for the new hire.

At the secondary level, however, teachers are recruited to teach specific subjects such as English, specific areas of the sciences (e.g. Biology, Chemistry, Physics), and specific areas of the math content (e.g. Geometry, Algebra, Trigonometry, Financial Math). These specializations are based on coursework taken in college/university and/or certification. Hiring teachers based on their training and/or specialization is paramount. A teacher teaching in their area of specialty (certification/endorsed area) is expected to have the basic knowledge needed to start a successful career in the profession. The assignment to teach in their field of study or specialization does not appear as daunting to a beginning/novice teacher, because the basic pedagogy exists, and the natural progression of professional growth can be built on that knowledge. It is at this level that specific subject/content teacher shortage or attrition can truly be tracked.

To ensure students have effective teachers and the most appropriate learning environment, many nations, states, and/or school districts (sometimes even at the school level, specifically) have established a variety of teacher inductions programs. These programs are designed to provide initiation for novice teachers, whether in- or out-of-field, in their formative years in the profession. The induction programs also vary across countries, states, school districts, and sometimes schools. These programs focus on teachers who have already attended teacher preparation programs (formal or alternative), received teaching certification, and have been hired to teach. These programs seem more widespread in recent years.

Teacher Characteristics Associated With Teacher Retention

Researchers have studied the retention of beginning teachers and the factors that may affect teachers' retention. Donaldson and Johnson (2010), Hanushek et al. (2004), Ingersoll (2001), and Luekens et al. (2004) have reported that retention of beginning/novice teachers is low. These researchers further agreed that the high attrition rates (40% leaving the teaching industry within their first 5 years; and 50% within their first 6 years), is a reason for some alarm among those who influence education as well as the policymaking in education (Donaldson & Johnson 2010; Kirby et al., 1999). The attrition rate for beginning/novice teachers in schools with a large percentage of low-income students and/or low-performing students is even higher (Allensworth et al. 2009; Boyd et al., 2009; Donaldson & Johnson, 2010).

Jianping (1997) found that teachers in schools with a combination of higher salaries, who held advanced degrees and many years of experience, were apt to remain in

those schools and in education. To support Jianping's claims of higher retention rates of teachers with more experience, other researchers have found that attrition of less experienced teachers was higher than those of teachers who were more experienced in the profession (Ingersoll, 2001; Hancock & Scherff, 2010; Marvel et al., 2006). This confirms the statements that inexperienced teachers are more likely to exit the profession than experienced teachers. If this is the case or the trend, then beginning/novice teachers who sign Out-of-Field Waivers have additional obstacles to overcome in order to feel confident enough in their effectiveness as teachers to remain in the profession.

Other researchers have found that teachers who are considered of high quality based on their college test scores and the institution's competitiveness, well known or Ivy League colleges/universities, had a propensity to exit the profession at a higher rate than their counterparts who may not have fared as well with test scores or attending a comparable institution (Boyd et al., 2005). However, teachers with students who demonstrate learning gains, while under their tutelage, are not as inclined to leave the profession (Boyd et al., in press; Boyd et al., press; Goldhaber et al., 2007; Hanushek et al., 2005).

Teacher Demographics

Researchers have found teacher gender and race to be associated with teacher retention (Adams & Dial, 1994; Hancock & Scherff, 2010; Hughes, 2012; Sun, 2018). Hancock and Scherff (2010), which is also supported by the claims of Achinstein et al. (2010), found that minority teachers, sometimes known as teachers of color, are less likely to leave the profession than their White counterparts. That White teachers are more

likely to leave the profession than teachers of other ethnic groups have been found by other additional education researchers (Adams & Dial, 1994; Hughes, 2012; Shen, 2001). Adams and Dial (1994) found that White teachers are four times more likely than Black teachers and almost 64% more likely than Hispanic teachers to leave their school district. More recently, in a study of teachers in the North Carolina School System, Sun (2018) found that there was an overall retention gap between Black teachers and White teachers, with White teachers being retained more so than their Black counterparts. In general, these studies have found that racial minority teachers are more likely to remain in the profession than their White peers, especially in hard-to-staff, urban schools (Adams & Dial, 1994; Hughes, 2012; Jianping, 1997; Sun, 2018; Whipp & Geromine, 2017).

When analyzing gender, race, and other variables potentially related to retention, Hughes (2012) found that, "men, ethnic minorities, [individuals] who do not hold graduate degrees, and scored lower on standardized tests [than their White counterparts]" are more likely to remain in the profession" (p. 246). Hancock and Scherff (2010) found that minority English teachers were less likely to leave the profession than their nonminority counterparts. According to Adams and Dial (1994), Hughes (2012), Jianping (1997), Sun (2018), and Whipp and Geromine (2017), Black women are more likely to continue teaching in schools with students from low socioeconomic homes, or students with discipline concerns, than White women. Though researchers have found associations between gender and race/ethnicity and teacher attrition, others found that teacher gender and race were not associated with teacher retention (e.g. Allensworth et al., 2009; Guarino et al., 2006; Johnson et al., 2005).

There appears to have been a decline in the retention of male teachers in the profession, leading to intensified recruitment and retention efforts focused on male teachers. According to King (1998) in his research and while he was a teacher, teachers who were men in the primary grades (Kindergarten through third grades) were missing. In his research in the US and that of Okeke and Nyanhoto (2021) in South Africa, as well as Mills et al.'s (2004) research in other English-speaking nations, they all found an imbalance with gender in the so-called primary school setting. Even though there are male teachers in the early childhood setting, there are only a few. James (1998) found there to be a perception of sexual-orientation" associated with teachers in the primary setting. The avoidance and sometimes lack of male teachers. This leads to the belief that the education profession has become, as is argued by researchers (Mattison et al., 2017; Mills et al., 2004; Okeke & Nyanhoto, 2021). Mattison et al. (2017), Mills et al. (2004), and Okeke and Nyanhoto (2021) all argued that the reason for the large attrition of male teachers and the difficulties in retaining male teachers is that the teaching profession has become feminized, meaning it has become dominated by female teachers.

Preparation Programs

The high attrition rate of beginning/novice teachers has caused school districts in areas such as Baltimore, New York City, Washington, D.C., Houston, New Orleans, Philadelphia, (Donaldson & Johnson 2010), and Miami-Dade County, and many others to use alternative teacher preparation programs such as Teach for America (TFA) to provide teachers for these hard to staff schools.

In order for a program to be considered an alternative pathway or preparation to teaching, according to the National Center of Educational Information and the National Association for Alternative Certification (as cited by McKibbon, 2001; Zhang & Zeller, 2016), the following components are necessary: (a) the program focuses on engaging and preparing gifted individuals in possession of a bachelor's degree; (b) the recruited individuals have successfully navigated rigorous assessments, interviews, and possess a grasp of the content necessary; (c) the programs allow for field experience with an ultimate outcome of a full-time teaching possession for the candidates; (d) while teaching the candidates are engaged in courses or comparable activities relating to the education profession; (e) all candidates participating in the program receive close supervision/support from an individual who has been trained to provide the needed support; and (f) participants must meet the standards for program completion.

There is a variety of programs such as TFA, Troops to Teachers, the Peace Corps Fellow Programs, Recruiting New Teacher, Inc, various State and/or School District Teaching Fellow Programs and sanctioned internships, to name a few, that offer alternative paths to teaching. Programs such as TFA recruit the brightest students from selected colleges/universities, offer incentives for them to become teachers (a 2-year commitment), and a 5-week preparation program before they are eligible to be interviewed and/or hired to work in a school. On the other hand, if one is participating in an internship, the participant is designated the "teacher of record" (McKibbin, 2001) and is simultaneously an active member of "teacher preparation program" (p. 138). Another form of alternative preparation/certification model is Professional Development Schools

(PDS). This model is based on providing students majoring in education with an all-encompassing classroom exposure. The philosophy behind this program is that in order to be an effective teacher, immersion into the classrooms setting, along with mentorship is needed.

When looking at retention base on grade levels or configurations, Boyd et al. (2011) and other researchers have found that teacher preparation for the profession can be a predictor of teacher attrition. Boyd et al. (2006) found that traditionally prepared teachers have a higher retention rate than alternatively prepared teachers from programs such as TFA or Teaching Fellows. Donaldson and Johnson (2010) found that teachers in the TFA program at the elementary level with more than one grade levels assigned to them were at greater risk to transfer to another location or leave the profession within their formative years as teachers.

Secondary teachers from the same program who were assigned to teach more than one subject were inclined to resign from the profession. This gives credence to the arguments posed that becoming a teaching and learning to be effective in the profession is not easy (Donaldson & Johnson 2010; Huberman, 1993; Lortie, 1975; Veenman, 1984), and for a beginning/novice teacher assigned more than one grade levels or subjects, in their beginning years of teaching, the task may seem quite daunting, especially if they were not traditionally trained. A surprising discovery for TFA however, was that Out-of-Field science teachers had a higher retention rate than that of in-field science teachers (Donaldson & Johnson, 2010). This may be due to teachers with formal training or degrees in science having more employment options in the corporate sector.

School Characteristics Associated With Teacher Retention

According to Lortie (1975), learning to teach is on-the-job training no matter the length of the teacher preparation program or its focus. There is evidence that school characteristics such as, working conditions (including facilities, supportive staff, and teaching out-of-field) are factors that influence the decision for a new teacher to leave or remain in the profession (Allensworth et al., 2019; Donaldson & Johnson 2010; Johnson & The Project on the Next Generation of Teachers, 2004).

Hughes (2012) and Ronfeldt and McQueen (2017) found that the following factors associated with school characteristics, greatly reduced the possibilities of teachers leaving the profession within their first 5 years at their schools or in the profession: (a) support from leaders of the school (administrators and leadership team), having adequate resources and communiqué; (b) allowing time for beginning teachers' attendance at professional development activities that are created specifically for novice teachers; and (c) allowing time for the novice teacher to collaborate and plan with peers.

Six other school or organizational characteristics were notable associations with teacher retention, depending on the particular study: (a) salary, (b) student behavior, (c) support from administrators(s), (d) little to no parental involvement, (e) inadequate working conditions, and (f) minimal opportunities for professional growth (Allensworth et al., 2019; Donaldson & Johnson 2010; Hughes, 2012; Johnson & The Project on the Next Generation of Teachers, 2004; Shaw, 2014). These researchers found that the school/organizational climate has a direct impact on the retention of beginning/novice teachers in the profession. Studies have also found a strong relationship between teacher

retention and several other factors: teachers expressing they have an influence on occurrences in the school; the relationship among staff members (collegiality); cleanliness of the school; and feelings of security (Dahlkamp et al., 2017). In addition,to the relationships with administrators, school climate, and working conditions discussed above, researchers have found socioeconomic context (e.g., Wronowski, 2018), school performance (e.g. Loeb et al, 2012), and grade configuration (e.g. Young, 2018) to be associated with teacher retention. The next subsections discuss these areas in detail.

Retention and Title I/Non-Title I Schools (Socioeconomic Background)

According to Darling-Hammond and Sykes (2003), Gray and Taie (2015), Hanushek et al. (1999), Ingersoll (2003), and Ronfeldt and McQueen (2017), the probabilities of teachers leaving the profession within their first 5 years is between 20% and 40%. However, the retention rates of teachers in schools located in high poverty/low socioeconomic areas appear to be lower than in those areas in which the populations are labeled middle-class or higher (Allensworth et al. 2009; Boyd et al., 2009; Donaldson & Johnson, 2010). Even though these are the neediest population of students in terms of economics and academics time and again, researchers have proven that recruiting and maintaining teachers in these schools can be difficult (Allensworth et al. 2009; Boyd et al., 2009; Donaldson & Johnson, 2010). No matter the method of theory used, the evidence seems to lead to the same conclusion, retention of teachers in what is termed needy or hard-to-staff schools, have been a challenge.

For instance, when looking at teacher retention in low socio-economic status schools, Corcoran et al. (1988) and Haberman (1987) found that some teachers in urban

schools had lower retention rates than teachers in other contexts. They believed this was due to the teachers having challenges relating to and understanding how to work with students in these settings. The teachers who had difficulties struggled to build a rapport with the students, thus, the complications in working with this needy population, and the teachers' eventual departure.

Wronowski (2018) examined the recruitment and retention of teachers in urban schools, specifically schools with large percentages of minority students and high percentages of students with low socioeconomic backgrounds (also referred to as hard to staff schools). Her attempt was to ascertain whether there were traits, if any, associated the teachers who were recruited and their retention in relations to urban/low socio-economic schools. The theory she employed, the grow your own theory, centered in urban, largely minority, and hard to staff communities/populations, focused on recruiting and preparing individuals from a given community to teach in the community because these teachers would have a better understanding and be more empathetic of the students they teach, with the belief that the retention rates in urban settings will improve. Wronowski intimated that retention of effective teachers in the neediest (low socioeconomic background or hard to staff) schools is sure to become more critical than it is now, if this theory is not used to recruit and retain teachers in the neediest of schools. This was further confirmed by Goldberg and Proctor (n.d.) who cited the United States Department of Education's concerns that teacher loss, or teacher turnover are of most glaring in areas with high-poverty rates (Allensworth et al., 2009; Boyd et al., 2009; Donaldson & Johnson, 2010; Young, 2018).

When looking at recruitment and retention of teachers in schools based solely on the student population's socioeconomic background, Whipp and Geronime (2017) considered schools in abject poverty to be those with 50% of their student body meeting the criteria for free or reduced-priced meals. Whipp and Geronime also considered urban schools to be those in close proximity to large cities, or large cities, with 50% of the students qualifying for free or reduced-priced meals, which is more stringent than M-DCPS. They found that teachers who themselves were deeply familiar with navigating through this particular community of learners, (whether through growing up there, through volunteerism, or by completing their in-service/student teaching in area considered to be of low socioeconomic status) were more likely to teach in said areas than their counterparts with dissimilar experience(s). In other words, teachers who themselves were from low socioeconomic backgrounds or had prior experiences in low socioeconomic areas were more likely to remain in hard-to-staff/needy schools, than their counterparts who did not have similar backgrounds and experiences.

The difficulties in staffing and retaining teachers in these settings may be due to the perception that these schools are looked upon as schools with difficult working conditions, high percentages of minority students, poor or low socio-economic background, and/or low academic achieving students (Olitsky et al., 2019; Tran & Smith, 2020). The retention of teachers in high-need or hard-to-staff schools can be dependent on the stages of their careers. For instance, a teacher at the beginning of their career, in a Title I Funded School may need more support than a teacher in the middle or ending stage of their career who may be teaching in or has transferred into a Title I Funded

School and may be more apt to leave the profession. Over the years recommendations have been put forth on the retention of teachers in what is considered hard-to-staff schools, whether through monetary gains, professional growth (leadership roles), building community relationships/partnerships, or increased parental involvement (Allensworth et al., 2009; Boyd et al., 2009; Donaldson & Johnson, 2010; Hughes, 2012; Shaw, 2014). Thus far it is unsure as to whether the recommendations have been taken into consideration, and if so, have they proven fruitful.

In the last decade, and with the rapid changes in technology, there has been an expressed need for teachers in the areas of science, technology, engineering, and mathematics (STEM). The difficulties in recruiting and retaining these teachers are more prevalent in high-need or hard-to-staff schools. Olitsky et al. (2019), when describing their outcomes, as in others (Allensworth et al. 2009; Boyd et al., 2009; Donaldson & Johnson, 2010), will remain in hard-to-staff schools if they deem them a good fit, their instructional content was student-focused/centered, and felt supported, as it related to the students' differences, had a tendency to remain in the profession. This supports the notion that some teachers will remain in hard-to-staff schools if their perception of support is satisfactory (Allensworth et al., 2009; Boyd et al., 2009; Donaldson & Johnson, 2010).

Retention and School Performance/Accountability

In the era of accountability in public schools, the US Department of Education and State departments of education have found ways in which to hold teachers, schools, and school districts accountable for student achievement and progress, whether it is No Child Left Behind (NCLB), or the Elementary and Secondary School Reform (ESSR).

These accountability measures vary from state to state, and in some cases, within states. The effects of teachers on student learning or achievement or academic outcomes have long been established. Quality teaching and teachers can positively affect student achievement outcomes, thus the importance of maintaining excellent teachers in the education system.

Loeb et al. (2012), reviewed 7 years of data pertaining to the effectiveness of schools and teachers in M-DCPS. The student achievement results used in this publication are those of the Florida Comprehensive Assessment Test (FCAT) from school years 2003-2004 through 2009-2010. These assessment results were also used to determine the teacher's or school's effectiveness based on the Value-Added Model (VAM). Within the VAM is the component that measures how a student improves from one test period to another, not simply the result of a single standardized assessment. During the timeframe of the aforementioned research, there were more than 350,000 students enrolled in M-DCPS, with the majority being Hispanic, along with 350 schools.

The results indicated that at the elementary level, teachers measured to be high value-added (high performing) had the penchant to transfer to schools falling within the same category. Schools considered to be "more effective" ensured assignments were equitable for their beginning teachers (Loeb et al., 2012). Teachers at various stages of their careers received equal consideration for the performance levels of students assigned to them. More effective schools had the capacity to aid their teachers in developing professionally, which improved teachers' value-added and in turn, student performance and school-value added. Schools considered effective or more effective were able to

retain their teachers more so than those schools not considered effective (Loeb et al., 2012). Teachers in the top performance tier were less likely to leave a more-effective school for a low-performing school. As a result, when there were vacancies in schools, the more-effective schools were more able to attract teachers to fill those openings, as well as employ higher-performing teachers than low-performing schools(Loeb et al., 2012).

Additional findings were that teachers performing in the top tier of the value-added and working in schools in the top tier of the school level value-added were "6% less likely to leave than top quartile teachers who were working less effective schools" (Loeb et al., 2012, p. 297). The results further suggested that school leadership and specific school personnel practices may have been the catalyst for ineffective schooling. Teachers who were considered effective or highly effective had a propensity toward remaining in schools that were deemed effective or highly effective based on standardized test results, because they found there was equity in the distribution of students, based on academic levels, and the level of support provided from the school's leadership was deemed satisfactory. Loeb et al.'s (2012) findings are consistent with other research showing that teachers greatly affect students' scholastic prospects and that more effective schools seem to disproportionately attract and retain more effective teachers (Boyd et al., in press; Boyd et al., in press; Goldhaber et al., 2007; Hanushek et al., 2005).

Retention and School Configuration

Though there have been a large number of studies about teacher retention, in general, few studies have focused on school configuration (elementary, K-8 Centers, middle schools, or high schools) as factors related to teacher retention. I was unable to locate any research for teacher retention focused on K-8 Centers. I did find research focused on elementary schools, and limited research (included below) on the middle and high schools separately. The majority of research that was found relating to middle and senior high schools were subject/content specific.

Shen (2001) and Young (2018) found that elementary teachers have a higher retention rate than secondary teachers. Donaldson and Johnson (2010) determined that teaching one grade level at the elementary level and one subject at the secondary level, reduced the likelihood of a beginning/novice teacher leaving the profession within their first three years in the field. Hughes (2012) stated that teachers at the elementary level are more likely to remain in the profession than those at the secondary level (Grades 6–12). In her quest to discover differences between the movement of Black teachers and their White counterparts, particularly in elementary and middle schools, Sun (2018) found that the turnover rate for middle school was greater than that of elementary school teachers.

One limitation of this literature is that there is no research pertaining to K-8 Centers, specifically. This may be due to the fact that these are not traditional, but combination schools (both elementary and middle schools). The majority of the teacher retention information found for K-12 schools were based on elementary, middle, and senior high schools. This means that information pertaining to the middle grades (6-8) of

the K-8 centers, may be grouped with the traditional middle schools, depending on the various studies. This may be due to the fact that at the secondary level, teachers are required to have subject certification, not necessarily general overall certification, as in the elementary level.

Teaching Out-of-Field

The issue of out-of-field teaching assignments exists for school districts such as M-DCPS, the fourth largest school district in the U.S., with a large minority percentage including English language learners (ELL), a growing number of students with disabilities (SWD also known as students participating in ESE/SPED programs), as well as a large percentage of students falling below the national poverty level and being considered homeless, in a situation where they are forced to hire teachers as quickly as the student population and demographics grow and change. With the increased number of students who are ELL and/or participating in the SPED programs, and the advancement of technology (requiring the hiring of teachers to prepare students for careers that have not been created yet), school districts are hiring teachers from traditional and non-traditional teacher preparation programs and placing them in positions they have not been prepared for teaching out-of-field.

Teaching out-of-field according to Nixon et al. (2017), occurs when a teacher agrees to, and carries out an instructional assignment that is not included in their area of study or expertise (Donaldson & Johnson, 2010; du Plessis, 2015; Ingersoll, 1999). This is done with the understanding that the teacher will complete professional development activities to fulfill the requirements within the given timeframe. This could include being

assigned to teach elementary when one has been prepared to teach in secondary schools or assigned to teach social studies when prepared to teach mathematics (Nixon et al., 2017). Teaching out-of-field transpires if a teacher is assigned to teach a subject, and/or grade configuration (elementary, middle, or high school) that she or he is not trained or certified to teach (Donaldson & Johnson, 2010; du Plessis, 2015; Ingersoll, 1999; Nixon et al., 2017).

Depending on the region, country, state, or even school district, examples of out-of-field teaching may vary. For example, and due to the fact that science consists of multiple areas of concentration, a teacher who has the prerequisites to teach physics, but assigned to teach biology; or a teacher who has the prerequisites to teach mathematics foundations but assigned to teach algebra or geometry, would be considered teaching out-of-field. Banilower et al. (2015) discovered that a beginning/novice teacher had a greater likelihood of being assigned to an out-of-field teaching position than skilled/veteran teachers. However, an out-of-field teacher beginning to transition to in-field, has not been discussed. Banilower et al. further uncovered that more than half of new physics and two-thirds of new earth science teachers were given out-of-field teaching assignments. The out-of-field assignments have been cited as the reason for many departing the occupation (Donaldson & Johnson, 2010; Keigher, 2010; Patterson et al., 2003; Sharplin, 2014; Soares et al., 2018) and approximately 50% of beginning/novice teachers exit the profession during their initial 5 years (Ingersoll et al., 2014; National Academies of Science, 2015).

Researchers have cited many reasons for teachers being assigned out-of-field. One such reason that was shared by Brodbelt (1990) and Ingersoll (1999) is the scarcity of skilled teachers. As a result, teachers are placed in open/unfilled positions or assignments that they have not been provided proper/formal preparation. They have been placed in positions based on the needs of the school and/or school district. Some scholars have contended that the shortage of teachers helped to contribute to the out-of-field teaching assignments, however, it was not the solitary factor or root cause. The contention is that out-of-field teaching assignments transpire in academic areas with excess teachers, such as English (Ingersoll, 1999; Ingersoll et al., 2004; Robinson, 1985). The belief of these researchers is that out-of-field teaching assignments are not necessarily due to the lack of qualified teachers in particular disciplines, but the fact that they are not assigned to their correct disciplines.

Another reason for out-of-field teaching assignments is the fact that some schools, based on location and demographics, are harder to fill than others – particularly schools with higher percentages of students who are living in poverty (Ingersoll, 1999; 2008; Ingersoll et al., 2004; National Commission on Teaching and America's Future [NCTAF], 1996). These areas are usually those considered large cities, urban and/or rural areas. If these areas are considered difficult to fill with qualified teachers, then schools and school districts are left in a quandary of recruiting and retaining qualified and certified teachers, which in turn, leads to having to fill vacant positions with out-of-field teaching assignments for what is considered our neediest students. This further raises the question of the distribution and equity for students being assigned, out-of-field teachers.

It appears that out-of-field assignments in rural and urban settings have been more prevalent than in suburban school settings, because those schools are at times, considered hard-to-staff. The practice of assigning teachers to teach in areas in which they have not received formal training or certification exists. This practice raises questions as to whether or not an out-of-field assignment will cause a beginning/novice teacher to remain in the profession for 3 years or longer.

Out-of-Field Waivers

Teaching out-of-field is done in many forms or contexts. For the purposes of this study, the focus was on teaching in an area that the beginning/novice teacher has not received formal training or endorsement/certification. Depending on the area or specialization in which the Out-of-Field Waiver is signed, this dictates whether the teacher will fulfill the requirements for certification or receive an endorsement on their Educator's Certificate. For instance, a teaching endorsement requires completing five courses in the specialty (ESOL, Gifted, Reading). These teachers have anywhere from 3 to 5 years to take all five courses, whether beginning/novice or veteran teacher.

Certification requires taking a State issued exam in the core content (K-5, Early Childhood Education Pre-K–Grade 3, Exceptional Student Education/SPED K-12, English). If a beginning/novice teacher signs an Out-of-Field Waiver to accept an assignment not formally trained for s/he has a timeline to take and pass the state required exam. The requirement to pass said exam must be completed prior to the end of the school year in which the Out-of-Field Waiver is signed. If not, the beginning/novice teacher risks being released from the teaching position. This adds to the stress of

beginning/novice teachers trying to navigate their ways through their first year in the classroom and now having to also focus on studying for and passing an exam in an area unfamiliar to them.

Summary

Teacher retention has become a major concern for school districts, and problem of teacher shortage has grown exponentially. There has been a teacher shortage, not only in general, but in specific areas such as ESOL, SPED, Gifted, and Reading (Donne & Lin, 2013; Hanson & Yoon, 2018; Heineke 2018; Liu & Ball, 2019). It is due to this shortage that beginning/novice teachers entering the profession are asked to sign Out-of-Field Waivers. These Out-of-Field Waivers require teachers to learn their craft while at the same time focusing on learning and developing pedagogy in a new subject/specialization unrelated to their field of study or preparation program. Researchers have not adequately studied the retention of teachers who sign Out-of-Field Waivers. It is imperative that in the attempt to ascertain the meaning behind various aspects of teacher attrition, researchers include beginning/novice teachers who signed Out-of-Field Waivers. Understanding the retention rates and possible reasoning behind said rates may allow policy-makers to mitigate losses and retain more teachers in the profession

Teacher retention is of concern to the education profession (Carr et al., 2017; Darling-Hammond & Sykes, 2003; Gray & Taie, 2015; Hanushek et al., 1999; Ingersoll, 2003; Lambert 2003; Riggs 1997; Ronfeldt & McQueen, 2017). In the teaching profession, researchers found that women are more likely to remain in the profession, than men. Ethnic minorities are more likely to remain in the profession than their White

counterparts (Achinstein et al., 2010; Adams & Dial, 1994; Hancock & Scherff, 2010; Hughes, 2012; Shen, 2001). Black women are more likely to continue teaching in schools with students from low socioeconomic homes, or students with discipline concerns than White women (Adams & Dial, 1994; Hughes, 2012; Jianping, 1997; Sun, 2018; Whipp & Geromine, 2017). When looking at teacher preparation and teacher retention, thus far, researchers opined that those who have attended formal teacher preparation programs (in colleges/universities) are more likely to remain in the profession than those who were alternatively prepared (Boyd et al., 2006).

The research has indicated that retention of teachers in schools housing students with low socio-economic status (Title I Funded Schools) is low when compared to those schools located in middle- to upper-middle class (Non-Title I Funded Schools) communities (Allensworth et al., 2009; Boyd et al., 2009; Donaldson & Johnson, 2010). Researchers have various theories as to the reasoning behind the differences in retention rates. For instance, Corcoran et al. (1988) and Haberman (1987) intimated that this is due to these teachers were not able to truly build a rapport with the students or understand their community or environment.

As it relates to teacher retention and school accountability, Loeb et al. (2012) found that teachers in schools considered high-performing, had a lower likelihood of leaving than their counterparts in low-performing schools. They found that higher performing teachers in low-performing schools had a tendency to seek out employment in high-perorming schools. To compound the situation, high-performing schools had a high

probability of attracting and retaining teachers than schools who were not as successful, academically.

Even though I was unable to find past research focused specifically on K-8 Centers, I was able to find some centered around elementary, middle, and senior high schools. Of the research found, the evidence led to retention rates being higher in the elementary settings than in the middle or high schools (Hughes, 2012; Shen, 2001; Young, 2018). If teachers were not overburdened with teaching more than one grade-levels (elementary) or content areas (secondary), they had a better chance of remaining in the profession.

Chapter 3: Methods

Research Design/Methodology

This chapter is focused on the design and methodology of this research study. The purpose of this research was to understand the retention outcomes for beginning/novice teachers who signed Out-of-Field Waivers in M-DCPS. This was a nonexperimental, exploratory, quantitative study. It was correlational and comparative in nature. M-DCPS considers teachers new to the profession, with 3 or fewer years of experience, to be beginning/novice teachers. I utilized three cohorts of teachers (Cohort I = teachers hired to teach during the 2013-2014 School Year; Cohort II = Teachers hired to teach during the 2014-2015 School Year; and Cohort III = Teachers hired to teach during the 2015-2016 School Year).

I analyzed data to answer the following question:

RQ1. What are the retention outcomes of beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS?

The specific subquestions (SQ) are:

SQ1.1 What percentage of Out-of-Field beginning/novice teachers remain in the profession for a minimum of 3 years?

SQ1.2. Do Out-of-Field beginning/novice teachers who sign Out-of-Field Waivers with different characteristics differ in their retention rates?

SQ1.3. Do Out-of-Field beginning/novice teachers have different retention rates depending on their particular school characteristics?

One intent that was not realized in this body of research was to determine whether there are differences in rates of certification/endorsement in a specialization for teachers who participate in different mentoring programs; or whether there were differences in the retention rates of Out-of-Field teachers to teachers who participate in different mentoring programs. However, M-DCPS did not begin collecting data for its established mentoring program (MINT) until after the 2015-2016 School Year, thus there is no available data for the years of newly hired teachers that I examined. Another intention that did not come to fruition, was to understand the rates of beginning/novice teachers who signed Out-of-Field Waivers and became In-Field Teachers since these data were not available. In addition, I had intended to examine potential differences in retention rate by teachers' specializations, but these data were not available.

Though data for the MINT Program were not available until after the 2015-2016 School Year, data were available for beginning teachers who did and did not sign Out-of-Field Waivers for the following demographics for Cohorts I, II, and III, and are the focus of this research: Race/ethnicity; gender; four major school configurations (Elementary, Middle, K-8 Centers, and Senior High Schools); Title I/Non-title I Funded Schools; School Accountability Grade; Teacher Preparation (traditional or alternative preparation); and areas in which Out-of-Field Waivers were signed.

Because I was given data for all newly hired teachers, not just those who had signed out-of-field waivers, I was able to ask additional questions to compare teachers who signed out-of-field waivers with those who did not and to analyze whether or not

signing and out of field waiver was a predictor of retention. The additional Research Question (Research Question 2, also identified as RQ2) is:

RQ2. How do beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS differ from those who do not sign Out-of-Field Waivers?

The specific subquestions are:

SQ2.1. Do Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers differ in their three-year retention rates?

SQ2.2. Do Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers differ in their characteristics?

SQ2.3 Are Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers hired in different schools?

SQ2.4. Is signing an Our-of-Field Waiver a predictor of teacher retention for beginning/novice teachers?

Data Sources

This research was conducted in M-DCPS, the fourth largest school district in the United States, (US Dept, of Education, National Center for Education Statistics, 2013). It is one of the largest urban school districts in the U.S. that has the distinction of being an "A" rated school district for 2017-2018, 2018-2019, and 2019-2020 School Years. Based on statistical data published in April 2019 by M-DCPS, within this school system, there were 476 traditional, charter, and specialty schools, approximately 350,040 students, and 37,830 employees (17,798 of whom were teachers). This diverse school system housed

students speaking 56 different languages and were native to 160 countries where the populations are largely of minority races from the South American Continent, including the Caribbean nations.

As for full-time employee Ethnic Classification, the 3 target years appeared to be stable in the makeup of the employee population, thus the decision to report the information for the 2015-2016 School Year (Cohort III). According to Public School Staff Survey (EEO-5), 2015-2016 School Year; published April 2016 (membership as of October 2015), the following information is provided pertaining to full-time employment in M-DCPS:

- White Non-Hispanic = 17.8% (6,123)
- Black Non-Hispanic = 32.8% (11,290)
- Hispanic = 48.0% (16,541)
- Other = 1.4% (480)
- Total full-time employee population = 34,434

The *Other* Classification included American Indian, Alaskan Native, Pacific Islander, and Multiracial categories. Hourly or part-time personnel were not included in the above employment numbers.

I analyzed existing, historical data, not data collected from human subjects. These existing data were held by M-DCPS. The data from M-DCPS were compiled during the summer and fall of 2021. The data were housed in the Human Resource/Human Capital Department of M-DCPS. I received and analyzed data for beginning/novice teachers hired in full-time teaching positions in M-DCPS during the 2013-2014, 2014-2015, and

2015-2016 School Years. The data set included information for 128 teachers who signed Out-of-Field waivers and 909 teachers who did not sign Out-of-Field Waivers – a total of 1037 teachers. The table below lists the data elements that I received from M-DCPS for teachers hired in the aforementioned focused years.

Table 1

Data Elements Received From M-DCPS

Teachers Hired during the 2013-2014, 2014-2015, and 2015-2016 School Years
Retention of teachers hired within the target school years (those who remained in M-DCPS after 3 years of employment)
Out-of-Field Waivers sign by new hires in each targeted school year
Areas in which Out-of-Field Waivers were signed
Teachers hired by Gender
Teachers hired by Race
Teachers hired who participated in a traditional teacher preparation program (majored in education courses or graduated from an education college/university)
Teachers hired by Major School Configurations (Elementary, Middle, K-8 Centers, and Senior High Schools)
Teachers hired by Title I Funded/Non-title I Funded Schools
Teachers hired by School Accountability Grade

Data Analysis

After receiving the raw data from M-DCPS in Microsoft Excel Spreadsheets (variables listed in Table 2), I recoded many of the fields to numeric data and created new columns that calculated the retention outcomes for each teacher after three years of teaching. I also classified each teacher as being "traditionally prepared" or "alternatively prepared." As it pertains to this research, a traditionally prepared teacher is one who, while in college/university majored in education courses or attended an education college/university. An alternatively prepared teacher is one who, while in school had no credits for education coursework or, after graduation from college was hired as a teacher

utilizing a nontraditional route. The traditionally prepared teacher was coded as 1, while the alternatively prepared teacher was coded with the Number 2 in IBM SPSS. I then saved these data in IBM SPSS, which I used for analysis.

After recoding these data, I ran frequency tables to determine the percent of beginning/novice teachers who signed Out-of-Field Waivers and remained in M-DCPS and the specializations of teachers who signed Out-of-Field Waivers. I ran crosstabulations to examine potential differences in retention by school year hired, gender, race/ethnicity, teacher preparation, being hired at a Title I Funded or Non-Title I Funded School, designation, school configuration used in this study, and School Accountability Grade. Table 3 provides the count and percentage for variables used in this study for teachers who signed Out-of-Field Waivers.

Table 2

Study Variables for Teachers who Signed Out-of-Field Waivers

Total Out-of-Field Waivers	*N*	Percentage
Out-of-Field Waiver Signed	128	100%
Gender	*N*	Percentage
Male	23	18.0%
Female	105	82.0%
Ethnicity/Race	*N*	Percentage
White/ Non-Hispanic	40	31.3%
Black/ Non-Hispanic	41	32.0%
Hispanic	44	34.4%
Other (Asian, Pacific Islander, American Indian or Alaskan Native)	3	2.3%
School level	*N*	Percentage
Elementary/Primary/Early Childhood	61	48.4%
Middle School	12	9.5%
K-8 Centers	36	28.6%
High School	17	13.5%
School Accountability Grade	*N*	Percentage
A	14	11.1%
B	18	14.3%
C	40	31.7%
D	36	28.6%
F	18	14.3%
Teacher Preparation	*N*	Percentage
Traditional Teacher Preparation	36	31.0%
Alternative Teacher Preparation	80	69.0%
Title I School Funding Status	*N*	Percentage
Title I Funded School	115	90.6%
Non-Title I Funded School	12	9.5%
	127	100%

Next, I ran crosstabulations to analyze potential differences in retention rates between teachers who signed Out-of-Field waivers and those who had not, and to see how teachers who signed Out-of-Field Waivers might differ in gender, race/ethnicity, and teacher preparation. Then I ran crosstabulations to examine potential differences in Title I status, school configuration and accountability grade between teachers who signed Out-of-Field waivers and those who had not. Finally, I ran a binary logistic regression analysis to understand the potential association between signing an Out-of-Field Waiver and retention, while controlling for teacher and school characteristics. Table 3 provides the count and percentage for the variables used in these comparisons and in the logistic regression analysis. Table 4 reports the coding for all variables used in the logistic regression analysis.

Table 3

Study Variables for All Teachers

Variable	*N*	Percentage
Waiver		
No Waiver Signed	909	87.7%
Out-of-Field Waiver Signed	128	12.3%
Gender		
Male	269	26.0%
Female	768	74.0%
Ethnicity/Race		
White/ Non-Hispanic	313	30.2%
Black/ Non-Hispanic	294	28.4%
Hispanic	401	38.7%
Other (Asian, Pacific Islander, American Indian or Alaskan Native)	29	2.7%
School level		
Elementary/Primary/Early Childhood	289	29.1%
Middle School	180	18.1%
K-8 Centers	142	14.3%
High School	382	38.5%
School Accountability Grade		
A	116	11.6%
B	143	14.2%
C	440	43.9%
D	198	19.8%
F	105	10.5%
Teacher Preparation		
Traditional Teacher Preparation	246	31.0%
Alternative Teacher Preparation	543	69.0%
Title I School Funding Status		
Title I Funded School	864	86.1%
Non-Title I Funded School	139	13.9%

Table 4

Logistic Regression Variables

Variable	Coding
Teacher Retention (Dependent Variable)	
Teacher retained in M-DCPS Teacher	1
Teacher not retained in M-DCPS	0 (Reference)
Waivers (Independent Variable)	
Out-of-Field Waiver	1
No Out-of-Field Waiver	0 (Reference)
Gender (Control)	
Women	1
Men	0 (Reference)
Race/Ethnicity (Control)	
Black (Not-Hispanic)	1
White (Not-Hispanic)	1
All Other Races	1
Hispanic	0 (Reference)
Teacher Preparation (Control)	
Traditionally Prepared	1
Alternatively Prepared	0 (Reference)
Major School Configuration (Control)	
Elementary	1
Middle School	1
K-8 Center	1
Senior High	0 (Reference)
School Accountability Grade (Control)	
A or B	1
C	1
D or F	0 (Reference)
Title I Funding (Control)	
Title I Funded School	1
Non-Title I Funded School	0 (Reference)

In the Race/Ethnicity category, the "All Other Races" Classification includes American Indian, Alaskan Native, Pacific Islander, and Multiracial categories

Data Integrity

In order to ensure the credibility of this research project, the data collected were received from Human Resources/Human Capital Department at the M-DCPS District levels. Information about beginning/novice teachers hired during each year focused on was retrieved from the Office of Human Capital database. Additional information needed about beginning/novice teachers who signed Out-of-Field Waiver was obtained from the Certification/Human Capital office, as well.

These data are likely to be accurate since M-DCPS uses these data for internal processes and reports this same information to the Florida Department of Education (FDOE) and the United States Department of Education (DOE) on an annual basis. Should the information reported to the FDOE, and DOE prove to be inaccurate, there may have been sanctions, including financial sanctions against M-DCPS. These were the most recent data available at the onset of this research project. Additionally, the data used were numerical, statistical, quantifiable, and based on concrete information, not on opinions. The elimination of subjectivity in this research and focusing on concrete quantifiable information was paramount. The data collected included the entire population of teachers in Cohorts I, II, and III (2013-2014, 2014-2015, and 2015-2016 School Years) so there is no sampling error. Another strength of this approach is that there is no nonresponse error, something that would have been unavoidable in a survey study.

Chapter 4: Results

The purpose of this nonexperimental, quantitative study was to describe the retention outcomes of beginning/novice teachers who signed Out-of-Field Waivers in M-DCPS during the 2013-2016 School Years. Specifically, I sought to answer the question and subquestions:

RQ1. What are the retention outcomes of beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS?

The specific subquestions (SQ) are:

SQ1.1 What percentage of Out-of-Field beginning/novice teachers remain in the profession for a minimum of 3 years?

SQ1.2. Do Out-of-Field beginning/novice teachers who sign Out-of-Field Waivers with different characteristics differ in their retention rates?

SQ1.3. Do Out-of-Field beginning/novice teachers have different retention rates depending on their particular school characteristics?

Originally, my intent was to also determine whether there are differences in rates of certification/endorsement in a specialization for teachers who participate in different mentoring programs; or whether there are differences in the retention rates of Out-of-Field teachers to teachers who participate in different mentoring programs. However, M-DCPS did not begin collecting data for its established mentoring program (MINT) until after the 2015-2016 School Year, thus there are no available data. Additionally, data on the retention rates of beginning/novice teachers who signed Out-of-Field Waivers and became In-Field Teachers during the 3 focused years were not available, thus, the

elimination of that subquestion. Finally, I eliminated a subquestion about differences in retention rates for beginning/novice teachers who signed Out-of-Field Waivers by specialization, since those data were not available.

Though data for some of the initial questions were not available, was available I was given data for all teachers who were hired for the 2013-2016 academic years, which enabled me to compare beginning/novice teachers who signed Out-of-Field Waivers, to those who did not. So, I created a second research question and subquestions. The additional research question and sub questions are:

RQ2. How do beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS differ from those who do not sign Out-of-Field Waivers?

The specific subquestions are:

SQ2.1. Do Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers differ in their three-year retention rates?

SQ2.2. Do Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers differ in their characteristics?

SQ2.3 Are Out-of-Field beginning/novice teachers and beginning/novice teachers who do not sign Out-of-Field Waivers hired in different schools?

SQ2.4. Is signing an Our-of-Field Waiver a predictor of teacher retention for beginning/novice teachers?

The next portion reports the descriptive and bivariate analyses of the logistic regression analyses and describe the relationship between the independent variable of

signing an Out-of-Field Waiver on the dependent variable of teacher retention. The binary logistic regression analyses were conducted in order to demonstrate any associations (potential or concrete) between beginning/novice teachers who signed Out-of-Field Waivers and retaining them in the profession. These analyses were conducted utilizing teacher characteristics and school characteristics as the control. The results are provided further in this chapter.

Before discussing the RQs and subquestions, I report the areas in which Out-of-Field Waivers were signed by beginning/novice teachers, during the 2013-2014, 2014-2015, and 2015-2016 School Years. As shown in Table 6, the great majority of Out-of-Field Waivers were signed for ESOL, at 72.6% (93 out of 128). Though signing Out-of-Field Waivers in ESOL far outpaced the other instructional areas, I find it interesting that Gifted instructions ranked second in the signed Out-of-Field Waivers in the same timeframe. Next, I report findings for Research Question 1.

Table 5

Out-of-Field Waivers Signed (Specializations)

Out-of-field waiver area	Percent/count signed
English for Speakers of Other Languages (ESOL)	72.6% (93)
Gifted	11.7% (15)
ESOL & Gifted	7.0% (9)
Reading	4.7% (6)
Autism	1.6% (2)
ESOL & Autism	.8% (1)
ESOL & ESE (Exceptional Student Education)	.8% (1)
ESOL & Reading	.8% (1)
Total	100% (128)

RQ1: What Are the Retention Outcomes of Beginning/Novice Teachers who Sign Out-of-Field Waivers in M-DCPS

There was a total of 128 beginning/novice teachers who signed Out-of-Field Waivers in M-DCPS for the 2013-2014, 2014-2015, and 2015-2016 school years. Out of the 128 Out-of-Field Waivers that were signed in the cohorts, 126 of the Out-of-Field Waivers were signed in the four school configurations (Elementary, Middle, K-8 Centers, and Senior High Schools). The other two Out-of-Field Waivers were signed in a specialized schools and/or district office. Due this small percentage, there was no significant effect on the outcome, and therefore the focus of the study was based on the four school configurations (Elementary, Middle, K-8 Centers, and Senior High Schools).

RQ1-SQ1.1: What Percentage of Out-of-Field Beginning/Novice Teachers Remain in the Profession for a Minimum of 3 Years?

In the three cohorts in this study, 12.3% (128) of the total population (1037) of beginning/novice teachers signed Out-of-Field Waivers. The overall retention rate for

beginning/novice teachers who signed Out-of-Field Waivers for the 2013-16 School Years was 67.2% (86 out of 128; See Table 6). Even though the number of beginning/novice teachers hired in each cohort was different, the number of employees who signed Out-of-Field Waivers were similar (Cohort I = 43; Cohort II = 42; and Cohort III = 43).

The cohort exhibiting the highest retention rate of beginning/novice teachers who signed Out-of-Field Waivers was Cohort I (2013-2014 School Year) at 81.4% (35 out of 43). The Cohort with the lowest retention rate of beginning/novice teachers who signed Out-of-Field Waivers was Cohort II (2014-2015 School Year), with 54.8% (23 out of 42) of its beginning/novice teachers staying in M-DCPS.

Table 6

Retention Outcomes for Beginning/Novice Teachers who Signed Out-of-Field Waivers

Retention Outcome	2013-2014 (Cohort I)	2014-2015 (Cohort II)	2015-2016 (Cohort III)	Total
Left M-DCPS	18.6% (8)	45.2% (19)	34.9% (15)	32.8% (42)
Stayed In M-DCPS	81.4% (35)	54.8% (23)	65.1% (28)	67.2% (86)
Total	100% (43)	100% (42)	100% (43)	100% (128)

RQ1-SQ1.2: Do Out-of-Field Beginning/Novice Teachers who Sign Out-of-Field Waivers with Different Characteristics Differ in Their Retention Rates?

The vast majority (82.0%) of beginning/novice teachers who signed Out-of-Field Waivers were women (105 out of 128). Of the women who signed Out-of-Field Waivers, 68.6% (72 out of 105) stayed in M-DCPS compared to 60.9% (14 out of 23) of the men who signed Out-of-Field Waivers. See Table 7.

Table 7

Retention Outcomes for Beginning/Novice Teachers who Signed Out-of-Field Waivers, by Gender

Retention Outcome	Man	Woman	Total
Left M-DCPS	39.1% (9)	31.4% (33)	32.8% (42)
Stayed in M-DCPS	60.9% (14)	68.6% (72)	67.2% (86)
Total	100% (23)	100% (105)	100% (128)

I did not find differences in retention rates for teachers of different races and ethnicities who signed Out-of-Field waivers, with the exception of *All Other Races*, where the retention rate is 33.3% but the total size of the group is only three teachers. See Table 8.

Table 8

Retention Outcomes for Beginning/Novice Teachers who Signed Out-of-Field Waivers, by Race

Retention Outcome	Hispanic	Black Not-Hispanic	White Not-Hispanic	All Other Races	Total
Left M-DCPS	31.8% (14)	29.3% (12)	35.0% (14)	66.7% (2)	32.8% (42)
Stayed In M-DCPS	68.1% (30)	70.7% (29)	65.0% (26)	33.3% (1)	67.2% (86)
Total	100% (44)	100% (41)	100% (40)	100% (3)	100% (128)

Next, I examined whether there may be a difference in retention between teachers who had been alternatively prepared and those who were traditionally prepared to teach. As stated previously, for the purposes of this study, *Traditional Teacher Preparation* is defined as beginning/novice teachers who, while in college/university, majored in an area of education, or graduated from an "Education College/University." I coded all other teachers as alternatively prepared. When comparing the two populations, beginning/novice teachers who participated in a *Traditional Teacher Preparation*

Program had a higher retention rate (72.2%), than those who participated in an *Alternative Teacher Preparation* Program (62.5%). See Table 9.

Table 9

Out-of-Field Waiver, Stayed in M-DCPS, and Teacher Preparation

Out-of-Field Waiver	Traditional Teacher Preparation	Alternative Teacher Preparation	Total
Left M-DCPS	27.8% (10)	37.5% (30)	34.5% (40)
Stayed in M-DCPS	72.2% (26)	62.5% (50)	65.5% (76)
Total	100% (36)	100% (80)	100% (116)

RQ1-SQ1.3: Do Out-of-Field Beginning/Novice Teachers Have Different Retention Rates Depending on Their Particular School Characteristics?

In this section, I included only the major school configurations (Elementary, Middle, K-8 Centers, and Senior High Schools) in M-DCPS. Charter schools and private schools were not included in this study. In order to respond to this subquestion, I focused on Title I school designation, the four major school configurations, and School Accountability Grade.

The majority (90.6%) of the beginning/novice teachers for the three cohorts, who signed Out-of-Field Waivers, were hired at a Title I Funded School. Of the 115 beginning/novice teachers hired in Title I Funded Schools, almost two-third, 66.1% stayed in M-DCPS compared to 75.0% of teachers who were hired at non-Title I Funded Schools. However, only 12 teachers were hired in Non-Title I Funded Schools, so these results may be the result of a small sample size. See Table 10.

Table 10

Out-of-Field Waiver, Stayed in M-DCPS, and Title I/Non-Title I Funded Schools

Out-of-Field Waiver	Title I Funded	Non-Title I Funded	Total
Left M-DCPS	33.9% (39)	25.0% (3)	33.1% (42)
Stayed in M-DCPS	66.1% (76)	75.0% (9)	66.9% (85)
Total	100% (115)	100% (12)	100% (127)

Table 12 shows retention rates for each of the major school configurations. The highest retention rate was at the K-8 Center at 69.4%. The lowest percent of individuals who signed Out-of-Field Waivers and stayed in M-DCPS, was at the Middle School level at 58.3%. Next is the Senior High with 64.7% of the individuals who signed Out-of-Field Waivers stayed in M-DCPS.

Table 11

Out-of-Field Waiver, Stayed in M-DCPS, and Major School Configuration

Out-of-Field Waiver	Elementary	Middle	K-8 Center	Senior High	Total
Left M-DCPS	32.8% (20)	41.7% (5)	30.6% (11)	35.3% (6)	33.3% (42)
Stayed in M-DCPS	67.2% (41)	58.3% (7)	69.4% (25)	64.7% (11)	66.7% (84)
Total	100% (61)	100% (12)	100% (36)	100% (17)	100% (126)

Table 12 shows the retention rates by the assigned School Accountability Grades. Schools with a School Accountability Grade of "A" and "B" held the highest retention rates, (71.4% and 72.2%) among those who signed Out-of-Field Waivers. Schools assigned a grade of "F" held the lowest percent, 61.1% (11 out of 18) of beginning/novice teachers who signed Out-of-Field Waivers staying in M-DCPS, followed closely behind by schools with an assigned Accountability Grade of "C" at 62.5% (25 out of 40).

Table 12

Out-of-Field Waivers, Stayed in M-DCPS, and School Accountability Grade

Signed Out-of-Field Waiver	"A"	"B"	"C"	"D"	"F"	Total
Left M-DCPS	28.6% (4)	27.8% (5)	37.5% (15)	30.6% (11)	38.9% (7)	33.3% (42)
Stayed in M-DCPS	71.4% (10)	72.2% (13)	62.5% (25)	69.4% (25)	61.1% (11)	66.7% (84)

Based on the data pertaining to beginning/novice teachers who signed Out-of-Field Waivers and school characteristics the following were evident: Non-Title I Funded Schools retained their teachers at a higher rate (75.0%) than Title I Funded Schools; K-8 Centers had the highest retention rate at 69.1% while Middle Schools reported the lowest retention rate at 58.3%; schools with Accountability Grades of A and B outperformed all other accountability grades with retention rates of 71.4 and 72.2, respectively; schools with an Accountability Grade of F performed the lowest (61.1%) in retaining their teachers.

RQ2: How do Beginning/Novice Teachers who sign Out-of-Field Waivers in M-DCPS Differ From Those who do not Sign Out-of-Field Waivers?

During the 2013-2014; 2014-2015; and 2015-2016 School Years a total of 1,037 beginning/novice teachers were hired in M-DCPS. Cohort I (2013-2014 School Year) totaled 286 new hires. Cohort II (2014-2015 School Year) totaled 264 new hires. However, Cohort III (2015-2016 School Year) witnessed a large increase in the hiring of beginning/novice teachers, with a total of 487 new hires. See Table 14.

Of the 1037 newly hired teachers, 12.3% signed Out-of-Field Waivers. During the 2013-2014 School Year (Cohort I), of the 286 beginning/novice teachers hired 15% (43

out of 286) signed Out-of-Field Waivers. In the 2014-2015 School Year (Cohort II), 15.9% (42 out of 264), of newly hired teachers signed Out-of-Field Waivers. Of the newly hired employees for Cohort III, only 8.8% (43 out of 487) of the beginning/novice teachers signed Out-of-Field Waivers.

Table 13

Year Hired/Signed Waiver

Waiver Status	Cohort I (2013-2014)	Cohort II (2014-2015)	Cohort III (2015-2016)	Total
No Waiver Signed	85% (243)	84.1%(222)	91.2% (444)	87.7% (909)
Out-of-Field Waiver Signed	15% (43)	15.9% (42)	8.8% (43)	12.3% (128)
All Cohorts Total	286	264	487	100% (1037)

RQ2-SQ2.1: Do Out-of-Field Beginning/Novice Teachers and Beginning/Novice Teachers who do not Sign Out-of-Field Waivers Differ in Their 3-Year Retention Rates?

Of the 128 beginning/novice teachers who signed Out-of-Field Waivers, 67.2% stayed in M-DCPS while 60.2% of the beginning/novice teachers who did not sign Out-of-Field Waivers remained in M-DCPS. See Table 14.

Table 14

General Percentage of No Waiver vs. Out-of-Field Waivers

Retention Outcome	No Waiver	Signed Waiver	Total
Left M-DCPS	39.8% (362)	42 (32.8%	39.0% (404)
Stayed In M-DCPS	60.2% (547)	67.2% (86)	61.0% (633)
Total	100% (909)	100% (128)	100% (1037)

During the 2013-2014 School Year (Cohort I), 286 beginning/novice teachers were hired. The retention rate for that cohort is 72.7%. Of the 264 beginning/novice teachers hired during the 2014-2015 School Year (Cohort II), 51.1% stayed in M-DCPS. Of the three cohorts, the largest number of beginning/novice teachers hired was during the 2015-2016 School Year; a total of 487. Of that number 59.5% remained in M-DCPS. As a result, the total retention rate for Cohorts I, II, and III is 61.0%. See Table 15.

Table 15

Retained in M-DCPS and Year Hired/Cohort

Retention Outcome	2013-2014 (Cohort I)	2014-2015 (Cohort II)	2015-2016 (Cohort III)	Total
Left M-DCPS	27.3% (78)	48.9% (129)	40.5% (197)	39.0% (404)
Stayed In M-DCPS	72.7% (208)	51.1% (135)	59.5% (290)	61.0% (633)
Total	100% (286)	100% (264)	100% (487)	100% (1037)

RQ2-SQ2.2: Do Out-of-Field Beginning/Novice Teachers and Beginning/Novice Teachers who do not Sign Out-of-Field Waivers Differ in Their Characteristics?

To understand if there were notable differences between beginning/novice teachers who signed Out-of-Field Waivers and those who did not, I ran crosstabulations for gender, race, and teacher preparation. Women were almost twice as likely to sign Out-of-Field Waivers as men (13.7% women vs. 8.6% men, see Table 16 shows no major difference by race or ethnicity among those who did nor did not sign Out-of-Field Waivers.

Table 16

Out-of-Field Waivers by Gender

Waiver/No Waiver Signed	Man	Woman	Total
No Waiver Signed	91.4% (246)	86.3% (663)	87.7% (909)
Out-of-Field Waivers Signed	8.6% (23)	13.7% (105)	12.3% (128)
Total	100% (269)	100% (768)	100% (1037)

Table 17

Out-of-Field Waivers by Race

Waiver/No Waiver Signed	Hispanic	Black Not Hispanic	White Not Hispanic	All Other Races	Total
No Waiver Signed	89.0% (357)	86.1% (253)	87.2% (273)	89.7% (26)	87.7% (909)
Out-of-Field Waiver Signed	11.0% (44)	13.9% (41)	12.8% (40)	10.3% (3)	12.3% (128)

Next, I examined whether there may be a difference in signing of Out-of-Field Waivers between teachers who had been alternatively prepared and those who were traditionally prepared to teach. For the purposes of this study, *Traditional Teacher Preparation* is based on those beginning/novice teachers who, while in college/university, majored in an area of education, or graduated from an "Education College/University." All others are considered alternatively prepared. I found no differences in the percentage of teachers who signed Out-of-Field Waivers between those who were alternatively prepared and those who were traditionally prepared. See Table 18.

Table 18

Out-of-Field Waivers by Teacher Preparation

Waiver/No Out-of-Field Waiver Signed	Traditional Teacher Preparation Participants	Alternative Teacher Preparation/Certified	Total
No Out-of-Field Waiver Signed	85.4% (210)	85.3% (463)	85.3% (673)
Waiver Signed	14.6% (36)	14.7% (80)	14.7% (116)
Total	100% (246)	100% (543)	100% (789)

RQ2-SQ2.3: Are Out-of-Field Beginning/Novice Teachers and Beginning/Novice Teachers who do not Sign Out-of-Field Waivers Hired in Different Schools?

Continuing with Crosstabulation data analysis, I pivoted to those beginning/novice teachers who signed Out-of-Field Waivers in Title I Funded Schools by

Non-Title I Funded Schools. As stated previously, a Title I Funded School is a public school receiving additional Federal Funding based on 75% or more of its student population receiving Free or Reduce-Priced Lunch. Table 20 shows that the vast majority of teachers hired were in Title I Funded Schools, 86%. Teachers who did not sign Out-of-Field Waivers were almost twice as likely to be hired in a non-Title I school (14.5% vs. 8.4%).

Table 19

Out-of-Field Waivers by Title I Funded/Non-Title I Funded Schools

Title I Funding Status	No Waiver Signed	Waiver Signed	Total
Title I	85.5% (749)	90.6% (115)	86.1% (864)
Non-Title I	14.5% (127)	8.4% (12)	13.9% (129)
Total	100% (876)	100% (127)	100% (1003)

After reviewing the data for Out-of-Field Waivers by Title I Funded/Non-Title I Funded Schools my attention shifted to comparing Out-of-Field Waivers to the four major school configurations utilized in this study. The four major school configurations in this study are Elementary Schools, Middle Schools, K-8 Centers, and Senior High Schools. A total of 48 newly hired individuals, in the three cohorts, were not considered for this portion of the study, due to the fact that they were employed at specialized centers (i.e., Special Education Centers, Alternative Education Centers, or at the District level).

Table 20 depicts the outcome of the analysis comparing those beginning/novice teachers who signed Out-of-Field Waivers to those who did not, based on the four major school configurations included in this research. When looking specifically and school

configuration, even though 28.8% (285) of the new hires were at the elementary level, this school configuration had the largest percentage (48.4% or 61 out of 126), of those who signed Out-of-Field Waivers. Additionally, K-8 Centers employed the smallest percentage (14.4% or 142 out of 989) of new teachers but had the second-highest percentage (28.6% or 36 out of 126) of individuals who signed Out-of-Field Waivers. Senior High Schools hired the largest percentage (38.6% or 382 out of 989) of new teachers, yet only 13.5% (17) signed Out-of-Field Waivers.

Not factored into this analysis was whether those individuals at the K-8 Centers who signed Out-of-Field Waivers were concentrated in the elementary or middle grades of the K-8 Centers. Nor did I consider in this study whether at the Middle or Senior High School, the small percentages of Out-of-Field Waivers were due to the fact that each subject at the secondary level is specialized (meaning when a vacancy occurs it is in specific subjects, that is, English, Biology, Algebra, etc.). At the elementary level, one is expected to be able to teach all subjects except Art, Music, Physical Education, and World Languages (in grades 2-5), and is expected to teach all subjects, except World Languages (in grades Pre-K-1). Thus, when looking at Table 20 the expectations of a beginning/novice teacher signing an Out-of-Field Waivers is more likely to occur in an Elementary School or K-8 Center.

Table 20

Out-of-Field Waiver by Major School Configurations

School Configuration	No Waiver Signed	Signed Waiver	Total
Elementary	26.0% (224)	48.4% (61)	28.8% (285)
Middle	19.5% (168)	9.5% (12)	18.2% (180)

K-8 Center	12.3% (106)	28.6% (36)	14.4% (142)
Senior High School	42.3% (365)	13.5% (17)	38.6% (382)
Total	100% (863)	100% (126)	100% (989)

After noting the fact that the probability of a beginning/novice teacher signing an Out-of-Field Waiver in an Elementary School or K-8 Center is vastly greater than signing an one in a Middle or Senior High School, my interest was to then pivoted to determine, based on School Accountability Grade, where most Out-of-Field Waivers were signed by these beginning/novice teachers. When looking at Table 22 just as the majority (43.9%) of beginning/novice teachers were hired at "C" graded schools, a large percentage, 31.7% (40 out of 126), were also hired at s "C" graded schools, specifically. However, 42.9% (54 out of 126) of the beginning/novice teachers who signed Out-of-Field Waivers were hired in "D" or "F" schools (28.6% or 36 in "D" schools, and 14.3% or 18 in "F" schools). As a reminder, of the 126 Out-of-Field Waivers signed, two Out-of-Field Waivers were not calculated in this analysis due to the fact that the individuals were placed at a specialized center or at the district level office.

Table 21

Out-of-Field Waivers by School Accountability Grade

School Accountability Grade	No Waiver Signed	Signed Waiver	Total
A	11.6% (102)	11.1% (14)	11.6% (116)
B	14.3% (125)	14.3% (18)	14.3% (143)
C	45.7% (400)	31.7% (40)	43.9% (440)
D	18.5% (162)	28.6% (36)	19.8% (198)
F	9.9% (87)	14.3% (18)	10.5% (105)
Total	100% (876)	100% (126)	100% (1002)

RQ2-SQ2.4: Is Signing an Out-of-Field Waiver a Predictor of Teacher Retention for Beginning/Novice Teachers?

This section reports the results of the logistic regression model that I ran to understand the potential associations between signing and out-of-field wavier and teacher retention while controlling for potentially confounding teacher and school characteristics. Prior to running the logistic regression analysis, I ran a series bivariate correlational analyses for all variables I considered (see Table 22 and 23). The dependent variable, being Retained In M-DCPS, had a weak positive correlation with being employed in an Elementary School (r = .032) and a weak negative correlation with working at a school assigned Accountability Grade C (r = -.062), working at a Middle School (r = -.074), working at a Title I Funded School (r = -.099), and being hired in the 2014-2015 School Year (-.118). The independent variable, whether or not a teacher signed an Out-of-Field Waiver, was weakly negatively correlated with working at a school assigned Accountability Grades A & B (r = -.003), working at a school assigned Accountability Grade C (r = -.096), working at a Middle School (r = -.084), or reporting a racial identity

other than Hispanic, White, or Black (r = -.012). The strongest correlation is between School Grades of A and B and Title I Funded Schools (r = -.558). There are many other statistically significant correlations among control variables. One of the important relationships amongst the variables is a weak positive correlation between teachers who signed Out-of-Field Waivers and being retained in M-DCPS (r = .048). These results suggest the need to account for these potentially confounding factors, when attempting to understand the potential association between retention and signing an Out-of-Field Waiver.

Table 22

Correlations I

	Retained in M-DCPS	Waiver	School Grade A & B	School Grade C	Elem School	Middle School	K-8 Center
Retained in M-DCPS	1.000						
Waiver	.048*	1					
School Grade A & B	.166	-.003**	1				
School Grade C	-.062**	-.096**	-.520**	1			
Elementary School	.032*	.162	-.028**	-.120**	1		
Middle School	-.074**	-.084**	-.151**	-.063**	-.299**	1	
K-8 Center	.003*	.156	.062	-.054**	-.261**	-.193**	1
Title I	-.099**	.050	-.558**	.225	.090	.138	-.078**
Women	.064	.073	-.013**	-.067**	-.075**	-.008**	.059
Black not Hispanic	-.001**	.028*	-.165**	.015*	-.084**	.047*	-.107**
White not Hispanic	.023*	.016*	.053	-.008**	-.082**	.009*	.028*
All Other Races	.007	-.012**	-.004**	-.013**	.017*	.058	-.037**
Hired 13-14 School Year	.145	.061	.128	-.201**	-.082**	.066	.041*
Hired 14-15 School Year	-.118**	.060	-.044**	-.056**	.017*	-.039**	-.038**

Table 23

Correlations II

	Title I	Women	Black not Hispanic	White not Hispanic	All Other Races	Hired 13-14	Hired 14-15
Retained in M-DCPS							
Waiver							
School Grade A & B							
School Grade C							
Elementary School							
Middle School							
K-8 Center							
Title I	1						
Women	.040*	1					
Black not Hispanic	.115	.034*	1				
White not Hispanic	-.116**	.034*	-.416**	1			
All Other Races	.050	-.033**	-.113**	-.112**	1		
Hired 13-14 School Year	.072	-.010**	.003*	.146	.042*	1	
Hired 14-15 School Year	.007*	-.054**	.028*	-.030**	.020*	-.362**	1

Table 24 reports information for each of the variables in the logistic regression analysis**.** As can be seen in table, multicollinearity, as measured by Tolerance, ranged from .918 to .479 and did not appear to adversely affect regression results.

Table 24

Variables, Means, Number, SD, and Tolerance

Variable		*M*	*n*	*SD*	Tolerance
Beginning/novice teachers					
	Signed Out-of-Field waiver	.1266	125	.33275	.912
	No waiver (reference group)				
Gender					
	Women	.7393	730	.43907	.918
	Men (reference group)				
Race					
	Black/Non-Hispanic	.2948	291	.45620	.757
	White/Non-Hispanic	.2928	289	.45528	.762
	All other races	.0294	29	.16896	.934
	Hispanic (reference group)				
Year hired					
	2013-2014	.2725	269	.44549	.744
	2014-2015	.2594	256	.43851	.818
	2015-2016 (reference group)				
School accountability grade					
	School Grade A & B	.2513	248	.43396	.479
	Grade C	.4458	440	.49731	.556
	Grade D & F (reference group)				
School Configuration					
	Elementary school	.2877	284	.45294	.631
	Middle school	.1814	179	.38551	.666
	K-8 center	.1439	142	.35114	.759
	High school (reference group)				
Title I Funding status					
	Title I Funding	.8673	856	.33945	.640
	No Title I Funding (reference group)				

The Omnibus Tests of Model Coefficients had *p.* <.001, indicating that the complete model fit better than a model with no predictors. The pseudo *R* squared measures for Retention in M-DCPS, Cox & Snell R^2 = .062 and Nagelkerke R^2 = .084, indicate that this is not a strong model, possibly because it does not account for other factors that may be associated with retention, such as salary, teacher support, and teacher satisfaction with job (Table 25). The classification Table 26 shows that the logistic regression would correctly classify the retention outcome for 62.3% of cases.

Table 25

Model Summary

Step	-2 Log Likelihood	Cox & Snell *R* Square	Nagelkerke *R* Square
1	1263.926[a]	.062	.084

Table 26

Classification

			Predicted		
			Remained in M-DCPS		
	Observed		.00 Left M-DCPS	1.00 Stayed in M-DCPS	Percentage Count
Step 1	Retained in M-DCPS	.00 Left M-DCPS	114	279	29.0
		1.00 Stayed in M-DCPS	93	501	84.3
	Overall Percentage				62.3

The logistic analysis revealed that the independent variable, signing and out-of-field waiver, was not a statistically significant predictor of retention (see Table 28). Three control variables were statistically significant predictors of retention. Accountability

School Grades of A & B had an Exp(B) of 2.193, indicating that teachers at a school with a grade of A or B were 2.193 times more likely to be retained than if they worked at a school with a grade of D or F. Being hired to teach in the 2013-2014 School Year had an Exp(B) of 1.765, indicating that teachers hired in this school year were 1.765 times more likely to be retained than those who were hired in the 2015-2016 school year. Being hired to teach during the 2014-2015 School Year had an Exp(B) of .713, indicating that these teachers were .713 times as likely to be retained as teachers hired during the 2015-2016 school year.

Table 27

Variables in the Equation

	Model	*B*	*S.E.*	Wald	*df*	Sig.	Exp(B)
Step 1[a]	Waiver	.315	.218	2.084	1	.149	1.371
	School Grade A & B	.785	.233	11.389	1	.001	2.193
	School Grade C	.194	.178	1.194	1	.274	1.215
	Elementary School	.049	.189	.068	1	.795	1.050
	Middle School	-.269	.211	1.623	1	.203	.764
	K-8 Center	-.180	.221	.664	1	.415	.835
	Title I	-.252	.263	.916	1	.339	.777
	Women	.331	.159	3.835	1	.050	1.364
	Black not Hispanic	.051	.169	.867	1	.352	1.170
	White not Hispanic	.051	.169	.091	1	.763	1.052
	All Other Races	.201	.414	.234	1	.629	1.222
	Hired 13-14	.568	.181	9.874	1	.002	1.765
	Hired 14-15	-.339	.165	4.209	1	.040	.713
	Constant	.038	.343	.013	1	.911	1.039

Summary

When looking at the retention rates of beginning/novice teachers in M-DCPS for three cohorts (Cohort I = 2013-2014 School Year; Cohort II = 2014-2015 School Year, and Cohort III = 215-2016 School Year), there were some unanticipated results. For instance, signing an Out-of-Field Waiver is not predictive of retention. Of the 128 total Out-of-Field Waivers signed for the three cohorts, 82.0% (105) were signed by women. Of that, 68.6% stayed in M-DCPS compared to the 60.9% of the men who signed Out-of-Field Waivers and stayed in M-DCPS. Even though the majority of Out-of-Field Waivers were signed in Title I Funded Schools, Non-Title I Funded School had a higher retention rate (75.0% Non-Title I Funded vs. 66.1% Title I Funded Schools). The lowest retention rate for those beginning/novice teachers who signed Out-of-Field Waivers was at the Middle School level (58.3% or 7 out of 12). Almost half (48.8%) of all Out-of-Field Waivers were signed at the elementary school level.

Signing an Out-of-Field waiver was not a predictor of a beginning/novice teacher leaving the school district/profession. Beginning/ novice teachers hired in schools with Accountability Grades of "A" or "B" had a higher retention rate than those hired in schools with Accountability Grades of "C", "D", or "F". Non-Title I Funded Schools outpaced Title I Funded Schools in their retention rates of beginning/novice teachers who signed Out-of-Field Waivers. Schools with Accountability Grades of "D" or "F". Beginning/novice teachers who participated in a traditional teacher preparation program were more likely to remain in the profession than their counterparts who were alternatively prepared. As for gender, when looking at beginning/novice teachers, women

who signed Out-of-Field Waivers were more likely to remain in the profession than their counterparts who did not. There was no notable difference in retention when comparing the Races of the beginning/novice teachers who signed Out-of-Field Waivers.

Chapter 5: Discussion and Implications

Summary of Study

The problem of practice for which I conducted my research was to determine the retention outcomes for beginning/novice teachers who signed Out-of-Field Waivers during the 2013-2014, 2014-2015, and 2015-2016 School Years in M-DCPS. I examined potential the differences among teachers who signed Out-of-Field Waivers and between beginning/novice teachers who signed Out-of-Field Waivers and those who did not. These comparisons focused on teacher characteristics and school characteristics, including race, gender, teacher preparation, major school configuration (Elementary, Middle, K-8 Center, and Senior High School), Title I status, and School Accountability Grade. In addition, I examined whether signing an Out-of-Field waiver was a predictor of teacher retention while controlling for these teacher and school characteristics.

Originally, my intent was to also determine whether there were differences in rates of certification/endorsement in a specialization for teachers who participate in different mentoring programs; or whether there were differences in the retention rates of Out-of-Field teachers to teachers who participated in different mentoring programs. However, M-DCPS did not begin collecting data for its established mentoring program (MINT) until after the 2015-2016 School Year, thus no available published data were available.

My study required merging data from two separate data bases, then extensive coding and recoding of data from text to numeric data, fields with multiple, inconsistent, text entries to numeric data, and determining teacher characteristics like whether a

teacher was traditionally or alternatively prepared, by looking at multiple text data fields and hand-coding these data. The research design and methodology I used in this project consisted of descriptive data analyses, bivariate comparisons, and a logistic regression model. This was a nonexperimental, exploratory, quantitative research study, utilizing historical data provided by M-DCPS. The analyses were based on three focused years/cohorts (2013-2014/Cohort I, 2014-2015/Cohort II, and 2015-2016/Cohort III).

Discussion/Reporting of Findings

As described by numerous researchers, teaching out-of-field is the agreement of a teacher to provide instructions for their students, in a subject/area where they have no training and/or certification (Donaldson & Johnson, 2010; du Plessis, 2015; Ingersoll, 1999; Nixon et al., 2017). Extensive numbers of studies on teacher retention have been conducted; however, I could not locate any on the retention of teachers who are assigned to teach out-of-field. In this study, I attempted to answer the following questions:

RQ1. What are the retention and certification outcomes of beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS?

RQ2. How do beginning/novice teachers who sign Out-of-Field Waivers in M-DCPS differ from those who do not sign Out-of-Field Waivers?

Given the lack of information pertaining to the retention of beginning/novice teachers who sign Out-of-Field Waivers, I sought to describe these outcomes by comparing this population of teachers to characteristics that have been found to be related to teacher retention, among teachers, in general (school characteristics, teacher

characteristics, etc.). There were aspects specific to teachers who sign Out-of-Field Waivers, that have not been, and need to be explored (such as specialization).

In my research, there were unanticipated findings. However, the five most significant findings are as follows:

1. Signing an Out-of-Field Waiver does not necessarily mean that the teacher will leave the school district or profession.
2. Beginning/novice teachers hired in schools with Accountability Grade of A or B is a predictor of teacher retention. Due to the fact that the majority of schools in M-DCPS are Title I Funded Schools, teachers who sign Out-of-Field waivers were more likely to be placed in Title 1 Funded Schools. However, Non-Title I Funded Schools outperformed Title I Funded Schools in the retention rates of beginning/novice teachers who signed Out-of-Field Waivers (retention rates for Non-Title I Funded Schools = 75.0%; retention rates for Title I Funded Schools = 66.1%). Additionally, teachers who signed Out-of-Field Waivers were more likely to be placed in schools with Accountability Grade of D or F and less likely to be hired in schools with a grade of C than teachers who did not sign Out-of-Field Waivers.
3. Teachers who signed Out-of-Field Waivers and were traditionally prepared were more likely to remain in the profession/school district.
4. Women who signed Out-of-Field Waivers were more likely to remain in school district/profession.

5. Retention rates of those who signed Out-of-Field Waivers did demonstrate notable differences, when it pertained to race.

Out-of-Field Waiver, Teachers, and Retention

Even though I found ample research pertaining to teaching and Out-of-Field Waivers, I was unable to locate research specific to the retention rates of teachers who signed Out-of-Field Waivers. In my data analyses specific to the retention of beginning/novice teacher who signed Out-of-Field Waivers in M-DCPS during the 2013-2014, 2014-2015, and 2015-2016 School Years, the results showed that signing an Out-of-Field Waiver does not necessarily mean that the teacher will leave. In general, 39.8% of beginning/novice teachers who did not sign an Out-of-Field Waiver left M-DCPS in comparison to 32.8% of those who did sign Out-of-Field Waivers, leaving (Table 14). This could be because effective localized (school-level) support is provided to the beginning/novice teachers, whether they have signed Out-of-Field Waivers or not.

Retention and School Demographics

The strongest predictor of teacher retention was being hired in a school with a grade of A or B rather than being hired in a school with a grade of D or F. Teachers hired at a school with a grade of A or B were 2.193 times more likely to be retained than those who were hired at a school with a grade of D or F. Schools with an Accountability School Grade of C employed the most beginning/novice teachers during the targeted years, however, schools with the Accountability Grade of B had the highest retention rate (Table 12).

Most new teachers were hired for positions in Title I Funded Schools; but, teachers who signed Out-of-Field waivers were less likely than their peers to be hired in a Non-Title I school (8.4% vs. 14.5%). Beginning/novice teachers who signed Out-of-Field Waivers who were assigned to Non-Title I Funded Schools had a higher retention rate (75.0%) than those who were hired in Title I Funded Schools (66.1%). These results are similar to those of Allensworth et al. (2009), Boyd et al. (2009), Corcoran et al. (1988), Donaldson and Johnson (2010), and Haberman (1987), who found that the retention rates of teachers in school with high percentages of students with low socioeconomic backgrounds are much lower than their peers in schools hosting students of middle to upper middle-class economic backgrounds.

Next, when looking at Major School Configuration and individuals who signed Out-of-Field Waivers, the K-8 Centers had a slight edge over the other school configurations for those who stayed in M-DCPS at 69.4% (Table 11). Additionally, those schools assigned a School Account Grade of "B" demonstrated a somewhat higher percentage of beginning/novice teachers who signed Out-of-Field Waivers remaining in M-DCPS at 72.2% (Table 12).

Retention and Teacher Preparation

When looking at teacher preparation and retention of these beginning/novice teachers, teachers who participated in a Traditional Teacher Preparation Program, when they did sign the Out-of-Field Waivers these teachers (Traditionally Prepared) held higher "staying power", 72.2% than those who participated in an Alternative Teacher Preparation Program at 62.5% (Table 9). This is in line with research results found by

Boyd et al. (2011) who asserted that teacher preparation can be an indicator of teacher retention. Boyd et al. found that traditionally prepared teachers maintained a higher retention rate than their counterparts who were alternatively prepared. Due to high levels of missing data, teacher preparation was not included in the logistic regression analysis.

Retention and Gender

As I focused my attention of retention of beginning/novice teachers, specific to gender, researchers such as Okeke and Nyanhoto (2021), as well as Whipp and Geromine (2017) found there to be a decline in men teachers in the public-school sector. When looking at gender and those who signed Out-of-Field Waivers, yet stayed in M-DCPS, I found that the overwhelming number of individuals who signed Out-of-Field Waivers was women at 82.0%. Less than two-thirds, 60.9%, of the men who signed Out-of-Field Waivers remained in M-DCPS. As for the women, more than two-thirds, 68.6%, stayed in M-DCPS. The overall retention rate, based on gender, for those individuals who signed Out-of-Field Waivers, was 67.2% (Table 7). Of the total population in my research, the results are that Black Not-Hispanic Women, whether they signed Out-of-Field Waivers or not, were most likely to remain in M-DCPS. However, because the reasons as to why women are more likely to sign Out-of-Field Waivers than men; or the measure of support provided to beginning/novice teachers, were not included in this body of work, the information is not provided. These are areas to be considered for future research.

Retention and Race

As for teacher retention and race, the research has found that minority teachers are less likely to leave the profession than their White counterparts (Achinstein et al., 2010;

Adams & Dial, 1994; Hancock & Scherff, 2010; Hughes, 2012; Jianping, 1997; Sun, 2018; Whipp & Geromine, 2017). This proved no different in my research. Of the four race categories compared (Black Not-Hispanic, White Not-Hispanic, Hispanic, and All Other Races), in reference to beginning/novice teachers who signed Out-of-Field Waivers and stayed in M-DCPS, the Black Not-Hispanic population had the higher percentage of individuals who signed Out-of-Field Waivers and stayed in M-DCPS 70.7% (Table 8).

Out-of-Field Beginning/Novice Teachers in M-DCPS

In my research, I expected to find that, in general, Out-of-Field beginning/novice teachers would have exited the profession at an alarming rate, when compared to the individuals who did not sign Out-of-Field Waivers. However, the data analyses yielding unanticipated results. The most notable unexpected result was that there was no major difference in the retention rate of beginning/novice teachers who signed Out-of-Field Waivers (67.2%) compared to their counterparts who did not sign Out-of-Field Waivers (60.2%). In fact, those beginning/novice teachers who signed Out-of-Field Waivers had a slightly higher retention rate. The meaning behind this was not delved into. It could mean be that these teachers received support, not only in the general sense of being a new teacher, they may have also received support specific to the areas in which the Out-of-Field Waivers were signed.

In the logistic regression analysis, which statistically controlled for potentially confounding teacher and school characteristics, signing an Out-of-Field Waiver was not a predictor of teacher retention. If this is true, then the possibility of retention of beginning/novice teachers, whether they sign Out-of-Field Waivers or not, may be based

on personal characteristics. This would require additional research that includes qualitative data with includes perception and feelings of the participants.

Limitations

There are several limitations to this study. I had hoped to examine several other teacher characteristics and experiences but was unable to obtain the relevant data from M-DCPS. As a result of insufficient data to respond to the original subquestion pertaining to the retention of beginning teachers who signed Out-of-Field Waivers and participated in the established induction program (MINT), the question was eliminated from the research. The intent was to also determine whether there are differences in rates of certification/endorsement in a specialization for teachers who participate in different mentoring programs; or whether there are differences in the retention rates of Out-of-Field teachers to teachers who participate in different mentoring programs. However, M-DCPS did not begin collecting data for its established mentoring program until after the 2015-2016 School Year, thus no available published data. However, through further investigation, additional data were available that enabled me to compare beginning teachers who signed Out-of-Field Waivers, to those who did not. This, in turn, created an additional research question (Research Question 2) with subquestions.

The fact that this study was conducted in one school district, M-DCPS, and not nationwide, was quantitative, and focused on existing administrative data provided by the school district is a limitation. Data extracted were based on that which was reported to the State and Federal Governments by M-DCPS. So, factors related to teacher retention and certification, salary, participation in mentorship/induction programs, that were not

included in the database could not be measured. Most traditionally prepared teachers in the state of Florida graduate with ESOL courses included in their coursework which enables them to receive the ESOL Endorsement when applying for certification. I did not focus on those who participated in a traditional teacher education program, graduated from a college outside of Florida, or had the coursework. The focus was whether or not the individual had an Out-of-Field Waiver.

I hoped to have access to 10 years of data; however, access was granted to only the 3 focus years (2013-2014, 2014-2015, and 2015-2016), not beyond. Having a larger dataset may have enabled me to discover and understand differences, if any, among teachers I was not able to examine in this study (specifically: Waiver, Retention, Race and Gender; Waiver and Retention by Race, Gender, and Cohort (Year Hired); Race by Gender and School Year Hired/Cohort; Year Hired, Waiver, Retention, and School Characteristics, etc.) due to the fact that the groups were very small. Additionally, having the ability to expand the time period studied may have yielded more informative results. Furthermore, when looking at Table 24, my model was week with a Nagelkerke R^2 of .084. This goodness of fit does not explain the differences in the observed data or variations.

Future Research

The inclusion of M-DCPS's established induction program, which I intended to study, as it pertains to retention of beginning/novice teachers who signed Out-of-Field Waivers, and the retention rate in this category, proved to be a slight handicap for my research. As researchers of the past have proven time and again, teachers who participate

in an induction program (school or district level) have better chances of staying in the profession. This topic, I believe should be an area of research in the future as it will help the establishment to evaluate their induction program as it relates to those beginning/novice teachers who sign Out-of-Field Waivers.

As research has shown, support is needed for newly hired employees in any organization. In the field of education, induction programs in various forms have been used to provide support for beginning/novice teachers. If a beginning/novice teacher is to feel a part of the education community, welcomed, and have a sense of success, support is needed. In M-DCPS, the established induction program is called MINT. However, data for this program was not collected by the district until after the 2015-2016 School Year. As a result, this portion was eliminated from the research. My intent in this research was to determine to what extent do beginning/novice teachers who signed Out-of-Field Waivers, gained certification/endorsement in the said field, and remained in M-DCPS and the profession. I also intended to determine which content area/specialization, if any, aids beginning/novice teachers in gaining certification/endorsement and retention in the profession, most successfully. These areas should be researched further in order to have a true understanding of areas to emulate, areas to improve upon, and for creating plans of action that will aid in increasing/improving teacher retention.

I do believe my research should be replicated both in M-DCPS other school districts and on a larger scale. The knowledge and understanding of the retention rates of beginning/novice teachers (and the whys behind it) will be of great help to those who affect recruitment and retentions on a local and larger scale. This includes

colleges/universities with teacher training programs. The results from research should garner more questions, specifically, why are the majority of Out-of-Field Waivers signed by beginning/novice teachers in the areas of ESOL and Gifted? If these areas are in high demand, should they be included in the teacher preparation programs so that teachers leave colleges/universities with these backgrounds and/or certification as a component of their degrees? This will lessen the number of Out-of-Field Waivers signed in areas containing large populations of students for whom English is not their first language (ESOL), as well as those school district who have focused a large portion of their efforts on expanding their advanced academics programs (Gifted). If my research is replicated on a larger scale, the explanation of retention rates for beginning/novice teachers who sign Out-of-Field Waivers inclusive of personnel and school characteristics may lead to national changes in policies for teacher education programs, partnerships between school districts, and colleges/universities, and the recruitment and retention processes and protocols for schools and school districts.

An additional area for future research is to learn what happens to those beginning/novice teachers who are asked to sign Out-of-Field Waivers and do not. Are they employed in their areas of certification or are they not employed due to a lack of vacancies in their areas of certification? Also an area to consider in further research is the quality of instruction for beginning teachers who signed Out-of-Field Waivers. Furthermore, has the COVID-19 pandemic affected the retention rates of beginning/novice teachers or veteran teachers?

Implications

The results of this study have several implications for policymakers and school districts. First, signing an Out-of-Field Waiver was not an indication as to whether a teacher would leave the school district or profession. Because of the fact that most of the Out-of-Field Waivers were signed in the areas of ESOL (those acquiring the English Language, while adapting to a new culture) and/or Gifted (those advanced and need to be challenged academically), almost polar opposites academically, is this acceptable? Is this an area that principals should revisit when asking beginning/novice teachers to sign Out-of-Field Waivers? As a reminder, my research focused on solely measuring retention rates, not reasons why.

Because the vast majority of Out-of-Field Waivers signed by beginning/novice teachers, were in the areas of ESOL (72.6%), Gifted (11.7) and ESOL and Gifted (two waivers at the same time; 7.0%), great considerations should be given in having teacher colleges/universities include these areas in the teaching program, or creating an education/specialization track, in order for the teaching candidates to graduate with all prerequisite skills and courses for certification/endorsement. The leadership at M-DCPS is proud (and rightfully so) of the school district's very diverse student population (hailing from 160 countries and 56 different spoken languages); however, teacher preparation has not caught up with the student demographics. With most of the student body being comprised of minority students, it is expected that the workforce would or should reflect the same or have received the requisite skills to provide effective instructions for the various populations. This will provide the beginning/novice teachers

with much-needed competencies to aid students whose first language is not English, in acquiring the language more expeditiously.

Another implication, is having beginning/novice teachers who were alternatively prepared for the teaching profession, sign Out-of-Field Waivers did not seem to bode well for M-DCPS. Of the total number of beginning/novice teachers who signed Out-of-Field Waivers and left, 75% were from those who were Alternatively Prepared for the field of education. This could be an indication that not having a strong background in education (teacher preparation courses) and being asked to teach an area of no familiarity, along with becoming oriented with the education profession is too overwhelming.

In M-DCPS most schools receive Title I Funding; however, this is not an indication of school or student performance. Considering the 3 focused years, 90.6 % of the schools with beginning/novice teachers who signed Out-of-Field Waivers, receive Title I funding and 56.7% of the same schools in the focused years earned an Accountability Grade of A, B, or C. As such, it was anticipated that the retention rates for beginning/novice teachers who signed Out-of-Field Waivers, would be greater in Title I Funded Schools. That was not the case. As indicated in the logistic regression and bivariate analyses, being a Non-Title I Funded Schools or having an Accountability School Grade of A, B, or C, matters in the retention of beginning/novice teachers during the 2013-2014, 2014-2015, and 2015-206 School Years. The retention rates for Non-Title I Funded Schools outperformed that of Title I Funded Schools 75.0% Non-Title I Funded Schools vs. 66.1% Title I Funded Schools). This is an area in which policymakers/decision makers may focus their attention. They need to discern the reasons

for higher retention rates in Non-Title I Funded Schools. If it pertains to the image surrounding being a Title I Funded School, rebrand the schools and focus on the positive aspects of the school, such as the school Accountability Grade and possibly the diverse population and languages and/or programs offered at the schools versus the funding of the schools.

Schools that are considered low-performing or needy should be limited in the number and areas in which beginning/novice teachers who sign Out-of-Field Waivers are placed. All students are entitled to and should be given the benefits of a highly qualified teacher. This goes back to school districts and teaching colleges/universities creating truly effective partnerships that provide incoming teachers with trends and strategies that change with the needs of the students being served.

As mentioned by previous researchers, students may communicate better with teachers in categories/demographics they can identify with. If need be, support services/groups targeting beginning teachers who are men, is worth considering for teachers who are men. Just as all beginning teachers need support systems, men may need to have colleagues or mentors, of the same gender, who can help them navigate through a career that seems to be dominated by women. The possibility of creating a Male Teacher, Educational Brother, or Brothers in Education Network, to support these teachers may help in the recruitment and retention process if it is not perceived as gender-bias. This could help alleviate the negative connotation associated with K-12, specifically elementary, teachers of it being a field for women.

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